

# sf-ADU

a guide for homeowners, designers,  
and contractors considering adding  
an Accessory Dwelling Unit to an  
existing residence in San Francisco



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JULY, 2015  
PREPARED BY OPENSOURCE STUDIO, ARCHITECTS

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### PARTIAL GARAGE CONVERSIONS

A - Single-family Residence

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# INTRODUCTION

## Accessory Dwelling Units in San Francisco

An Accessory Dwelling Unit (ADU)<sup>1</sup> is a residential unit added to an existing building. ADUs are subordinate to the primary residential unit(s), generally due to their location on the lot and/ or the size of the unit. Also known as Secondary Units, In-Law Units, or Granny Flats, ADUs are generally developed using underutilized spaces within a lot, whether a garage, storage, rear yard, or an attic. ADUs are independent units that have their own kitchens, bathrooms and living areas. These units can be developed either within the existing building, with an extension to the existing building, or as a separate structure. ADUs are more likely to utilize side entrances, exhibit lower ceiling heights, experience lower light exposure, and so forth.

The City of San Francisco is facing growing housing demands and an increasing need to encourage and facilitate more housing options for residents. One promising strategy is building new homes in existing residential buildings. These added units are commonly known as Accessory Dwelling Units (ADUs) and are also sometimes known as secondary units, in-law apartments or granny flats.

Much of the city's existing housing stock has the capacity to legally include an additional housing unit, sometimes within the existing building envelope. The added unit can help subsidize homeowner's mortgage by creating rental apartment, or can enable multi-generational households; an older homeowner could move to the ADU while his or her children live in the main home. Additionally,

concerns about the seismic sustainability of soft-story structures can be mitigated through the addition of a dwelling unit.

This handbook serves as a guide for homeowners or contractors when adding a unit to an existing residential building. It helps define the various physical forms for ADUs; multiple City Codes which regulate adding ADUs; and when such investment is financially feasible or beneficial to small property owners.

The "Context and Codes" section reviews the main constraints on creating new ADUs, including the various Building Code and Planning regulations. The "ADU Prototypes" section outlines typical scenarios for creating an ADU based on a set of common residential buildings found in San Francisco. The "Financial Analysis" section summarizes the costs and benefits of building an ADU to help homeowners understand whether adding an ADU to their property makes financial sense. The "Resources" section contains additional background information to help understand the issues at play, including definitions and code references. This handbook is a helpful first step to understanding how an existing property might be adapted to accommodate a new unit. However, please note that it is not a replacement for hiring a professional to help plan your project.



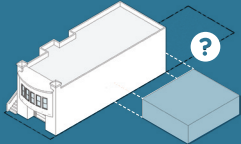
# PROCESS DIAGRAM

Can I add a unit  
in my building?

What could my  
unit look like?

Read the ADU handbook and  
find a prototype that most  
closely matches your property:

How much could  
the new unit cost?



Refer to the **online map**  
to see if your property is  
eligible.

view Eligible Parcels Map at:

[WWW.SF-PLANNING.ORG/ADU](http://WWW.SF-PLANNING.ORG/ADU)

not sure?



Look up your property  
on the online **Property  
Information Map**.

Here you will learn  
your property's zoning  
control. If the density  
permits, you can add  
one or more units.

[HTTP://PROPERTYMAP.  
SFPLANNING.ORG](http://PROPERTYMAP.SFPLANNING.ORG)

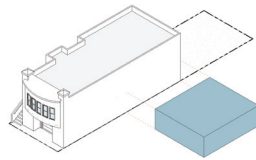
still not sure?



Contact or visit the  
**Planning Information  
Center (PIC)**.

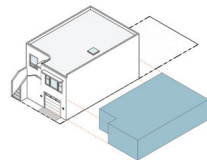
**PLANNING INFORMATION  
CENTER**  
1650 MISSION STREET  
FIRST FLOOR  
SAN FRANCISCO, CA 94103  
Phone: (415) 558-6377  
Email: [pic@sfgov.org](mailto:pic@sfgov.org)

I HAVE A  
**SINGLE-FAMILY HOME**



I want to keep my garage  
and potentially expand my  
building.

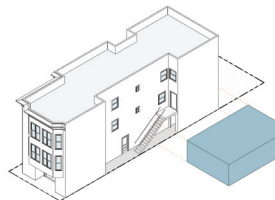
**PROTOTYPE A** see page 35



I want to replace my  
garage with a new unit.

**PROTOTYPE D** see page 57

I HAVE A **DUPLEX**



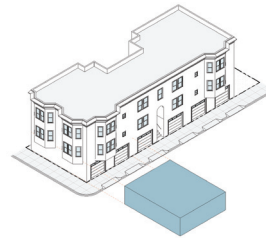
I want to replace my  
garage with a new unit.

**PROTOTYPE B** see page 43

I want to keep my garage  
and potentially expand my  
building.

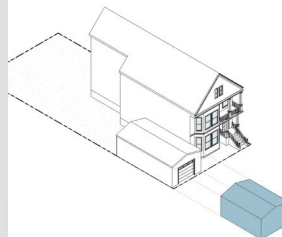
**PROTOTYPE D** see page 57

I HAVE A **MULTI-UNIT  
APARTMENT**



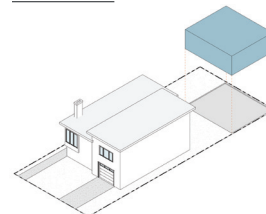
**PROTOTYPE C** see page 51

I HAVE A **FREE-  
STANDING GARAGE  
ON MY PROPERTY**



**PROTOTYPE E** see page 63

MY NEIGHBORS HAVE  
**COTTAGES IN THE  
REAR YARD** OR MY  
**LOT FRONTS TWO  
STREETS**



**PROTOTYPE F** see page 71



See **Section 4 -  
Financial Analysis** for  
issues relevant to your  
property.

see page 77



Download the  
**calculator spreadsheet**  
and plug in your  
numbers to estimate  
costs and potential  
revenue from your new  
unit.

download at:

[WWW.SF-PLANNING.ORG/ADU](http://WWW.SF-PLANNING.ORG/ADU)

## IMPORTANT !

Read about the **regulations**  
in **Section 2** related to your  
prototype associated with  
your property.

Each prototype in **Section 3**  
calls out the relevant Code  
requirements.

Looks like adding a unit to my building is feasible. Where do I begin?

This process usually includes an architect, City agencies and a contractor. The color-coded circles in the diagram below indicates key party responsible for each stage.



● Architect/Designer



● City Agencies



● Contractor

1 Interview & select a design professional

## Design & Permitting

2 Pre-Application Meeting with DBI

3 Preliminary Project Design

4 Complete Construction Drawings

5 Submit Building Permit and Pay Fees

9 Bids From Contractors

8 Building Permit Issued

7 Revise Drawings per City Agency Review

6 City Agency Review

10 Select Contractor

Note: Contract bidding and selection can start after Step 4.

! Potential neighborhood meetings & notification

## Construction

11 Begin Construction



12 Construction Administration



13 Construction Inspections



✓ Passed Inspections.

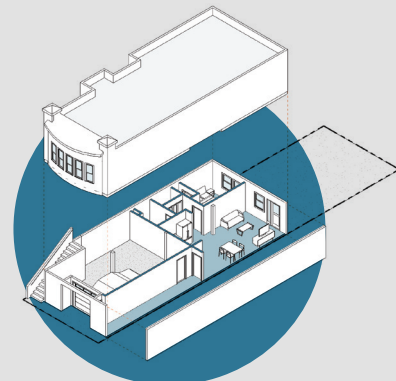
14 Certificate of Occupancy



15 Signoff to Approve Final Payment to Contractor

16 Handover to Owner

**Done! Your new unit is ready.**



# ADUs AS A HOUSING POLICY

## Accessory Dwelling Units in San Francisco

Adding apartments to existing, older housing stock is a small-scale residential infill strategy which complements the current housing development trends in San Francisco. Most of the current development occurs on lots that are significantly underdeveloped or vacant, through demolishing the existing use and constructing a new residential (or mixed use) building. The majority of the city's residential properties is already built with a single family house or a multi-unit apartment. These properties would not undergo major development in near or long-term future. However, many can potentially include one or more apartments for rental or ownership. Such small-scale residential infill would create additional homes for existing and future San Franciscans spread throughout the city.

ADUs can play a unique and important role in a neighborhood's housing supply. They can have lower construction costs because they use the existing infrastructure (walls, floors, roofs) of the primary structure, and require less material due to their generally smaller size. ADUs could benefit homeowners and renters, and provide flexibility for families:

- With a modest investment, many property owners can add an ADU. Rental revenue from leasing the ADU can help offset mortgage costs. In some cases, the addition of a unit can be completed in concert with seismic retrofit work, with potential rental revenue offsetting those costs as well.
- Renters can also benefit from ADUs. Generally smaller, subordinate units rent at lower prices than standard units in new or existing residential buildings. ADUs also allow new units in areas of the city where the rents are generally cheaper. This means ADUs can serve as a housing option that is more affordable than new residential buildings, without requiring public funds or subsidies.
- ADUs can enable families to support each other across generations while maintaining independent households, or allow people to age in place. Among the many possible scenarios, adult children of the homeowner could move to the ADU when they need support while starting their schooling or careers. In other cases families might like to provide space and care for elder relatives in their home, and could add an accessible ground floor unit for those elder members of the family. Seniors wishing to age in place may elect to vacate the primary unit but remain in their

home by moving to the ADU

ADUs are not a new housing type; in fact there are many ADUs in the city's existing housing supply. In some neighborhoods, the original houses from the 1800's were built far back from the street, and new larger buildings were built in front turning the original dwelling into a backyard 'accessory' dwelling. In many other places a garage or ground floor storage room was long ago turned into a separate apartment. Some of these units were established before the City closely regulated such activities. Others were established with Planning and Building Department review, and some were built without the proper permits and approvals.

### **San Francisco Housing Policy and ADUs**

In relation to ADUs, generally the Planning Code is concerned with whether additional units are permitted per the density limits; and the Building Department is concerned with the life safety issues of a unit. Most of the policy work around the inclusion of ADUs, happens through changes to the Planning Code. This section briefly summarizes key San Francisco programs and policies.

Since the early 1980's, the State of California has encouraged municipalities to allow ADUs to help meet local housing needs. State legislation around secondary units has been amended frequently over the years, but continues to compel municipalities to allow secondary units.

San Francisco currently allows ADUs in many parts of the City. Many properties are not built to their maximum allowable residential density. For example, a parcel zoned to allow 3 units may only contain one or two units. These properties are permitted to add additional units that may be larger "standard" units or smaller "accessory" units.

Many of the newer zoning districts that have replaced the 30 - 40 year old zoning controls do not limit residential density based on the number of units

"Second-units (i.e., in-law apartments, granny flats, or accessory apartments) provide an important source of affordable housing. By promoting the development of second-units, a community may ease a rental housing deficit, maximize limited land resources and existing infrastructure and assist low and moderate-income homeowners with supplemental income."

- *Federal Department of Housing and Community Development.*

allowed per lot. Instead, these zoning districts regulate by building height, bulk, rear yard and open space requirements. Often these districts also require a mix of unit sizes. Parcels in these “form-based” zoning districts are able to add more units, including ADUs, to the site.

Some zoning districts are explicitly intended to allow property owners to go above their maximum density limit by adding an accessory dwelling unit(s). This type of ADU regulation is common in many California jurisdictions, and consistent with State policies. The RH-1(S) zoning designation was established in San Francisco 1978, but has so far only been applied to a very small number parcels - there are currently less than 70 parcels of RH-1(S) in the city. Secondary units in RH-1(S) are limited to a net area of 600 square feet.

However, since 2014, as one of the many responses to growing housing affordability issues, San Francisco has expanded the secondary unit density exemption to other areas of the City, and to buildings undergoing a seismic retrofit, allowing owner's to add accessory units to their buildings provided they do so within the existing building envelope.

### **Legalization of Existing ADUs**

The City recently created a new program that allows property owners to legalize existing ADUs that either do not have a permit history, or were built without appropriate permits. These ADUs - commonly referred to as “illegal units” - provide a valuable source of housing for San Francisco's existing residents. Previously, if the Building Department received reports of illegal units, they were legally obligated to issue a Notice of Violation and require the property owner to demolish the unit.

The legalization program allows property owners to secure permits for existing ADUs provided they meet the City's building and fire code stan-

### **ACCESSORY UNIT**

The SF Planning Code defines ‘accessory dwelling units’ in section 207(c) (4) as it pertains to new ADUs built under recent legislation. This handbook takes a broader look at building ADUs anywhere in the City that either does not have density controls or is underbuilt relative to its existing zoning.

dards. The program also allows property owners to clear their property record as it relates to the illegal unit and ensure that tenants can stay in a safe and secure unit. For the purposes of the legislation, an “existing unit” is any unit constructed prior to January 1, 2013.

For more information regarding this program visit:

<http://sfdbi.org/legalize-your-illegal-units-today>

### **ADUs and the 21st Century**

As San Francisco’s population continues to grow, the City is committed to exploring creative solutions to meet residents’ housing needs. Affordability and flexibility remain key themes in housing policy discussions. ADUs can provide flexibility for families over generations, offset the costs of homeownership, and/or provide a more affordable housing option for some households.

A healthy housing stock has a variety of housing types – to better serve a diversity of needs. While there is little data on the number of ADUs in the City, they are generally considered to be a small but significant portion of the housing supply. As the City continues to explore solutions to address growing housing needs, we will continue to review how ADUs can play a role in our existing housing supply.





# CONTEXT AND CODES

San Francisco is a diverse and complex city, planning for any type of construction can be challenging. Every project must navigate a network of legal constraints - including compliance with life-safety concerns of the Building Code, land-use and density controls of the Planning Code, and preservation of the architectural qualities that lend distinct character to the City's neighborhoods. This section outlines portions of the Building and Planning Codes that most commonly pertain to adding dwelling units to existing buildings.

### San Francisco Housing Types and ADUs

This handbook is primarily concerned with the creation of new units on lots that already have at least one existing dwelling unit - a single-family house, a duplex, a small apartment building, etc. It focuses on the types of housing that are most prevalent and most conducive to the addition of a secondary unit.

The open ground floor (a floor with few structural dividing walls or existing uses other than storage or garage space) that is common in many houses and the lack of side yards presents a unique context for the development of ADUs in San Francisco. Most cities in the country have been planned with much more suburban residential neighborhoods - wider and deeper lots, mandatory side yards, relatively large rear yards, separate garages, etc. Those communities often focus their ADU efforts on building new, free-standing rear yard cottages.

In San Francisco, however, much of our housing stock offers surplus space at ground level under the primary residence - often used for storage or extra parking; or filled in with additional rooms, or even a separate - usually non-permitted - unit. Nearly all of the homes built in San Francisco in the first half of the twentieth century - the majority of the city's current housing stock - were built with this layout. The narrow lots and varying

topography made it an efficient and cost-effective configuration. While the individual plans and exterior styling found a variety of expressions, it was a model that was replicated street after street, decade after decade across much of the city.

Buildings constructed before the 1920's typically did not have dedicated garages. Many were raised to add a full-height garage at some point in the last century, or had a free-standing garage added to the front or side of the main house.

Whether under the primary living space, or set in a free-standing garage, these surplus ground floor spaces provide the most common opportunities for creating additional units in existing homes in the city.



The barrel front single family home with a ground floor garage, most common in the western neighborhoods but found throughout San Francisco, is typical of much of the City's housing. This example has an exterior stair to the side leading to the front door, a vehicle door on the sidewalk, and a separate tradesman's door into the garage.

# ZONING

## THE PLANNING DEPARTMENT AND THE ZONING CODE

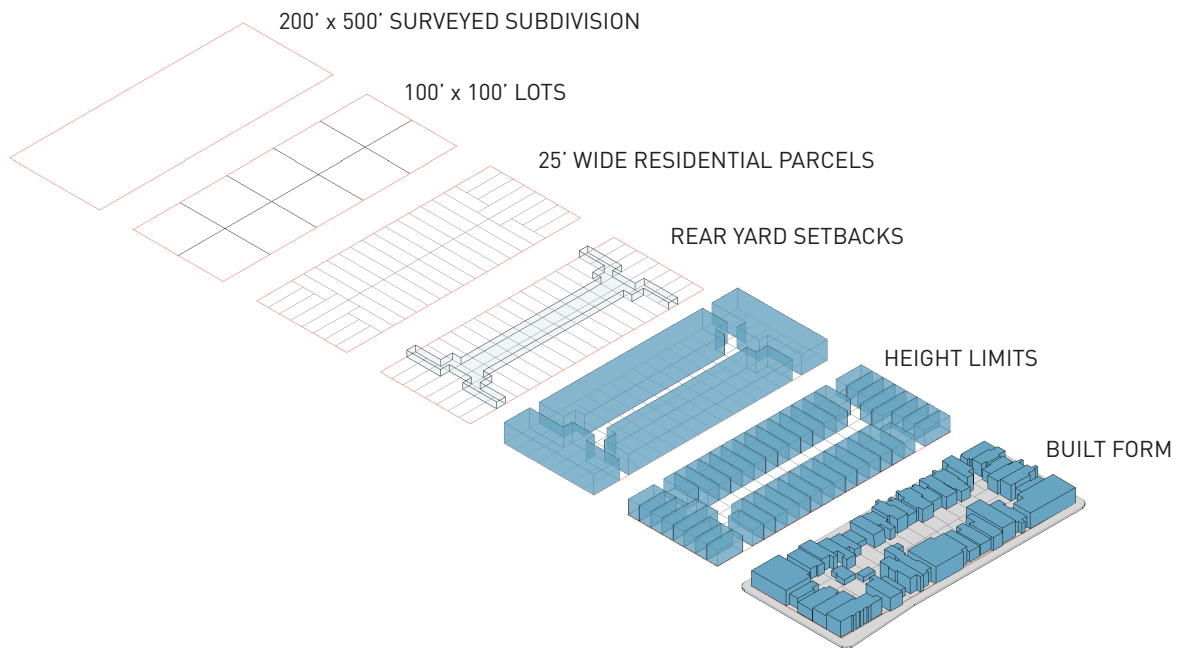
This section reviews zoning considerations related to ADUs. Density constraints are by far the most significant Planning Code consideration around the feasibility of ADUs. However, there are other considerations and requirements to take into account. These issues are discussed later in the handbook for each prototype design in the following section.

### Zoning Overview

The first step to understanding whether you can build an ADU is to understand the zoning of the property in question. Zoning regulations govern how land can be used in various geographic areas of San Francisco called “zoning districts” (also known as “zoning” or “zones”).

Zoning regulations might:

- govern sizes and shapes of buildings
- limit the number of units or apartments that can exist on a property
- require the accommodation of car parking off of the street
- set controls on planting street trees under certain circumstances



### RESIDENTIAL BUILDING PATTERNS

Many of San Francisco's typical residential blocks derive from the original surveyed block - perhaps 200' x 500' or 200' x 600' depending on when the neighborhood was surveyed - being divided into 100' x 100' squares. Residential blocks were further subdivided into 25' wide parcels. Imposing rear yard setbacks and height limits results in the building patterns found throughout the City.

For each use of land (also known as “land uses” or “uses”) in any given zone, zoning regulations are specified in a legislative policy document called the “San Francisco Planning Code.” The Code indicates whether a use is: Permitted (P), Conditional (C), or Not Permitted (NP) in any given district. Knowing the zoning of your property will help you understand what’s allowed and what specific limits may apply to your residential or commercial project.

You can view San Francisco’s zones and use classifications on the official Zoning Map in Section 201 of the San Francisco Planning Code - both available on the Planning Department’s website. The Planning Department also maintains a parcel information database - searchable by address or parcel number - that provides a summary of the property’s zoning designation:

<http://propertymap.sfplanning.org>

Zoning regulations define height limits and setbacks (a setback is how far a building needs to be from a property line). They also specify how many dwelling units are allowed on a site in a residential district. For example, in RH-2 zoning (a Residential, House Character District) up to two units per lot are currently allowed. In other types of zoning, the number of units is determined by the area of the lot. In a Residential, Mixed (Houses & Apartments) District like RM-3, one unit per 400 square feet of lot area is permitted.

Many parcels are currently underdeveloped relative to the existing zoning. For example, a homeowner of a single family home in an area zoned for two-family buildings (RH-2 zoning) would be able to add an additional

apartment within the existing zoning of the property, as long as other regulations pertaining to setbacks, height, parking, etc. are followed.

### **Districts Without Density Controls**

Many parts of the city have been rezoned in recent years. New zoning designations in some parts of the city do not have density controls. This means that as long as you follow the regulations regarding building size, shape, unit mix, and open space requirements, there is no limit on the number of dwellings that can be inside.




In the examples given in the previous section, the number of residences on a lot is limited either by a fixed number or a number of units per site area. In parts of the City without density controls, any number of units can be permitted as long as the other portions of the zoning are followed. In Transit-Oriented and Mixed Use districts, for example, the building’s allowable size is defined in the zoning regulation, and any number of units that fit within that envelope are allowed. These types of zoning are located in the City’s eastern neighborhoods, near Market Street and in Hayes Valley.

Large areas in the western and southern sections of the City are designated RH-1 and RH-1(D). These zoning categories restrict housing density to one unit per plot, and, except in specific overlay zones, adding a second dwelling unit to these parcels is currently prohibited in the Planning Code unless that unit is specifically designed for, and occupied by, senior citizens. *Reference SF Planning Code Section 207.2.*

**SAN FRANCISCO RESIDENTIAL ZONING**

ZONING VARIES FROM PARCEL TO PARCEL ACROSS THE CITY. THE PLANNING DEPARTMENT WEBSITE HAS RESOURCES TO HELP DETERMINE THE ZONING OF ANY GIVEN PARCEL AND THE IMPLICATIONS OF THE ASSIGNED ZONING CATEGORY, NEIGHBORHOOD OVERLAY, SPECIAL USE DISTRICT, ETC.



-  RH-1 AND RH-1(D) ZONING: SINGLE-FAMILY RESIDENCES
-  RH-2 ZONING: UP TO TWO UNITS
-  DENSER RESIDENTIAL & MIXED-USE/NEIGHBORHOOD COMMERCIAL ZONING: THREE OR MORE UNITS



You can find your zoning using the San Francisco Property Information Map on the Planning Department's website by entering your street address or Assessor's Parcel Number. You can find more information about zoning on the "Permit How-To Guides" page on the Planning Department's website, or by calling, emailing or stopping in person at the Planning Information Center.

### **Parking Requirements**

While the Planning Code requires one parking space per residential unit in most neighborhoods, Section 150(c) states that additional parking is only required for renovations that increase the overall required parking count by two or more spaces. Adding a single ADU would not require an additional parking space anywhere in the City.

Sections 150(e) and 161 allow for the reduction of car parking spaces on site if they are replaced with Class 1 bicycle spaces (indoor, secure and sheltered). You may be required to add bicycle parking for the ADU as well.

### **Bicycle Parking**

In addition to regulating vehicle parking, the Planning Code outlines requirements for providing secure locations to store bicycles. Adding a unit to a lot where off-street car parking exists will trigger the requirement for a new Class 1 bike space. In designing an ADU, plan for a space 2' wide and 6' long in an area that is protected from the weather.

Identify this location on the plans you submit for permit review. *Reference SF Planning Code Section 155, and Zoning Administration Bulletin No. 9.*

### **Setbacks and Open Space**

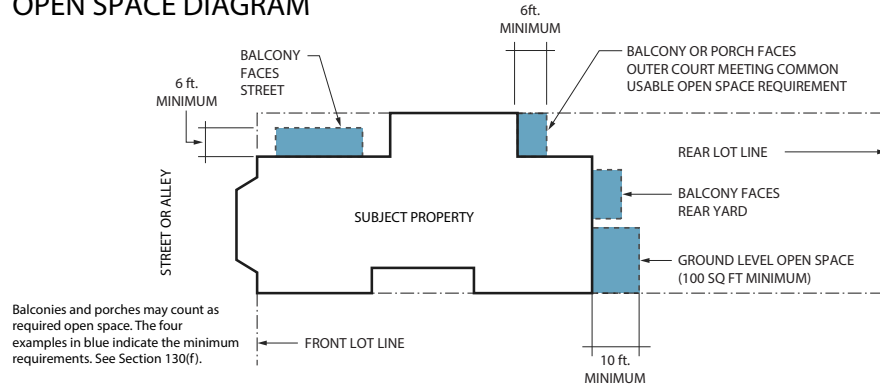
Setbacks determine how closely structures may be built to a property line. Calculating the setbacks with an addition to the rear of a house can be complicated because it can depend on the location of the rear wall of the neighboring properties. You can look at Sections 132, 133, 134, 136 and 261 of the San Francisco Planning Code to learn more about where you are permitted to build on your lot. Zoning Administrator Bulletin Number 5 (available on the Planning Department's website) is also an excellent resource for deciphering setback requirements.

One important item to note is that in almost no case will you be allowed to build an addition or new structure in the last 25% (or 15' at minimum) of your property (for example, if your lot is 100' deep, the rear setback would be 25' from the back property line). The rear yard requirement can be up to 45% of the overall depth of your lot, depending on zoning.

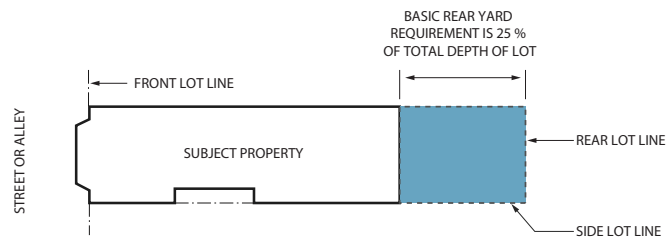
#### **DOUBLE-FRONTAGE**

Setback issues for properties with double-frontages - through-lots, rear alleyways, etc.  
- are reviewed in Prototype E

## OPEN SPACE DIAGRAM

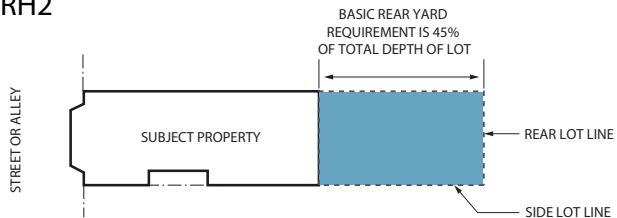


## REAR YARD



In many cases, the rear yard setback line can be reduced to an average between the depths of the rear building walls of the two adjacent buildings. See Section 134 for more information about rear yards.

## REAR YARD RH2



### OPEN SPACE AND SETBACK REQUIREMENTS

Lot configuration, existing conditions at adjacent properties, and the particulars of the property's zoning designation can all impact the specific requirements for a project. Reviewing the issue with Planning Department staff, at a Pre-Application Meeting or at the Planning Information Center for example, can help ensure compliance as your ADU design develops. (Diagrams taken from the SF Planning Code).



### Street Trees & Front Yard Improvements

The Planning Department requires one street tree along the sidewalk of a typical 25' wide residential lot. Adding a unit or legalizing a unit may trigger this requirement. If the property does not already have a street tree in place, one may need to be provided as part of the permit requirements. *Reference SF Planning Code Section 138.*

Similarly, the Planning Code has requirements for landscaping and permeability in the front yard set back of most residential zoning districts. These are likely to be required as part of the Planning Department's review of the project. *Reference San Francisco Green Landscaping Ordinance, and the SF Planning Code Section 132.*

### Removing or Merging an ADU

It is important to note that once a dwelling unit has been legally added to a property, it may not be removed without a thorough review by the Planning Department. In most cases, removing a unit requires a public hearing before the Planning Commission - either a Conditional Use authorization or a Discretionary Review. The specific requirements depend on the number of units proposed for removal or merger, their location within the building, their values, and the zoning district of the property.

See Planning Code Section 317 and the Mayor's Executive Directive 13-01 for additional information about regulations related to removing housing units.

### Neighborhood Notification

San Francisco has a neighbor notification process for building projects that meet certain criteria in Planning Code Section 311 and 312. This means everyone who lives within a certain radius of your property needs to be notified of the project and has an opportunity to file for a Discretionary Review, which is an opportunity for neighbors to express their concerns and provide input early in the project. There is also a pre application neighborhood meeting required.

Adding an ADU does not automatically trigger Neighborhood Notification. If your project is built entirely within the existing footprint of the building, you will not have to go through this process.

### Pre-Application Meetings

Prior to doing detailed design of your ADU project, it is possible to schedule a Pre-Application meeting with the Department of Building Inspection, and if necessary, the San Francisco Fire Department (for buildings with three or more units).

The Pre-Application meeting is a chance to obtain feedback that can clarify many critical code issues. There is a fee to set up this meeting, but it can save a lot of time and money later in the construction process. Questions are submitted in advance of the meeting, and notes taken during the meeting of agreed-upon interpretations are sent back to the officials for review and their signatures. The written record becomes part of your building permit application.

# HISTORIC PRESERVATION

## Historic Resource Determination

The California Environmental Quality Act (CEQA) requires cities to analyze a project's impact on known or potential historic resources. Most buildings in San Francisco that are 50 years and older that have not had an historic survey completed are classified as Category B resources, meaning that they are of potential importance.

If your project involves alteration to a structure that has been identified (through a Historic Resource Determination Survey

or other means) as a historic resource, or if the structure is 50 years old or greater, then there will most likely be additional materials and process involved in order to determine if the proposed work is appropriate. However, if your project is entirely within the existing structure and doesn't involve changes to the front of the building, you will most likely not be affected by historic preservation guidelines. Historic Preservation Technical Specialists are available at the Planning Department to answer your questions.

The following are the Planning Department's general guiding principles for historic preservation in alteration projects:

1. The distinguishing historic qualities of the building and/or neighborhood shall be preserved.
2. Alterations shall be consistent with and reference the features of the historic building and/or neighborhood that justify its significance.
3. Alterations shall be designed to be consistent with the historic neighborhood context. Neighborhood patterns for entrances and relationships to the public right-of-way shall be preserved and used to inform the design.
4. Alterations shall be located discretely on secondary or non-visible facades when possible, and should respect and relate to the overall features - such as door surrounds and millwork, existing window patterns, and solid-to-void ratios - of the building and/or the neighborhood.
5. Alterations to existing openings for a new entrance or an egress window shall minimize removal of historic material. All surround historic materials shall be protected during construction to avoid damage. All historic millwork, door surrounds, etc., shall be salvaged and reinstalled. All exterior finishes shall match surrounding finished.

# BUILDING CODE

## THE DEPARTMENT OF BUILDING INSPECTION, AND THE CALIFORNIA BUILDING CODE

This section reviews Building Code considerations. These generally revolve around life safety issues, especially in the case of a disaster. However there are also some quality issues, such as ceiling heights and minimum sizes. Each prototype covered later in this handbook reviews code issues specific to that design as well, and may make reference to this section when relevant.

Understanding the basics of the Building Code is one of the keys to determining the feasibility of a renovation project, especially when it comes to adding an extra housing unit on your property. Construction in the State of California is governed by the California Building Code (CBC). Like many cities, San Francisco has adopted their own set of amendments to the CBC in order to adapt or interpret the state code in relation to specific local conditions. This set of amendments is referred to as the San Francisco Building Code (SFBC).

In San Francisco, the Department of Building Inspection (DBI) enforces the Building Code and is responsible for issuing building permits, conducting construction inspections, and tracking code violations. The relevant codes are available on-line at [www.sfdbi.org/codes](http://www.sfdbi.org/codes). DBI also issues Administrative Bulletins, [www.sfdbi.org/administrative-bulletins](http://www.sfdbi.org/administrative-bulletins), and Information Sheets, [www.sfdbi.org/information-sheets](http://www.sfdbi.org/information-sheets), that help clarify common code issues.

### Type of Occupancy

One key feature of the Building Code is that it categorizes how buildings are used in order to determine applicable requirements for exiting, fire/life-safety, construction materials, etc. The buildings most commonly considered for adding an ADU generally will fall into either the R-2 or R-3 Occupancy Group. An R-2 occupancy has three or more dwelling units, while an R-3 has one or two units. Taking an existing building with two units and adding a unit to it will change its occupancy from R-3 to R-2. In short, an R-3 building is viewed from a Code perspective as a single family home while an R-2 building is viewed as an apartment building.

What difference does the Occupancy Group make to a homeowner? The Building Code has different requirements - exiting, fire-ratings, etc. - for different occupancies. The biggest difference in terms of the review process is that the San Francisco Fire Department may be required to weigh in on

### RESIDENTIAL OCCUPANCIES

The Zoning Code designations and Building Code Residential Occupancies have similar names but are not related. An R-2 Occupancy would typically be in an RH-3 or higher Zoning, while an R-3 Occupancy would be found in the RH-2 or lower Zoning.

the approval of your permit; the Fire Department has jurisdiction over R-2 buildings, but not R-3 buildings.

### Pre-Application Meeting

Prior to submitting your plans and building permit application, it is strongly recommended that you set up a pre-application meeting with DBI (for R-3 Occupancy), or with both DBI and the Fire Department (required for R-2 Occupancy). There is a fee for this meeting, but the pre-application meeting is an opportunity to ask questions and work out any critical code issues prior to submitting your permit application. You can find the application form and list of requirements on the Department of Building Inspection's website: [www.sfdbi.org/forms-handouts](http://www.sfdbi.org/forms-handouts).

Along with the fee and the application form you will need to submit a set of schematic drawings that describe the existing conditions and the proposed project, as well as a list of specific code-related questions.

The notes and outcome of the pre-application meeting will be available in writing, and should be included in your permit plans when they are submitted for review. The determinations made in the pre-application meeting are intended to be binding when you submit for your building permit, and will help guide the plan reviewers if they have questions about your project's code compliance.

### CODE-RELATED DEFINITIONS

Following are explanations of some of the key portions of the building code that apply to residential buildings, and commonly impact the design of a secondary unit.

## EXITING

### Means of Egress

From the 2013 California Building Code, Chapter 2:

*MEANS OF EGRESS: A continuous and unobstructed path of vertical and horizontal egress travel from any occupied portion of a building or structure to a public way. A means of egress consists of three separate and distinct parts: the exit access, the exit and the exit discharge.*

The Means of Egress is the entire route from an occupied space to a public street. The *exit access* takes an occupant from the living space to the exit. The *exit* is the path from the exit access to the street. It can include stairs, ramps and passageways that are all defined in the code and are required to have specific construction requirements (generally to provide safe passage for the occupants). The *exit discharge* is where the exit terminates at the public way. In San Francisco this is often a door that leads directly to the sidewalk.

The Building Department's plan reviewer will look closely at the Means of Egress because it is a critical component in providing occupants with a safe way to get out of the building in an emergency. They will want to ensure the minimum number of exits, minimum exit width, and the fire-rated construction requirements described in the Building Code are in compliance and clearly noted in your permit drawings.

### Number of Exits

The number of exits required from a building depends on the type of use and the number of

occupants. The minimum is usually two, but some residential uses only require one exit if the number of occupants is low enough, the travel distance does not exceed code allowances, and the building has fire sprinklers. *Reference 2013 SFBC/CBC Section 1021.*

There is at least one scenario where only one exit would be required for the new unit: if you are considering adding an ADU to the ground floor of your single-family house, you comply with the rescue opening requirements (outlined later in this section), you upgrade the fire resistance of the ceiling assembly, and you are able to add a fire sprinkler system to the entire ground floor. As there are quite a few variables affecting this issue, it should be carefully reviewed during the pre-application meeting.

### **Exit Widths and Door Sizes**

The exit path from the unit entry to the street should be at least 36" wide, with a ceiling height of at least 7'-6". Objects that encroach into the clear width may be permitted, but should be clearly noted in the plans and reviewed during the pre-application meeting. *Reference 2013 SFBC/CBC Section 1003.*

Doors along the exit path - typically the unit entry door, and any doors between the unit entry and the street should provide at least 32" of clear opening width. This generally means at least a 34" wide door panel. *Reference 2013 SFBC/CBC Section 1008.*

If you need to provide a stairway as part of the exit path from the new unit, it will also need to be at least 36" wide and provide at least 80" of headroom along the stairway. *Reference*

*2013 SFBC/CBC Section 1009.*

### **Exiting Through a Garage**

The San Francisco Building Code does not permit a dwelling unit to exit directly through a garage. If that is the only access a unit has to the street, a fire-rated hallway will need to be built from the unit entry door to an exterior door that opens to the sidewalk.

On a case-by-case basis, the Building Department may allow an exit from the rear yard to go through the garage without requiring a dedicated hall - installing sprinklers in the garage and clearly identifying the exit path will likely be required. This particular condition is outlined in San Francisco Building Department Administration Bulletin AB-020, and should be carefully reviewed during the pre-application meeting if it is relevant to the proposed exiting plan.

### **FIRE SAFETY**

Increased fire safety is achieved by both passive and active methods. One of the most direct passive methods that the Building Code uses to reduce the risk of fire is to require fire resistant materials be used in the wall assemblies that separate different spaces. At the scale of small residential buildings this will typically be a single layer of 5/8" thick Type X gyp board on either side of common 2x4 wood framing. It is important to note the locations and specifics of these assemblies when reviewing the Code compliance of the project.

### **Separation between the ADU and the Garage**

Walls that separate the ADU from an adjacent garage are required to be a fire-resistance assembly - typically a documented (UL-tested, for example) one-hour fire resistance rating. This is not a complex assembly (the typical wall of 2x4 framing and gyp board reviewed above should suffice) but the designer and contractor should be familiar with how to rate any mechanical ducts and plumbing lines that penetrate the fire rated wall, in addition to other detailing issues (fasteners, etc.) that will ensure compliance.

### **Separation between the ADU and an Upstairs Unit**

Similar to the fire rating required between the ADU and the garage, a new dwelling unit should be isolated from any upstairs units with a fire-rated floor-ceiling assembly. This may be slightly more involved than the wall assembly since the floor framing (and electrical wiring, mechanical ducts, garage door tracks, etc.) is already in place. To minimize disruption to the upstairs unit you are typically permitted to apply Type X or Type C gyp board to the underside of the floor. The new gyp board, along with resilient furring channels and fire caulking at any penetrations should be sufficient to demonstrate compliance with the separation requirement.

### **Walls on the Property Line**

Like the floor-ceiling assembly separating upstairs and downstairs units, walls on the property line must also be demonstrated to

provide a one-hour fire separation from the adjacent property. Since adding fire resistant material to the exterior is often impossible if the wall is directly next to another building, it is again generally permissible to add gyp board to only the interior side of the wall. The number of layers, typically one or two, will depend on the structure and exterior finish of the existing wall and should be reviewed at the pre-application meeting.

### **Fire Sprinklers**

Fire sprinklers are an example of active fire protection, and are now required in all new single family residential construction in California - You should include the cost of a fire sprinkler system in any construction budget you prepare (we review the costs of these systems in the Financial Analysis Section). In the case of adding an ADU to an existing single-family home, you will most likely only be required to add sprinklers to the new unit, adjacent spaces on the same floor, and along the exit path - unless directed otherwise at your pre-application meeting.

There are various 'grades' of fire sprinkler systems. NFPA-13R systems are designed for use in homes and will be accepted by the Building Department for use in R-3 occupancies. Sprinklers in a garage are generally required to meet the NFPA-13 specification. If you have three or more units, the Fire Department may require the use of a more extensive NFPA-13 sprinkler system throughout the ground floor.

One important consideration when planning a new fire sprinkler system is the available



water pressure to the property. The Fire Department recommends having the water main flow-tested to determine the working pressure. If there is insufficient water pressure to meet the demand of the sprinkler system an auxiliary pump may need to be provided.

If the sprinkler system is relatively modest it may be feasible to install a “combo-meter” - a new water meter that allows for the branching of the supply lines for domestic and fire sprinkler water lines. For larger systems, or at properties with an already undersized water service, a second (or larger) service may be required, along with new water meter(s).

system. They may not be battery operated, though they may have a battery back-up. You must provide a smoke detector in each bedroom, outside of each sleeping area, and in each story (including basements).

Carbon Monoxide detectors are required to be installed in any dwelling unit that has a fuel-burning heater or appliance (e.g. a gas range or furnace), a fireplace, or has a garage immediately adjacent.

### **Smoke and CO Detectors**

Smoke alarms are required to be installed in all new dwelling units. These items must be hard-wired into the building’s electrical



## INSIDE THE UNIT

### Ceiling Heights

Ceiling heights within the dwelling unit are governed by the Building Code as well. The main living space and the bedroom must have 7'-6" minimum ceiling heights. The other rooms in the unit - kitchen, bathroom, hallways, laundry rooms - can have ceilings as low as 7'-0". Headroom is typically quite low when dealing with adding ground floor units to hillside properties, or in existing garages - and there are a number of exceptions for beams and sloped or furred ceilings - so clearances should be reviewed during the pre-application meeting. *Reference 2013 SFBC/CBC Section 1208.*

### HABITABLE SPACES

Many of the requirements for the interior of the unit only apply to Habitable Spaces. These include bedrooms and living rooms, and any space used for eating or cooking. Bathrooms, hallways, utility closets, and storage rooms are not considered habitable spaces for code compliance purposes.

### Room and Unit Sizes

The main living space and the bedroom must each be at least 7' wide. There is no minimum room size for kitchens, but you must provide at least 36" of clear floor space in front of cabinets and appliances. *Reference 2013 SFBC/CBC Section 1208.*

Every dwelling unit must have at least one room that provides at least 120 square feet of net habitable floor area. Other habitable rooms - bedrooms and living rooms, but not kitchens, bathrooms, or storage rooms - must have at least 70 square feet of net floor area. *Reference 2013 SFBC/CBC Section 1208.*

## Efficiency Dwelling Units

The Building Code has a specific category for an exceptionally small studio unit that has one room used for sleeping, cooking, eating, and living. The total area of the unit (including bathroom, closets, kitchen, and all living and sleeping space) must be at least 220 square feet. The unit is limited to two occupants. An additional 100 square feet of unit area must be provided for each occupant over this two-person limit. The primary living space (the area of the unit excluding the closet and bathroom) must be at least 150 square feet.

In addition to the size requirements, Efficiency Units must contain the following:

- a separate closet
- a kitchen with a sink, refrigerator, and cooking appliance; with at least 30" clear floor space in front of the counter and appliances
- a bathroom with a toilet and sink, and a bathtub or shower
- the same light and ventilation as required for other dwelling types

*Reference 2013 SFBC/CBC Section 1208.*

### HOW LARGE IS AN ADU?

Many cities that have formalized their ADU policies have limited the size of dwelling units that can be considered "accessory" or "secondary" - sometimes as a percentage of the primary dwelling, and sometimes as an absolute maximum square footage. San Francisco currently has only one zoning designation that specifically regulates secondary units - ADUs in RH-1(S) zones are limited to 600 square feet. In other residential zones, there are no limits placed on the size of new dwelling units.

## Disabled Access

Requirements for creating safe and accessible residential spaces for disabled persons can be involved - with a number of different Codes, both State and Federal. An ADU added to an existing single-family home is generally exempt from complying with the Building Code's disabled access requirements.

One exception to this is if the unit is added to a duplex or larger apartment building where the total unit count would be over three apartments or four condominiums. In this case the new unit may need to comply with



the requirements of Chapter 11A Housing Accessibility. Note that units created within the existing envelope (e.g. not as an addition) of an apartment building that was first occupied before March 13, 1991 are exempt from complying

with current California disabled access codes.

Where the new unit is required to comply, it may also trigger compliance requirements for any new common spaces added to the building at the same time (laundry room, mailboxes, trash rooms, outdoor spaces, etc.), per SFBC/CBC Chapter 11B which governs disabled access requirements for public/common spaces. *Reference 2013 SFBC/CBC Section 1102A.2, and Section 3411.*

## Rescue Windows

**EMERGENCY ESCAPE AND RESCUE OPENING:** An operable window, door or other similar device that provides for a means of escape and access for rescue in the event of an emergency. *Reference SFBC/CBC Ch. 2*

Rescue openings must be provided from every sleeping room in a dwelling - this means each bedroom needs to have its own rescue opening. In the case of a studio apartment, the main living space needs a window or door that complies with the rescue opening requirement. If it is a window, it must be at least 5.7 square feet in size (5' at the ground floor). The net opening can't be less than 24 inches high or 20 inches wide, and the bottom can't be more than 44 inches above the floor. It also needs to open freely to allow a person to climb out, meaning it can't require any keys or tools to open. A door that leads to a public way or to a court that opens to a public way also meets the requirement. *Reference 2013 SFBC/CBC Section 1029.*

The Code intends for these openings to lead to an exterior space that has access to a street so that self-rescue or assisted-rescue to a safe area can occur. If the rear yard has no access to the street, the depth of the yard should be reviewed during the pre-application meeting to determine if occupants can move a safe distance away from the building while they await rescue.

### Light and Ventilation

Building codes require that all habitable rooms are provided with adequate levels of light and ventilation.

Natural ventilation may be provided by operable exterior openings, such as a window, with an area of not less than 1/25 of the floor area of the room, with a minimum opening size of 4 square feet. For example, a 150 square foot bedroom will require a minimum of 6 square feet of window that can be opened for ventilation. An exterior door can also be used to comply with the ventilation requirement. This requirement can also be met by installing an active mechanical ventilation system. *Reference SFBC Section 1203.*

In addition to providing ventilation for the living spaces, the California Mechanical Code requires that an exhaust fan be installed in the bathroom.

Habitable rooms (excluding kitchens, home offices and media rooms) within a dwelling unit need to receive natural light by means of exterior glazed openings (windows, French doors, sliding glass doors, etc.). The minimum net glazed area needs to be at least 8 percent of the floor area of the room served. *Reference 2013 SFBC/CBC Section 1205.*

In a one-room studio apartment the floor area of the entire living and sleeping space needs to be used to calculate the light and ventilation requirements. A separate bedroom built into an apartment needs to meet these requirements as well. If the bedroom is not fully enclosed, it can share the light and air with the adjacent room provided that the common wall between the two rooms is 50 percent open and unobstructed and the area

is at least 25 square feet or 1/10 the floor area of the room served.

This will be covered later in the prototypes section.

### Temperature Control

You must provide a heating system for the new unit. This must be a permanently installed system, such as a furnace or an in-wall unit. Plug-in space heaters are not an acceptable method of complying with the Code requirement. *Reference 2013 SFBC/CBC Section 1204.*

### Energy Conservation

Any new ADU will need to demonstrate compliance with the California Energy Standards, more commonly known as Title-24. These standards regulate how much insulation is required in the walls and roof, how many and what type of light fixtures can be installed, and the type of water and space heating equipment that is used.

T-24 calculations are usually performed by an outside consultant for a modest fee - typically less than \$500 for a straight-forward residential project. The project designer will be able coordinate the T-24 calculations with the project requirements, and make sure that the proper reports are included in the permit drawing set.

### Noise Insulation

Requirements to provide walls and floors that are designed to significantly reduce noise

transmission - both airborne and impact noises - apply only to residential buildings with building permit applications dated after August 22, 1974. Quoting the Building Department's bulletin AB-026: "They do not apply to buildings constructed before 1974 in which new units are created through alterations, additions or changes of use."

When adding a unit to a building permitted after August 22, 1974, all wall and floor assemblies will need to be documented to provide the required sound insulation.

Wall and floor-ceiling assemblies which separate living units or guest rooms from each other, or from common areas of the building such as hallways and garages, must meet a Sound Transmission Class (STC) of 50. In addition, the floor-ceiling assemblies must meet an Impact Insulation Class (IIC) of 50.

There are a number of detailed components (caulking at framing plates, etc.) that are listed in the Building Department's bulletin. In addition to the overall assemblies, these detail items should be clearly indicated in the permit plans.

Whether required by Code in your particular building or not, it is prudent to consider including basic provisions for minimizing noise transmission - particularly if the ADU is intended to act as a rental property.

*Reference San Francisco Building Department Administrative Bulletin AB-026.*

## EARTHQUAKE SAFETY

### Seismic Upgrades

Upgrading the earthquake safety features in an older existing building is often considered a sound financial investment given the modest costs generally associated with a retrofit, and the tremendous costs of repairs that come with serious earthquake damage.

The California Building Code mandates that existing buildings designed to comply with a pre-1978 building code that are going through a change of occupancy, or any type of substantial addition or alteration, should also undergo a seismic retrofit as part of the improvements.

The need for a seismic upgrade should be determined as early in the process as possible, as it may impact the layout of the ADU. It should definitely be reviewed at the pre-application meeting.

For structures not subject to a Mandatory Seismic Upgrade or the Soft-Story program, owners may still want to consider completing a voluntary seismic upgrade at the same time they are adding a unit. Even if no excavation or foundations are required for the ADU, the wall finishes required to construct the unit may cover up much of the framing in the open garage - making any future seismic upgrades much more costly.

The City encourages homeowners to retrofit their homes through the Building Department's voluntary seismic upgrade guidelines.

*Reference: California Existing Building Code Chapter A3, and Department of Building Inspection Administrative Bulletin AB-108.*

### Soft-Story Conditions

San Francisco initiated the Mandatory Soft-Story Program in 2013 to improve the earthquake safety of older multi-family buildings. Buildings subject to review are wood-framed and must have been permitted for construction prior to 1978. They must have five or more residential dwelling units, three or more stories (or two stories over an exposed basement), and have not yet been seismically strengthened. The City has completed the survey and notification process and is currently reviewing the screening forms to determine a property's eligibility and status. Building owners should now be aware, through the notification and screening process, whether or not their property is subject to the regulation.

For buildings that are subject to mandatory structural retrofit work under the program, there may be opportunities for adding one or more dwelling units while the seismic upgrade is taking place. Since compliance with the soft-story program is a legal requirement and has specific deadlines for compliance, it is recommended that the permitting of the soft-story retrofit be kept separate from the permitting of the additional unit(s), even if construction is scheduled to occur at the same time.

*Additional information can be found at the building department's website: <http://sfdbi.org/mandatory-soft-story-program>*

*and the San Francisco Earthquake Safety Implementation Program website: <http://sfgsa.org/index.aspx?page=6044>*

### SOFT-STORY RETROFIT AND ADU'S

Recent City legislation permits ADUs to be added to properties that are subject to the Mandatory Soft Story Program. The intention is to encourage property owners to add units to an apartment building as part of the retrofitting work - increasing the income potential of the property, and helping to offset the costs associated with the seismic upgrade.

# OTHER REQUIREMENTS

## MISCELLANEOUS CODES THAT IMPACT PLANNING FOR AN ADU

### Rent Control

The City's Rent Board regulates rents, security deposits, rent increases, and evictions for residential rental properties that fall under the current San Francisco Rent Ordinances (Chapter 37). The Rent Control Law applies to most rental units in buildings that were constructed before June 13, 1979. Units in buildings built after that date are generally exempt from Rent Control. Specific types of units are also generally exempt; non-profit or religious housing, transient occupancies (hotels, etc.), buildings that have received substantial renovation since 1979, for example, are not under the jurisdiction of the Rent Board.

While there are exceptions, single-family homes are not typically subject to rent control. There are Rent Board eviction protections in place that may still apply however, and existing non-permitted ("illegal") units in single-family homes are generally subject to rent control.

City legislation enacted since 2014 requires that new ADUs in the Castro or in buildings undergoing seismic retrofitting will be subject to Rent Control if the existing building is already subject to the law. *Reference: San Francisco Planning Code Subsection 207(c)(4)*

Questions about whether a specific residence or ADU would be subject to Rent Control should be directed to the Rent Board

for determination.

*Reference <http://www.sfrb.org/>*

*The Costa-Hawkins Rental Housing Act* prohibits municipal regulation of rent increases on single-family homes and condominiums; and prohibits regulation of how rent adjustments are made when a new tenant leases the property.

A Costa Hawkins waiver is required when the new ADU is being added as a part of the legislation passed in 2014 under Planning Code subsection 207(c)(4) that legalized additional units in the Castro and in multifamily buildings undergoing seismic strengthening.

For ADUs in the Castro and those created under the seismic retrofit legislation, if the existing building is subject to rent control, then ADU would also be rent control and Costa Hawkins waiver would be required. If the ADU is being added to a single family home- which is not usually subject to rent control- the Costa Hawkins agreement won't be necessary since the ADU won't be rent controlled.

If you are adding an ADU elsewhere in the city, the rent control and Costa Hawkins waivers will not apply.



### **Curb Cuts**

If you are removing a garage as part of adding an ADU, the Department of Public Works (DPW) will require that you also remove the curb cut that used to provide driveway access to that garage.

### **Garbage Cans**

DPW also enforces a San Francisco municipal code that requires garbage, recycling, and compost receptacles to be stored so that they are not visible from the street. In planning for an ADU that may take up a substantial amount of the garage space, care should be taken to maintain adequate space for the receptacles, or to provide a screened outdoor area where they may be stored. Information on acceptable screening enclosures can be found by searching for ‘Garbage and Recycling Receptacles’ at the Department of Public Works’ website: [www.sfdpw.org](http://www.sfdpw.org).

### **Utilities**

One of the advantages to constructing an ADU within an existing building rather than as a detached, free-standing structure is that the water and drain lines are usually (relatively) easy to tap into so that the services can be extended to the new unit’s bathroom and kitchen.

Although the existing water service can often be used to supply the new unit (you may not even need to install a separate domestic water meter), in many cases, a new dedicated water meter will be required that just serves the new fire sprinkler system.

The plumbing fixtures in the ADU should be able to tie into the existing sanitary sewage drain lines under the house as well. Drains do have maximum capacities, however, so the existing drain sizes need to be verified as adequate for the new fixture count.

ADUs do require their own electrical service, with a dedicated electrical meter, circuit panel, and shut-off.

If you opt for gas appliances, a gas water heater, or gas space heating, you will need to extend the property’s gas lines to the new unit as well. Since the gas service will need its own meter, the new line must be installed starting from a point ‘upstream’ of the existing gas meter.





# PROTOTYPES

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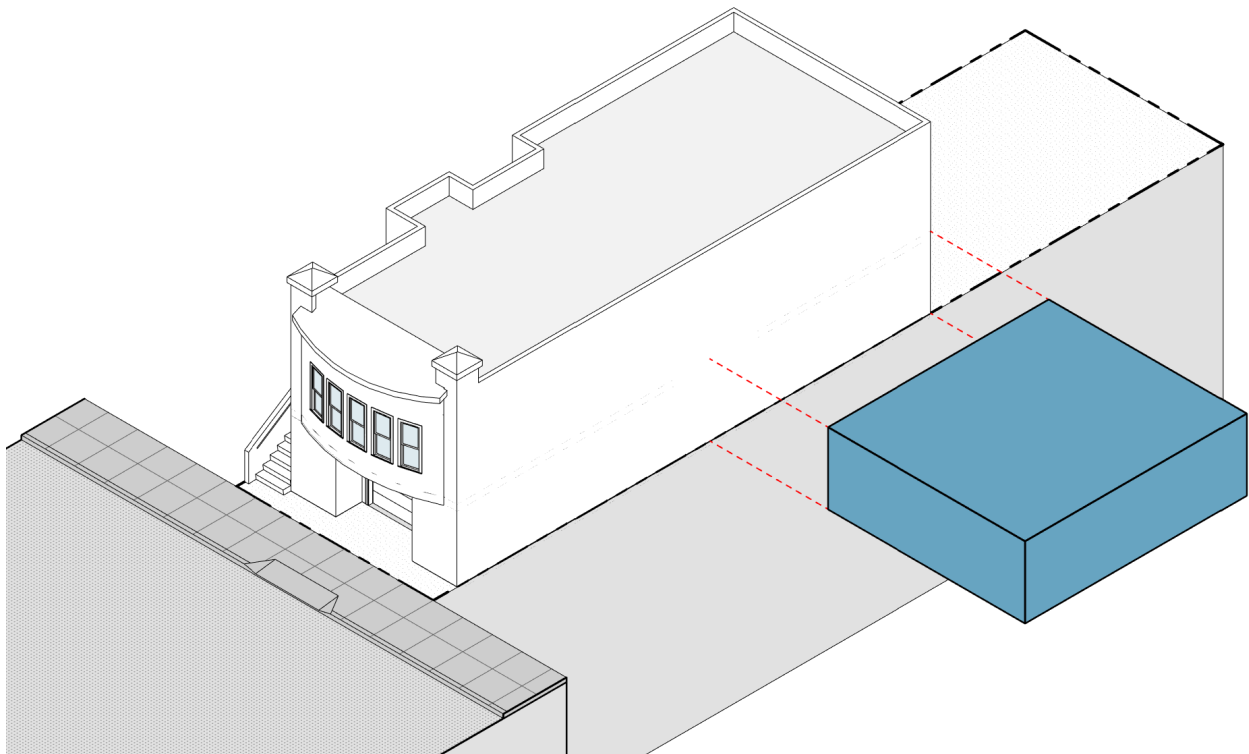
Following are a set of residential buildings typical of much of the housing found in San Francisco. For each prototype, we provide a brief description of the existing building, and propose a strategy for adding an accessory dwelling unit to the property. The solutions, variations, and sets of issues are not intended to provide a comprehensive design review, but rather to clearly describe some of the more common issues that home owners and designers will encounter when planning for an ADU across a fairly diverse set of building types.





# PROTOTYPE A

Partial garage conversion of a single-family home with an open ground floor



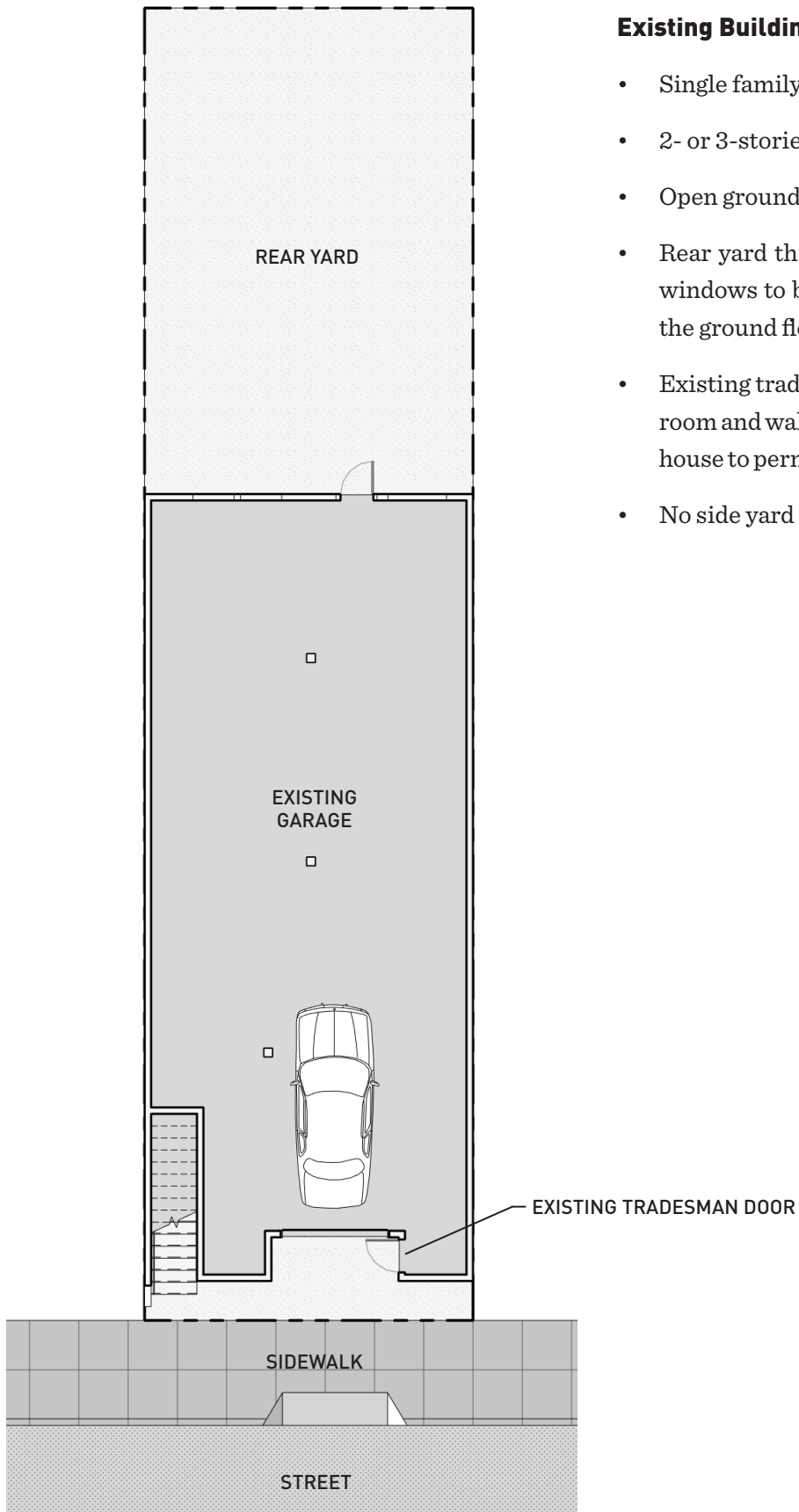
### Existing Building

The existing building is one of the more common housing types in San Francisco - a 2-story single-family home with an open garage on the ground floor, and all of the living space and bedrooms upstairs. These buildings are generally 25' wide, filling the entire width of a typical San Francisco parcel; and provide no side yard. Some neighborhoods were developed with fairly generous front yards, but most of these homes are setback only a few feet from the front property line.

The depth of the building varies based on the floor plan - perhaps 55' or more in larger versions, down to 35' or 40' in some later smaller homes. This example concerns itself with the former, where on-site parking is maintained and the footprint of the original building is unchanged. A shallower footprint example is shown in Prototype D.

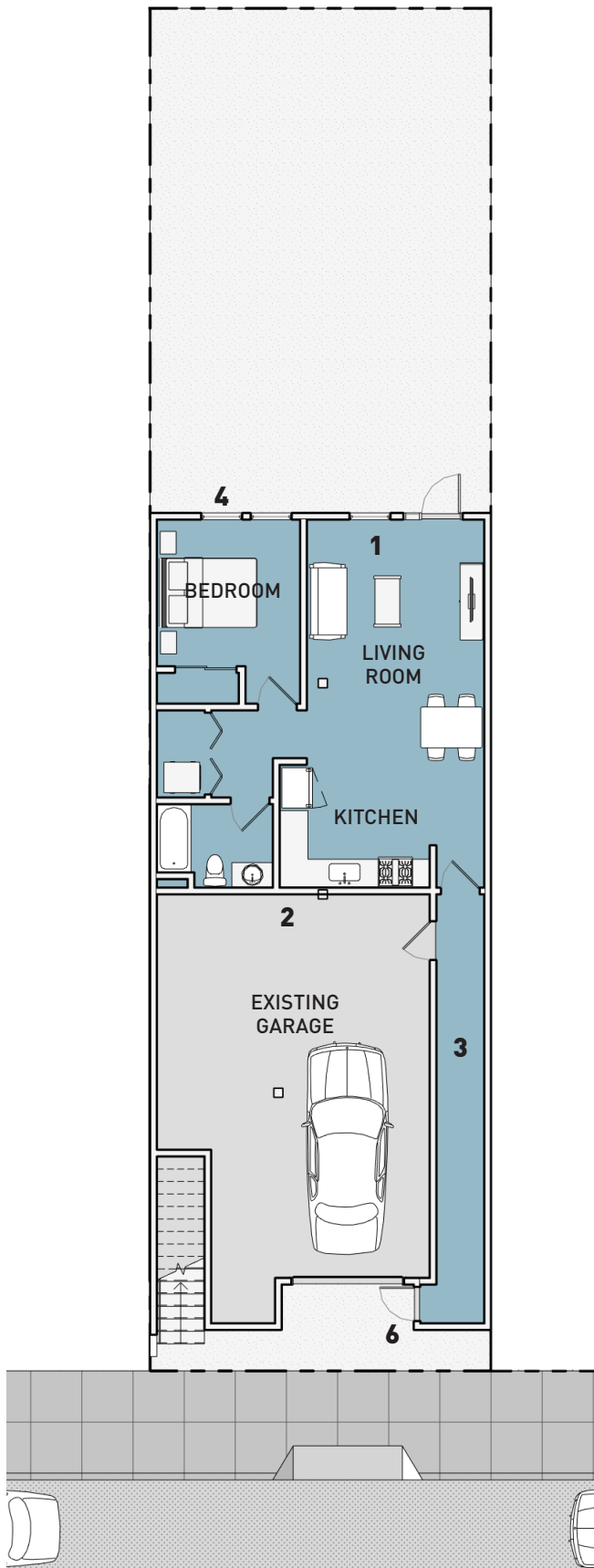
Most of the homes developed before WWII have tradesmen doors leading into the garage from the sidewalk, but that feature was dropped from many of the smaller homes developed from the 1950's onward.



**Existing Building**

- Single family residence
- 2- or 3-stories
- Open ground floor garage
- Rear yard that is level enough to permit windows to be placed in the back wall of the ground floor
- Existing tradesmen door, or enough head room and wall space along the front of the house to permit a new door to be installed
- No side yard

**Existing Ground Floor Plan**



Ground Floor Plan

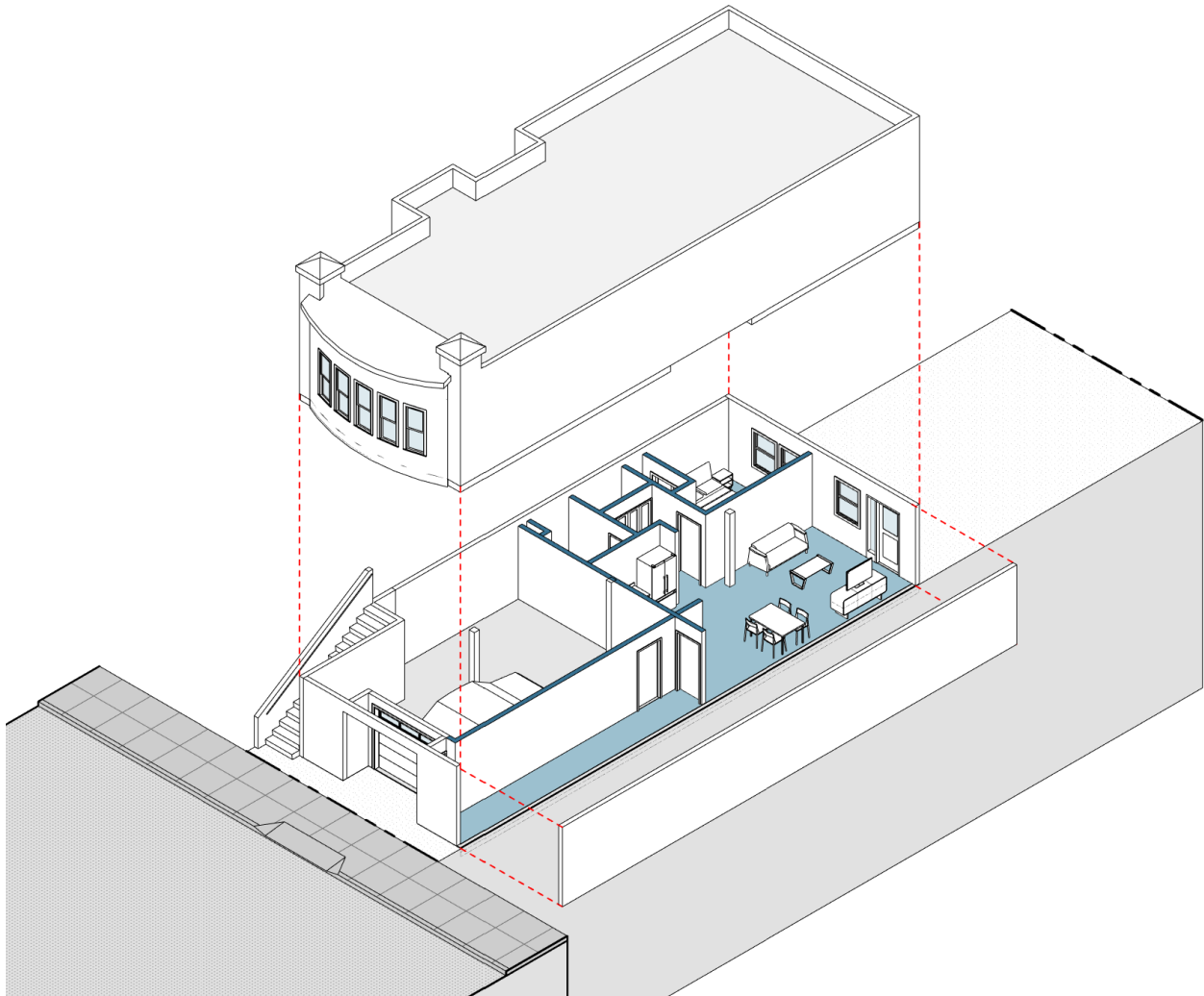
### ADU Strategy

The unit is arranged at the rear of the ground floor, with the living space and bedroom placed against the exterior wall to take advantage of the natural light and ventilation. The unit plan assumes at least one on-site parking space will remain, and that the existing footprint of the house will be maintained. It is likely that the upstairs bathroom and/or kitchen are located towards the middle of the plan as well, hopefully allowing for a relatively easy access to the drain lines for the new bathroom and kitchen. If not, extra plumbing will need to be added to coordinate vents and drains.

### ADU PLAN

- 1.** Bedroom and primary living space arranged to maximize access to natural light, and have the opportunity for operable windows and doors facing a rear yard that's at least 25' deep.
- 2.** Provide a fire-rated wall to separate the dwelling unit from the garage.
- 3.** Fire-rate the new exit hall through the garage that leads from the unit entry door to a door that opens directly to the sidewalk.
- 4.** Emergency escape and rescue openings to the rear yard.
- 5.** Ensure that the existing door provides adequate exit clearance.





Most homes of this type have a narrow interior stair that connects the living space directly to the garage. With the ADU taking up much of the garage space this stair will likely need to be removed, and the opening in the floor above framed in, and finished to match the upstairs.

San Francisco will not permit a dwelling unit to exit directly through a garage, so a dedicated exit hall has been built inside the garage leading from the rear unit to the tradesman door at the front.

### Primary Considerations

**Exiting:** Like a number of other prototypes, the depth of the rear yard needs to be reviewed during the pre-application meeting in order to determine if the emergency escape and rescue openings are compliant.

If the tradesman door provides less than 32" of clear opening width an alternate exit door may be required - either a wider door that replaces the existing tradesman door, or a new door at a different location. In either case, if a new door is installed, the Planning

Department will need to review the project to ensure it complies with the Zoning Code, Historic Preservation guidelines, Neighborhood Notification requirements, etc.

The new hall should be planned to provide at least 36" of clear width along the entire path of travel. Any obstructions that reduce the width, such as gas or electric meters, or plumbing pipes, should be noted and reviewed during the pre-application meeting.

Similarly, any steps or other abrupt changes in level should be noted for review to make sure that they don't constitute a tripping hazard, or otherwise interfere with door clearances.

**Fire Sprinklers:** As with other prototypes that add a unit to the ground floor of an existing building, installing a residential fire sprinkler system throughout the ground floor may be necessary. While San Francisco does not automatically require sprinklers for projects that are alterations to existing 1- and 2-unit buildings (SFBC 903.2.8, Exception 5) but circumstances specific to particular properties and proposals may change or expand that requirement. It is always best to review it carefully during the pre-application meeting.

## VARIATIONS

### Sloped Lots

As with any open ground floor building in the City, ceiling height can vary dramatically across the ground floor. On an up-slope lot, it is not uncommon for the rear portion of the ground floor to be raised several feet above the garage floor - sometimes, the ground floor is only roughly excavated into a crawl space. In this case, substantial excavation would be needed to re-build the foundations, and provide the 7'-6" ceiling height that is required in the living spaces.

### Alternate Entry Point

The location of the entry to the primary dwelling unit upstairs plays a role in planning for the ADU. The majority of San Francisco homes have an exterior stair leading from the sidewalk up to an entry door landing - as shown in this prototype or in Prototype C. A less common plan, however, provides for a front door on the ground level and an interior stair up to the living space; or for a 'tunnel-entry' (quite common in the 1930's

and 1940's) that provides an exterior hall at ground level to a winding stair towards the middle or rear of the house. These variations on the entry sequence lend themselves better to ADUs because they may offer good opportunities for accommodating an entry door to the rear unit without needing to construct an enclosed hall through the garage.

### Corner Lot

It is not uncommon to find this housing type located on corner parcels. A corner location allows for greater access and can provide a number of opportunities. If the floor of the unit is at the same level as the adjacent sidewalk, it may be possible to provide a dedicated entry door directly from the street into the unit (note that this may trigger historic preservation review). Another option may be to have the unit entry door open directly into the backyard, and then provide direct access to the street.



Diagram of Egress Through the Backyard of a Corner Lot



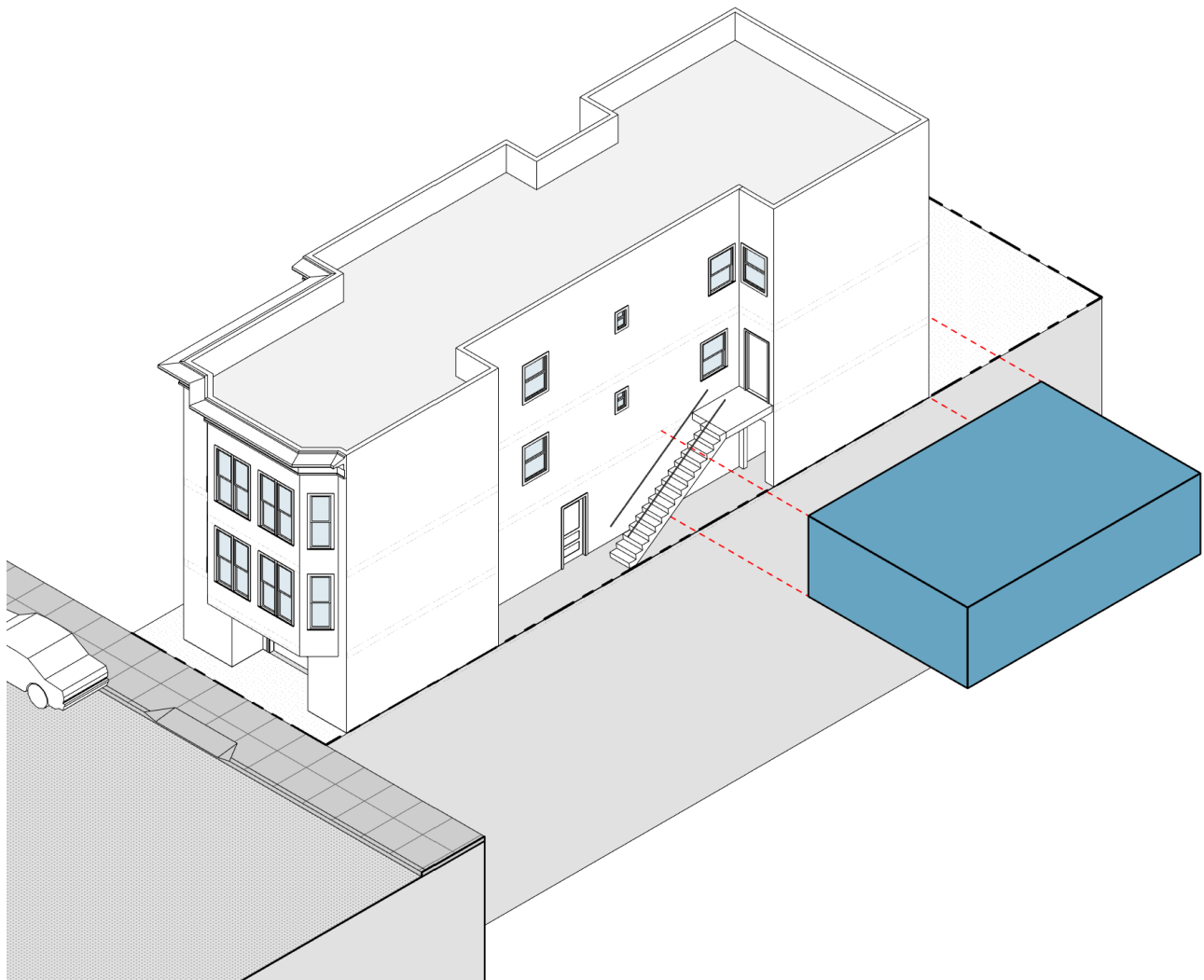




# PROTOTYPE B

Partial garage conversion of a duplex  
with an open ground floor

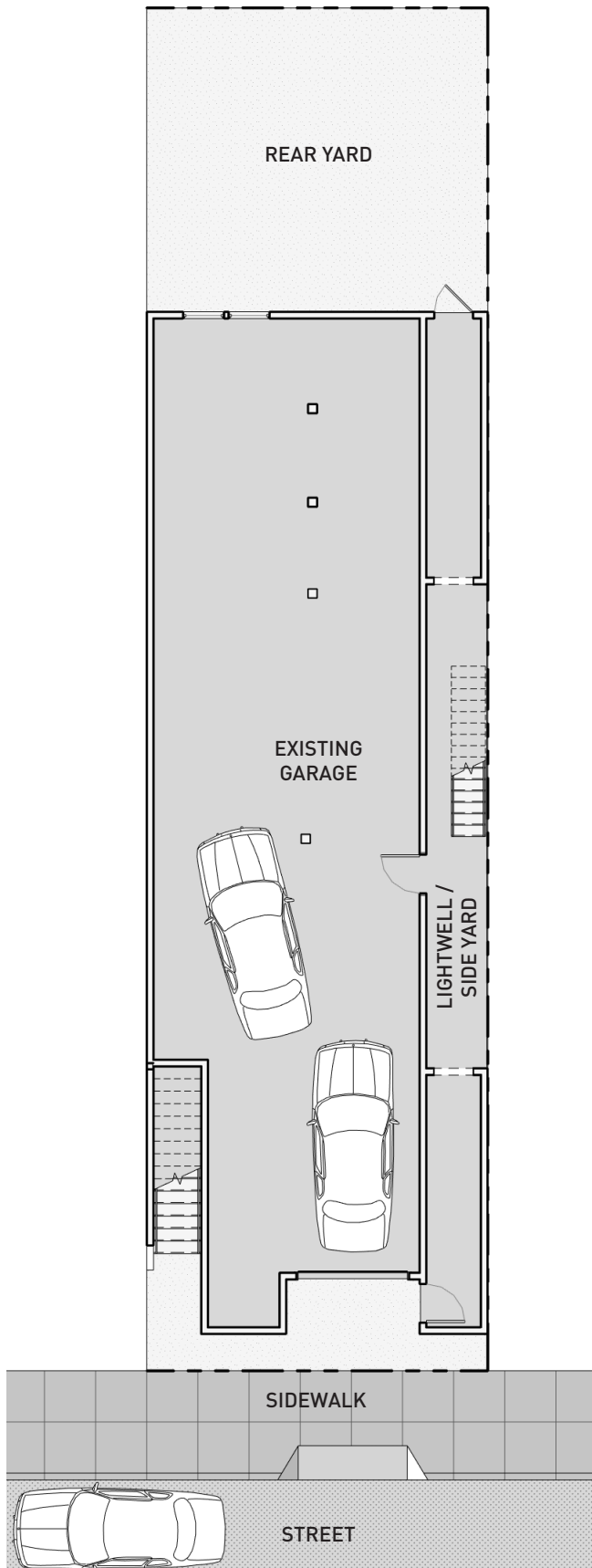




### Existing Building

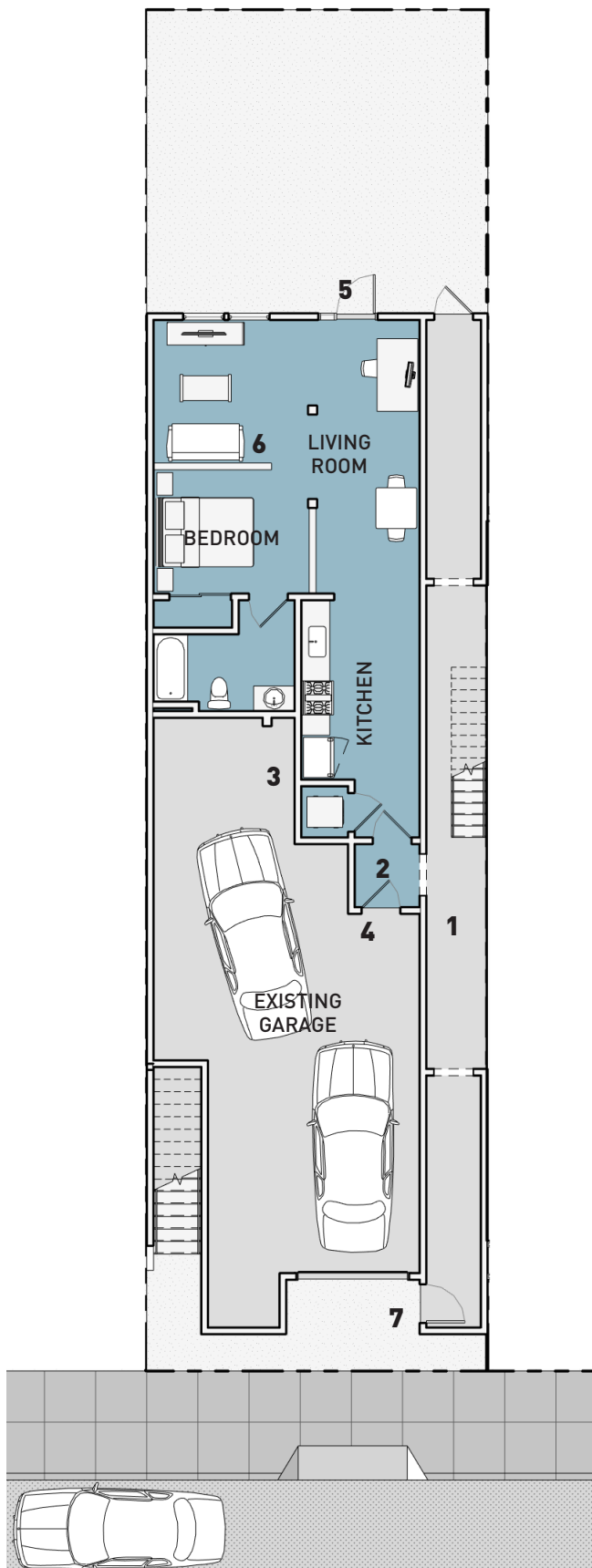
This prototype covers another very common San Francisco housing type- a modest two-unit building consisting of two flats over an open one-story ground floor garage. The garage is typically large enough to park two cars in tandem and still have room for storage along the rear wall. A narrow side yard often provides access from a tradesman door to the backyard. The units above may extend over a portion of the side yard, but much of it is open to the sky and functions as a lightwell. There is a single shared entry stair leading up from the street to a common landing at level two. Access to the upper flat continues up a second interior stair. There is often a secondary stair near the rear of the building that gives one or both of the units access to the rear yard and side yard/lightwell.



**Existing Ground Floor Plan****Existing Building**

- Two existing units
- Three stories
- Open ground floor garage
- Rear yard that is level enough to permit windows to be placed in the back wall of the ground floor
- Side yard lightwell suitable for use as an exit





Ground Floor Plan

### ADU Strategy

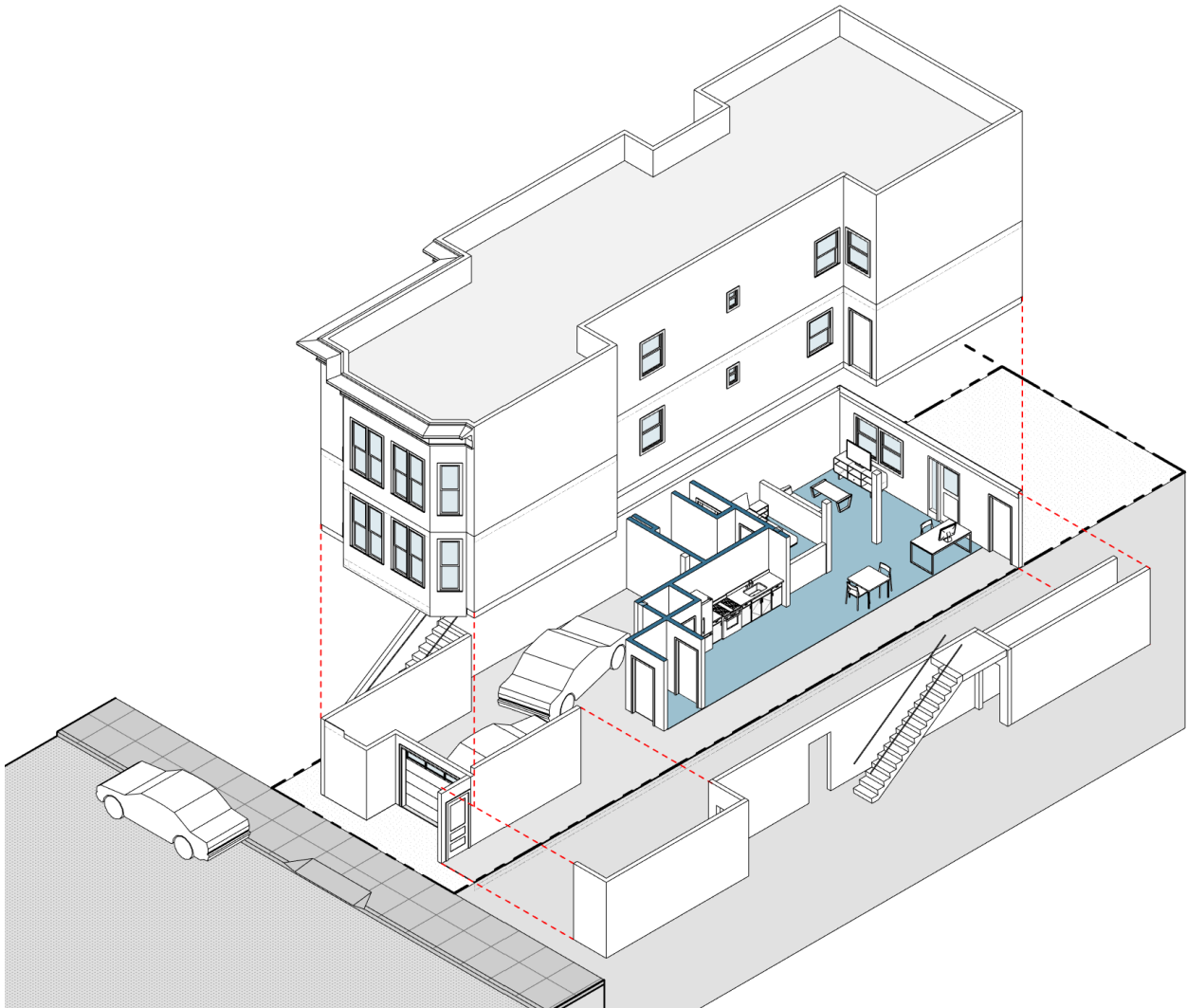
This ADU is located behind the garage in a small two unit apartment building.

In order to maintain at least one on-site parking space, the ADU is placed in the rear portion of the ground floor. Depending on the overall footprint of the building, and the layout of utilities and structural columns in the garage, it may still be possible to accommodate two tandem parking spaces even with the ADU in the rear.

This scenario assumes the new ground floor unit will have a readily accessible exit path through the side yard and tradesman door.

#### ADU PLAN

1. Lightwell with upgraded fire-resistance, as required, and clearance to function as an Exit Court
2. Vestibule to separate ADU from the garage
3. Fire-rated wall between the unit and the garage (and a rated ceiling to separate from the unit above).
4. Fire-rated door between the unit and the garage
5. Emergency escape and rescue opening to the rear yard that is at least 25' deep
6. Bedroom shares natural light and ventilation with the main living space by using partial height walls to separate spaces
7. Existing tradesman door that provides at least 32" of clear opening width



Ideally, the path is at least 36" wide and without obstructions that would interfere with the Fire Department moving equipment and personnel through the space in an emergency.

The side yard in this prototype results in a narrow building footprint compared to the other prototypes. A common strategy to maximize natural light and ventilation for the living and sleeping spaces is to bring the kitchen and bathroom away from the exterior walls into the middle of the building. This prototype puts the bathroom behind the

living space and adds a partial height wall between the living and sleeping spaces to share light from the back windows between the two areas.

### Primary Considerations

**Occupancy Change:** As mentioned in the Building Code Overview section, adding a third unit to a two-unit building requires changing the occupancy classification from R-3 to R-2. The Fire Department will be included in the permit review for this

project, and this change in occupancy may entail a number of additional code-required elements that would not come up when adding a unit to a single-family home.

**Exiting & Fire Ratings:** Since the lightwell will also serve as an exit path for the new unit, it is likely that the Building Department and Fire Department will require more fire-resistant construction for at least a portion of this area (from the exit door to the street, for example). This would involve adding layers of gypsum board to the walls to create fire-rated assemblies. The lightwell has, in effect, become an Egress Court (a court or yard that provides access to a public right of way for one or more exits) for purposes of Building Code compliance, and any windows and doors in the new unit that open into the lightwell may need to be fire-rated as well.

The other area that would likely require an upgrade to the fire rating would be the ceiling of the new unit and garage. The ceiling of the entire ground floor may be required to be finished in additional layers of gypsum board in order to increase the fire resistance of the separation between both the existing units above and the entire ground floor.

Walls that separate the garage from the new ADU also need to be fire-rated, and a fire-rated door is required between the unit and garage. It is important that any door that leads to the garage not open directly into the space that is directly connected to a sleeping room. In this case, we have introduced a small vestibule that functions as entry to both the unit and the garage, and mitigates the separation requirement. This door to the vestibule also

needs to be fire-rated.

If the tradesman door opening is too narrow to safely accommodate the exit path (less than 34" wide), a new door may need to be installed - either in place of the existing door, or at a new location. In this case, the project will need to be reviewed with the Planning Department to ensure that zoning code compliance, neighborhood notification process, and any concerns over preserving the potential historic character of the structure are addressed. Similar to Prototype A, a new dedicated hall may need to be added if there is no suitable exit path in the existing configuration.

**Fire Sprinklers:** The common fire protection systems reviewed in Section Two, including fire sprinklers, will be required in the new dwelling unit. This should be discussed at the Pre-application meeting.

**Accessibility:** Unlike most of the prototypes in this book, this new ground floor ADU may need to be built to accommodate occupants who are disabled, as the occupancy change mentioned earlier means it is defined more as an apartment building than a single family home under the California Building Code.



As was reviewed in Section 2, the unit itself may need to be plan checked for compliance with CBC Chapter 11A. If the project includes new common spaces, those might also need to comply with appropriate accessibility requirements. Compliance with disabled access requirements should be carefully reviewed during the Pre-application meeting.

## VARIATIONS

**See the “Variations” section for Prototype A.**



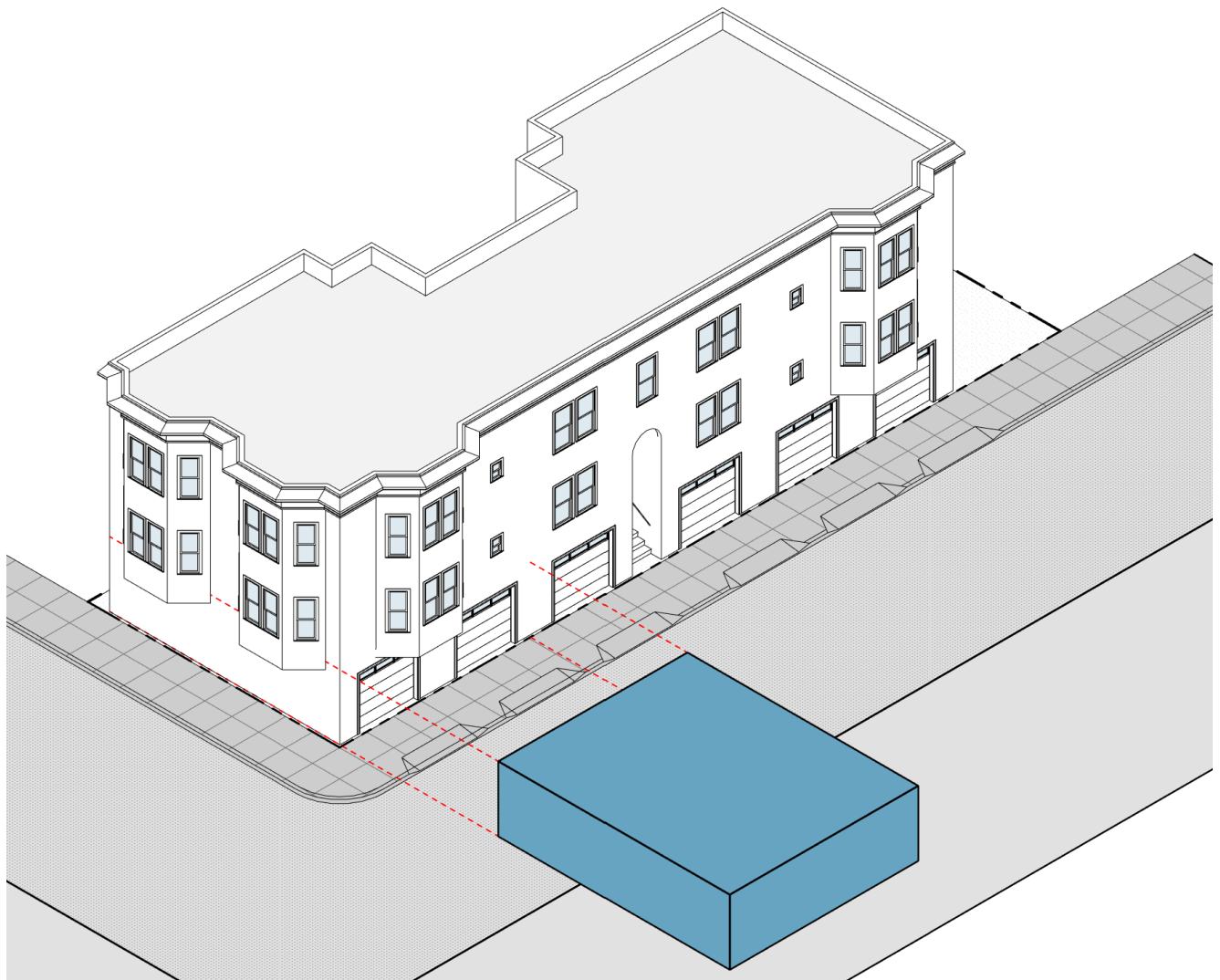




# PROTOTYPE C

Partial garage conversion of a larger apartment building





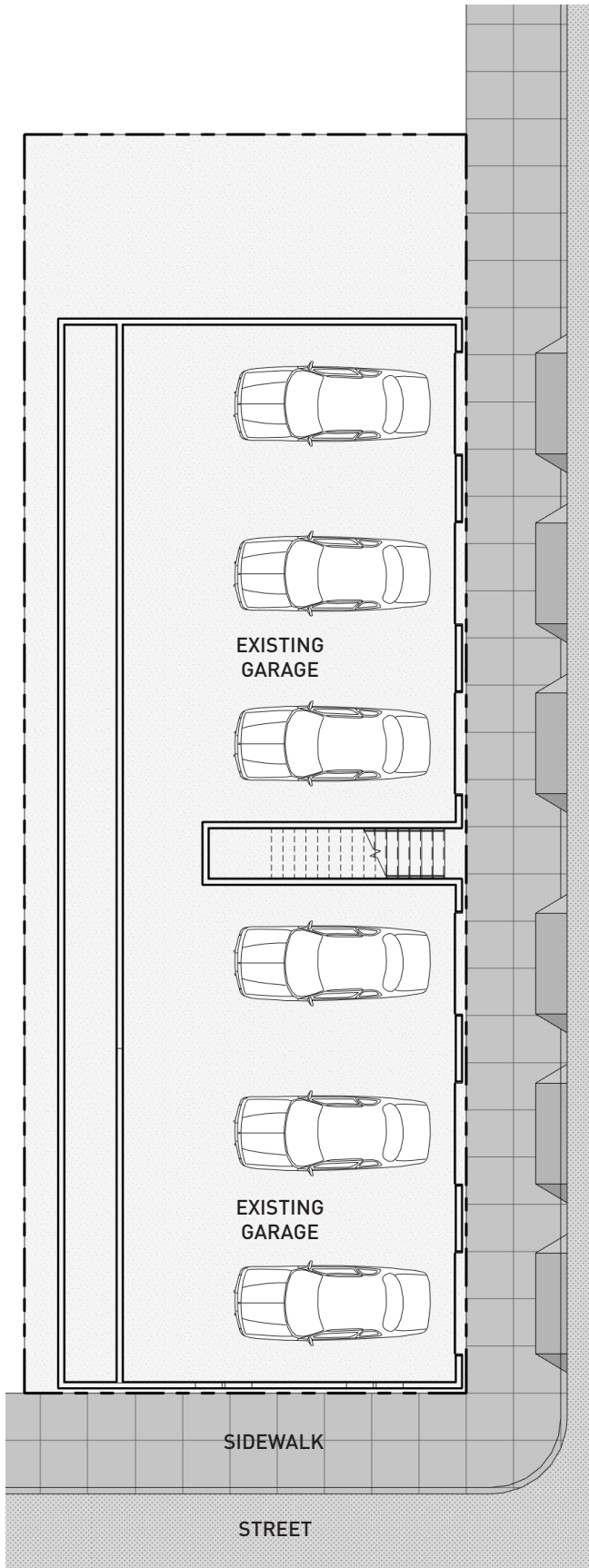
### Existing Building

This model takes place in an older low-rise apartment building, common throughout much of the City. These are typically three or four stories and have at least six units. They are often found on corner lots, and may have quite a few parking spaces immediately adjacent to the sidewalk - with the cars either concealed behind separate garage doors or exposed in open carports.

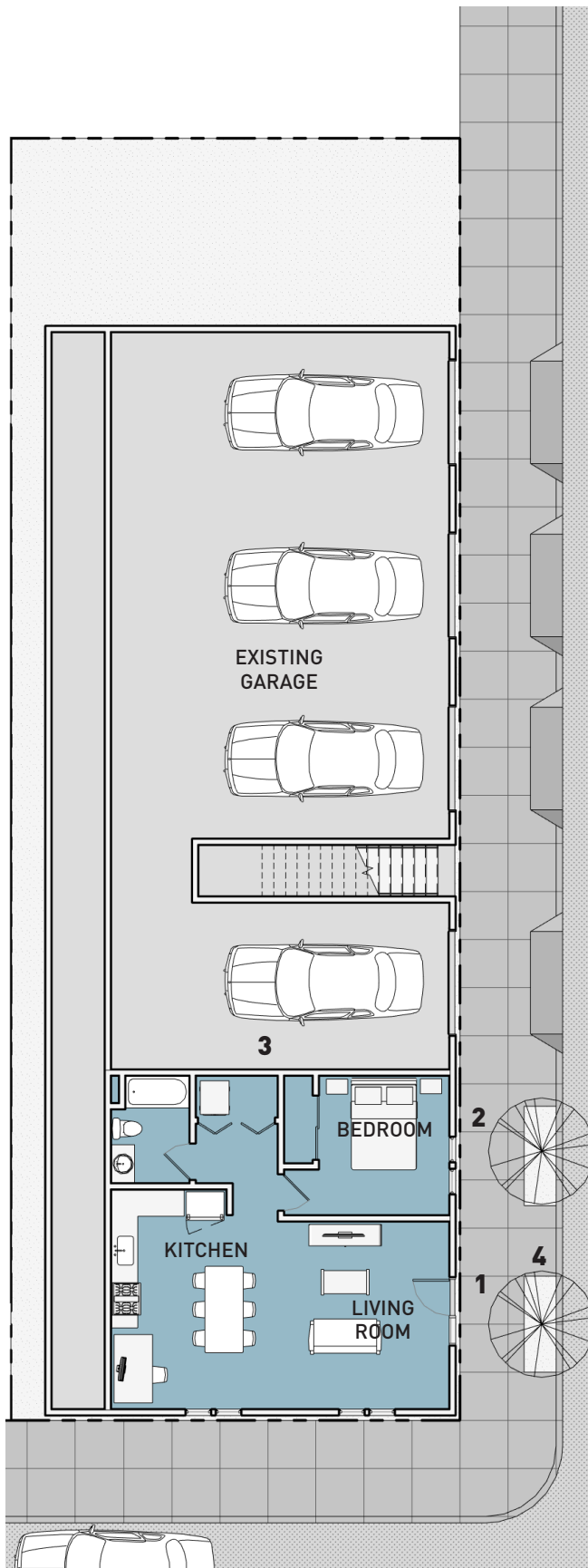
### SOFT STORY LEGISLATION

Many of these buildings have been identified as 'soft-story' structures under the City's Earthquake Safety Implementation Program, and may be impacted by the Mandatory Soft Story Retrofit Ordinance passed by the San Francisco Board of Supervisors in 2013.



**Existing Ground Floor Plan****Existing Building**

- Three or four stories
- Generally at least four units
- The ground is almost exclusively dedicated to car parking
- Each parking space typically has its own driveway
- Often on corner lots, but they are found mid-block as well



Ground Floor Plan

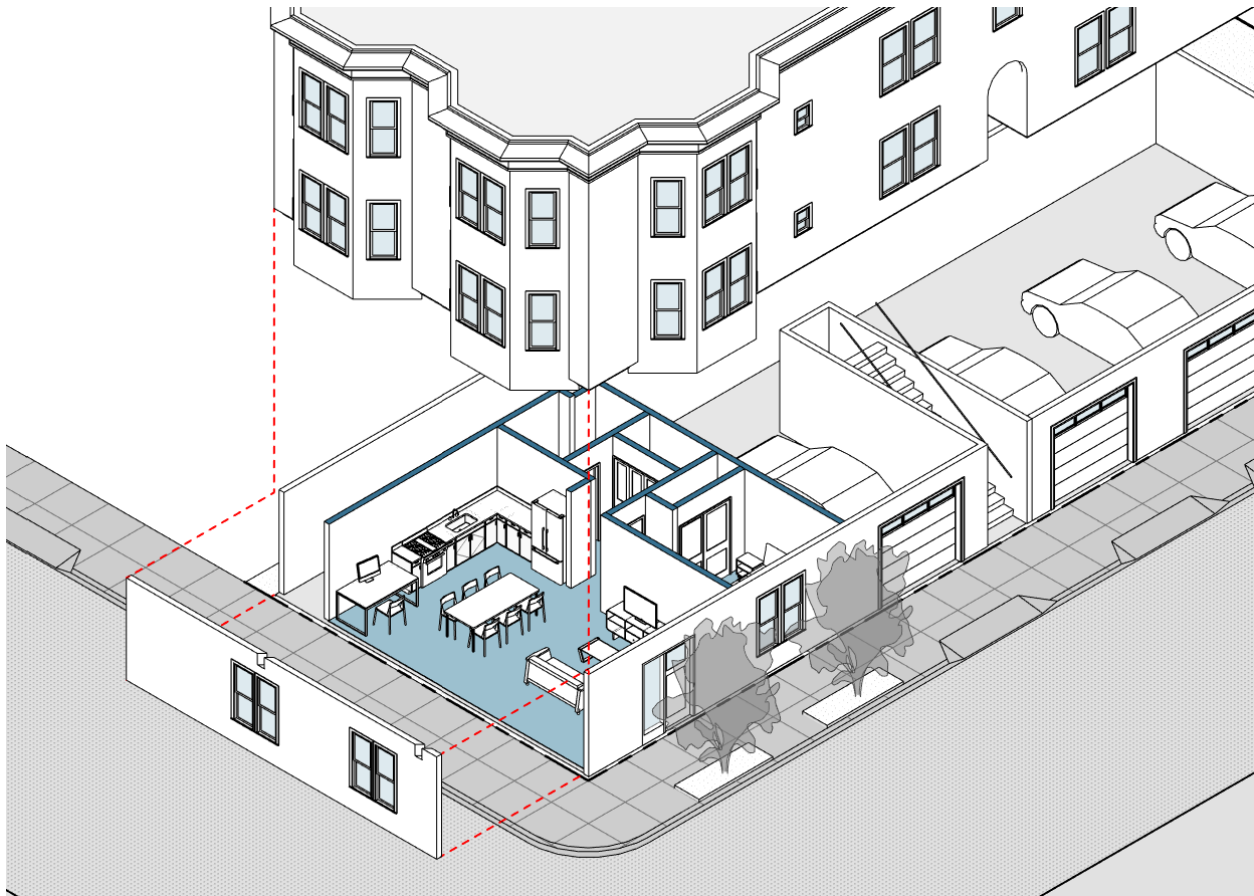
### ADU Strategy

This ADU is a modification of an apartment building with ground floor parking. The new ADU has been placed on the corner in this design to take advantage of windows on two sides, with the living room and kitchen extending nearly the full depth of the building.

A single parking space may be smaller than the 220 square foot minimum required for an Efficiency Unit. If there is not sufficient area in and around the parking space to accommodate the unit, two on-site parking spaces may need to be removed - as is shown in this example. Curb cuts will need to be removed from in front of the existing garage doors.

#### ADU PLAN

1. Replace garage door(s) with swing doors and windows.
2. Provide the bedroom and other sleeping spaces with adequate access to windows on an exterior wall for light and ventilation and for use as emergency rescue openings.
3. A fire-rated wall is required between the new ADU and any garage or storage space.
4. Remove the existing curb cuts.



### Primary Considerations

**Fire Department Review:** As this unit is being added to an apartment building that already has over three units, there is no change of occupancy per the Building Code. The Fire Department will still be involved in the plan review and should attend the pre-application meeting, but many of the issues related to the Change of Occupancy in Prototype B are eliminated when adding units to larger buildings.

**Fire Ratings:** As with other prototypes that insert a dwelling under existing habitable space, the floor/ceiling that separates them will need to be fire-rated. The fire sprinkler system will need to be expanded to include the new unit, and the building's fire and smoke alarm system will need to include the new living space as well.

**Accessibility:** Similar to Prototype B, this new ground floor unit should be reviewed for accessibility requirements. Compliance with this portion of the Building Code should be carefully reviewed during the pre-application meeting.

While most of the prototypes reviewed in this handbook can be severely impacted by having a sloping site, the larger footprint of this building type make it more likely that you will find steps and/or cross slopes along the ground floor that may impact the planning of the ADU. While the driveway entries are often level enough to be adapted into a unit entry, it is often necessary to either build up or excavate down in order to provide a level slab suitable for accommodating a dwelling unit.



## VARIATIONS

### **ADUs Not Fronting a Sidewalk in a Multifamily Building**

In some apartment buildings, the ADU will not have a door leading out to the sidewalk, but will be located further back in the building. If this is the case, the new ADU will still need to have access to light and air from an exterior wall and will require a corridor for exiting to the street. Review the “Exiting” section for Prototypes A and B for additional information.

### **Low Ceilings**

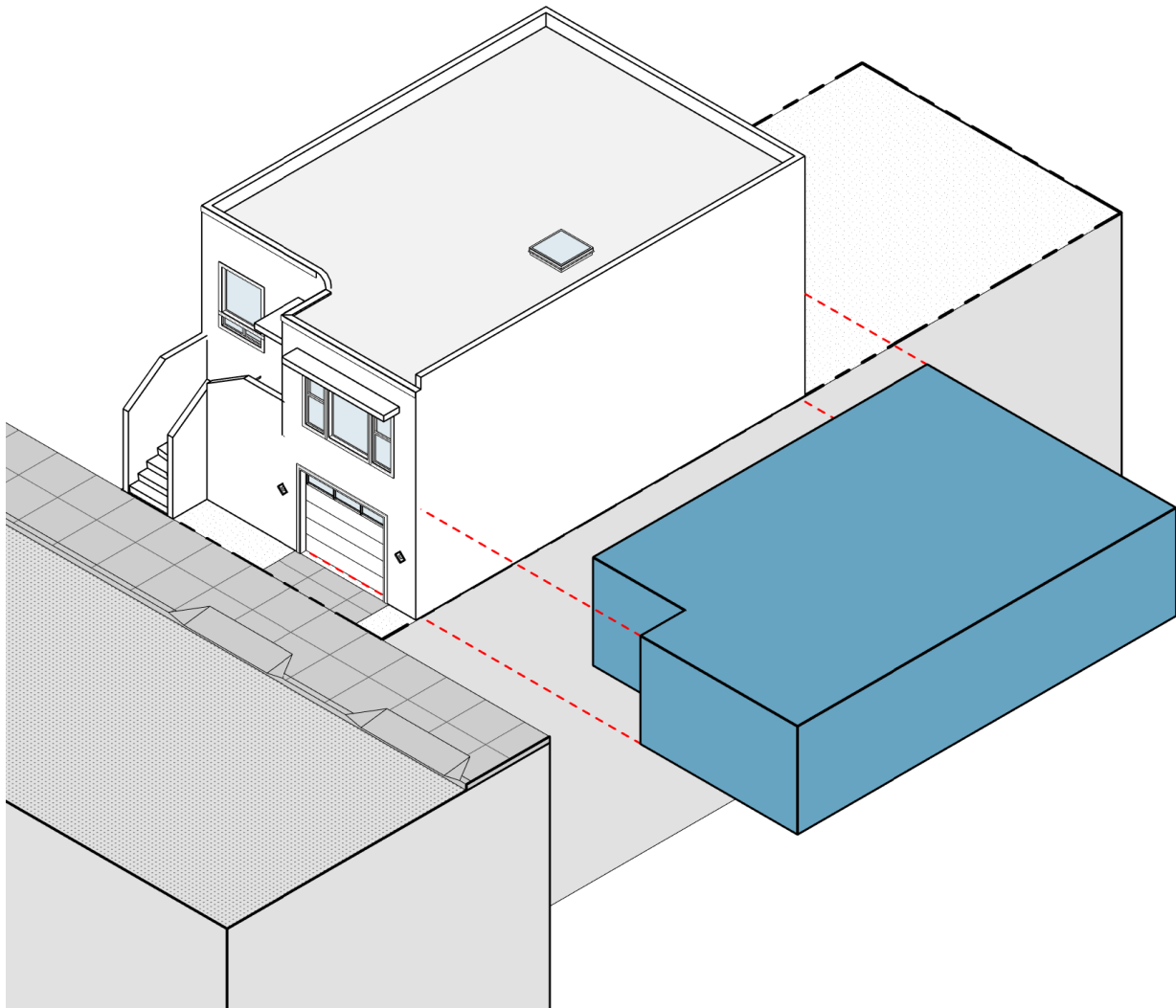
Even on flat lots, many garages in apartment buildings are built with lower ceilings than what is typical for a living space, especially in older buildings. If the ceiling is not at least 7’-6” high, the floor will need to be excavated to provide additional headroom. This means that the new ADU will have a floor below street level, requiring steps to access the door. The rest of the ground floor will need to stay at its original level if it is going to be maintained as a garage. The building could also be lifted to accommodate additional headroom but in many cases this will be impossible for technical reasons or be prohibitively expensive.





# PROTOTYPE D

Full garage conversion of a single-family home with an open ground floor

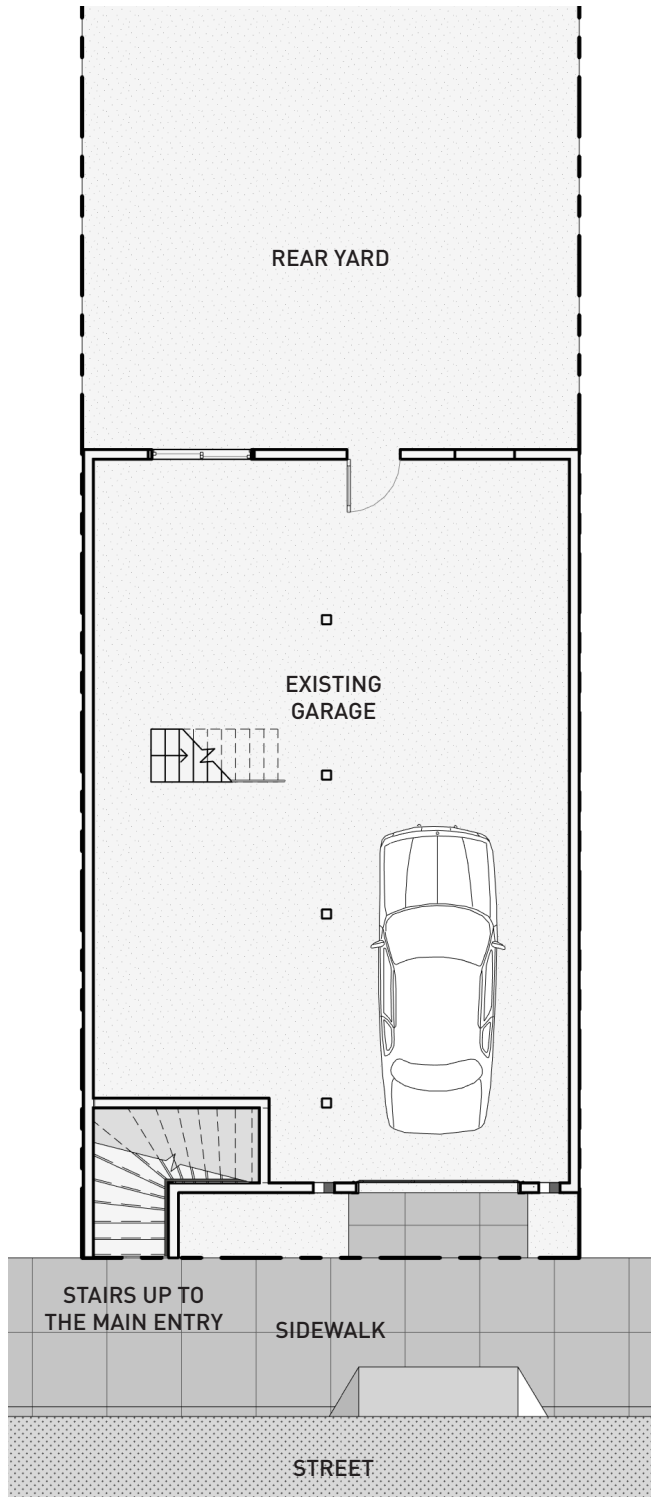


### Existing Building

Similar to Prototype A, this type covers a single-family residence that is common throughout many parts of the City, but it is different from Prototype A in that the new ADU would cover the entire ground floor for the new dwelling unit. This prototype represents a common Junior-5 plan which is shallower (typically only 35' deep) than the larger barrel-front and patio-plan homes represented in Prototype A. These smaller footprints tend to be represented in a slightly newer housing stock, with variations on this type being common from the 1940's onwards.

### Existing Building

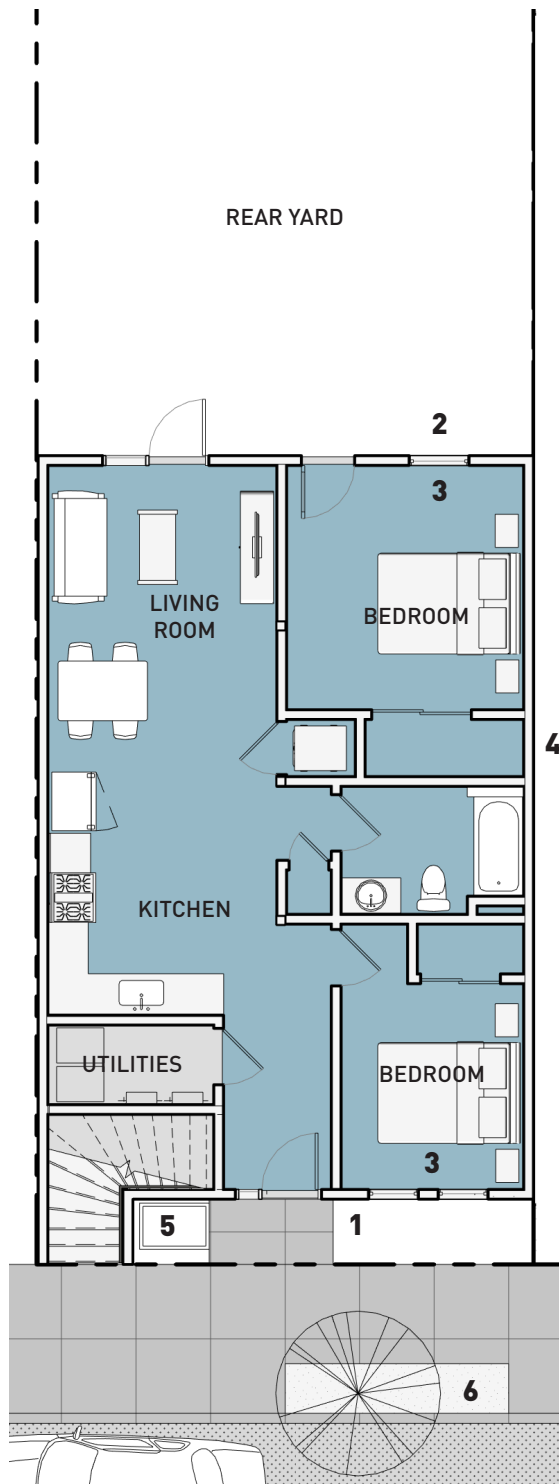
- Single-family residence
- Two-stories
- Open garage at the ground floor
- Rear yard that is level enough to permit windows to be placed in the back wall of the ground floor
- No side yard
- No tradesman door



**Existing Ground Floor Plan**

This prototype usually lacks an existing tradesmen door and the main entry stair cuts across the front of the house. These two features would make it challenging to add a new hallway and entry door and still preserve a parking space in most circumstances. Other prototypes more easily allow adding a unit at the rear of the garage while preserving an on-site parking space.





Ground Floor Plan

### ADU Strategy

This prototype is located on the ground floor of single family home. It utilizes as much of the ground floor as possible, while allowing space for the furnace and water heater that serve both this unit and the original unit. It is well suited to creating a two-bedroom unit.

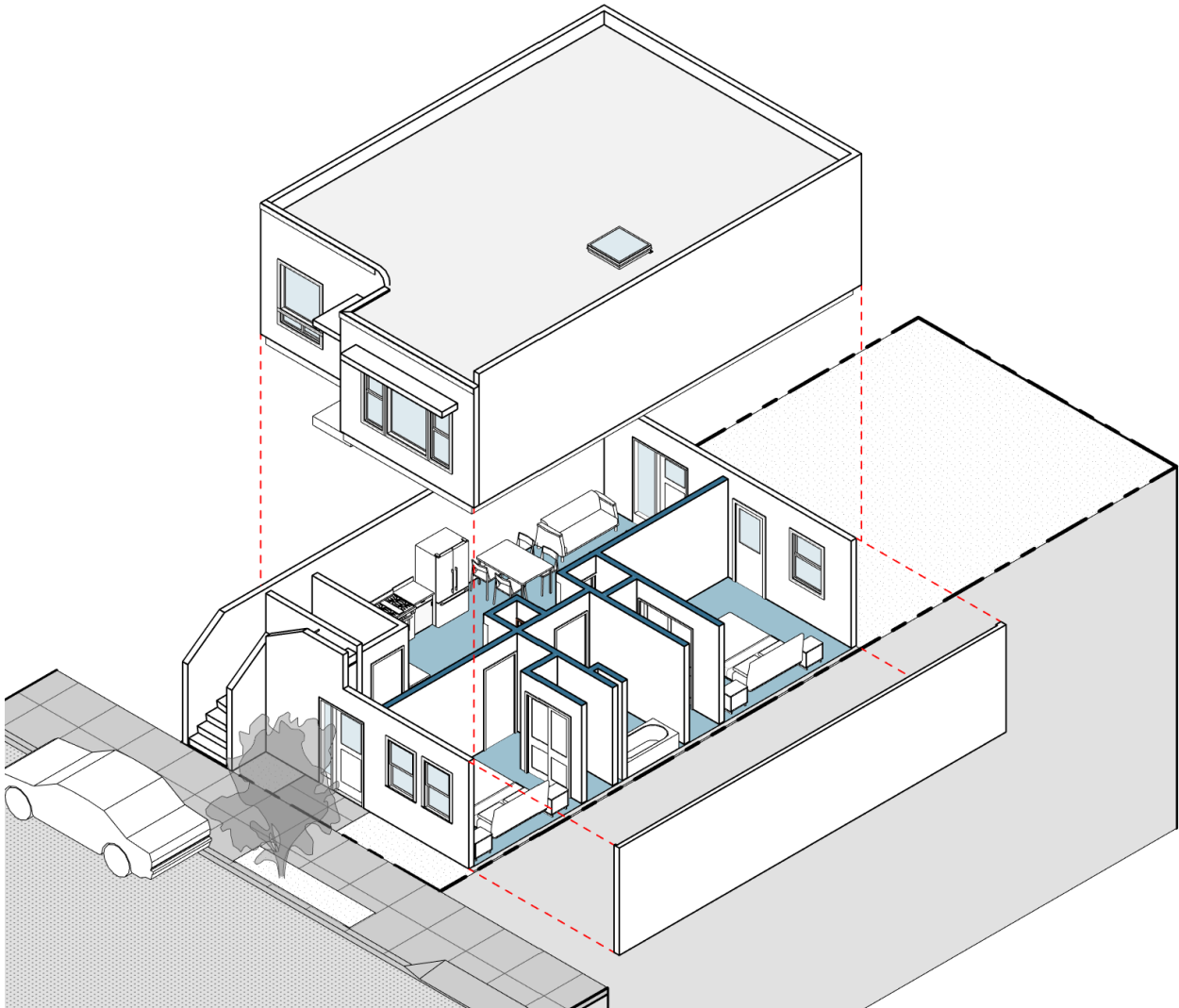
This particular layout assumes a relatively quiet street that would allow for a second bedroom next to the sidewalk. Other variables such as rear yard amenities, views, and sloped sites could suggest different arrangements of living room, kitchen and bedrooms.

### Primary Considerations

**Existing Building:** There is usually an interior stairway that leads from the upstairs living spaces down to the garage, and this will

#### ADU PLAN

1. Replace the garage door with a swing door and windows.
2. Ensure that the sleeping spaces have access to a rear yard that is at least 25' deep.
3. Each bedroom has access to natural light, and the possibility of operable windows for ventilation.
4. Walls that are within 3' of the property line (unless on a street) need to be fire rated, and should be reviewed in the pre-application meeting.
5. New screening enclosure for trash, recycling, and compost receptacles.
6. Remove the existing curb cut.



likely be removed with the addition of the unit downstairs.

**Historic Preservation:** Adding an ADU in this prototype results in changes visible from the street. Historic preservation review may be required if the building is identified as historically significant or potentially significant as described in Chapter Two.

**Fire Sprinklers:** The common fire protection systems reviewed in Section Two, including fire sprinklers, will be required in the new dwelling unit.



Photo of a Garage Conversion Exterior

## VARIATIONS

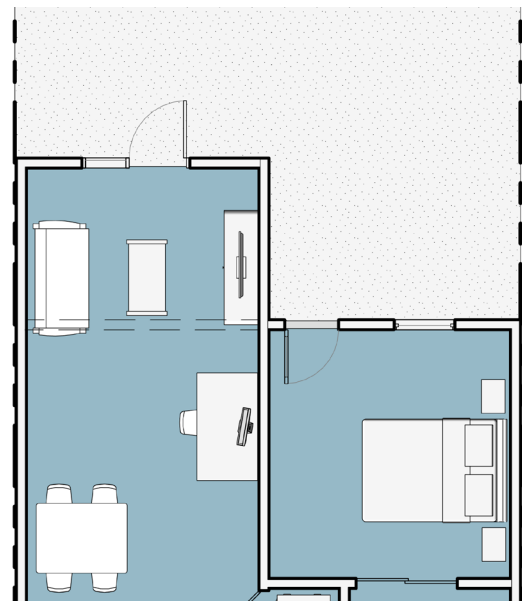
### Sloped Lots or Low Ceilings

Many garages in single family homes are built with lower ceilings than what is typical for a living space, especially on sloped lots. If the ceiling is not at least 7'-6" high, the floor will need to be excavated to provide additional headroom.

### Extension of the Footprint

Because the primary residence for this prototype is smaller than the other prototypes, some homeowners may wish to expand the building's footprint to the rear for additional floor space on both floors. Some owners may want to keep one parking space. This could mean expanding the building footprint to the back to account for the space needed for parking at the front while still having enough room for a new ADU.

Expanding the footprint usually trigger neighborhood notification, and expanding into the rear yard may trigger a variance as well. See the sections in Chapter Two dealing with setbacks and neighborhood notification.



Variation of the ADU Plan for Prototype D, showing an extension into the rear yard.

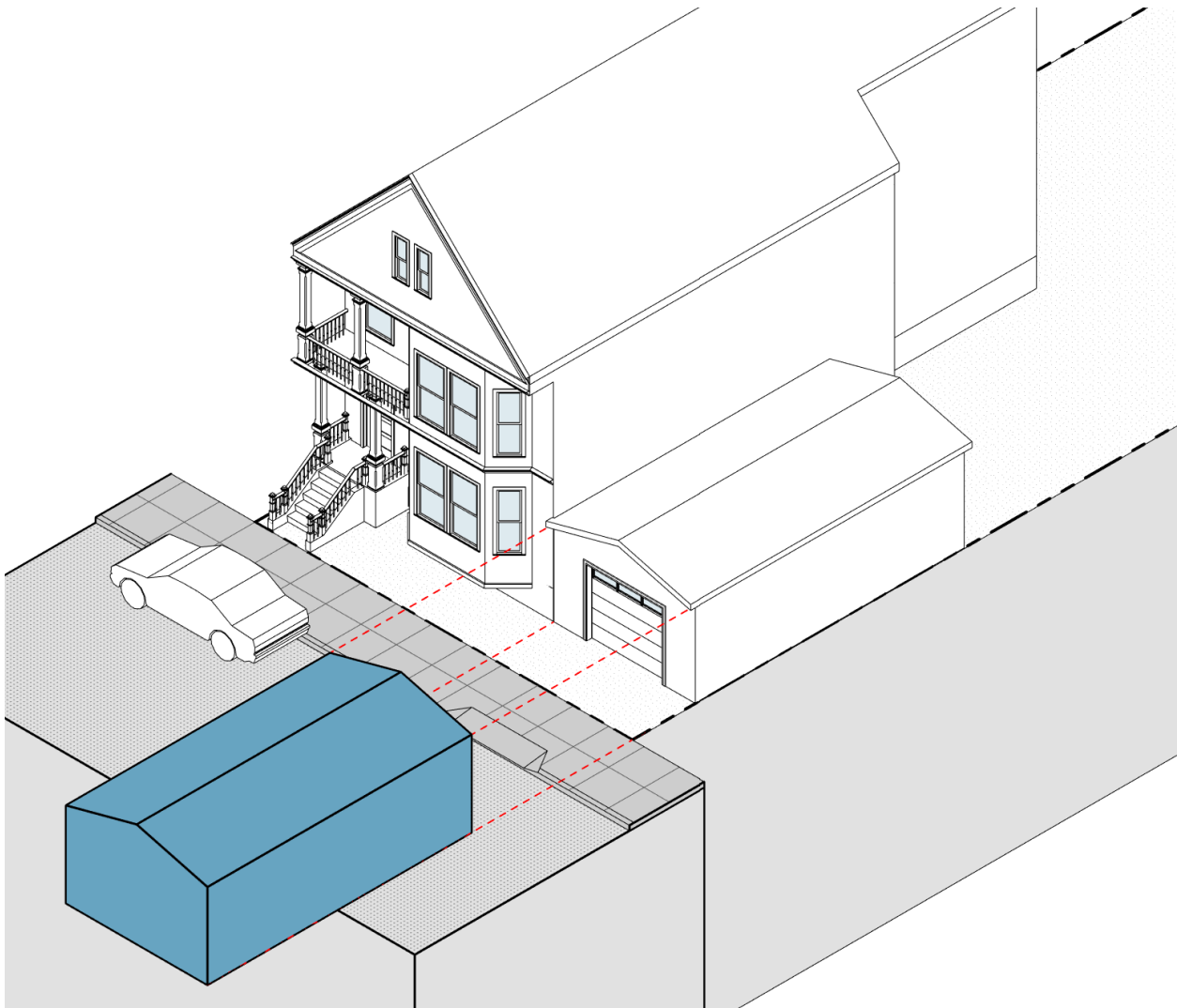




# PROTOTYPE E

Full conversion of a free-standing garage



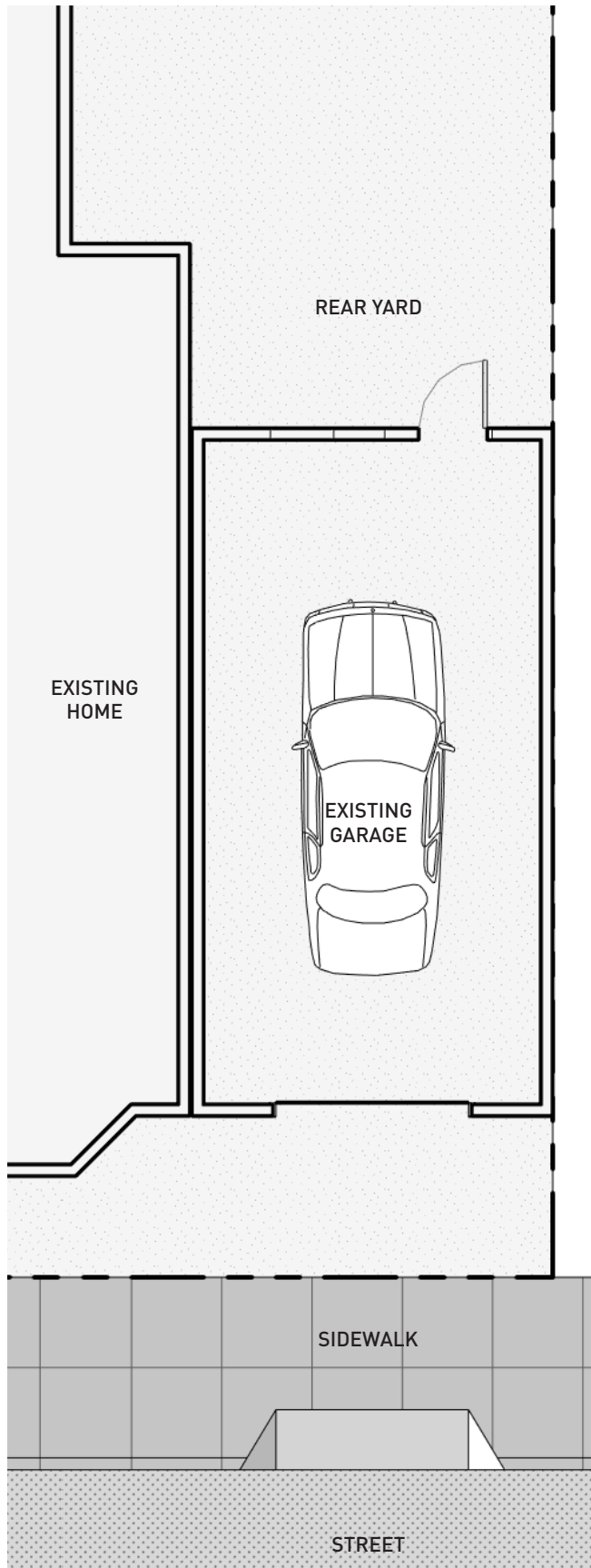


### Existing Building

In San Francisco, it is not uncommon to find a small free-standing one-story garage built adjacent to the main house. The garage is usually built near the front property line, and typically has a large set of carriage doors, or a newer upward-acting door, as the only way into the garage from the sidewalk.

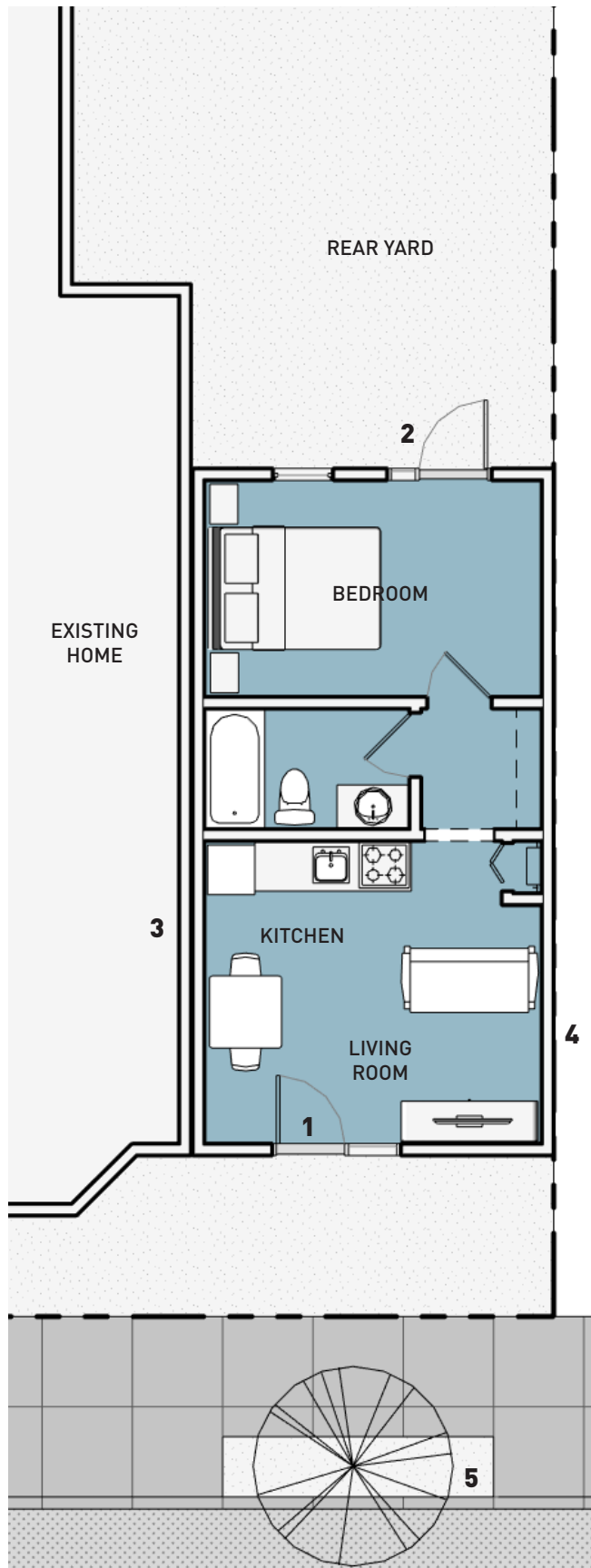
Having sufficient headroom in the existing garage is quite important in this scenario. Excavation or building a new roof will be required to create at least 7'-6" of headroom if it does not already exist.



**Existing Ground Floor Plan****Existing Building**

- Single-story free-standing garage
- Open access to the rear yard
- Sufficient headroom to not require substantial excavation and foundation work
- Floor area adequate to accommodate at least a 220 square foot efficiency studio (otherwise the garage will need to be expanded to at least this size).





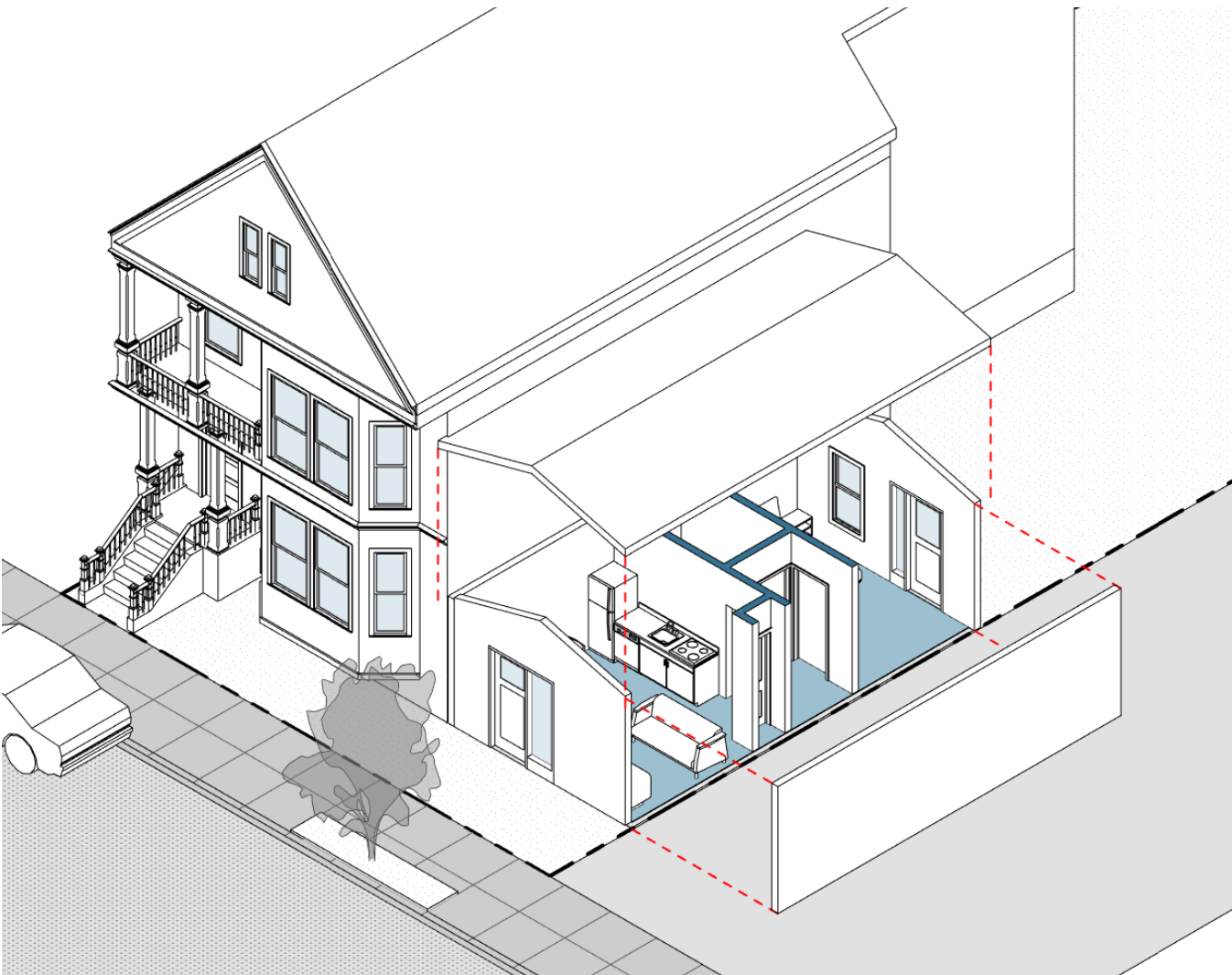
Ground Floor Plan

### ADU Strategy

Free-standing garages that have adequate headroom without the need for significant structural modifications are often well-suited to conversion to an ADU. These garages are often quite small and the floor area available to use for living space may be limited. There may be ready access to natural light from the front and rear - as well as an option for skylights. Access to the ADU is often easy to achieve directly from the sidewalk, but a new swing door must be added to the front of the structure to provide a safe means of entry and exit.

#### ADU PLAN

1. Replace the garage door with a swing door and windows.
2. Ensure that the sleeping spaces have adequate access to a rear yard at least 25' deep, or have access to a public way.
3. Review the fire-rating requirements for the walls between the two structures.
4. Walls that are within 3' of the property line (unless on a street) also need to be fire rated, and should be reviewed in the pre-application meeting.
5. Remove the existing curb cut.



### Primary Considerations

A small one-bedroom or efficiency studio is typically all that can be accommodated in a free-standing garage, unless the footprint is expanded (see “Variations”).

**Historic Preservation:** Changing the front of the garage to install the swing door will create a change visible from the street. Historic preservation review may also be required if the building is identified as historically significant or potentially significant as described in Chapter Two.

**Exiting & Fire Ratings:** If there is no access to the street, compliance with the emergency egress opening requirements may dictate that the sleeping space be located with direct access to the sidewalk, (ather than to the rear yard as shown in our example) unless the yard is deep enough to provide a safe refuge (typically over 25’ from the building).

Since these are two separate buildings on the same property, the fire-rating requirements of the walls between the primary residence and the garage/ dwelling unit need to be reviewed as part of the pre-application

meeting.

**Fire Sprinklers:** The common fire protection systems reviewed in Section Two, including fire sprinklers, will be required in the new dwelling unit.

**Front Setback Variance:** In some cases the front of the garage may be built over the front property line. If you do any work on the existing building, you will have to obtain a variance. You can get additional information about variances from the Planning Department's website or by contacting the Planning Information Center.

## VARIATIONS

### Studio Unit or Footprint Expansion

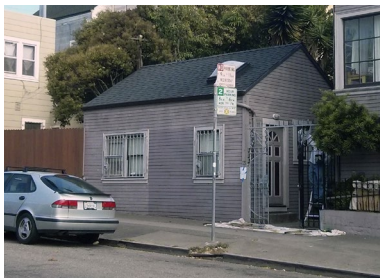
In the case of having no rear yard access and/or a very small building footprint, an efficiency studio may be the best option. If you have space to expand, you may want to consider enlarging the the existing building. Read the sections on Setbacks, Neighborhood Notification and Historic Preservation in Chapter Two to understand what an expansion would involve.



Carriage House Variation

### Carriage House

Rather than replacing the parking space with a unit, it is not uncommon to see a small unit placed on top of a free-standing garage. A small exterior staircase typically provides access to the rear of the carriage unit.



Rear Yard Converted Garage on a Corner Lot

### Rear Yard Garage

When the home is on a corner lot, in some cases the garage is technically in the rear yard of the parcel. Adding a unit to the rear yard, even into an existing structure, may require a formal variance as part of the Planning Department review process.



Front Yard Garage

### Front Yard Garage

San Francisco has many homes where the free-standing garage sits in front of the main house. Many of the same issues apply, but the unit will need to be planned to get light and ventilation from the front of the garage (and possibly the side wall as well, if one is open). This would most likely be a studio unit, or a unit where the light and ventilation is shared across rooms.





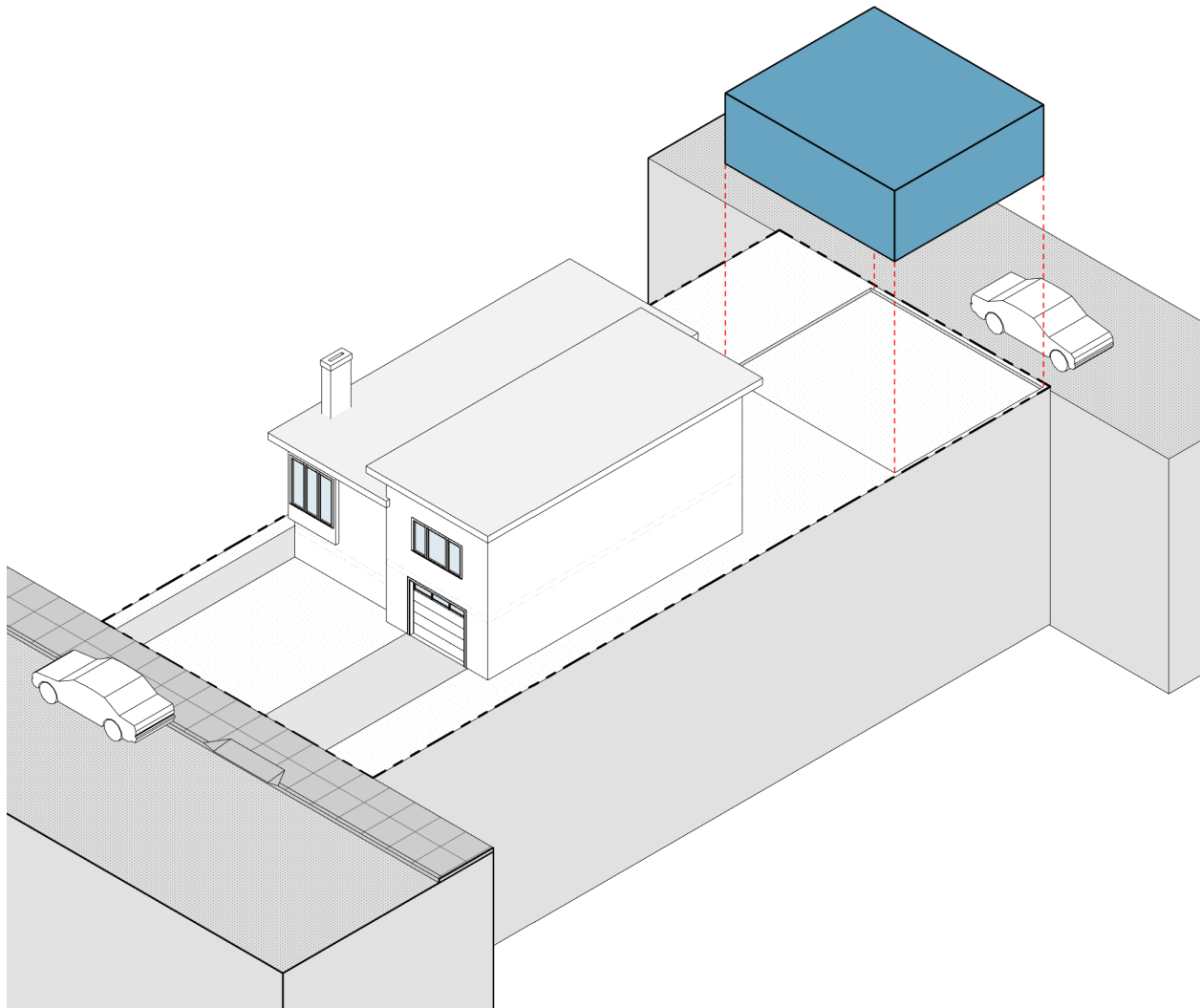


# PROTOTYPE F

Construction of a new free-standing rear-yard dwelling unit

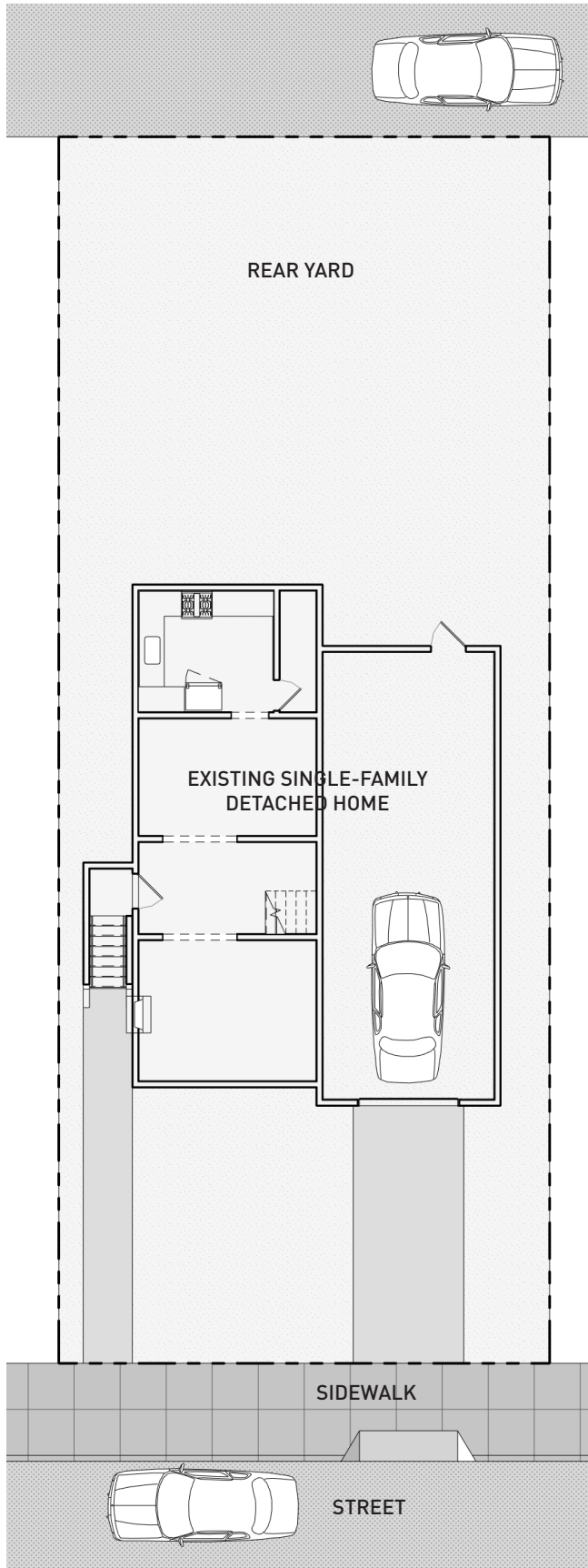






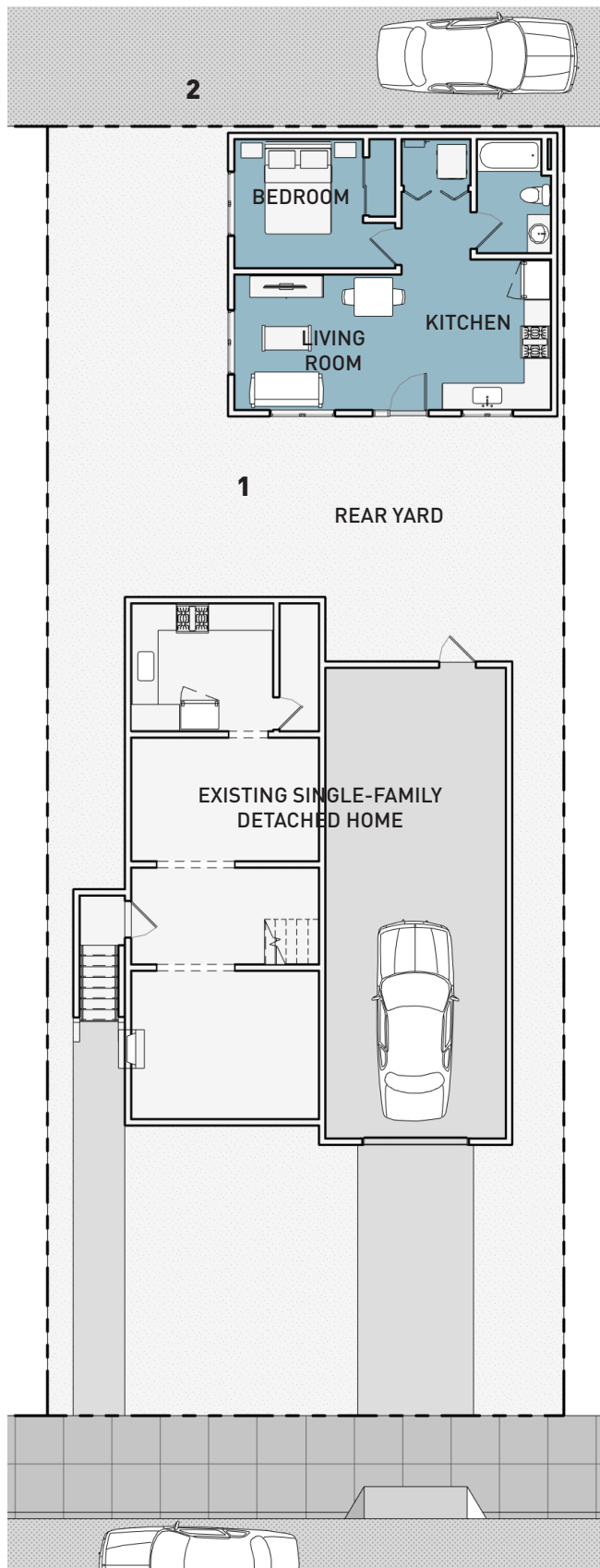
### Existing Building

The existing configuration is a detached single-family house on a double-frontage lot.

**Existing Ground Floor Plan****Existing Building**

- A parcel with a single family home on a double-frontage lot (there is a street or alley at the back of the rear yard).
- Relatively deep lot.

While there are relatively few detached homes in San Francisco, this is a common ADU type in many other cities.



Ground Floor Plan

### ADU Strategy

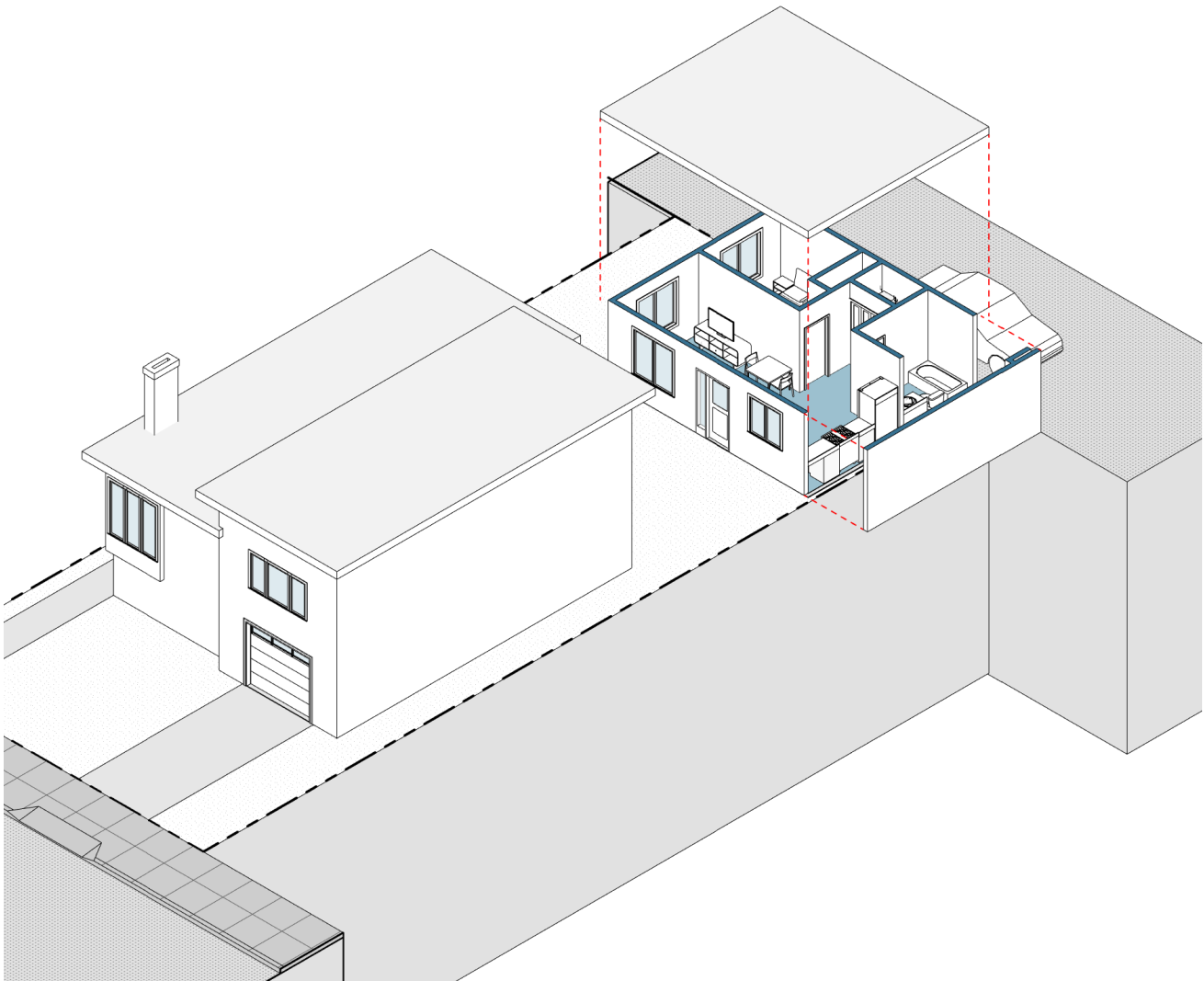
The ADU is a new building constructed on the alley at the back of a double-frontage lot. If the adjacent neighbors have existing structures at the back of their lots, no variances will be required as long as 25% of the lot is left open between the main house and the ADU. If the adjacent properties do not have a structure at the back, you can apply for a variance to get the ADU permitted.

Lots for detached homes are typically wider than San Francisco's typical 25' residential lot. To take advantage of this, the Prototype ADU has been planned to have light from two sides.

Since this ADU is not adjacent to an existing garage space, basement, etc., water heating and space heating equipment will need to be accommodated inside the unit. A tankless water heater and an overhead horizontal furnace, or a small in-wall heater may be all that is required in such a small unit; the floor space taken up by this equipment is fairly minimal.

#### ADU PLAN

1. Demonstrate adequate fire separation is maintained between the existing house and the new ADU.
2. Provide safe path of travel to the street from the ADU.



### Primary Considerations

**Utilities:** It is not uncommon for properties that have alleys behind them to have at least some of their utility connections at the alley, making tie-in a bit simpler. If not, extending the water, sewer, and electricity services from the front house to the rear yard will need to be coordinated.

**Fire Sprinklers:** The common fire protection systems reviewed in Section Two, including fire sprinklers, will be required in the new dwelling unit.



# **FINANCIAL**

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# **ANALYSIS**

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This section explores the cost of building an accessory dwelling unit, potential rental income, and the impact on property value. While not all ADUs are built as rental properties, it is good to understand the income potential of adding a unit to your property as this will factor into the eventual resale value.



# CONSTRUCTION COSTS

## A BREAKDOWN OF ESTIMATED EXPENSES

In developing construction pricing for this chapter, we analyzed one of the most common prototypes. This was based on cost data gathered from a database of past ADU projects. The cost estimating data was obtained from New Avenue Homes (a Bay-Area business that assists homeowners with construction project management) and validated by comparing it with estimates for similar work from local contractors.

Prototype B is an ADU added at the back of the ground floor of a two unit building. We looked at adding a junior one bedroom apartment, as shown in the prototypes section. Measuring approximately 675 square feet, this unit does not require any new construction outside the existing envelope of the building.

This unit was chosen because it is very common in San Francisco and is representative of the changes required in most of the retrofit-type ADUs. Prototypes A, C, and D all have similar requirements to Prototype B and will see similar costs, depending on the square footage and level of finishes chosen. Prototype E, a garage retrofit, may have a lot of similarities but much of the cost will be dependent on the condition of the existing building. A free-standing building (like Prototype F) will have additional expenses associated with the foundation, roofing, and exterior walls that the interior ADUs will not incur. Free-standing buildings will also require additional utility work to bring services to the buildings.

New construction outside the existing building footprint will also trigger neighborhood notification in most cases, adding extra steps to your permitting process.

### Assumed Scope of Work:

- Construction of a fire-rated wall between the garage and the new unit, along with a vestibule and door(s)
- Addition of windows and doors to serve the new unit
- Construction of interior partitions in the new unit
- A new bathroom and kitchen
- Plumbing, heating and ventilation to serve the new unit.
- Finishes and insulation at the new unit
- Seismic improvements required by the SF Building Code.
- Addition of sprinklers to the ground floor

This cost estimate is approximate, based on 2015 costs. Generally, construction costs rise 3-5% annually, although recent years have seen larger than usual increases. The estimate assumes a basic project described above. Depending on the existing conditions or variations an ADU may require additional work.

**COST ESTIMATE - Based on Prototype B**

ITEM	FEE
<b>Construction Costs</b>	
Site work/ preparation, earthwork and cleanup	\$12,300
Demolition	\$9,500
Shoring	\$2,000
Concrete	\$9,200
Framing and carpentry	\$14,700
Insulation and moisture protection	\$7,500
Windows and doors	\$11,700
Finishes	\$26,000
Plumbing (including fixtures)	\$21,000
Sprinklers	\$5,000
Heating and ventilation	\$6,300
Electrical (including fixtures & appliances)	\$18,500
Overhead and profit	\$23,600
<i>Sub-Total</i>	<i>\$167,300</i>
<b>City Permit Costs</b>	
Pre-application meeting fee	\$600
San Francisco Building Permit fee	\$5,800
School District Development fee (residential properties over 499 SF)	\$1,964
Department of Public Works fee (sidewalk improvement, min. fee)	\$1,228
<i>Sub-Total</i>	<i>\$9,592</i>
<b>Professional Services</b>	
Architectural & Engineering (approx. 10% of Construction Costs)	\$16,730
<b>TOTAL COST ESTIMATE</b>	<b>\$193,622</b>

## Additional Expenses

### Excavation and Foundation Work

While the example project budget above did not involve excavation at the ground floor, on many buildings this will be required to create enough headroom in the new unit. At current construction prices, we would advise homeowners to carry at least \$100 per square foot of the plan area, assuming an increase in headroom of one to two vertical feet.

This cost can vary dramatically depending on factors that include but aren't limited to:

- the slope/terrain of the site
- ease of access for construction equipment
- location of the sewer lateral (an ejector pump may be required)
- disposal costs for contaminated soil

### Sprinklers & Fire Protection

The estimate includes an allowance for fire sprinklers, but there are numerous variables that could change this amount. For example, if the water pressure is not high enough in your area, you could be required to add an additional pump at a cost of several thousand dollars. Also, the type of sprinkler system installed may vary depending on the outcome of your pre-application meeting. This number could double or more in some cases.

Other things that could impose additional costs, including but not limited to:

- increasing the fire rating of existing wall or floor/ceiling assemblies by adding additional layers of gypsum board.
- increasing existing door sizes or replacing existing doors with fire-rated ones (new doors are several hundred dollars each, plus installation). This could also require changes to the front of the building, which can require additional review at the Planning Department due to historic preservation concerns.
- putting existing utility meters in a cabinet or having to move them if they project into a space used for exiting. This could range from a few hundred to a few thousand dollars depending upon the extent of the changes required.

### **Changes to the Façade**

Changes made to the front of your building may result in additional costs. Our pricing exercise assumes that an existing door could be used to access the ADU. In a building where the garage door is being removed or replaced, or additional openings are being added, you may trigger a historic review through the Planning Department. Preparation of a Historic Resource Survey by an outside consultant will cost approximately \$3,500 and the Planning Department will charge a minimum of \$2,680 in fees.

This will also trigger neighborhood notification, which will add extra steps to the project's approval process, versus a project that has no historic review triggers.

### **Impact of Tenant Disruption**

Tenant parking (for existing tenants in your building) or other amenities may be removed or made inaccessible during construction in a multifamily building. Some building owners may choose to combine the construction of an ADU with other work that could potentially make the building uninhabitable for a period of time. Contacting the Rent Board is a good first step to understanding what your obligations may be in the case of disrupting the occupants of your building as there may be costs associated if alternate accommodations need to be found during portions of the construction process.

### **Earthquake Retrofitting**

For an ADU installed in an existing larger apartment building (over five units, similar to Prototype C) at the same time as a soft-story retrofit, the cost of the retrofit alone will be in the range of \$60,000-\$130,000 in addition to the ADU costs.

There are a number of scenarios in which an ADU retrofit will trigger a mandatory seismic upgrade of a small building based on Chapter 34 the San Francisco amendments to the California Building Code. The two most likely to occur would be the addition of a third unit to a two unit building (Section 3408.4.1 Exception 2 of the S.F. Building Code) or when modifying a large portion of your building as defined under Section 3404.7. Substantial non-structural modification of more than two-thirds of a building's floors or cumulative modification of more than 30% of its structural elements since May 21, 1973 will also trigger it.

The cost of adding shear walls, foundation bolts and any potential improvements to the foundation itself will have to be factored into your costs. This can cost from under \$10,000 to upwards of \$50,000 or more, depending on the existing structure.

# INCOME AND ASSETS

## RENTAL INCOMES AND PROPERTY VALUES

### Rental Income Estimates

Analysis of the 2014 Craigslist apartment listings for the City of San Francisco shows that the median listing price for studio and one-bedroom apartments between 200 and 750 square feet was approximately \$2,900, with monthly rents in most areas averaging just over \$4/square foot per month.

It is reasonable to assume that many accessory units will rent for less than other units in the same neighborhood that may have better views or be located in new buildings with other amenities. Doing your own research on comparable rental properties in your neighborhood is the best way to understand what the potential rental income from an ADU in your house would be.

### Property Value

A simple analysis of District 5 (Hayes Valley, Haight, Western Addition, Inner Sunset, Cole Valley) sales from 2014 shows that, on average, two-unit properties sell for less than one unit properties. Two unit properties sold for approximately \$735 per square foot, while single family properties sold for slightly over \$1,000 per square foot. This is despite there being far more single family properties on the market (244 versus 56 two-unit buildings).

Digging deeper into resale values shows that this simple square foot analysis isn't completely accurate in determining the value of an ADU because most of the two-unit properties are duplexes built as two roughly equivalent apartments. Large homes with a smaller accessory unit are very different in the real estate market. As an example, the most expensive home sold in Noe Valley last year was nearly 6,000 square feet, sold for \$6,750,000 and contained a newly-built ADU.

Looking at sales data for the City as a whole over the second half of 2014, homes with and without ADUs sell for nearly the same amount per square foot (within about 6%):

#### Duplexes

147 2-Unit Buildings Sold  
Avg. List: \$1,533,967  
Avg. Sale: \$1,666,867  
Avg. sq ft: 2791  
Days on Market: 41  
\$/sqft: \$622

#### Single Family Homes

849 Homes Sold  
Avg. List: \$1,490,425  
Avg. Sale: \$1,629,647  
Avg. sq ft: 1956  
Days on Market: 30  
\$/sqft: \$783

#### Single Family w/ ADU

38 Homes Sold  
Avg. List: \$1,485,362  
Avg. Sale: \$1,644,974  
Avg. sq ft: 2106  
Days on Market: 29  
\$/sqft: \$736

By increasing the square footage of your building, you are increasing the amount of square footage you sell when you decide to move. In our example two-unit property from the pricing exercise, adding 675 square feet of living space could add approximately \$420,000 to the resale of the property based on the average selling price of \$622/square foot.

In larger apartment buildings, there would be no reason not to add additional units from a resale viewpoint. The pricing of large buildings is usually tied to the unit count and financials of the leased units, so it is hard to imagine a scenario where bringing in additional rental income would not make the property more valuable.



# FINANCING

## PAYING FOR AN ADU

Many homeowners will find that a home equity loan is a viable way to finance an Accessory Dwelling Unit. Looking at the finances of a home equity loan on the example property priced above shows that homeowners who choose to put in an ADU are likely to receive enough rental income from the new unit to cover the monthly loan payment.

Example, based on a Home Equity Loan Amount of \$200,000 using Bank of America's published rates in early 2015:

Monthly Loan Payment (25 year loan at 5.44% interest)	\$1,221 / Month
Projected monthly rent (adjusted for location)	\$2,900 / Month

While there are a variety of other expenses that would need to be accounted for, including maintenance, increased property taxes on your new assessed value and income tax on the rental income, the homeowner would easily come out ahead financially in a scenario where this ADU is being used as a rental property.

It is reasonable to assume that many ADUs will rent for less per square foot than other units in the same neighborhood that may have better amenities, including views, better light access or dedicated parking. Doing your own research on comparable rental properties in your neighborhood is the best way to understand what the potential rental income from an ADU in your house would be.

Looking at a break even analysis provided by [accessorydwellings.org](http://accessorydwellings.org) and taking into account 5% annual appreciation (low by San Francisco standards) and the rent and loan figures noted above, our prototype ADU owner would break even in under five years.

# RESOURCES

# GLOSSARY

## Change of Use

A “use” is a common planning concept. A use is established when land has been declared to be usable for a particular building type or development activity (see *Use* definition). Change of Use is a change from one permitted use to another. The only guide for determining whether one use is different from another is its treatment in the San Francisco Planning Code. If the Code treats them differently, they must be considered distinct uses. Thus if “Use A” is first permitted in a different zoning use district than “Use B,” it is clear that they are different uses. A good way of thinking about it is whenever the use of a building or lot changes in a way that would be regulated differently than the current use, a change of use occurs.

## Conditional Use Application

A Conditional Use (CU) is a type of land use that is not principally permitted in a particular Zoning District. Conditional Uses require a Planning Commission hearing in order to determine if the proposed use is necessary or desirable to the neighborhood, whether it may potentially have a negative impact on the surrounding neighborhood, and whether the use complies with the San Francisco General Plan.

## Coverage, Lot or Site

The percentage of a site covered by roofs, soffits or overhangs extending more than three feet from a wall and by decks more than four feet in height. Roofs with openings or perforations 50 percent or greater of their surface area, pools, or hot tubs shall not be included in lot coverage calculations.

## Discretionary Review

The Planning Commission has discretion over all Building Permit applications. Normally, this discretion is delegated to the Planning Department, which approves applications that meet the minimum standards of the Planning Code, including the priority policies of the San Francisco Planning Code Section 101.1. Occasionally, the Commission will review a Building Permit application. The Commission may determine that modifications to the proposed project are necessary in order to protect the public interest. If so, they can require the permit applicant to make the changes necessary for approval. This process of Commission consideration is commonly known as “Discretionary Review” or simply “DR.”

## **Dwelling Unit**

One or more rooms with no more than one kitchen, designed for occupancy by one family or single housekeeping unit for living and sleeping purposes, with all rooms (except an attached garage or carport) accessible from the interior of the dwelling unit.

## **Environmental Evaluation Application**

The California Environmental Quality Act (CEQA) requires public agencies to review the environmental impacts of proposed projects. In San Francisco, environmental review under CEQA is administered by the Environmental Planning (formerly MEA) division of the Planning Department. The environmental review process begins with the submittal of a completed Environmental Evaluation (EE) Application to the Planning Department. Only the current EE Application form will be accepted. No appointment is required but staff are available to meet with applicants upon request.

## **Environmental Review**

The Environmental Planning (formerly MEA) division of the Planning Department reviews projects for potential environmental impacts on the City and County of San Francisco and its residents, a process known as environmental review. Reviews are conducted pursuant to the California Environmental Quality Act (CEQA), Chapter 31 of the San Francisco Administrative Code, which provides guidelines for implementing the CEQA process. The reviews identify any potential adverse environmental effects of proposed actions, assesses their significance, and proposes measures to eliminate or mitigate significant impacts.

## **Grade, Existing**

The surface of the ground or pavement at a stated location as it exists before disturbance in preparation for a project.

## **Historic Preservation Commission Hearing**

The Historic Preservation Commission is responsible for identifying and designating San Francisco's landmarks and the buildings in the City's historic districts. It consists of seven Commissioners and a Commission Secretary. The Commission holds a public hearing (also known as a "Commission Meeting") twice a month.

## Lot Line or Property Line

A recorded boundary of a lot.

## Mandatory Soft Story Retrofit Ordinance

This ordinance requires the structural retrofit for added seismic safety of San Francisco buildings that meet ALL of the following criteria:

- Wood frame construction (Type V);
- Application of permit for original construction was prior to January 1, 1978;
- Five or more residential units;
- Two or more stories over a basement or underfloor area that has any portion extending above grade;
- A soft story condition that has not been seismically strengthened to the standards set forth in the ordinance.

The ordinance was signed in 2013 and is current law in San Francisco. As of this writing, buildings potentially within the scope of this ordinance have received formal notice of screening and compliance requirements.

## Neighborhood Notification (also known as “Section 311/Section 312,” “Notification,” or simply “Notice”)

San Francisco Planning Code Section 311 and Section 312 describe a neighborhood notification requirement applicable in certain residential districts (i.e. Section 311) and commercial districts (i.e. Section 312). Notification is a process generally triggered by new construction of a building, expansion of existing buildings, or certain changes of use.

Notification is usually comprised of three components: a mailing that to surrounding property owners and occupants, a poster placed at the subject property, and an ad in the San Francisco Chronicle (the ad is only applicable for certain entitlements). Current Planning staff will process the notifications for you based upon mailing lists that you will provide with the application packet at the intake appointment. The process provides for a 30-day notification period for owners, tenants and neighborhood groups in the vicinity of a proposed project to allow them an opportunity to voice concerns over the nature of a proposal and/or to request a public hearing before the Planning Commission (known as a Discretionary Review) to request the project modified or denied.

**Adding an ADU does not automatically trigger Neighborhood Notification. However if you expand the footprint of your building or modify the front of the house, you most likely will have to go through this process.**

## **Occupancy**

Each separate use of property conducted on a lot or within a building or any portion thereof.

## **Open Space**

Usable open space shall be composed of an outdoor area or areas designed for outdoor living, recreation or landscaping, including such areas on the ground and on decks, balconies, porches and roofs, which are safe and suitably surfaced and screened, and which conform to the other requirements of Section 135 of the Planning Code.

## **Planning Commission Hearing**

The Planning Commission consists of seven members appointed by the Mayor and the President of the Board of Supervisors to help plan for growth and development in San Francisco. The Commission holds a public hearing each week (also known as a “Commission Meeting”) to carry out its duties and advise the Mayor, City Council and City departments on San Francisco’s long-range goals, policies and programs on a broad array of issues related to land use, transportation, and neighborhood planning.

## **Planning Department Review of All Applications**

The Planning Department reviews Building Permits and other Planning Department applications. In regards to Building Permit applications, depending on the scope of your project, you may need to obtain permits from the Building Department, the Fire Department, the Health Department, the State Alcoholic Beverage Commission, or other City agencies. The Planning Department reviews these applications.

## **Project Review Meeting**

A Project Review Meeting is a one-hour scheduled meeting available to any permit applicant. It provides members of the public and Planning Department staff an opportunity to discuss Code requirements, planning processes and Departmental policies related to a specific proposed project. It allows applicants to get early feedback on potential issues of concern, and thus avoid unnecessary or costly work on proposals that are not likely to be approved.



## **Pre-Application Process**

**Planning Department:** The Pre-Application Process is required for any Formula Retail use subject to a Conditional Use Authorization and for new construction projects and certain alterations located in zoning districts that are subject to Section 311 or 312 Notification. The Pre-Application Process needs to occur prior to the filing of any entitlement. ADU projects within the footprint of the existing building should not require the Planning Pre-Application Process.

**Department of Building Inspection (DBI) and the Fire Department:** This is a meeting to review questions with design issues that have building code implications. The meeting is intended to occur prior to submitting drawings for a permit. This is not mandatory, but is strongly encouraged for ADU projects.

## **Setback**

The distance by which a structure, parking area or other development feature must be separated from a lot line easement, other structure or development feature. If a street dedication is required, then the setback requirement shall be measured from the revised property line after the dedication. The word “yard” is often used interchangeably, as in the “required rear yard.”

## **Street, or Public Right-of-Way**

A public thoroughfare, avenue, road, highway, boulevard, parkway, way, drive, lane, court or private easement, not including freeways, providing access to, and egress from, the property.

## **Tandem Parking**

A parking space configuration where two or more parking spaces are lined up behind each other.

## **Use** (also known as Land Use)

A “use” is a common planning concept. A use is established when land has been declared to be usable for a particular building type or development activity. A simple example of these concepts would be when a home or residence is built, the “use” of the building would be “Residential” and its construction would only be allowed in a “Residential zoning use district.”

## **Variance Hearing**

A variance is a request for an exception from the quantitative standards of the Planning Code, such as rear yard, front setback and parking. Certain provisions of the Planning Code, such as height, sign and use requirements, are not variable. The Zoning Administrator hears and makes determinations on variance applications.

# REFERENCES

## HELPFUL AGENCIES AND WEBSITES FOR PLANNING AN ADU

### **San Francisco Planning Department**

1650 Mission Street, Suite 400

San Francisco, CA 94103

General Information: (415) 558-6378

[www.sf-planning.org](http://www.sf-planning.org)

### **San Francisco Department of Building Inspection**

1660 Mission Street

San Francisco, CA 94103

General Information: (415) 558-6088

[www.sfdbi.org](http://www.sfdbi.org)

### **San Francisco Department of Building Inspection - Soft Story Program**

(415) 558-6699

[softstory@sfgov.org](mailto:softstory@sfgov.org)

[www.sfdbi.org/softstory](http://www.sfdbi.org/softstory)

### **California Building Code and San Francisco Amendments**

[www.sfdbi.org/codes](http://www.sfdbi.org/codes)

### **San Francisco Earthquake Safety Implementation Program**

City Hall, Room 362

1 Dr. Carlton B. Goodlett Place

San Francisco, CA 94102

(415) 554-4925

<http://sfgsa.org/index.aspx?page=6044>

### **San Francisco Rent Board**

25 Van Ness Ave., Suite 320

San Francisco, CA 94102-6033

415-252-4602

<http://www.sfrb.org/>

**Earthquake Brace and Bolt**

A project of the California Residential Mitigation Program

[www.earthquakebracebolt.com](http://www.earthquakebracebolt.com)

**SF72**

San Francisco's hub for emergency preparedness

[www.sf72.org](http://www.sf72.org)

# BIBLIOGRAPHY

## ADDITIONAL INFORMATION ON SECONDARY DWELLING UNITS

### **Bibliography of Selected Resources on Second Units**

California Department of Housing and Community Development, Housing Policy Division, August 2005

### **Secondary Units and Urban Infill: A Literature Review**

Berkeley Institute of Urban and Regional Development, February 2011

### **Understanding and Appraising Properties with Accessory Dwelling Units**

Martin John Brown and Taylor Watkins, The Appraisal Journal, Fall 2012

### **The Feasibility of Accessory Dwelling Units in San Francisco**

San Francisco Planning Department, and the Goldman School of Public Policy at UC Berkeley, May 2014

### **Accessory Dwelling Units**

[www.accessorydwellings.org](http://www.accessorydwellings.org)

### **Secondary Units - A painless way to increase the supply of housing**

<http://www.spur.org/publications/spur-report/2006-06-01/secondary-units>, June 2006

### **San Francisco Public Press: Backyard Cottages**

<http://sfpublicpress.org/news/2014-06/housing-solution-backyard-cottages-could-add-one-third-more-homes-to-san-francisco>, June 2014

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# **sf-ADU**

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