

# Accessory Dwelling Units

## A Step by Step Guide to Design and Development

An ADU Design Catalog with a summary of ADU policies in Austin, TX; Denver, CO; Oakland, CA and the District of Columbia.



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# 1

## ADU Regulations

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- A Retired Teacher
- A Multi-generational Family
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*“There is no part of the country where the majority of middle-class older workers have adequate retirement savings to maintain their standard of living in their retirement,” said Teresa Ghilarducci, a labor economist who specializes in retirement security.*

*“People are coming into retirement with a lot more anxiety and a lot less buying power.”*

Mary Jordan and Kevin Sullivan. “The New Reality Of Old Age In America.” *Washington Post*, September 30, 2017.

# ADUs: An Affordable Option

In markets around the country, housing costs are pushing people out of their homes and away from neighborhoods in which they were previously rooted, often destroying generations-long relationships between a locale and its people. Bearing the cost are both individuals and the fabric of cities themselves. To preserve existing livable cities, those with vibrant and healthy social networks, communities must examine alternate means of engendering affordable housing choices and income stability.

One such alternate means is the Accessory Dwelling Unit (ADU). Also known as the Lane-way, Alley Flat, Carriage House, Granny Flat, Guest House, or In-Law unit, the ADU is generally a small, self-contained unit. It can be detached, as with a cottage in the backyard of a single family home, or attached—above a garage, in an attic or in a basement space of a home. As a small foot-print housing type, it is an efficient, creative, and cost-effective option in the affordable housing toolkit and can be used by jurisdictions to rapidly increase the supply of market rate units, thus relieving pressure on local housing markets.

Homeowners may choose to construct ADUs for various reasons including as a substitute for nursing home care, a means to age in community, an opportunity to live with other family members in multi-generational living arrangements, as well as a source of earning extra income to supplement fixed incomes in their retirement years. In the *AARP Home and Communities Survey, 2018*, results revealed that sixty-seven percent of adults age 18 and older would live in an ADU to be close to someone but still live in a separate space. One-third of the respondents stated that they would consider building an ADU. Those findings also showed that almost two-thirds of adults age 65 and older would build an ADU to house a caregiver that could help with daily activities.

ADUs are more cost effective to build than multifamily units on a per unit basis: An ADU can be built for as little as one-third the cost of a traditional multi-family unit of the same size and with comparable amenities.

Such factors make ADUs appropriate for jurisdictions that support adding units for many who need housing, including older adults, who studies show generally prefer to age in their own communities. As people age, the risk of developing a disability can increase and therefore, universal design elements can be considered for integration into ADU design where applicable.

Despite the potential benefits of ADUs, many home-owners are stymied by local ordinances and the need for financing. When financial or technical resources are available, homeowners may still be confused without a clear direction on how to proceed with developing ADUs. Moreover, a movement toward ADUs may face human obstacles, starting with lack of awareness and trust in the solution. A history of displacement has left some community members with a sense of inevitability that they will need to leave their home and community in the face of change.

The ADU Design Catalog is for homeowners, builders and local stakeholders who are interested in learning more about ADUs and expanding housing options within the community. The catalog takes the reader through the journey of key steps that must be considered for ADU development. Those four steps are: 1) ADU Regulations – an overview and analysis of ADU regulations in several cities to spotlight the unique needs of each place; 2) Finance Options – available financing mechanisms for people considering ADU construction; 3) ADU Space Planning – key elements, such as local regulations, intended use and project budget that should be considered in the design and construction of an ADU and 4) Three ADU Designs – sample ADU designs that can adapt to changing needs, ranging from 250 SF and 1100 SF to fit different families and local regulatory environments.

## GOALS

The ADU Design Catalog is a guidebook, a cohesive actionable package, to provide community members with a potential pathway to financial security through housing stability. The catalog is designed to:

- Provide a pathway to develop an ADU which can lead to affordable housing options for people at all life stages, including older adults and community members in low-income households;
- Illustrate how adding second units within existing neighborhoods is a low-density, comparatively low-cost alternative to large-scale infill development.
- Examine the housing market and regulatory landscape in several cities experiencing rising housing costs to help inform the ADU Design Framework and ADU designs included in the catalog;
- Identify available national, local and non-traditional financial options;
- Offer a housing design that is expandable and adaptable to changing lifecycles; and
- Create a clear roadmap from design and budgeting to permit and construction.

## METHODOLOGY

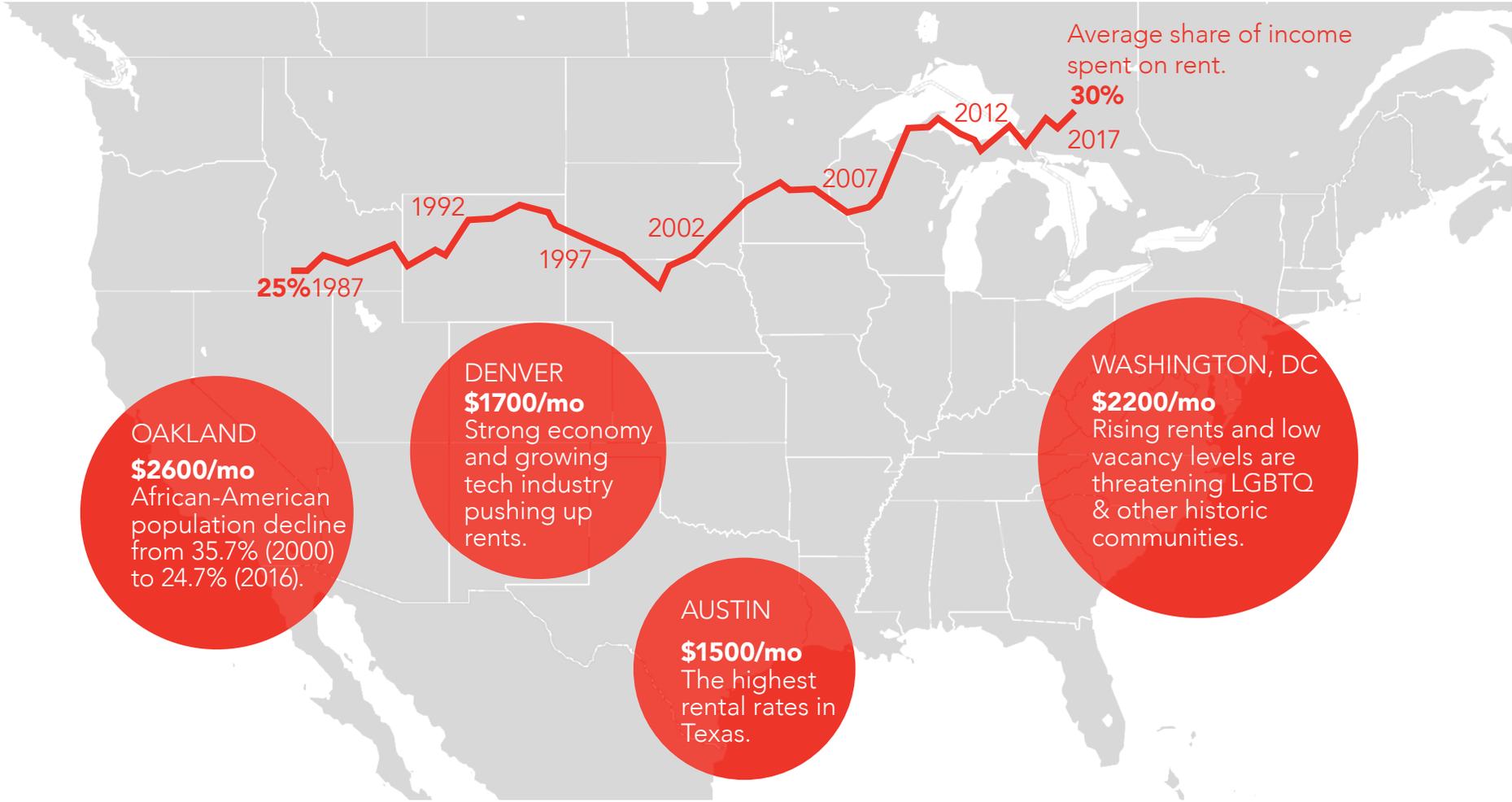
### Geographic cross-section

The ADU Design Catalog analyzes four cities and their ADU capacity. In setting a framework for the study, we focused on cities experiencing the fastest growing rent costs in urban centers in their respective regions. Rising rents are the greatest threat to housing affordability, housing stability, and the ability to age in-place; increasingly, rising rents create the threat of elder homelessness.

Three of the cities selected for review are on the Livability Index Top Ten Most Livable Cities List and all are simultaneously, experiencing the fastest rising rent cost in their geographic region. The catalog examines cities in four parts of the country: Oakland, CA; Denver, CO; Washington, DC; and Austin, Texas.

The development of this guide relied extensively on Vancouver, British Columbia, Canada's Laneway Survey 2018 and the American Census 2016. Vancouver's dense urban-economic center that largely resulted from a secondary unit policy initiated in the 1980s, provides a substantial housing lesson on how to integrate small-footprint ADUs into the existing urban fabric. In Vancouver 35 percent of single-family houses have ADUs. Vancouver's integration of ADUs serves as a model for comparison with the four cities profiled in the catalog and used as a measure for envisioning the potential of each place to add this housing type.

# RENTS AS A SHARE OF INCOME, 1987 TO 2017

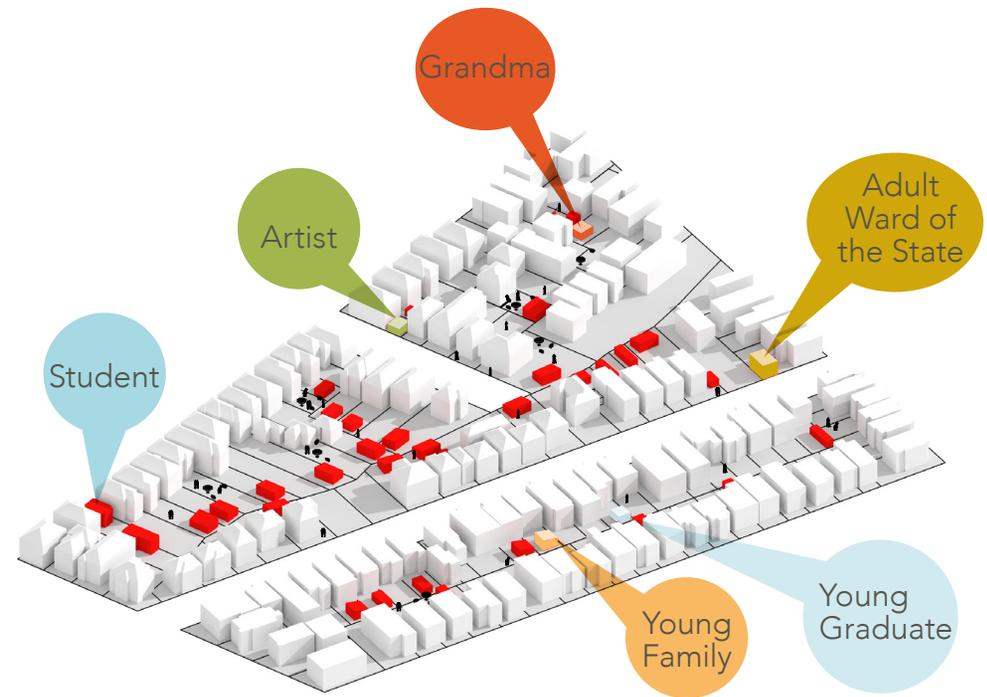


Source: Line graph by Visual Capitalist, 2018. City descriptions and rent rates provided by Rent Cafe and US Census 2016. LGBTQ quote provided by Swerv Magazine, 2018

## PERSONAL STORIES

The catalog's designs are also influenced by the "voice of the average family," and so designs are based on the direct participation of such families and individuals. In all cases, the design participants are active in their respective communities and have a desire to solve the housing crunch. To a large extent they are reflective of a greater sample population that has expressed a desire to build ADU units. Participants included:

- A single mother, earning below regional average, on a smaller than standard size lot that includes an unused dilapidated accessory garage. (Deep East Oakland)
- A family, descendants of the Great Migration, in the no-to-low-income category, has inherited a house on a standard size lot. (North/West Oakland)
- A fixed-income retired teacher with a slightly larger than standard lot size. With his last child now in college, he is contemplating living in the ADU while renting the main house. (Central East Oakland)



## WHO LIVES IN AN ADU?



# ADU REGULATIONS

# ADU Regulations

## Regulations affect ability to build

Cities within the United States are beginning to embrace ADUs as a low-density / low-impact solution to immediate affordable housing that promotes personal economic stability for a wider cross-section of a community's population.

Zoning regulations determine where ADUs are allowed. Included in these ordinances are the maximum allowable size and location of the second unit.

## What's holding back ADUs?

Myriad regulatory barriers exist across many US

cities. The following tables reference the success of Vancouver, BC, where over 26,000 ADUs have been constructed, thanks primarily to the removal of restrictions. Starting in the late 1980s, the city legalized thousands of existing, but illegal, ADUs. Over time, it eliminated the most counter-productive barriers. Vancouver, BC:

- does not require an off-street parking spot for each ADU,
- does not require the owner to live on site,
- allows single-family lots to host both an attached and detached ADU, and
- provides great latitude to property owners in terms of size, height, and placement of each ADU.

## KEY CONSIDERATIONS

1

### LOCATION & ZONING

Cities are comprised of buildings with varying uses - residential, commercial, industrial, etc. In most cities, ADUs are only permitted in residential zones.

2

### PROPERTY LINE SETBACK + HEIGHT

Zoning codes and ADU ordinances dictate property-line distances and heights of all structures in cities.

3

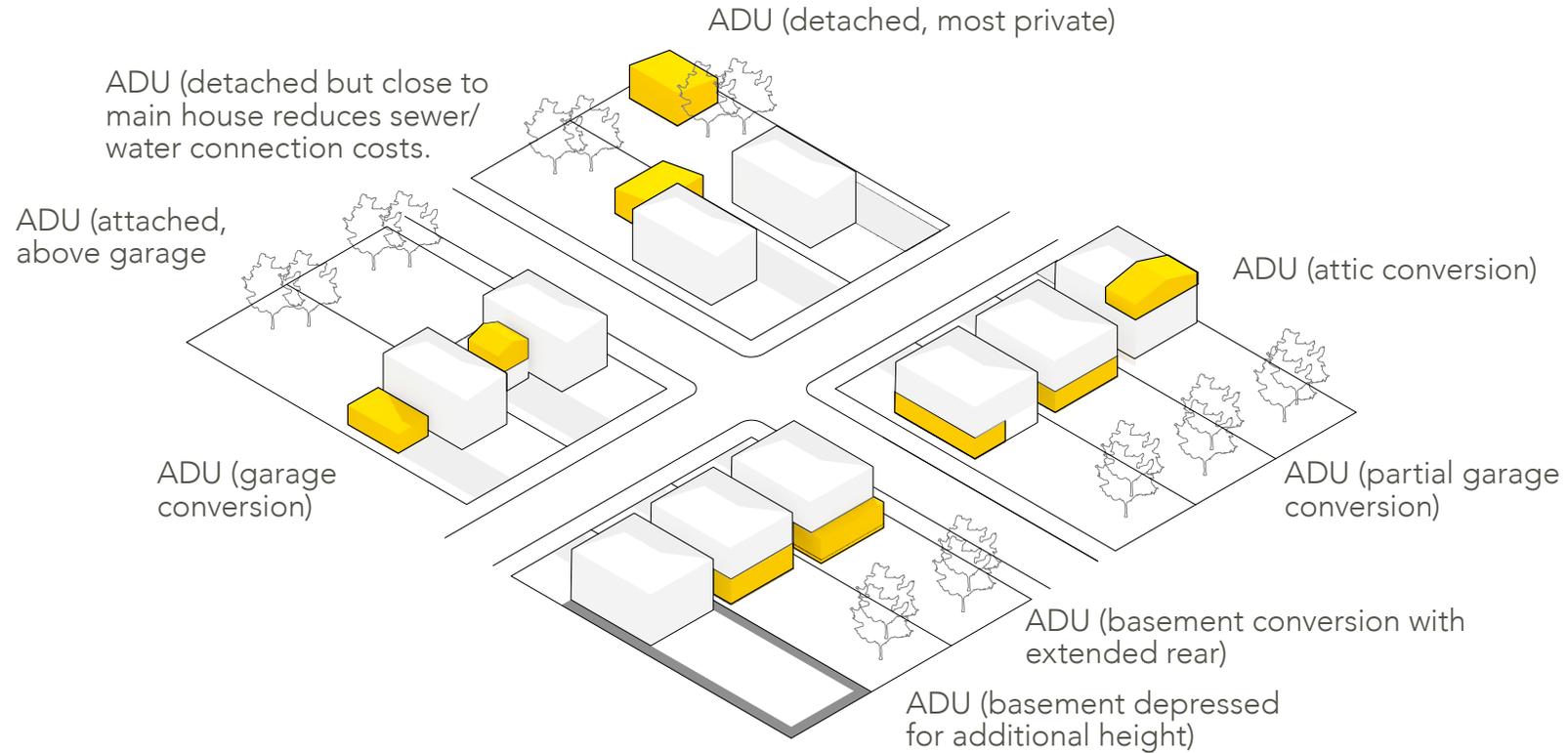
### INCENTIVES FOR ADU DEVELOPMENT

In order to attract ADU construction, some cities have eliminated permit fees, accelerated permit review or even pre-approved designs.

4

### BARRIERS TO ADU DEVELOPMENT

Additional parking requirements are, often, a deterrent to a desired ADU project.



### ADU Configurations - Attached and Detached

Building a second unit that is adaptable, can be a low-impact solution to addressing affordable housing in certain communities. In its varied forms, from detached structure to embedded apartment-style unit, ADUs can meet the needs of a variety of households. The above diagram assumes a 5 FT property-line setback.

**Vancouver, BC demonstrates a substantial housing opportunity for other cities. For example, matching Vancouver's ADU track record could translate into 25,000 ADUs in Oakland, CA where 2,700 individuals are currently without a permanent address.**

## ADU REGULATIONS - PRECEDENT CITIES

Cities that are increasing the number of ADUs through policy and program implementation can serve as models for other communities looking for strategies to address affordable housing issues. Appendix A1 provides additional detailed information regarding ADU regulations across the cities studied.

	Vancouver, BC	Ashland, OR	Portland, OR	Seattle, WA
POPULATION	631,486	21,000	620,589	668,849
Eligible Single Family Homes	75,000	9,382	152,360	134,000
INCOME				
% Population earning < \$25,000	29%*	28%	18%	17%
Equivalent Households	not available	2,981	47,696	55,521
% Population 65+	16%	21%	12%	12%
Equivalent Households	44,007	2,254	31,616	38,413
DEVELOPMENT REGULATION				
Incentive	Loft / 2nd Story Units allowed. Minimal permit fees	Owner occupancy not required. Attached ADUs are exempt from planning application process if < 500 SF	Fee waiver program eliminates \$7,000 - \$15,000 development fees	Pending approval, Pre-package ADU designs will save owners up to \$30,000 in design fees.
RENT (Average Monthly)				
1 Bedroom Apartment	\$1,552	\$1,400	\$1,370	\$1,884
<b>1 Bedroom ADU</b>	<b>\$1,600</b>	<b>\$1,300</b>	<b>\$1,095</b>	<b>\$1,500</b>
<b>TOTAL # OF ADUs (2017)</b>	<b>26,650</b>	<b>191</b>	<b>2,000</b>	<b>1,396</b>
<b>% of Eligible Single Family Homes with ADUs</b>	<b>35%</b>	<b>1.3%</b>	<b>1.3%</b>	<b>1.0%</b>

Source: Vancouver, BC Census 2016, US Census 2016.

## ADU REGULATIONS - CASE STUDIES

Case study cities are experiencing rising housing costs. By easing regulatory restrictions and offering incentives, these cities could see the number of ADUs rise to benefit residents looking for lower cost housing options. Appendix A1 provides additional detailed information regarding ADU regulations across the cities studied.

	Austin, TX	Denver, CO	Oakland, CA	Washington, DC
POPULATION	907,779	663,303	412,040	649,009
Eligible Single Family Homes	183,203	138,405	72,612	36,352
<b>INCOME</b>				
% Population earning < \$25,000	19%	22%	25%	22%
Equivalent Households	74,557	65,854	41,565	66,556
% Population 65+	8%	11%	12%	11%
Equivalent Households	30,677	32,628	20,698	34,965
<b>DEVELOPMENT REGULATION</b>				
Incentive	ADUs can be sold as a separate property.	None located. See section on Denver for further information.	Owner occupancy not required. No additional parking required within 1/2 mile of public transit.	ADUs can be sold as a separate property.
Barrier				
<b>RENT (Average Monthly)</b>				
1 Bedroom Apartment	\$1,130	\$1,400	\$2,300	\$2,000
<b>1 Bedroom ADU</b>	<b>\$1,000</b>	<b>\$1,250</b>	<b>\$1,800</b>	<b>\$1,350</b>
<b>TOTAL # OF ADUs (2017)</b>				
	<b>821</b>	<b>139</b>	<b>404</b>	<b>30</b>

Source: US Census 2016.

Year Built: 2017  
ADU: 1,000 SF  
Total Cost: \$300,000

AUSTIN  
TX

Image: Leonid Furmansky

**Neighborhood: Clarksville**

**Population: 20,815**

**Average Rent, 1-bedroom apartment: \$1,970/month**

The Clarksville neighborhood is charmingly upbeat, characterized by rich historic architectural styles and is within close proximity to downtown.

**Neighborhood: East Austin**

**Population: 22,617**

**Average Rent, 1-bedroom apartment: \$1,694/month**

A mile from downtown, East Austin has historically been a working-class neighborhood. Today, it is also the city's newly fashionable arts district, with studios, galleries, cocktail bars, cafes and eateries.



Currently, 35% of single-family homes in Vancouver, BC include at least one ADU. The map demonstrates that if 35% is applied to Clarksville and East Austin neighborhoods, the potential is a low-density/low-impact addition of 2,016 and 2,191 affordable housing units, respectively.



■ 35% of existing neighborhood detached, small structures.  
 Source: GIS Data, US Census 2016, Rent rates provided by RENTCafe'.

## ZONING REGULATIONS

### Lot Size

#### 5,750 SF example

The maximum allowed ADU size is 1,100 SF, which will comfortably accommodate two bedrooms. However, the maximum allowed second-floor area is 600 SF.

### Setbacks + Height

#### 10/10/10 FT

Required setback are 10 FT side, rear and distance from the rear of the existing house.

Two-story structures are permitted, with a total allowed maximum height of 30 FT.

### Maximum Lot Coverage

#### 40%

Example:

Lot Size: 5,750 SF

Main House: 1,400 SF

ADU Footprint: 600 SF

Total Build Footprint: 2,000 SF

$2,000 / 5,750 = 35\%$

### Parking + Access

#### Varies

Depending on zoning and distance from mass transit, one additional off-street parking space per ADU is required.

## DEVELOPMENT CONSIDERATIONS

### Incentive Programs - State of Texas

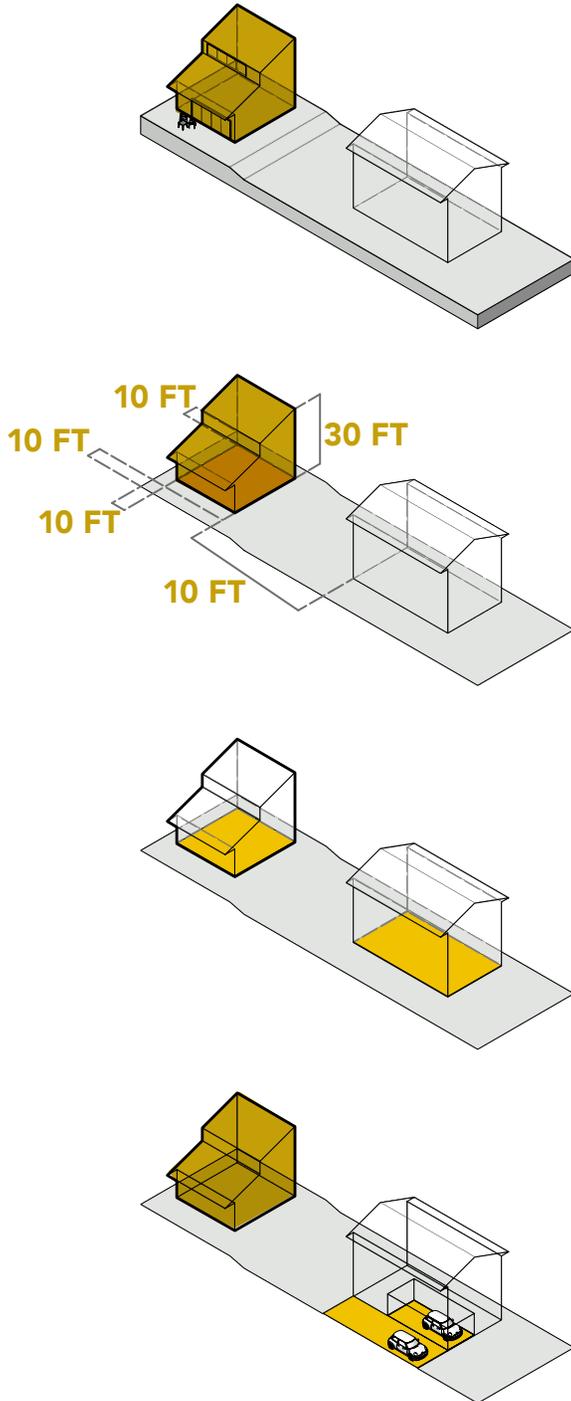
None located.

### Incentive Programs - City of Austin

- A significant driving force in accessory dwelling units is the ability to subdivide the lot and sell an ADU separately from the main house. The condo model divides the property, allowing the ADU to be sold separately. This incentive is generating great interest in more people exploring this option as a means to access capital.
- One additional parking space must be provided for the ADU; however, this does not necessitate an individual driveway for said ADU. Alternatively, a parking space does not have to be provided in locations where the ADU is located within 1/4 mile of an area served by transit.

### Development Constraint

None located.



## RESOURCES

The next steps in starting an ADU project are:

- Contact the local regulatory agency to confirm whether ADUs are allowed in the area.
- Retrieve the zoning setbacks, heights, footprint and parking requirements.
- Measure the parcel to assess the preferred location for an ADU on the property.

### AUSTIN ADU ORDINANCES

AUSTIN DEVELOPMENT SERVICES DEPT

- Accessory Dwelling Units.
- Reduced Parking Map.

### OTHER AUSTIN ADU CONTACTS

AUSTIN ALLEY FLAT INITIATIVE.

## REFERENCES

- Aubrey Bryan. "So You Want to Build an ADU?" *Strong Towns*, September 20, 2018.
- Alyssa Goard. "City Council Looks To Turn The Tide Of Gentrification In East Austin." *KXAN*, May 9, 2018.
- Gene Menez. "What You Need To Know About Accessory Dwelling Units." *Austin Monthly*, 2017.

Imagine you're a young couple, and you want to live in town, your choices are to buy a tear down for \$400,000 or one of these ADUs for about the same price. Except everything in the ADU is brand new, all nice, warrantied, low maintenance- all of the advantages you get from buying a nice, new, energy-efficient home."

Davey explained, "It creates more affordable options in the market. I might not be able to buy a 2,300 SF house, but an 800 SF accessory dwelling unit is in my budget.

Scott Turner, Riverside Homes.  
*Everything You Need To Know  
about ADUs in Austin, Texas.*  
Maxablespace.

# DENVER CO

Year Built: 2018  
Lower Level: 546 SF  
Upper Level: 505 SF  
Total Cost: \$230,000



Image: ADU Home Tour

**Neighborhood: Five Points**

**Population: 5,889**

**Average Rent, 1-bedroom apartment: \$1790/month**

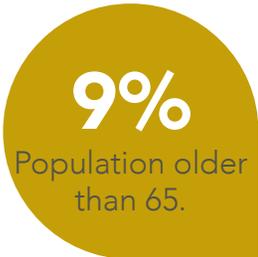
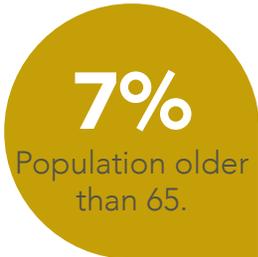
Five Points is one of Denver’s oldest neighborhoods located at the intersection where the downtown street grid meets the neighborhood street grid of the first Denver suburbs. Historically, Five Points is an ethnically and economically diverse community.

**Neighborhood: Golden Triangle**

**Population: 5,305**

**Average Rent, 1-bedroom apartment: \$1650/month**

The Golden Triangle is characterized by many single family Victorian homes and bungalows built in the late 19th and early 20th centuries, alongside newer contemporary, tall condominiums, civic and art institutions.



Currently, 35% of single-family homes in Vancouver, BC include at least one ADU. The map demonstrates that if 35% is applied to the Five Points and Golden Triangle neighborhoods, the potential is a low-density/low-impact addition of 328 and 202 affordable housing units, respectively.



■ 35% of existing neighborhood detached, small structures.  
Source: GIS Data, US Census 2016, Rent rates provided by RENTCafe’.

## ZONING REGULATIONS

### Lot Size

#### 5,750 SF example

200 SF is the minimum ADU size allowed. However, maximums vary. Maximum ADU sizes:

- 650 SF for lots 6,000 SF or less
- 864 SF for lots 7,000 SF or less
- 1,000 SF for lots greater than 7,000 SF.

### Setbacks + Height

#### 5/5/28 FT

Required setbacks are 5 FT side, rear and distance from the rear of the existing house.

Two-story structures are permitted.

### Maximum Lot Coverage

N/A

### Parking + Access

N/A

## DEVELOPMENT CONSIDERATIONS

### Incentive Programs - State of Colorado

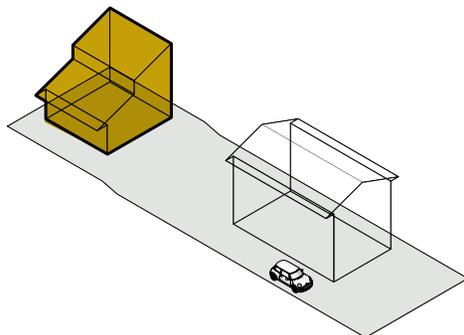
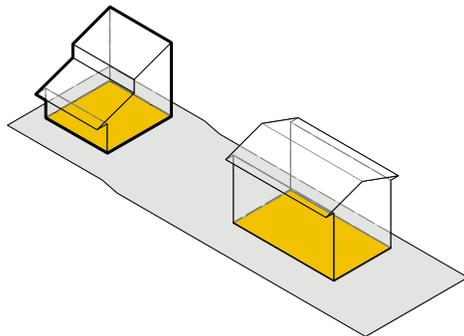
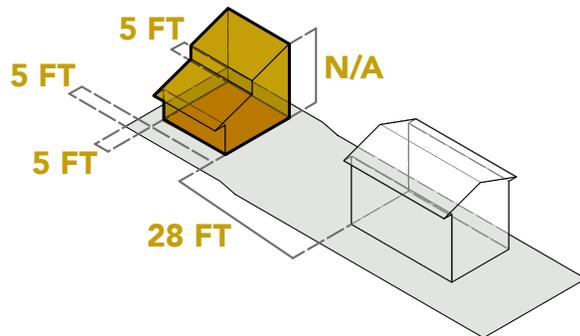
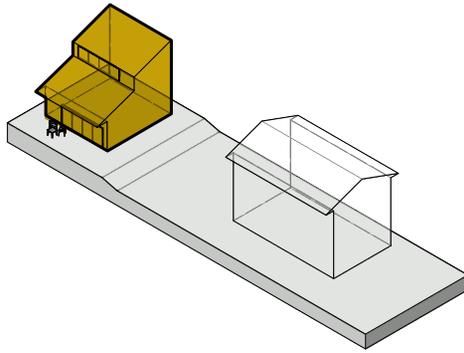
None located.

### Incentive Programs - City of Denver

An ADU may be established on a carriage lot, even in the absence of the existence of a main house.

### Development Constraint

None located. Denver's ADU program appears to primarily target existing carriage structures. However, the program is in its early stages and public ability to implement, even if desired, is not easily determined.



## RESOURCES

The next steps in starting an ADU project are:

- Contact the local regulatory agency to confirm whether ADUs are allowed in the area.
- Retrieve the zoning setbacks, heights, footprint and parking requirements.
- Measure the parcel to assess the preferred location for an ADU on the property.

## DENVER ADU ORDINANCES

DENVER DEVELOPMENT SERVICES DEPT

- Ordinance. Project Guide for Detached Dwelling Units.
- Project Guide for Addition of Habitable Space

## REFERENCES

- Megan Arellano. "Why carriage houses work in some parts of Denver better than others." *Denverite*, September 8, 2016.
- Erica Meltzer. "Carriage houses and casitas could help fight gentrification on Denver's West Side." *Denverite*, November 14, 2017.
- Jon Murray. "Home values are spiking wildly in west Denver. Are hundreds of backyard cottages part of the affordability solution?" *Denver Post*, November 29, 2017.

Tucked into the Sunnyside neighborhood of Denver, the ADU on the section cover provides ample garage space and a workshop big enough for all of the owner's hobbies.

The street view of this ADU is a great example of why The City of Denver is a proponent of ADUs, as they are much less disruptive to the neighborhood fabric versus other types of development.

This project was completed in the first half 2018 and sports a living space of 641 SF with an additional 855 SF of garage space.

The Denver ADU Home Tour.

Year Built: 2017  
ADU: 350 SF  
Total Cost: \$150,000

# OAKLAND CA



Image: Eric Rude

**Neighborhood: Dimond**

**Population: 29,628**

**Average Rent, 1-bedroom apartment: \$2000/month**

The Dimond community has one of the largest concentrations of older-adults. A sheltered enclave located at the base of the Oakland Hills, this quiet, residential stretch has a strong Latino culture and shopping district which provides a mix of urbanity and nature.



Currently, 35% of single-family homes in Vancouver, BC include at least one ADU. The map demonstrates that if 35% is applied to Dimond and Elmhurst neighborhoods, the potential is a low-density/low-impact addition of 2,807 and 2,524 affordable housing units, respectively.



■ 35% of existing neighborhood detached, small structures.  
Source: GIS Data, US Census 2016, Rent rates provided by RENTCafe.

**Neighborhood: Elmhurst**

**Population: 33,823**

**Average Rent, 1-bedroom apartment: \$1762/month**

Real estate in Elmhurst is cheaper than in other parts of Oakland. Historically, this allowed workers the ability to enter the middle class. As rents increase in the Dimond District or other western neighborhoods, Elmhurst residents are facing displaced by new, often wealthier arrivals.



## ZONING REGULATIONS

### Lot Size

#### 5,000 SF example

A typically sized residential parcel in Oakland.

The minimum size ADU allowed is 250 SF. The maximum is 800 SF; which will comfortably accommodate two bedrooms.

### Setbacks + Height

#### 5/5/14 FT

Required setbacks are 5 FT side, rear and distance from the rear of the existing house.

The allowed maximum height is 10 FT at the property line and 14 FT at the roof peak.

### Maximum Lot Coverage

#### 50%

Example:

Lot Size: 5,000 SF

Main House Footprint: 1,400 SF

ADU Footprint: 600 SF

Total Build Footprint: 2,000 SF

$2,000 / 5,000 = 40\%$

### Parking + Access

#### Varies

None required if within 1/2 mile of public transit. All others, one parking space required.

## DEVELOPMENT CONSIDERATIONS

### Incentive Programs - State of California

Two key considerations in the cost of an ADU project are utility connection fees and the cost of fire sprinkler systems. These two factors can be sizable costs for any project. As an incentive to construction, State law SB 1069 provides that:

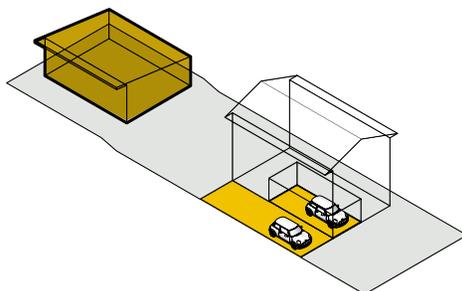
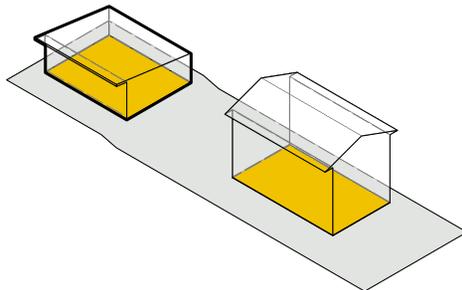
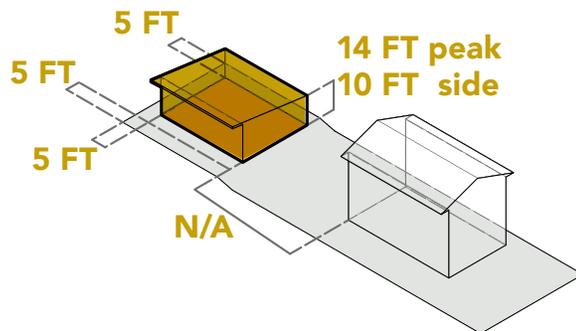
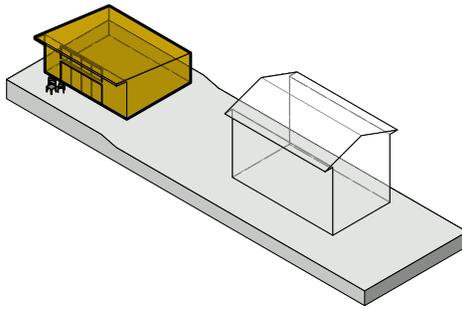
- ADUs shall not be considered new residential uses for the purpose of calculating utility connection fees, including water and sewer service.
- ADU are not required to have a new or separate utility connection.
- Fire sprinklers are not required in an ADU if they are not required in the primary residence.

### Incentive Programs - Oakland and Alameda County

- The City of Oakland is in Alameda County (AC). The County's low-interest home repair loan program allows for the conversion of an existing main house space into an ADU.
- New property taxes are calculated based on the construction cost of the ADU, not the market value.
- Same-day planning review process

### Development Constraint

- Permit Fees



## RESOURCES

The next steps in starting an ADU project are:

- Contact the local regulatory agency to confirm whether ADUs are allowed in the area.
- Retrieve the zoning setbacks, heights, footprint and parking requirements.
- Measure the parcel to assess the preferred location for an ADU on the property.

## OAKLAND ADU ORDINANCES

OAKLAND PLANNING & BUILDING SERVICES DEPT

- Secondary Units Zoning Regulations  
secondary-unit-in-law-regulations
- Permit Forms.

## REFERENCES

- Ramona D’Viola. “Granny Units to the Rescue.” *Oakland Magazine*, December 13, 2016.
- Marisa Kendall. “Building a granny flat can cost big bucks. But there is help out there” *Mercury News*, January 29, 2018.
- Lance Knobel. “Berkeley City Council further eases process for ADUs.” *Berkeleyside*, May 17, 2018.

I would like to build an ADU on my late grandmother’s land. My father lives in the main house and I would like to live in the in-law unit instead of renting elsewhere, as I do now.

Landlords are raising rents and I am feeling a sense of insecurity. Eight years ago all 24 homes on the block were owned by African-Americans. Now there are only five families left.

The biggest barrier to building is funding and the approval process. It is so confusing. If I could build next month, I would; my family would all help to build.

Annette Miller, Oakland

# WASHINGTON DC

Year Built: 2017  
Private project.  
Information not  
available.



**Neighborhood: Anacostia**

**Population: 5,551**

**Average Rent, 1-bedroom apartment: \$990/month**

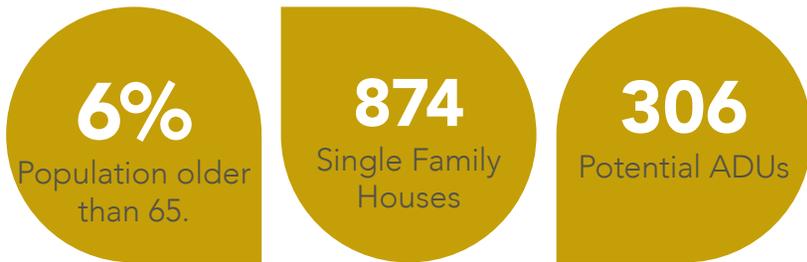
One of DC’s earliest suburbs, the population is 92 percent African-American. Located east of the Anacostia River, Anacostia provides a serene natural retreat for walkers, hikers and bikers alongside a small town feel a short metro-ride from downtown DC.

**Neighborhood: Shaw**

**Population: 6,088**

**Average Rent, 1-bedroom apartment: \$2355/month**

This historically African-American neighborhood is home to many cultural landmarks, including several theatres. Today, Shaw is one of the city’s hippest enclaves, with craft cocktail bars, beer gardens, indie clothing boutiques, trendy global restaurants and rising rents.



Currently, 35% of single-family homes in Vancouver, BC include at least one ADU. The map demonstrates that if 35% is applied to Anacostia and Shaw neighborhoods, the potential is a low-density/low-impact addition of 306 and 333 affordable housing units, respectively.



## ZONING REGULATIONS

### Lot Size

#### 5,750 SF example

Ability to build an ADU will depend on the zoning designation and minimum size of the main house. Main house minimum sizes vary from 1,200 SF to 2,000 SF.

### Setbacks + Height

#### 8/8/300 FT

Required minimum setback are 8 FT side, rear and distance from the rear of the existing house. The code does not specifically state a height restriction. However it does restrict how far from a public street that an ADU can be located.

### Maximum Lot Coverage

#### 15%

Example:

Lot Size: 5,750 SF

Main House: 2,800 SF (two story)

35% of Main House = 980 SF allowable structures

ADU Footprint: 600 SF

A 600 SF ADU is within the regulatory size.

### Parking + Access

#### None

No additional parking requirement.

One parking space required per main dwelling.

## DEVELOPMENT CONSIDERATIONS

### Incentive Programs - Ownership

Both Austin and Washington, DC regulations permit the sale ADUs. This flexibility in their regulations is a powerful tool to access home-ownership at lower entry costs.

This small footprint is an affordable model to starter home ownership.

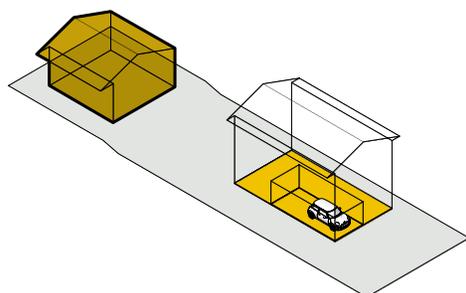
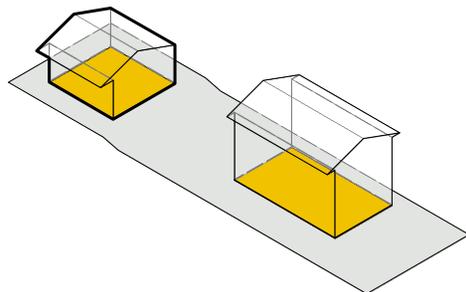
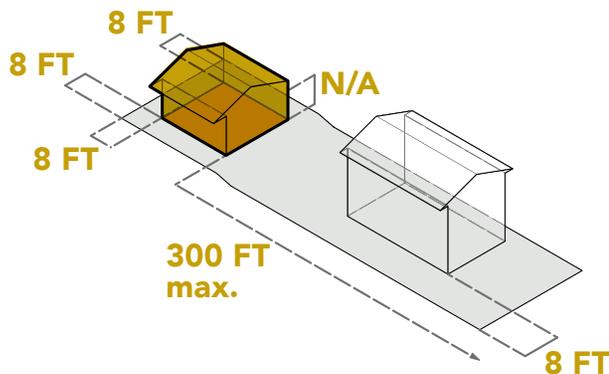
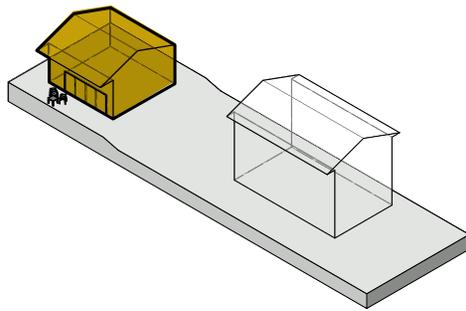
### Incentive Programs - Operations

Accessory apartments are not required to obtain a certificate of occupancy because they are a single family dwelling use.

### Development Constraint

In order to have an accessory dwelling, the above-grade ground floor area of the house must be a minimum of 2,000 SF in the R-1-A, R-1-B and R-19 zones or a minimum of 1,200 SF in the R-2, R-3, R-10, R-13, R-17 and R-20 zones.

DC zoning amendments that went into effect in 2016 made ADUs matter-of-right in many residential zones in DC. However, few have been built. This could be due to restrictions on location and main house size requirements.



## RESOURCES

The next steps in starting an ADU project are:

- Contact the local regulatory agency to confirm whether ADUs are allowed in the area.
- Retrieve the zoning setbacks, heights, footprint and parking requirements.
- Measure the parcel to assess the preferred location for an ADU on the property.

## WASHINGTON, DC ADU ORDINANCES

### DC DEPT. OF HOUSING AND COMMUNITY DEVELOPMENT

- ADU Policy Statement
- ADU Frequently Asked Questions

### DC OFFICE OF ZONING

- Accessory Dwelling Units DC Regulations
- Accessory Apartments DC Regulations

## REFERENCES

- David Alpert. "We need to battle "cultural" obstacles to accessory apartments." *Greater Greater Washington*, October 3, 2018.
- Maura Broffy. "DC now allows accessory apartments to be built in residential zones. What happens next?" *Greater Greater Washington*, October 16, 2017.
- Accessory Dwelling Units. *Coalition for Smart Growth*.

This is gentrification. It has changed the neighborhoods of low income people, the elderly, people of color - and now LGBTQ folks...What made them unique and special is gone. Businesses closed down, people moved away, and entire city blocks are demolished to build deluxe apartments in the sky.

I feel that something is lost when our neighborhoods fade away. There isn't a place to gather. We can't walk down the street to run into old friends..."

Rayceen Pendarvis. "There Goes the Neighborhood." *Swerv Magazine*, May 2018.

# 2

## FINANCE OPTIONS

Image: Propel Studio

# Finance Options

Homeowners choose to construct ADUs for various reasons including as a substitute for nursing home care, a means to age in community, an opportunity to live with other family members in multi-generational living arrangements, as well as a source of earning extra income to supplement fixed incomes in their retirement years.

## KEY CONSIDERATIONS

1

### SOURCE OF FUNDING

A Home Equity Line of Credit (HELOC) and other home refinance products, such as cash-out refinances, are available from commercial lenders and credit unions. In a survey of ADU homeowners in Santa Cruz County, CA, over half of the respondents used personal savings and about 40 percent used a HELOC for design and construction. Less than 10 percent used a refinance product.

2

### LOAN TERMS

Financing terms vary depending on loan source. Federal, commercial and non-profit financing sources offer varying packages ranging from:

- Low cost and/or deferred loans.
- ADU loan assistance in exchange for providing affordable rental housing.

3

### COST SAVING INCENTIVES - DESIGN

Several cities have implemented incentives for ADU construction such as:

- Free design and project support.
- Pre-approved permit ready plan can save home-owners up to \$30,000 in design and development costs depending on the ADU size.

4

### COST SAVING INCENTIVES - CONSTRUCTION

Once design is complete, permit and development fees can also be a deterrent. In order to encourage projects, many cities have:

- Reduced permit fees or fee waivers.
- Waived infrastructure impact fees
- Dedicated ADU permit review staff to facilitate faster permit review.

## LOAN OPTIONS

The five primary loan options available to homeowners looking to add an ADU are:

**A First Mortgage** on the purchase of a new home. The loan is based on the new “as completed” value of the main house. While the loan funds will cover the cost of the home, it likely will not cover the cost of adding a future ADU which would require the homeowner to self-finance with existing cash, credit cards, or to apply for a second mortgage.

**A HELOC or Home Equity Line of Credit** is a second mortgage product that provides access to a short-term, variable mortgage that is contingent on the homeowner having sufficient equity to access funds. HELOCs are similar to credit cards in that a homeowner only pays interest as one accesses the funds for construction.

**Homeowners may refinance the loan** on their existing home to access equity due to appreciation in value or a paydown of principal. Proceeds of the refinance could then fund ADU construction.

**Homeowners with sufficient cash on hand** can use it to pay for the cost of ADU construction and then refinance the home to account for the potential increase in value.

**Renovation loans** such as the Department of Housing and Urban Development’s (HUD) 203(k) loans are less widely-used tools that are available to homeowners. The 203(k) product is available for additions to the main structure, meaning the unit must be attached to the main structure via a foundation. Fannie Mae has also recently updated its HomeStyle Loan product for detached ADUs. Homeowners might also consider using loans from retirement accounts such as 401(k) or 403(b) accounts to finance the design and construction of ADUs.

## ASSESSING OPTIONS

After completing a budget, the next step is to discuss the project with a local bank or credit union.

- Given the nascent state of ADU lending, most lending institutions will require that a borrower has a credit score of at least a 680.
- Typical debt to income ratios must be less than 45 percent for all outstanding debt
- The vast majority of lenders do not include future expected income for loan qualification purposes although new loan products such as Fannie Mae’s HomeReady loan now provide an opportunity to capture expected future rent based on neighborhood comparables and boarder income for tenants that can document proof of occupancy over the previous 12-month period.
- Appraisals are needed to help lenders determine the value of the home and the after rehab value due to construction of the ADU.

## HOME EQUITY LINE OF CREDIT OPTIONS

	QUALIFYING FACTOR	DRAWBACKS	HOME-OWNER BEST FIT
<b>First Mortgage Cash Out Refinance</b>	<p>Homeowner must have at least 15% in equity (maximum cash out is 85% on a one unit owner-occupied home (i.e greater than 15% in equity).</p> <p>Generally a 45% max debt-to-income ratio. Exception: where 20% or more in equity and/or FHA financing.</p>	<p>\$3-5K administrative fee.</p>	<p>Owners who refinance receive a better interest rate or those who desire lowest long term fixed interest rate as opposed to a higher second mortgage interest rate.</p>
<b>2nd Mortgage - fixed or home equity line of credit</b>	<p>Requires at least 20% equity or more (maximum loan to value on second mortgages 90% or less.)</p> <p>Without material existing equity it does not provide enough funding depending on current first mortgage balance.</p> <p>Generally 45% debt to income.</p>	<p>Higher interest rate than first mortgage options and rate is adjustable on a line of credit vs. fixed second mortgage.</p>	<p>Owners who do not refinance their first mortgage and have significant existing equity, and also have plan to pay off higher interest rate second mortgage loan (or adjustable rate as on line of credit).</p> <p>Owners who have significant equity (eg. have lived on the property for 5+ years).</p>
<b>Renovation Financing</b>	<p>The only loan based on after rehab value</p> <p>Similar to a traditional first mortgage, typically 45% debt ratio is max but can be exceeded with 20% or more in equity.</p> <p>660 minimum credit score required for Homestyle renovation loan, 640 for 203(K) FHA Rehabilitation Loan.</p> <p>Typically no reserves/assets are required to qualify for a refinance on renovation loan; minimum 5% down payment on Homestyle purchase and minimum 3.5% down payment required on 203(K).</p>	<p>Must have a Construction Contractor who is willing to take draws from the lender.</p> <p>Must show permitted drawings to help convey future value.</p>	<p>Owners without assets or without significant home equity or those who wish to leverage financing to fund renovation versus liquidating savings.</p>

## FINANCE BARRIERS

The Turner Center for Housing Innovation reported in April, 2018, that in Portland, Seattle and Vancouver, BC 34 percent of survey respondents cited finding a loan is the biggest challenge; while 18 percent indicated paying for the cost of construction was their greatest barrier to ADU development. Additional financing hurdles include:

**Debt to income.** Individuals are often unable to secure loans that increase their monthly debt to income beyond the 35 to 45 percent threshold. Freddie Mac now accepts income from a

signed lease to contribute to one’s monthly income under its Home-Ready program.

**Equity.** A substantial amount (20% or more in equity) is required for a Home Equity Line of Credit (HELOC) which makes this product unattainable for many low to moderate income property owners.

**Credit.** A minimum credit score of 680 is necessary to qualify for Fannie Mae guaranteed loan products.

## FINANCE OPTIONS MARKET GAP

### FINANCE WITH AN EXISTING OR NEW MAIN HOUSE

One mortgage for the entire property. Loans based on “as completed” value of the main house plus the future ADU, which provides the funds to construct the ADU.

### FINANCE BASED ON EXISTING HOME EQUITY

Home equity loans and HELOCs provide funding to build an ADU if you have sufficient “equity” in the main home and are second mortgages on the property.

### FINANCE WITH AN INDEPENDENT MAIN HOUSE

Besides personal loans, credit cards, and family loans, currently, there are no established second mortgage options for people who do not have sufficient equity, nor wish to refinance.

For a more detailed understanding of the Finance Options Market Gap and other finance considerations, see documents listed on page 2-34.

**SUFFICIENT FINANCING OPTIONS READILY AVAILABLE**

**FINANCING GAP**

## FILLING THE ADU FINANCE GAP

### EMERGING FINANCING TRENDS

**Seller Financing / Developer.** An emerging model for ADU construction is one where a developer owns the ADU, while the property owner owns the land. The developer pays the homeowner a percentage of the rental revenue each month under a lease agreement. In this model:

- The developer is responsible for all construction and installation, and maintenance costs.
- The property owner has the choice of identifying qualified tenants for the ADU, but can also allow the developer to select qualified tenants in which case, the developer guarantees a minimum monthly payment to property owner.
- The property owner can purchase the ADU at any time based on a declining buyout payment established in the lease agreement. At the end of the lease term, the property owner will own the unit outright.

**Public or philanthropic grant or soft loans** are starting to appear. For example, Housing Trust Silicon Valley has created a three-tiered ADU financial assistance program:

- Planning Grant of up to \$1,000
- Start-up loan of \$25,000
- Construction loan up to \$200,000

### POLICY RECOMMENDATIONS

There are a number of steps local jurisdictions can take to help low-income seniors realize the ADU opportunity. These include:

- **Partnerships with local foundations** to provide seed funding to local non-profit design, construction, and development organizations.
- **Provide forgivable pre-development loans** to homeowners that can be used for pre-construction activities such as inspections, feasibility assessment, and project management services, some portion of which homeowners would cover.
- **Provide grants to establish a loan loss reserve** or other credit enhancement to induce credit unions to loosen credit terms for homeowners.
- **Consumer financing for ADU** development that would include short-term financing that could be convertible to long-term shared appreciation financing.
- **Local loan pools.** Private loan funds can be leveraged to provide below-market loans to income-eligible homeowners for ADU construction. For example, in 2007, Healthy Neighborhoods, a non-profit organization committed to improving targeted Baltimore neighborhoods, created the Healthy Neighborhoods loan pool, a \$30.5 million private loan pool, in partnership with local banks and philanthropic organizations. The fund provides special below-market purchase and rehab loans to home-buyers and homeowners in Baltimore City to encourage investment and standard-setting renovation.

	RECOMMENDED % OF BUDGET	COST PERCENTAGE	COSTS
<b>A. THE BUILDING</b> (The Building and Equipment)			
New Construction (including site preparation, utility connection, construction, paving, landscaping, interior tile, paint, lighting, all fixed items, equipment installation, construction overhead and profit)	70 - 80%		
Construction Contingency	5%		
Subtotal Construction			
Fixtures and Equipment	3 - 5%		
<b>Subtotal the Building</b>		%	
<b>B. DESIGN AND APPROVAL</b> (Drawings, Permits and Inspection)			
Property Survey (property line, easements, monuments)	5%		
Design Professional Fees (Architects, Engineers, Prints and Reimbursables etc.)	8 to 15%		
Permit fees and Utility charges (Building Permits; Electrical, Mechanical, Plumbing and Fire Protection Permits; Sewer, Water, etc.)	3%		
Testing and Inspection Services	2%		
<b>Subtotal Drawings and Approval</b>		%	
<b>C. BUDGET MANAGEMENT</b> (Target between 70/30 and 80/20 depending on site or project complexity)			
TOTAL HARD COSTS (A)	70 - 80%		
TOTAL SOFT COSTS (B)	30 - 20%		
<b>Total Project Budget</b>		%	\$
<b>OTHER COSTS TO CONSIDER</b>			
<ul style="list-style-type: none"> <li>• Project Financing Fees and Costs.</li> <li>• Additional Real Estate Taxes due to new construction</li> </ul>			

## RESOURCES

Building an ADU requires much of the same research, contemplation, and preparation as making any other large financial investment. Families should assess their needs and finances to determine whether building an ADU makes good financial sense.

Although the AARP ADU Design Catalog provides an overview of financing options, it is the responsibility of the property owner to secure financing.

### AUSTIN

- Austin Alley Flats Initiative. Free design and project management/construction management support in exchange for five years of restrictions and agreement to build using the city's sustainability program.

### DENVER

- Office of Housing and Opportunities for People Everywhere, Local Rental Voucher

### OAKLAND

- Alameda County Home Preservation Loan Program

### WASHINGTON, DC

- The Coalition for Smart Growth

## REFERENCES

- Fannie Mae: HomeReady Mortgage.
- Jumpstarting the Market for Accessory Dwelling Units. Turner Center for Housing Innovation.
- The ABCs of ADUs by AARP.
- Oregon ADU Finance Guide 2015 : The Finance Options Market Gap.

Even with the provision of user guides, technical assistance, and financing, older adults are reluctant to take on any additional debt and are unwilling to manage the construction process even though they were prime candidates for ADUs.

With this in mind, new financing programs administered by a jurisdiction will require a concerted educational outreach effort to older adults and their families to achieve success.

Karen Chapple. Professor  
UC Berkeley

A modern kitchen with light wood cabinets, stainless steel appliances, and a grey tufted sofa in the foreground. The kitchen features a refrigerator, microwave, oven, and sink with a window above it. A large teal number '3' is overlaid on the image, followed by the text 'ADU SPACE PLANNING'.

# 3 ADU SPACE PLANNING

Image: Propel Studio

# Planning for Living in Dignity

## **The right fit for different households**

Demographic trends are producing more households where adult children wish to give care and support to parents in a semi-independent living arrangement. Having lived geographically separate lives, a certain degree of sensitivity to the ability to maintain a private life is necessary.

The older adult population is living longer and as the risk of having a disability increases with age, they may require care at home. Because the majority of older adults want to live in their homes as they age, they may require longer care at home. ADUs can be an effective solution for family caregivers and people with disabilities.

The societal benefits associated with the creation of accessory dwelling residences cannot be overstated. ADUs can be an economic solution for many strained under

the weight of high housing costs such as aging homeowners, single parents, and college graduates saddled with student loan debt. ADUs increase the supply of affordable housing without the need for more infrastructure or further land development. Their smaller size allows for better integration into communities with minimal negative impact to neighborhood character.

ADUs provide that final link to livable communities as they often allow older residents the opportunity to live in supportive family environments and in communities with features, and amenities that help them live actively, independently and with dignity.

Lastly, the diminutive size of ADUs can be a design puzzle. It may require input from an architect or another design professional to maximize livable flexibility within the limited boundary.

## KEY CONSIDERATIONS

### 1 PRIORITIES

Creating a smaller, safe, sustainable, and comfortable home means weighing options among the elements and features included in the unit. This often translates to making decisions between having a full-size refrigerator and stove or a dedicated work space. Homeowners must determine whether their most desired features will fit into a compact space. Given, that there are now smaller versions of many appliances, fixtures and furniture, homeowners can choose from a wide variety of options.

### 2 ADAPTABILITY

The ADU should be equally responsive to changing needs. That is, it is designed to be adaptable to the needs of different families or people at different life stages. The planned use will most likely determine the design elements selected for the ADU. For some who have or anticipate limited mobility as they age, universal design elements can be added to the space. Others, who are using the ADU for caregivers or renters, may prioritize other features such as flexible storage space.

Key factors in considering design and function of the space are adaptability and priority. They both require thought about potential occupants and their possible use of the space over time.

### 3 COST AND AFFORDABILITY

Affordability is a top priority for cities where rents are rising aggressively and the number of families experiencing homelessness continues to rise. As a result, several cities have created incentives aimed at lowering project costs. Several factors should be considered:

- The cost per square foot of construction varies in opposition to the size of the building; ie, the larger the unit, the lower the per square foot cost of the project. Additionally, several cities provide decreased building permit fees which assists in lowering the cost of designs for space-efficient units. Cumulatively, this allows an ADU to be within reach of a large number of older-adult home-owners and low-income community members.
- Energy-efficient construction methods, windows, doors and materials all contribute to the overall project costs and should be managed carefully to stay on budget and avoid.
- Incorporating modern energy-efficient appliances, can positively impact monthly savings.

### 4 HEALTH AND THE ENVIRONMENT

Instituting policies and incentives that encourage healthy building design, construction and use of materials can reduce waste and minimize the environmental impact of developing an ADU.

# ONE MODEL

An amenity-rich floor plan that provides for relaxed comfort, independence, privacy and social gatherings.



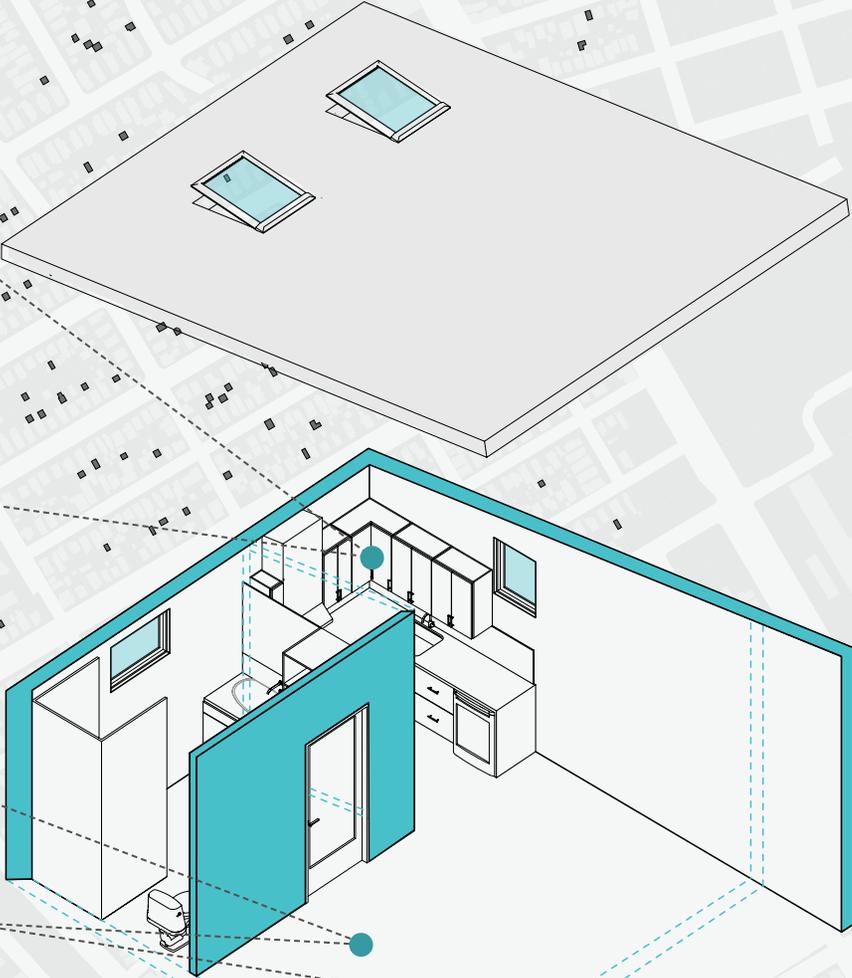
**ZONE 1**  
An ADU provides the ability to cook without reduction in standards.



**ZONE 2**  
Similar to a private apartment, an ADU accommodates a full size bed and storage.



**ZONE 3**  
A sheltered entry and optional outdoor deck provides privacy and a space for socializing with friends.

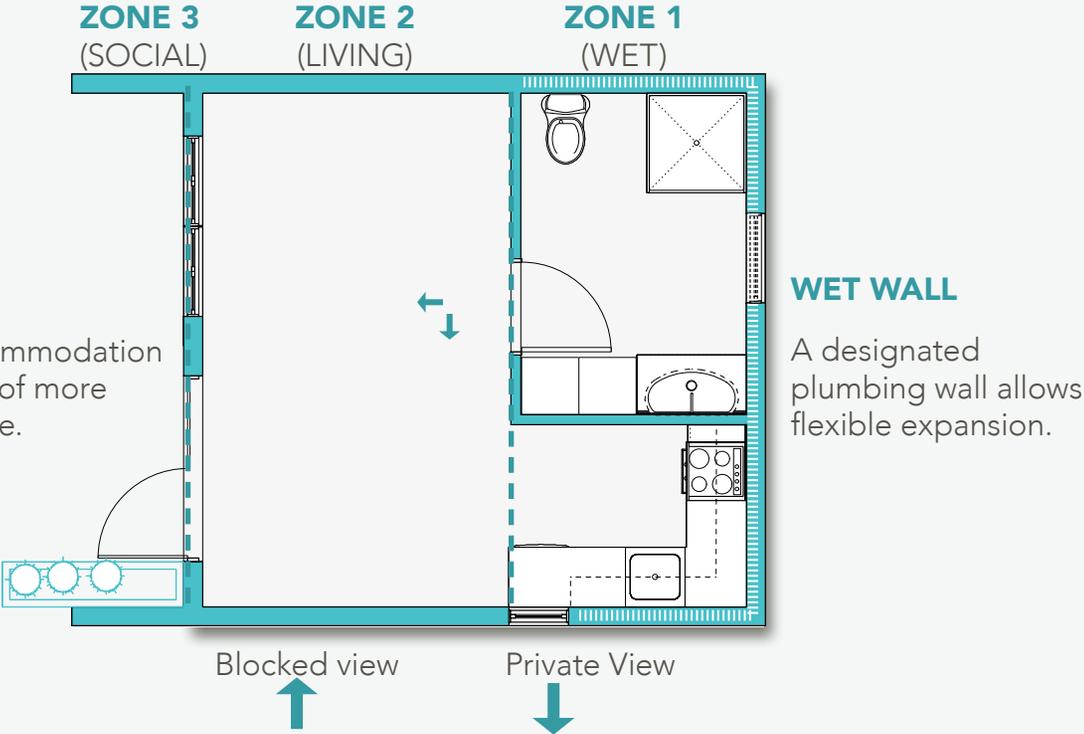


# ONE MODEL, THREE DESIGNS

From 250 SF to 1,100 SF, ADUs vary in size depending on local regulations, intended use and available financing. One approach to design is to focus on flexible floor plans that are expandable or adaptable.

## FLOOR PLAN INVENTORY

ROOM LIST & SIZES	
Sleeping Area	100 SF
Living Area	100
Bathroom	90
Kitchen	60
ADU Size	350
Deck (optional)	112
FURNISHINGS (as shown)	
Queen-Size Bed	Coffee Table
Clothes Closet	Bookshelves
Clothes Drawer	Wall-mounted TV
Sofa	Deck furnishings
APPLIANCES & EQUIPMENT	
Roll-in Shower	4-Burner Stove
Low-Flow Toilet	Oven
Bathroom Sink	Under-counter refrigerator
Wall-mounted Hot-Water	Waste Disposal Unit



## MODULAR VARIATIONS



# SAMPLE ADU BUDGET

ADU Project Budget	Notes	Cost	Total Cost
<b>A. THE BUILDING (The Building and Equipment)</b>			
<b>A1. Construction</b>			
New Construction* (includes site preparation, utility connection, construction, paving, Landscaping, Interior tile, stone, paint, lighting, all fixed items, all interior equipment instalation, construction overhead and profit)	Cost Per square foot	\$315.00	110,250
Construction Contingency	% of Construction Costs	5%	5,513
<b>Subtotal Construction</b>			<b>115,763</b>
<b>A2. Fixtures and Equipment</b>			
Kitchen and Bathroom Fixtures and Appliances	3 - 5% of Construction Costs	4.0%	4,631
<b>Subtotal Furnishings and Equipment</b>			<b>4,631</b>
<b>Subtotal The Building</b>			<b>120,393</b>
<b>B. APPROVAL (Drawings, Permits &amp; Inspection)</b>			
<b>B1. Site Investigation</b>			
Property Survey (property line, easements, monuments)	Required in some cities.	5.0%	5,788
<b>Subtotal Acquisition</b>			<b>5,788</b>
<b>B2. Professional Fees</b>			
Architecture and Engineering	8 to 15% of Construction Costs	15.0%	17,364
A&E Reimbursables (Printing)	2 to 5% of A/E fees	5.0%	868
<b>Subtotal Professional Fees</b>			<b>18,233</b>
<b>B3. Permit fees, tap fees, utility charges</b>			
Planning and Design Review Fee	3 - 5% of Construction Costs	4.0%	4,631
Building Permit Fee			
Fire Dept Permit Fee			
Water and Sewer Connection			
Electrical Connection			
School / County Fees			
<b>Subtotal Permit &amp; Inspection Fees</b>			<b>4,631</b>
<b>B4. Inspection</b>			
Testing and Inspection Services	2 - 3% of Construction Costs	2.0%	2,315
<b>Subtotal Inspection Fees</b>			<b>2,315</b>
<b>Subtotal Approval</b>			<b>30,966</b>
<b>BUDGET MANAGEMENT (target between 70/30 and 80/20 depending on site or project complexity)</b>			
TOTAL HARD COSTS (A)		80%	\$120,393
TOTAL SOFT COSTS (B)		20%	\$30,966
<b>TOTAL DEVELOPMENT COST ESTIMATE</b>		<b>100% \$</b>	<b>151,359</b>
CLIENT AVAILABLE FUNDING		\$	150,000
SAVINGS (OVER-BUDGET)			(\$1,359)

### Cost Assumptions

Project Size	350 SF
Available Funding	\$150,000
Construction Duration	4 months

\*Construction Costs are used as the basis for estimating other costs, primarily because City and County fees are based on estimated construction costs.

- OTHER COSTS TO CONSIDER**
- Project Financing Fees and Costs
    - Financing Fees (0% for IFF; 1% for private loan)
  - Miscellaneous
    - Additional Real Estate Taxes due to new construction

	VENDOR / SUPPLIER	AVERAGE INDUSTRY	ESTIMATED SIZE / COST (SF / \$)
<b>A. ROOM LIST</b>			
Rooms and accommodation should reflect the intended occupant and use.			
• Bedroom. Is a separate bedroom desired or will an alcove be appropriate?		170 - 220 SF	
• Bathroom. Is a shower or full bath? Wheel-chair Accessible?		60 - 100 SF	
• Kitchen. Full-size or compact?		50 - 160 SF	
	<b>Total</b>	250 - 1,200 SF	
<b>B. FURNISHINGS</b>			
Consider which items you will provide (built in) versus which items to be provided by the occupant:			
• Closet. Will a built-in closet be provided? Or will the occupant provide their own		48 SF (minimum)	
• Bed. King, Queen, Single			
• Storage Amenities. Bookshelves? TV mounting?			
• Light fixtures. Will you provide light fixtures or only the connection?			
<b>C. APPLIANCE AND EQUIPMENT LIST</b>			
• Shower or Bathroom. Are there accessibility requirements?	eg. American Soak		
• Toilet. Low-Flow? Dual-Flush?			
• Faucets. Accessible?			
• Kitchen sink.			
• Stove. 4 burner or compact?			
• Oven.			
• Refrigerator. Full or Under-counter?			
• Dishwasher			
• Washer/Dryer. Stacked or compact?			

## RESOURCES

Homeowners must understand why they want to build an ADU, including the intended purpose and use, before beginning the project.

Will it be a place for parents to live so they can be close to the grandkids? For a recent university graduate? A young family? Is the ADU a planned downsize in lifestyle?

The answer to **WHY** to building an ADU will influence design and budget decisions.

## DESIGN

- The Austin Alley Flats Initiative offers free design and project management/construction management support in exchange for five years of restrictions and agreement to build using the city's sustainability program.
- The West Denver Renaissance Collaborative provides designs for low-income communities

## REFERENCES

- Propel Studio. "5 Biggest Surprises Our Clients Discover When Designing And Building An Accessory Dwelling Unit (ADU) In Portland, Oregon." *Propel Studio*, April 5, 2017.
- Alex Bazeley. "New prefab home can be yours for under \$100K." *Curbed*, July 24, 2018.

Note: Most prefab sales prices do not include site preparation, foundation, nor permit fees. In order to calculate the project's budget, these costs should be added to the pre-fab unit costs.

Fifty-eight percent of the total population of Oakland on average spend 30 percent of their income on rent. This is a huge problem. ADUs typically rent at lower rates than apartments.

Building an ADU with 1-2 bedrooms in your backyard can increase your property's valuation by 10 – 30 percent in Oakland city. Also, homeowners can earn about \$2,037 a month for a 1 bedroom ADU and about \$2,726 a month for a 2 bedroom ADU in rent.

Hauser Construction



4  
THREE  
ADU  
DESIGNS

# ADU Floor Plans

## Three ADU Designs

Accessory Dwelling Units (ADUs), overall, have economic and social benefits for individuals and the community.

1. Individual. As we age, two factors arise - income and mobility. When rented, ADUs can provide additional income. Alternatively, ADUs can help people plan for aging in their homes as the risk of limited mobility tends to increase with age.
2. Community. When constructed in large enough numbers, ADUs can strengthen communities by providing affordable housing options and allowing individuals, of all income levels, a means to improve their economic standing through rental income.

Determining the appropriate size of an ADU is the result of the synthesis of zoning regulations (Section 1), budget estimates (Section 2) and desired design features (Section 3).

## AARP Home-Fit Design Guide

The following three ADU sizes reflect consideration of income and life-cycle changes often experienced by older-adults. Detailed drawings of each can be found in the Appendix.

These designs incorporate sensitive features such as:

- ☑ At least one step-free entrance into your home.
- ☑ A bedroom, full bathroom and kitchen on the same level.
- ☑ Doors and pathways are least 36" wide
- ☑ A work-surface in the kitchen with a functional work surface at seat height.
- ☑ Kitchen cabinets and shelves are easy for you to reach. Base cabinet are fitted with pull-out drawers instead of doors.
- ☑ Bathroom and Kitchen floors are nonslip surfaces
- ☑ Exterior stairs include at least one handrail.
- ☑ Exterior walkways, stairs and entrances are well lit.
- ☑ Showers are step-free entry or tubs are low-step
- ☑ The bed is located within easy access to the bathroom

## KEY CONSIDERATIONS

### 1 SMALL - 300 - 400 SF

#### A Retired Teacher Gains Income Security

A smaller footprint option, the 350 SF ADU is a comfortable, rentable unit or a private space for a family care-giver. Added features such as access to garden spaces, and shielded views, increase the sense of privacy. These are critical location and design decisions that increase the attractiveness of a small unit.

Cost Per SF: as low as \$315 - \$350/SF

Estimated Project Cost: \$110,250 - \$122,500

Estimated Design & Permit Timeline: Varies

Estimated Construction Time: 4 - 6 months

Finance Options:

- HELOC
- Second Mortgage
- Renovation Financing

### 2 MEDIUM - 500 - 600 SF

#### A Family Of Two Generations

A 525 SF ADU is spacious enough to include accessible design features for those with limited mobility or be suitable for a family caregiver. The 525 SF floor plan shows a built-in closet. Eliminating a closet can provide greater flexibility to accommodate a family's needs.

Cost Per SF: as low as \$225 - \$250/SF

Estimated Project Cost: \$118,125 - \$131,250

Estimated Design & Permit Timeline: Varies

Estimated Construction Time: 6 - 9 months

Finance Options:

- HELOC
- Second Mortgage
- Renovation Financing

### 3 LARGE - 800 - 1,000 SF

#### A Single Mother

The decision to move from a house into an ADU means eliminating "stuff". However, choosing to reduce one's footprint does not mean our social life is suddenly restricted. The size of the unit allows space to entertain, host a guest, or have a home-office in this larger space. An 800 SF or larger unit may also benefit significantly from decreased costs per square feet.

Cost Per SF: as low as \$160 - \$225/SF

Estimated Project Cost: \$128,000 - \$180,000

Estimated Design & Permit Timeline: Varies

Estimated Construction Time: 9 - 12 months

Finance Options:

- HELOC
- Second Mortgage
- Renovation Financing

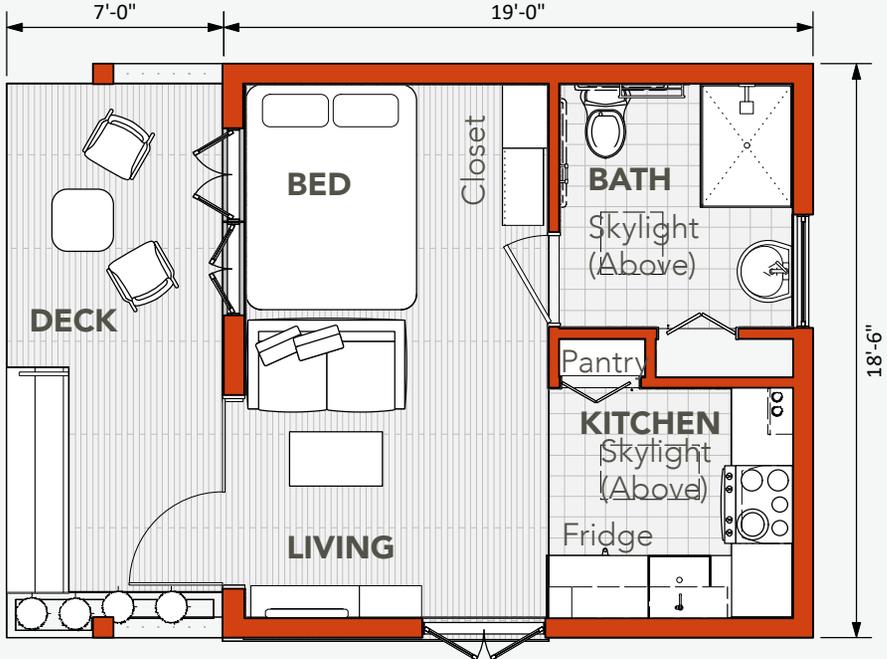
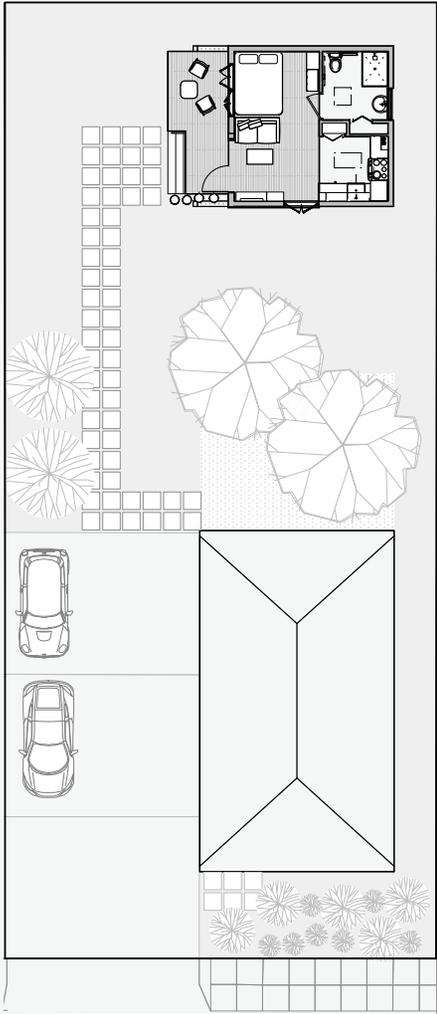
# ADU FLOOR PLAN - 350 SF



# ADU FLOOR PLAN - 350 SF

The 350 SF ADU is an open studio where the exterior is extremely important. The deck is a means of extending personal space to create a social area which is both private and inviting.

ROOM LIST & SIZES	
Sleeping Area	80 SF
Living Area	90
Bathroom	60
Kitchen	70
Deck (optional)	130
FURNISHINGS (As Shown)	
Queen-Size Bed	Sofa & Coffee Table
Clothes Closet	Bookshelves
Dresser	Wall-mounted TV
Sofa	Deck furnishings
APPLIANCES & EQUIPMENT	
Roll-in Shower, Bench & Sink	4-Burner Stove/Oven
Low-Flow Toilet	Under-counter refrigerator
Hot-Water Heater	Waste Disposal Unit
Skylights (2)	



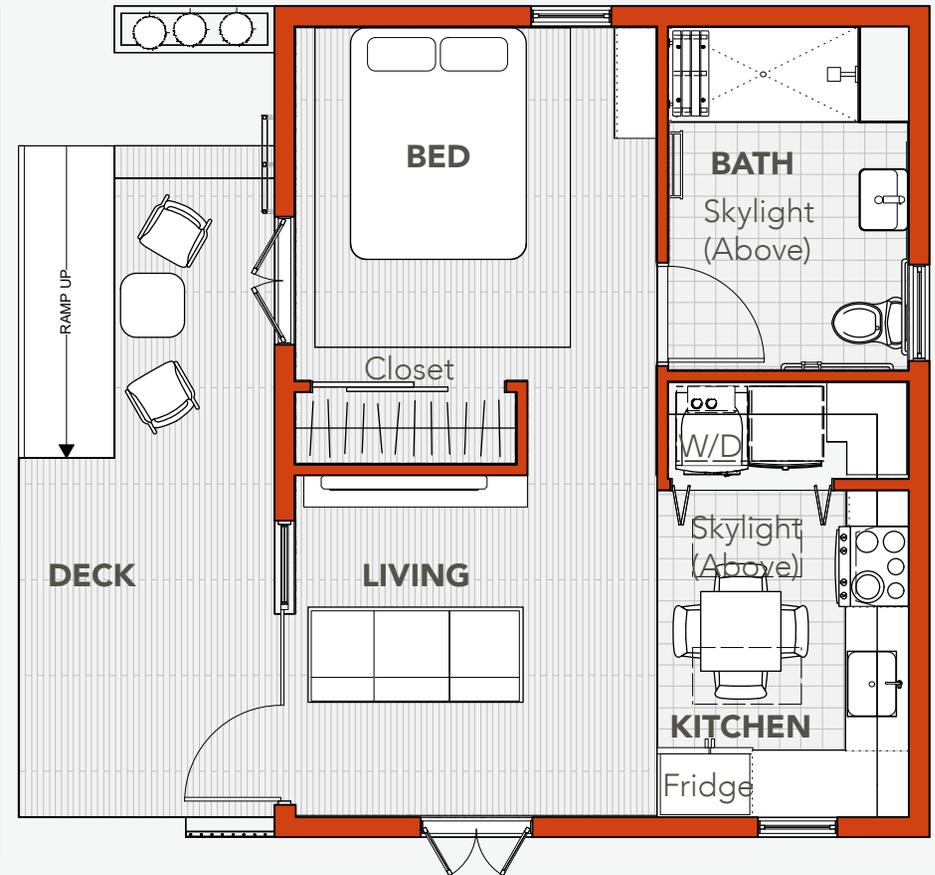
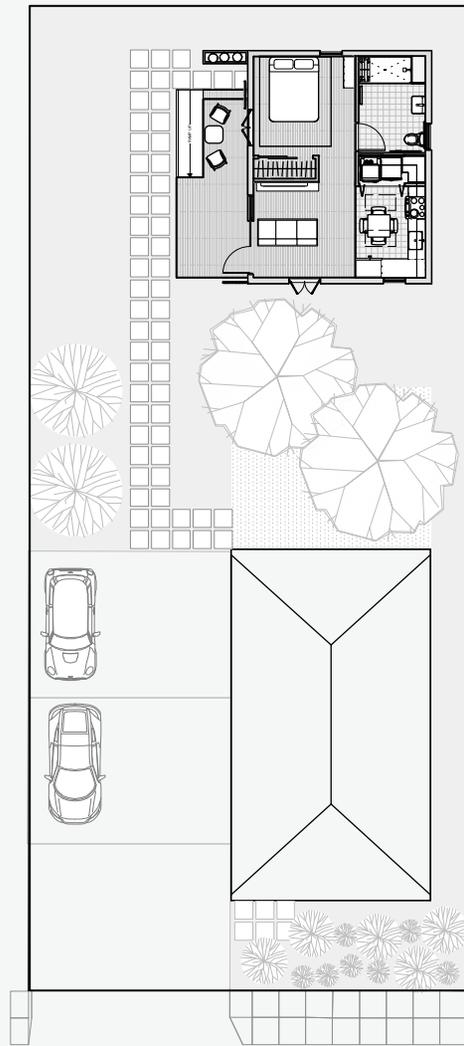
ADU FLOOR PLAN - 525 SF



# ADU FLOOR PLAN - 525 SF

The 525 SF ADU is a spacious unit designed for those with special mobility needs. The deck shown is 9 inches above grade. It is designed so that regardless of physical ability, entry to the house is experienced from the same starting point.

ROOM LIST & SIZES	
Sleeping Area	160 SF
Living Area	120
Bathroom	80
Kitchen	120
Deck	170
FURNISHINGS (as shown)	
Queen-Size Bed	Sofa & Coffee Table
Dresser	Bookshelves
Built-in Closet	Wall-mounted TV
Sofa	Deck furnishings
APPLIANCES & EQUIPMENT	
Roll-in Shower, Bench & Sink	4-Burner Stove /Oven
Low-Flow Toilet	Full-sized Washer/Dryer
Wall-mounted Hot-Water Heater	Full-height refrigerator
Skylights (2)	



# ADU FLOOR PLAN - 800 SF

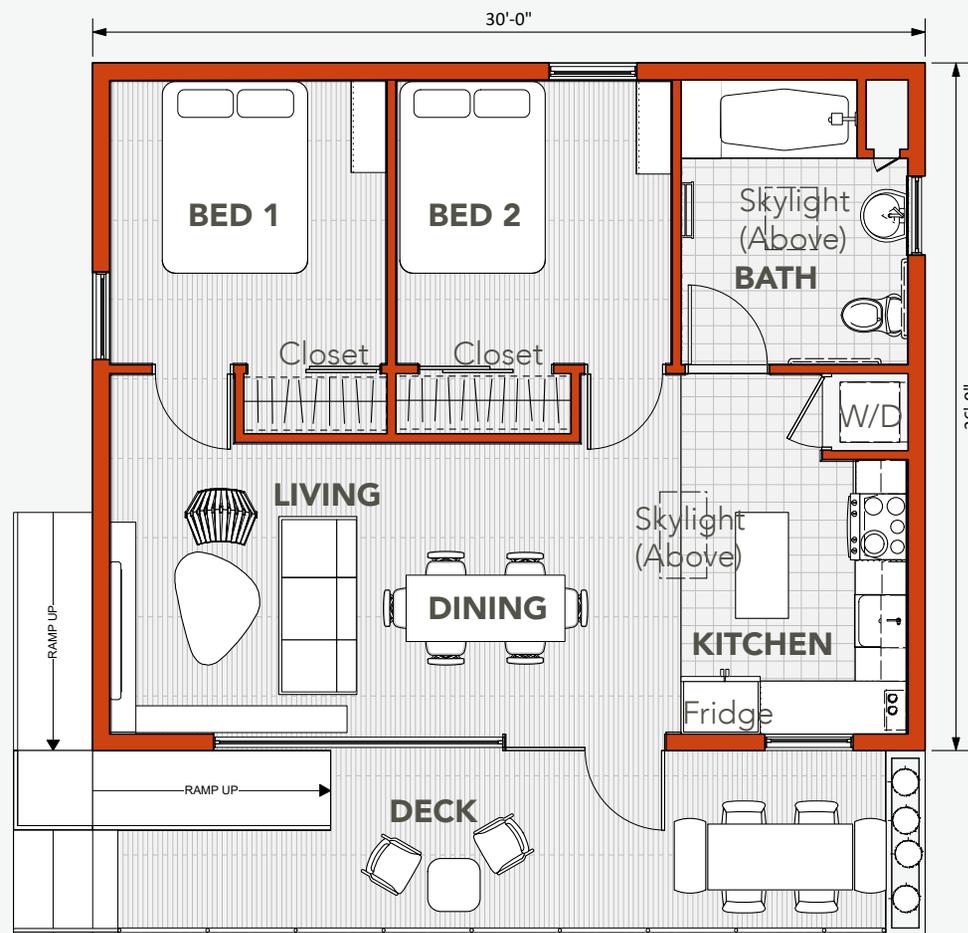
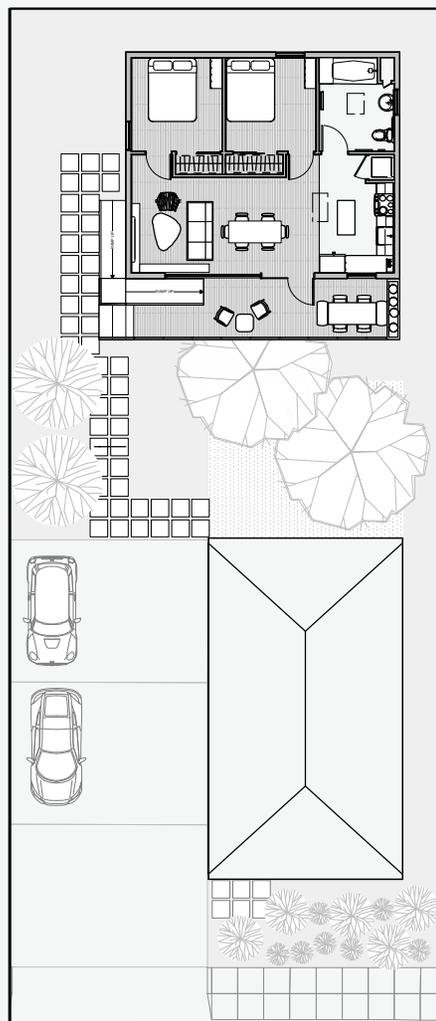


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# ADU FLOOR PLAN - 800 SF

This 800 SF ADU is suitable for a small family or those who wish to down-size and still be able to have a guest room. The deck shown is 18 inches above grade. Therefore, a longer ramp is required. We have shown the ramp as a seamlessly, integrated element.

ROOM LIST & SIZES	
Sleeping Area	290 SF
Living Area	136
Bathroom	80
Kitchen	102
Dining	136
Deck	230
FURNISHINGS (as shown)	
Queen-Size Bed (2)	Sofa & Coffee Table
Dresser (2)	Bookshelves
Built-in Closet (2)	Wall-mounted TV
Sofa	Deck furnishings
APPLIANCES & EQUIPMENT	
Full Bath & Sink	4-Burner Stove /Oven
Low-Flow Toilet	Stacked Washer/Dryer
Wall-mounted Hot-Water	Full-Height refrigerator
Skylights (2)	



# ADU - EXTERIOR AND INTERIOR FINISHES

## LEVEL 1 FINISHES: Lower Cost

Finishes can account for as much as eight percent of a project’s budget. For example, cement-board or stucco are less expensive than wood exterior siding. Similar looking light fixtures are available at varying prices. Starting with a Level 1 finish list is a good method to manage a limited budget. Below are a list of finishes that meet the needs of a sensitive budget.

EXTERIOR FINISH	
Cement Board	Economical over time
DOORS & WINDOWS	
Wood-Clad	Economical
LIVING ROOM	
Ceiling	LED Light fixture - pendant
Wall	Paint - Flat Latex
Floor	Oak Laminated Flooring Paint Grade Wood Wall base
BATHROOM	
Ceiling	LED Light fixture Mirror Light
Countertop Backsplash Wall	Laminate Laminate Paint - Flat Latex
Floor	Rubber Flooring Rubber Wall base
KITCHEN	
Ceiling	LED Light fixture
Countertop Backsplash Wall	Laminate Surface Laminate Surface Paint - High Gloss Latex
Floor	Rubber Flooring Rubber Wall base



# ADU - EXTERIOR AND INTERIOR FINISHES

## LEVEL 2 FINISHES: Mid-level costs

Mid-level finishes are typically longer lasting and have a higher cost. In regions with extreme summers and winters, selecting doors and windows with higher thermal performance ratings is a good long-term cost management strategy. Below are a list of finishes and characteristics to consider when performance and durability are desired. The images demonstrate it is possible to achieve a similar look regardless of budget.

EXTERIOR FINISH	
Wood Siding	Traditional. Regular maintenance required.
DOORS & WINDOWS	
Solid Wood	Better Thermal Performance
LIVING ROOM	
Ceiling	LED Light fixture
Wall	Paint - Flat Latex
Floor	Oak Hardwood Solid Wood Wall base
BATHROOM	
Ceiling	LED Light fixture LED Mirror Light
Countertop Backsplash Wall	Manufactured Stone Ceramic Tile Paint - High Gloss Latex
KITCHEN	
Ceiling	LED Light fixture
Countertop Backsplash Wall	Manufactured Stone Ceramic Tile Paint - High Gloss Latex
Floor	Oak Hardwood Solid Wood Wall base

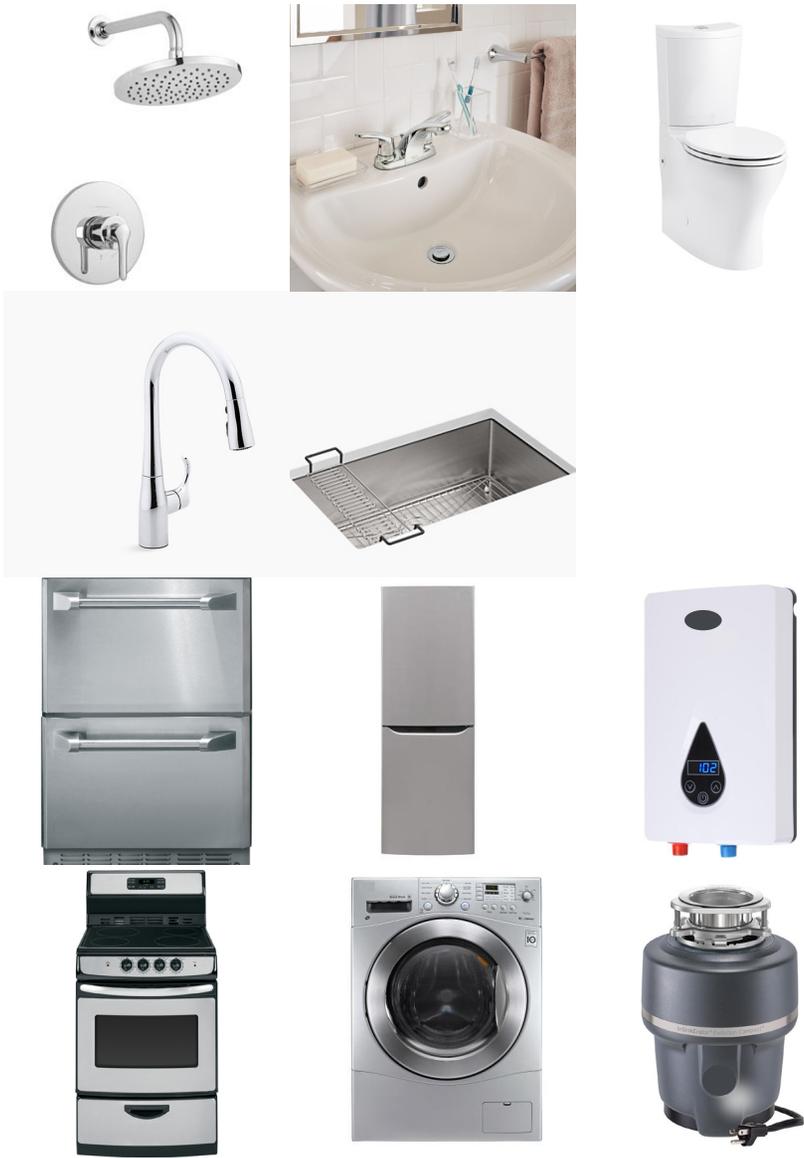


# ADU - FIXTURES AND EQUIPMENT

## TYPICAL PRODUCTS

The plumbing fixtures and equipment shown below are typical for any home. However, an ADU is a compact living unit. Therefore, compact washer/dryer units and fridges are often more appropriate. One critical space saving equipment is a tankless water-heater. Reduced-size equipment frees more space for living.

BATHROOM FIXTURES	
Shower Faucet	Low-Flow
Bathroom Sink	Low-Flow
Toilet	Dual Flush
KITCHEN FIXTURES	
Kitchen Faucet	Lever
Kitchen Sink	Stainless, Under-mount
EQUIPMENT	
Refrigerator	Under-counter or Narrow Full-height
Water Heater	Tankless Electric Wall-Mounted
Cooktop/Oven	4-Burner, Electric, Self-Cleaning
Washer/Dryer	Compact All-In-One
Food Disposal	3/4 HP



## RESOURCES

Think about **WHO** will live in the ADU. Whether a university student, teacher, or retired older-adult, all represent differing needs and habits. Who occupies the unit will determine the level of maintenance required.

The answer to **WHO** will live in the ADU will influence the level of finish, fixtures, equipment, size and budget.

## DESIGN

In most states, construction drawings are required to be prepared by a licensed architect or engineer. The American Institute of Architects (AIA) is the national professional organization to which most registered architects are members.

## REFERENCES

- Sarah Milstein. "What I Wish I Had Known Before Hiring An Architect." *Curbed*, January 29, 2018.
- "Why Hire an Architect." American Institute of Architects, District of Columbia Chapter.
- Tom Silva. "Top 8 Pro Tips On How To Hire A Contractor." *This Old House*.

We built an ADU after renting out our house on Airbnb. We did it for three reasons.

1. Financial. It's really expensive to live in the Bay Area.
2. Aging parents.
3. A way to build our community.

Jake Decker, Oakland, CA

# Conclusion

The success of Vancouver, BC; Portland, Seattle, and Ashland in integrating accessory dwelling units into the fabric of their cities reveals their various approaches for eliminating barriers that expand housing options. Austin, Denver, Oakland and Washington, DC are experiencing aggressively rising rents. A comparison of all eight cities clearly indicates areas where regulatory barriers could be removed in order to incentivize ADU development. These strategies include easing zoning restrictions, lifting parking requirements, and expedited permitting among others.

While building ADUs present a wide range of financial, social and health benefits to homeowners and the larger community, the development of this housing requires thoughtful consideration as the process involves significant investment in time and resources. Property owners must educate themselves to understand all aspects of the project from regulations, finance, design and construction and seek expertise and technical assistance where available.

The following checklist has been provided to assist in planning to design and develop an ADU.

## **REGULATIONS** [See Section 1]

1. Is the parcel **zoned for ADUs**? A few typical zoning regulations require or prohibit:
  - Owner Occupancy
  - Short-term rentals
  - Home-based businesses
  - Definition of a household
  
2. Does the parcel or lot meet the **zoning requirements**? Compare the lot against the city's ADU zoning map for:
  - Allowed Zone
  - Geographic Area
  - Minimum Lot size

3. What is the **approval process**? Are you allowed to build in your location:
  - By-Right or by Ordinance
  - Which code elements are available for adjustment
  - Planning and Building Permits required
  
4. Are there limitations to **size**? Key regulations include:
  - Minimum and maximum square feet
  - Height limits
  - Lot coverage
  - Distance to garage, access alleys or other structures
  
5. What **types of ADUs** are allowed? How many ADUs are permitted per parcel?
  - Detached structure
  - Attached to existing house
  - Converted garage
  - Above the garage
  - Converted attic
  - Upgraded basement
  
6. Is additional **parking** required?
  - Distance to public transportation incentives
  - Required total parking
  
7. Are there **design restrictions** on style, visibility from street?
  - Design compatibility with surrounding

- Location on lot
- Setbacks from property lines and adjacent buildings

### **AFFORDABILITY** [See Section 2]

For the majority of owners, this will be the first time undertaking a construction project. It is vital to consider design, permitting and construction costs when developing a budget.

8. **Managing the cost** of acquiring an ADU includes several considerations:
  - Construction Costs
  - Drawings and Design Fees
  - Building Permit Approval and Inspection Fees
  - Available incentives to offset initial costs (eg tax-credits for providing affordable rents)
  - Available incentives to offset operating costs (eg subsidies for solar panels, and low-flow water fixtures)
  - Alternative financing options such as low-interest loans available specifically for older-adults, people with disabilities and low-income families.
  
9. For the unit to remain affordable, the rent charged per month should address several **after-construction** costs, some of which include:
  - Loan Repayment
  - Property Taxes
  - Business Taxes
  - Utility Fees

## DESIGN [See Sections 3 and 4]

10. **What is the purpose for building an ADU?** It is important to understand who will live in the ADU. The design, choice of materials and fixtures should consider whether:

- Owner-occupied / down-sizing from the main house
- An investment property for use by long-term or short-term rentals
- Family member / family caregiver

11. **Determining which design and construction documents** are required is a daunting task when building for the first time. In order to build, homeowners must seek approvals required by local jurisdictions, and provide varying documents at different stages of the building process. These often include:

- Design drawings prepared by a licensed architect or engineer.
- Environmental design considerations to comply with state building codes.
- Building Permits
- Utility Permits

12. Available resources for hiring an **architect or contractor:**

- ADU tours provide substantial insight through first-hand accounts about the ADU building process from homeowners, designers and contractors.
- Local professional organizations of designers and contractors may have a directory of active members (e.g. American Institute of Architects has chapters in every state and large cities)

- Regulatory bodies maintain active registries of local businesses and business complaints (Consumer Protection Board)

## EDUCATION

In addition to undertaking construction for the first time, many ADU owners will also be first-time landlords. Owners and tenants may benefit from attending trainings to gain a greater understanding of:

- Landlord rights
- Tenant rights
- Hiring an Accountant
- Creating and placing rental advertisements
- Property Management

The journey to expand housing options by building an ADU has many steps:

1. **Understanding the regulatory environment:** The analysis of four cities – Austin, Denver, Oakland and Washington, DC – illustrated the variation in regulations and the barriers to growth when compared to the success of Vancouver, BC’s Laneway program.
2. **Availability of financing:** The examination of available finance options shows ADUs are primarily financed through a home equity line of credit (HELOC). However, alternative sources are emerging. Baltimore’s Healthy Neighborhoods is leading the way with an innovative public-private partnership loan pool which provides below-market loans to encourage investment in ADU construction.

3. **Design and budget:** Design and building expenses can bloat construction costs making ADUs unattainable. However, innovative ADU solutions can help to lower costs for some. The City of Austin's is reducing the initial costs of design and project management services to home-owners through the Austin Alley Flats Initiative. By using pre-designed ADU models, homeowners are estimated to save as much as \$30,000 in design fees and a streamlined construction process. Likewise, this resource offers design models for homeowners to consider as they conceptualize designs, elements and features for their own unit. These models and design elements can help homeowners begin to draft their own construction budgets.
4. **Use, form and regulation:** Depending on a family's needs, ADUs could be suitable housing solutions for different household types. A homeowner may wish to build an ADU to satisfy the desire to remain in their home and community as they age. This guide offers three designs, ranging from 250 SF to 800 SF that can accommodate different needs, regulatory environments and budgets.

Attaining affordable housing is out of reach for many people across the country. Families and communities are looking for solutions that address their diverse housing needs. Expanding housing options through ADUs is one strategy to address the lack of suitable places to live within a community. While potentially beneficial for income generation, caregiving and affordability, financial barriers, regulatory constraints and other related unknowns make embarking on ADU development a daunting process for many families.

This catalog guides homeowners and other community stakeholders towards a better understanding of the key

questions and answers to building an ADU. The resources included in each section are intended to spark community discussion and encourage action on ADU development.

# A

- A1 ADU REGULATIONS
  - Details
- A2 PERMIT APPLICATION FORMS
  - Austin,
  - Denver,
  - Oakland,
  - Washington, DC
- A3 Design Technical Drawings

# A1

## ADU REGULATIONS - Details

## Comparison of ADU Regulations

### Vancouver, Ashland, Portland, Seattle

The below are selected restrictions and requirements for Accessory Dwelling Units (ADU). This table is provided for information purposes only and is not guaranteed to be accurate. Check with local building permit offices for property specific ADU zoning laws.

	Vancouver, BC	Ashland, OR	Portland, OR	Seattle, WA
<b>CITY DESCRIPTION</b>				
Urban Classification	Economic Center	Mixed-Use District	Economic Center	Economic Center
Population	631,486	21,002	620,589	668,849
Households (total)	283,915	10,534	272,551	322,795
No. Single Family Homes	N/A	6,703	152,360	139,473
<b>HOUSING ANALYSIS</b>				
% of Population earning <\$25,000*	N/A	28%	18%	17%
Equivalent Households	N/A	2,981	47,696	55,521
% of population 65+	16%	21%	12%	12%
Equivalent Households	44,007	2,254	31,616	38,413
<b>RENT</b>				
Average Monthly Rent (1 Bedroom)	\$1,552	\$1,400	\$1,370	\$1,884
Average ADU Rent (1 Bedroom)	\$1,600	\$1,300	\$1,095	\$1,500
Total No. Constructed ADUs (2017)	26,650		2,000	1,396
<b>DEVELOPMENT INCENTIVES &amp; CONSTRAINTS</b>				
Incentive Programs	Minimal - 1 story - CAN\$1,13 1 1/2 story - CAN\$1,730. Other typical Sewer, Water, Electricity and Gas fees apply.	None.	SDC Waiver Program, no expiration date. Waives \$7,000 - \$15,000 Development Fee.	May 2018, Seattle is studying the feasibility of a fast-track application where architects develop standard cottage designs that homeowners can choose from. Current design costs range between \$10,000 to \$30,000, and up to \$300,000 to build. A pre-established package will reduce both permit time and project cost.
Off-Street Parking	One off-street parking space.	Off-street parking lots adjoining a C or M districts. More than 500sqft unit requires 2 parking spaces.	Varies.	Required off-street Parking.
Owner Occupancy & Occupancy Requirements	Owner occupancy not required.	Owner occupancy required.	At least one person related by blood, marriage, legal adoption or guardianship to the property owner must occupy principal or ADU.	Property owner must occupy principal or ADU.
Number of ADUs per Parcel	Both AADU and DADU are permissible	Unknown.	One ADU is permitted per residential lot.	One ADU is permitted per residential lot.
<b>ADUs as Percentage of Single Family Homes</b>	<b>35.5%</b>	<b>NA</b>	<b>1.3%</b>	<b>1.0%</b>

# Comparison of ADU Regulations

## Vancouver, Ashland, Portland, Seattle

	Vancouver, BC	Ashland, OR	Portland, OR	Seattle, WA
PLANNING & DESIGN				
Zoning & Allowable Lots	All RS single family zones, RT-11/11N, RM-7/7N, RM-8/8N, RM-9/9N and RM-9A/9AN.	Accessory Residential Units (ARU) and in the Single-Family Residential Zones (R-1-5/R-1-7.5 & R-1-10) ARUs require a Conditional Use Permit.	ADU allowed sites zoned Residential, Commercial and in the Central Employment zone.	In single-family or lowrise zones.
Lot size & Access	See: "Maximum ADU Size" below.	See: "Maximum ADU Size" below.	See: "Maximum ADU Size" below.	Minimum lot size 4,000 SF and minimum size of 25 SF.
Setbacks & Orientation	Minimum 16 FT separation between main house and ADU. Minimum 3 FT from rear property line (laneway). If facing the rear property line, 5 FT setback.	The proposal must conform with the overall maximum lot coverage and setback requirements of the underlying zone.	ADU must be at least 40 FT. from front lot line, 6 FT. behind house, attached house. One entrance on the street façade.	Must be located at least 5 FT. from rear and side lot lines; ADU may be located on lot line if adjacent to alley. Only one entrance may be located on each street facing façade.
Maximum ADU Size	Minimum floor area - 280 SF. Maximum floor area - 900 SF. Maximum width - 67% of lot width.	The maximum gross habitable floor area (GHFA) of the accessory residential structure shall not exceed 50% of the GHFA of the primary residence on the lot, and shall not exceed 1000 sq. ft. GHFA.	Maximum 75% of the living area of the primary dwelling unit or 800 SF. Combination of all detached accessory structures may not exceed 15% of the total area of the site.	Attached ADUs limited to 1,000 SF; detached ADUs limited to 800 SF, including garage and storage areas.
Building Height	1 1/2 story - 26 FT.	No structure shall be over thirty-five (35) feet or two and onehalf (2 1/2) stories in height, whichever is less. Structures within the Historic District shall not exceed a height of 30 feet.	20 FT. Maximum height allowed for detached ADU	Roof peak of detached ADU may not extend more than 15 FT. above roof peak of principal dwelling.
Lot Coverage and Landscaping	Permeable parking surface required. Minimum 9'-6" wide.	max lot coverages apply and are dependent upon the zone	See: "Maximum ADU Size" above.	ADU may cover up to 40% of rear yard.
Parking	One off-street parking space.	Off-street parking lots adjoining a C or M district. Street parking permitted if there is 50 linear feet of uninterrupted curb in front of property. An ADU greater than 500 SF requires 2 parking spaces.	No additional parking required; existing parking must be maintained.	One off-street parking space required for ADU; may be provided tandem with parking for primary dwelling.
Design Aesthetics	Allows full-range of architectural approaches.	Not required to match the existing house.	ADU shall be compatible with desired character or neighborhood, respect build scale, smaller than existing house.	Unknown.

# Comparison of ADU Regulations

## Vancouver, Ashland, Portland, Seattle

	Vancouver, BC	Ashland, OR	Portland, OR	Seattle, WA
Local Municipal References	Building Your Laneway, City of Vancouver	City of Ashland Municipal Codes	City of Portland, Planning Department	Seattle City Council, Backyard Cottages and Basement Units

Source: US and Canada 2016 Census. City Planning Department Documentation and recent newspaper articles. \*The lowest income level tracked by US Census data.

## Comparison of ADU Regulations

### Austin, Denver, Oakland, Washington-DC

The below are selected restrictions and requirements for Accessory Dwelling Units (ADU). This table is provided for information purposes only and is not guaranteed to be accurate. Check with local building permit offices for property specific ADU zoning laws.

	Austin, TX	Denver, CO	Oakland, CA	Washington, DC
<b>CITY DESCRIPTION</b>				
Urban Classification	Emerging Economic Center	Economic Center	Emerging Economic Center	Economic Center
Population	907,779	663,303	412,040	659,009
Households (total)	388,316	299,338	169,654	306,711
No. Single Family Homes	183,203	138,405	72,612	36,352
<b>HOUSING ANALYSIS</b>				
% of Population earning <\$25,000*	19%	22%	25%	22%
Equivalent Households	74,557	65,854	41,565	66,556
% of population 65+	8%	11%	12%	11%
Equivalent Households	30,677	32,628	20,698	34,965
<b>RENT</b>				
Average Monthly Rent (1 Bedroom)	\$1,130	\$1,388	\$2,300	\$1,996
Average ADU Rent (1 Bedroom)	not available	\$1,250	\$1,800	\$1,350
Total No. Constructed ADUs (2017)	821	139	379	30
<b>DEVELOPMENT INCENTIVES &amp; CONSTRAINTS</b>				
Incentive Programs	By means of creating a Condo Regime, an ADU can be split from the main house and sold separately. This ability to subdivide the lot and sell separately is an attractive option to affordable home-ownership.	Unknown.	Design Review Exemption, to be processed within 120 days of application receipt.	An ADU property can be split from the main house and sold separately.
Off-Street Parking	Required one off-street parking.	Varies	None required if within 1/2 mile of public transit. All others, one parking space required.	No additional required. One space per main dwelling.
Owner Occupancy & Occupancy Requirements	None.	Owner occupancy required.	No, owner occupancy not requirement	Property owner must occupy principal or ADU. Maximum 3 persons, typical. Exceptions: R19 and R20 -maximum 6 persons.
Number of ADUs per Parcel	One ADU is permitted per residential lot.	One ADU is permitted per residential lot.	One ADU is permitted per residential lot.	One ADU is permitted per residential lot.
<b>ADUs as Percentage of Single Family Homes</b>	<b>0.4%</b>	<b>0.1%</b>	<b>0.5%</b>	<b>0.1%</b>

## Comparison of ADU Regulations

### Austin, Denver, Oakland, Washington-DC

	Austin, TX	Denver, CO	Oakland, CA	Washington, DC
<b>PLANNING &amp; DESIGN</b>				
Zoning & Allowable Lots	Varies.	Varies.	Secondary Units are allowed only on lots with an existing One-Family Dwelling Facility (the Primary Dwelling Unit)	Zones R1, R2, R3, R10, R13, and R17. R19 and R20 only on the 2nd story of a detached existing accessory structure.
Lot size & Access	Minimum lot size 5,750 SF.	See: "Maximum ADU Size" below.	Minimum 20 FT wide street width. 600 FT maximum distance from public street.	Zones R1 and R19; main House minimum 1,200 SF. Zones R2, R3, R10, R13, R17 and R20; main house minimum 2,000 SF. Minimum 8 FT wide and no more than 300 FT maximum distance from a public street.
Setbacks & Orientation	Minimum 10 FT separation between main house and ADU. Minimum 10ft side and rear property line (laneway). If facing the rear property line setbacks.	Minimum 28 FT separation between main house and ADU. Side and Rear yard setbacks - 5 FT.	Side and Rear yard setbacks - 4 FT.	Side yard setback - 8 FT.
Maximum ADU Size	Maximum 1,100SF or 0.15 FAR. Maximum 2nd story - 600SF.	Minimum 200 SF. For Lots 6,000 SF or less, maximum 650 SF. For Lots 6,001 to 7,000 SF, maximum 864 SF. For Lots greater than 7,000 SF, maximum 1,000 SF.	Maximum 800 SF or 7% of existing gross floor area.	Maximum 35% of the gross floor area of the primary dwelling unit. Combination of all detached accessory structures may not exceed 15% of the total area of the site.
Building Height	Maximum height - 30 FT; two stories.	Regulations vary by zone. Contact the local Planning Department for further information.	Maximum wall height - 10 FT and roof height - 14 FT.	Codes do not specify a height restriction. Recommend confirmation with local agencies.
Lot Coverage and Landscaping	Impervious Maximum coverage - 45%. Maximum building coverage - 40%		Maximum rear yard coverage - 50%	
Parking	Required one off-street parking.		None required if within 1/2 mile of public transit. All others, one parking space required.	No additional required. One space per main dwelling.
Design Aesthetics	None.	Restrictive. Compatible in composition and appearance.	Restrictive. Compatible and visually match.	None.

## Comparison of ADU Regulations

### Austin, Denver, Oakland, Washington-DC

	<b>Austin, TX</b>	<b>Denver, CO</b>	<b>Oakland, CA</b>	<b>Washington, DC</b>
Local Municipal References	City of Austin, Development Services Department	City and Country of Denver, Denver Development Services	City of Oakland, Secondary Units, Zoning Regulations for Secondary Units	DC Dept. of Housing and Community Development
		City and Country of Denver, Denver Maps, Accessory Dwelling Units		DC Office of Housing

Source: US 2016 Census. City Planning Department Documentation and recent newspaper articles. \*The lowest income level tracked by US Census data.

# A2

## PERMIT APPLICATION FORMS

- Austin
- Denver
- Oakland
- Washington, DC

Sample documents provided for information only. For the most current forms, contact local planning and building departments.

# AUSTIN



**CITY OF AUSTIN**  
**Development**  
**SERVICES DEPARTMENT**

Residential Review – One Texas Center  
 505 Barton Springs Road, Austin, TX 78704; (512) 978-4000

# Residential New Construction and Addition Permit Application

## Property Information

Project Address:	Tax Parcel ID:
Legal Description:	
Zoning District:	Lot Area (sq ft):
Neighborhood Plan Area (if applicable):	Historic District (if applicable):

## Required Reviews

Is project participating in S.M.A.R.T. Housing? <input type="checkbox"/> Y <input type="checkbox"/> N (If yes, attach signed certification letter from NHCD, and signed conditional approval letter from Austin Energy Green Building)	Does project have a Green Building requirement? <input type="checkbox"/> Y <input type="checkbox"/> N (If yes, attach signed conditional approval letter from Austin Energy Green Building)
Is this site within an Airport Overlay Zone? <input type="checkbox"/> Y <input type="checkbox"/> N (If yes, approval through Aviation is required)	Does this site have a septic system? <input type="checkbox"/> Y <input type="checkbox"/> N (If yes, submit a copy of approved septic permit)
Does the structure exceed 3,600 square feet total under roof? <input type="checkbox"/> Y <input type="checkbox"/> N (If yes, Fire review is required)	Is this property within 200 feet of a hazardous pipeline? <input type="checkbox"/> Y <input type="checkbox"/> N (If yes, Fire review is required)
Is this site located within an Erosion Hazard Zone? <input type="checkbox"/> Y <input type="checkbox"/> N (If yes, EHZ review is required)	Is this property within 100 feet of the 100 year floodplain? <input type="checkbox"/> Y <input type="checkbox"/> N (Proximity to floodplain may require additional review time.)
Are there protected size trees onsite or on adjacent sites? <input type="checkbox"/> Y <input type="checkbox"/> N (If yes, <a href="#">click here</a> for more information on the tree permit process.)	Proposed impacts to trees: (Circle all that apply) Root zone Canopy Removal None/Uncertain
Was there a pre-development consultation for the Tree Review? <input type="checkbox"/> Y <input type="checkbox"/> N	
Is this site within the Residential Design and Compatibility Standards Ordinance Boundary Area? (LDC 25-2 Subchapter F) <input type="checkbox"/> Y <input type="checkbox"/> N	
Does this site currently have: water availability? <input type="checkbox"/> Y <input type="checkbox"/> N wastewater availability? <input type="checkbox"/> Y <input type="checkbox"/> N (If no, contact Austin Water Utility to apply for water/wastewater taps and/or service extension request.)	
Are there existing water/wastewater infrastructure, appurtenances or existing water/wastewater easements located on site? <input type="checkbox"/> Y <input type="checkbox"/> N (If yes, contact Austin Water Utility Pipeline Engineering for review and approval)	
Does this site have or will it have an auxiliary water source? <input type="checkbox"/> Y <input type="checkbox"/> N (If yes, submit approved auxiliary and potable plumbing plans.) (Auxiliary water supplies are wells, rainwater harvesting, river water, lake water, reclaimed water, etc.)	
Does this site require a cut or fill in excess of four (4) feet? <input type="checkbox"/> Y <input type="checkbox"/> N (If yes, contact the Development Assistance Center for a Site Plan Exemption)	
Is this site within the Waterfront Overlay? <input type="checkbox"/> Y <input type="checkbox"/> N (LDC 25-2 Subchapter C Article 3)	Is this site within the Lake Austin Overlay? <input type="checkbox"/> Y <input type="checkbox"/> N (LDC 25-2-180, 25-2-647)
Does this site front a paved street? <input type="checkbox"/> Y <input type="checkbox"/> N (If no, contact Development Assistance Center for Site Plan requirements.)	Is this site adjacent to a paved alley? <input type="checkbox"/> Y <input type="checkbox"/> N (Public Works approval required to take access from a public alley.)
Does this site have a Board of Adjustment (BOA) variance? <input type="checkbox"/> Y <input type="checkbox"/> N Case # _____ (if applicable)	
Does this site have a Residential Design and Compatibility Commission (RDCC) waiver? <input type="checkbox"/> Y <input type="checkbox"/> N (If yes, provide a copy of decision sheet. Note: A permit cannot be approved within 10 days of approval of a variance from BOA.)	

## Description of Work

Is Total New/Added Building Area > 5,000 Sq Ft? <input type="checkbox"/> Y <input type="checkbox"/> N (If yes, construction material recycling is required per LDC 25-11-39)	
Existing Use:	vacant    single-family residential    duplex residential    two-family residential    other: _____
Proposed Use:	vacant    single-family residential    duplex residential    two-family residential    other: _____
Project Type:	new construction    addition    addition/remodel    other: _____
Will all or part of an existing exterior wall, structure, or roof be removed as part of the project? <input type="checkbox"/> Y <input type="checkbox"/> N (Note: Removal of all or part of a structure requires a demolition permit application.)	
# existing bedrooms:	# bedrooms upon completion:
# baths existing:	# baths upon completion:

Project Description: (Note: Please provide thorough description of project. Attach additional pages as necessary.)  
 \_\_\_\_\_  
 \_\_\_\_\_

Trades Permits Required (Circle as applicable):    electric    plumbing    mechanical (HVAC)    concrete (R.O.W.)

Job Valuation		
Total Job Valuation: \$ _____ Note: The total job valuation should be the sum total of all valuations noted to the right. Labor and materials only, rounded to nearest dollar.	Amount for Primary Structure: \$ _____ Elec: <input type="checkbox"/> Y <input type="checkbox"/> N   Plmbg: <input type="checkbox"/> Y <input type="checkbox"/> N   Mech: <input type="checkbox"/> Y <input type="checkbox"/> N	Total Remodeled Floor Area _____ sq ft. (work within existing habitable square footage)
	Amount for Accessory Structure: \$ _____ Elec: <input type="checkbox"/> Y <input type="checkbox"/> N   Plmbg: <input type="checkbox"/> Y <input type="checkbox"/> N   Mech: <input type="checkbox"/> Y <input type="checkbox"/> N	

Please utilize the Calculation Aid on the last page of the Additional Information, page 7, as a guide to complete the following calculations and to provide supplemental information for thorough review.

**Site Development Information**

Area Description Note: Provide a separate calculation for each distinct area. Attach additional sheets as necessary. Measurements are to the outside surface of the exterior wall.	Existing Sq Ft		New/Added Sq Ft		Total Sq Ft	
	Bldg 1	Bldg 2	Bldg 1	Bldg 2	Bldg 1	Bldg 2
a) 1 <sup>st</sup> Floor conditioned area						
b) 2 <sup>nd</sup> Floor conditioned area						
c) 3 <sup>rd</sup> Floor conditioned area						
d) Basement						
e) Covered parking (garage or carport)						
f) Covered patio, deck, porch, and/or balcony area(s)						
g) Other covered or roofed area						
h) Uncovered wood decks						
<b>Total Building Area</b> (total a through h)						
i) Pool						
j) Spa						
k) Remodeled Floor Area, excluding Addition / New Construction						

**Building Coverage Information**  
 Note: Building Coverage means the area of a lot covered by buildings or roofed areas, but excludes ground-level paving, landscaping, open recreational facilities, incidental projecting eaves, balconies, and similar features. Pools, ponds, and fountains are not included in this measurement. (LDC 25-1-21)  
 Total Building Coverage (sq ft): \_\_\_\_\_ % of lot size: \_\_\_\_\_

**Impervious Cover Information**  
 Note: Impervious cover is the total horizontal area of covered spaces, paved areas, walkways, and driveways. The term excludes pools, ponds, fountains, and areas with gravel placed over pervious surfaces that are used only for landscaping or by pedestrians. For an uncovered wood deck that has drainage spaces between the deck boards and that is located over a pervious surface, 50 percent of the horizontal area of the deck is included in the measurement of impervious cover. (LDC 25-1-23)  
 Total Impervious Cover (sq ft): \_\_\_\_\_ % of lot size: \_\_\_\_\_

**Setbacks**  
 Are any existing structures on this site a non-compliant structure based on a yard setback requirement? (LDC 25-2-492) Y N  
 Does any structure (or an element of a structure) extend over or beyond a required yard? (LDC 25-2-513) Y N  
 Is front yard setback averaging being utilized on this property? (LDC 25-2, Subchapter F, Sec. 2.3 or 25-2-778) Y N

<b>Height Information</b> (LDC 25-1-21 or 25-2 Subchapter F, Section 3.4) Building Height: _____ ft ___ in Number of Floors: _____	<b>Parking</b> (LDC 25-6 Appendix A & 25-6-478) # of spaces required: _____ # of spaces provided: _____
---	--

**Right-of-Way Information**  
 Is a sidewalk required for the proposed construction? (LDC 25-6-353) Y N  
 \*Sidewalks are to be installed on any new construction of a single family, two-family or duplex residential structure and any addition to an existing building that increases the building's gross floor area by 50 % or more.  
 Will a Type I driveway approach be installed, relocated, removed or repaired as part of this project? Y N  
 Width of approach (measured at property line): \_\_\_\_\_ ft Distance from intersection (for corner lots only): \_\_\_\_\_ ft  
 Are storm sewer inlets located along the property or within ten (10) feet of the boundaries of the property? Y N  
 (If yes, drainage review is required)

## Subchapter F

### Gross Floor Area

This section is only required for projects located within the Residential Design and Compatibility Standards Ordinance Boundaries as defined and illustrated in Title 25-2 Subchapter F of the Land Development Code. The Gross Floor Area of each floor is measured as the area contained within the outside edge of the exterior walls.

		Existing Sq Ft	New/Added Sq Ft	Proposed Exemption (check article utilized)	Applied Exemption Sq Ft	Total Sq Ft
1 <sup>st</sup> Floor						
2 <sup>nd</sup> Floor						
3 <sup>rd</sup> Floor						
Area w/ ceilings > 15'				Must follow article 3.3.5		
Ground Floor Porch* (check article utilized)				<input type="checkbox"/> Full Porch sq ft (3.3.3 A) <input type="checkbox"/> 200 sq ft (3.3.3 A 2)		
Basement				Must follow article 3.3.3B, see note below		
Attic				Must follow article 3.3.3C, see note below		
Garage**: (check article utilized)	Attached			<input type="checkbox"/> 200 sq ft (3.3.2 B 1)		
	Detached			<input type="checkbox"/> 450 sq ft (3.3.2 A 1 / 2a) <input type="checkbox"/> 200 sq ft (3.3.2 B 2a / 2b)		
Carport**: (check article utilized)	Attached			<input type="checkbox"/> 450 sq ft (3.3.2 A 3) <input type="checkbox"/> 200 sq ft (3.3.2 B 1)***		
	Detached			<input type="checkbox"/> 450 sq ft (3.3.2 A 1)		
Accessory Building(s) (detached)						
Totals						

TOTAL GROSS FLOOR AREA (add Total Sq Ft column) \_\_\_\_\_

(Total Gross Floor Area ÷ Lot Area) x 100 = \_\_\_\_\_ Floor-To-Area Ratio (FAR)

Is a sidewall articulation required for this project?      Y      N

(Yes, if: a wall, 15' tall or higher, within 9 feet of a side property line extends further than 36 feet in length per article 2.7.1)

Does any portion of the structure extend beyond a setback plane/exemption exhibit (aka "tent")?      Y      N

(If Yes, indicate applicable section of Subchapter F and length of protrusion on the drawings.)

**\*Ground Floor Porch exemption:** A ground floor porch, including a screened porch, may be exempted, provided that the porch is not accessible by automobile and is not connected to a driveway; and the exemption may not exceed 200 square feet if a porch has habitable space or a balcony above it.

**\*\*Garage and carport exemptions (in relation to primary structure):** Exemptions must follow the code as outlined in Title 25-2 Subchapter F 3.3.2. Each amount listed (450 or 200) is the maximum exclusion allowed per the article designated. Note: Article 3.3.2 C, "An applicant may receive only one 450-square foot exemption per site under paragraph A. An applicant who receives a 450-square foot exemption may receive an additional 200-foot exemption for the same site under paragraph B, but only for an attached parking area used to meet minimum parking requirements."

\*\*\*Ordinance article 3.3.2 B 1 is the only 200 sq ft exemption that may be combined with a 450 sq ft exemption. Otherwise only one 450 exemption or one 200 sq ft exemption may be taken.

**Basement exemption:** A habitable portion of a building that is below grade may be exempted if the habitable portion does not extend beyond the first-story footprint and is below natural or finished grade, whichever is lower; and it is surrounded by natural grade for at least 50% of its perimeter wall area and the finished floor of the first story is not more than three feet above the average elevation at the intersections of the minimum front yard setback line and the side property lines.

**Habitable Attic exemption:** A habitable portion of an attic may be exempted if: 1) The roof above it is not a flat or mansard roof and has a slope of 3 to 12 or greater; 2) It is fully contained within the roof structure; 3) It has only one floor; 4) It does not extend beyond the footprint of the floors below; 5) It is the highest habitable portion of the building, or a section of the building, and adds no additional mass to the structure; and 6) Fifty percent or more of the area has a ceiling height of seven feet or less.

Contact Information			
Owner		Applicant/Agent	
Mailing Address		Mailing Address	
Phone		Phone	
Email		Email	
General Contractor		Design Professional	
Mailing Address		Mailing Address	
Phone		Phone	
Email		Email	
Authorization			
<p><input type="checkbox"/> I understand that in accordance with Sections 25-1-411 and 25-11-66 of the Land Development Code (LDC), non-compliance with the LDC may be cause for the Building Official to suspend or revoke a permit and/or license.</p> <p><input type="checkbox"/> I acknowledge that this project qualifies for the Site Plan Exemption as listed in Section 25-5-2 of the LDC. I understand that nothing may be built upon or over an easement.</p> <p><input type="checkbox"/> I further understand that no portion of any roof structure may overhang in any public utility or drainage easement. I acknowledge that customer will bear the expense of any necessary relocation of existing utilities to clear this driveway location and/or the cost to repair any damage to existing utilities caused during construction. Water services, meters, and wastewater cleanouts are not permitted within or beneath driveways or sidewalks. Private plumbing appurtenances will not be located in public right-of-way or public easements. Private plumbing lines will not cross lot lines.</p> <p><input type="checkbox"/> <b>I agree that this application is good for twelve (12) months after the date it is filed, and will expire if not approved for compliance within that time frame. If the application expires, a new submittal will be required and compliance with current code may be required.</b></p> <p><input type="checkbox"/> I hereby certify that to the best of my knowledge and ability, the information provided in this application is complete and accurate.</p> <p><input type="checkbox"/> I further acknowledge that, should any information contained herein prove incorrect, the building official may suspend or revoke any resulting permit and/or license.</p> <p><input type="checkbox"/> As owner or authorized agent, my signature authorizes staff to visit and inspect the property for which this application is being submitted. I understand that without consent the review process may be delayed.</p> <p><input type="checkbox"/> I also understand that if there is a septic system located on the property, I am required to complete an On-site Sewage Facility (a.k.a. an OSSF or septic system) application by contacting Austin Water at (512) 972-0050 or <a href="mailto:ossf@austintexas.gov">ossf@austintexas.gov</a> . This initiates the septic system permitting requirement needed to proceed with the development review process.</p> <p><input type="checkbox"/> Erosion and Sedimentation Controls are required per Section 25-8-181 of the LDC. <b>Failure to comply with this requirement may result in a Stop Work Order and/or legal action by the City of Austin including criminal charges and fines of up to \$2,000.00 per day.</b></p> <p><input type="checkbox"/> I acknowledge that a sidewalk will be required on any new construction of a single family, two-family or duplex residential structure and any addition to an existing building that increases the building's gross floor area by 50 % or more.</p> <p><input type="checkbox"/> I acknowledge if my plans are subject to a technical review it will not be construed to be a permit for, or an approval of any violation of any of the provisions of the current adopted building codes or another ordinance of the City of Austin.</p> <p><input type="checkbox"/> I am the record owner of this property and authorize the agent/applicant listed above to apply for and acquire a permit on my behalf.</p> <p>Owner's signature: _____ Date: _____</p> <p>Applicant's signature: _____ Date: _____</p> <p>Design Professional's signature: _____ Date: _____</p> <p>General Contractor's signature: _____ Date: _____</p>			

# DENVER



# CITY AND COUNTY OF DENVER

## Community Planning and Development

### AFFIDAVIT OF REQUIREMENTS FOR OWNER-OCCUPIER PERMITS

BUILDING DEPARTMENT  
201 WEST COLFAX AVENUE  
DEPT. 205  
DENVER, COLORADO 80202  
[HTTP://WWW.DENVERGOV.ORG](http://www.denvergov.org)

In compliance with Denver Building Code Section 131.3 Item 1, for the scope of (Circle all that apply)

ELECTRICAL                      MECHANICAL/HVAC                      PLUMBING                      CONSTRUCTION

work under consideration for a permit, I hereby declare **all** of the following statements to be true.

- I am the legal owner of this existing or new dwelling.
- I am currently living in this existing dwelling or I intend to occupy this new dwelling, located at \_\_\_\_\_, Denver, Colorado, upon completion.
- I agree to occupy the dwelling at this address for a minimum of twelve (12) months after this permitted work is completed.
- If these owner-occupier permits are for a new single-unit dwelling or accessory structure I understand I will not qualify for any additional owner-occupier permits for the construction of new dwellings or accessory structures for a period of five (5) years.
- I will be obtaining all permits, performing all work authorized in the owner-occupier permits myself, or with the assistance of the Designated Worker, after passing all applicable discipline specific exams.
- I acknowledge that I am responsible for all work performed under the owner-occupier permit, that all work is done by the Designated Worker or me in a "workmanlike manner" and compliant with the code identified on the permit.
- I acknowledge that if I utilize the assistance of the Designated Worker I am not allowed to pay this person for their assistance in any way.
- The dwelling on which I will be working is not a duplex, townhome, condominium, apartment or commercial building/property.
- I agree to abide by the testing rules set forth by the Building Official.

I, \_\_\_\_\_, verify that the above statements are true. I agree to abide by these statements. I acknowledge that any violation of these statements may result in the immediate cancellation of any issued permits, revocation of my testing rights, and revocation of the single-unit dwelling's Certificate of Occupancy.

Signed: \_\_\_\_\_  
(Signature of owner-occupier)

Date: \_\_\_\_\_

## Owner-occupier (Homeowner) Exam Information

The types of owner-occupier exams offered are:

Electrical, Mechanical, Plumbing, Refrigeration, Hot water / Boiler, Evaporative Cooling

Owner-occupier Exam Requirements:

1. The *owner-occupier* listed in the Assessor's records must be the individual taking the exam.
2. The *owner-occupier* of an existing *single-unit dwelling* may be issued permits and conduct work on their own *single-unit dwelling* and accessory structures after agreeing to occupy the dwelling for 12 months and passing discipline specific exams.
3. The *owner-occupier* of an existing *single-unit dwelling* may be issued permits and conduct all work in the construction of new accessory structures (including detached garages) after agreeing to remain in the dwelling for 12 months and passing all applicable discipline specific exams. Such permits shall only be issued to the *owner-occupier* once in any five (5) year period.
4. The *owner-occupier*, who intends to construct a new *single-unit dwelling* and to occupy it for at least 12 months, may be issued permits and conduct work on their new dwelling after passing all applicable discipline specific exams. Such permits shall only be issued to the *owner-occupier* once in any five (5) year period.
5. The *owner-occupier* or the *designated worker* must be performing the work.
6. The dwelling must not be a duplex, tandem house, townhome, condominium, apartment, or commercial building.
7. The *owner-occupier* may have the assistance of the *designated worker* in taking the test. The *designated worker* is the individual, designated on the permit, which will be assisting the owner-occupier with the work as well as the test, and cannot accept payment from the *owner-occupier*.
8. To sit for the *owner-occupier* exam for the work to be performed the *owner-occupier* must supply a current Colorado Photo ID or Driver's License. To assist with the test, the *designated worker* must supply a current Colorado Photo ID or Driver's License. A Colorado temporary Driver's License, other State-Issued Photo ID or Driver's License, Passport, or Federal Issued Permanent Resident Card ("Green Card") may also be accepted with the Building Official's approval.
9. The *owner-occupier* must agree to the following testing rules set forth by the Building Official:
  - Taking or using notes is prohibited during the exam. Relevant code books are provided for your use on a "first-come, first-served" basis. You may bring your own code books or instructional books; however, they may be reviewed and rejected for notations, or other inappropriate material.
  - Mobile phones, 2-way radios and pagers are prohibited during the exam.
  - Contact with individuals outside the testing area is prohibited during the exam.
  - If either the *owner-occupier* or *designated worker* needs to leave the testing area for any reason, they must return all test materials immediately.
  - In the event that the *owner-occupier* fails an exam, they must wait a minimum of thirty minutes before re-taking the exam.
  - Exams are available Monday through Friday, 8:00am to 3:30pm at Contractor Licensing, 201 W. Colfax, 2<sup>nd</sup> Floor, Denver, CO 80202. There are no exam fees.
  - If *owner-occupier* wishes to obtain the permit on the same day of testing, plan to be finished testing before 4:00pm.

<b>Subject: ISSUANCE OF OWNER-OCCUPIER (HOMEOWNER) PERMITS</b>		
<b>Approved: Michael Roach, P.E., Building Official</b>		
<b>Number: ADMIN 131.3</b>	<b>Effective Date: August 20, 2009</b> <b>Revised Date: October 17, 2011</b>	<b>Page: 1 of 4</b>

**Reference: ADMIN Section 131.3**

**Scope:**

This policy is to establish the procedure for issuance of permits to an *owner-occupier*. This policy also establishes who may assist the *owner-occupier* in obtaining owner-occupier permits and performing work authorized under owner-occupier permits.

**Definitions:**

**DESIGNATED WORKER.** The individual who will be assisting the *owner-occupier* with the *owner-occupier* permitted work and may assist the *owner-occupier* with the *owner-occupier* exams. This individual cannot accept payment from the *owner-occupier* for services rendered without written request and approval from the Building Official. The individual who will be assisting the *owner-occupier* must be identified on the *owner-occupier* permit.

**OWNER-OCCUPIER.** The natural person listed in the Assessor's records who owns and occupies a *single-unit dwelling*, or who owns and occupies such *single-unit dwelling* they wish to construct. This natural person must own and occupy as their domicile the single-unit dwelling for 12 months.

**SINGLE-UNIT DWELLING.** A stand-alone structure housing a single dwelling unit which is the domicile for the *owner-occupier*. Duplexes, townhomes (attached single-unit dwellings), condominiums, apartments, and commercial buildings are not single-unit dwellings.

**Policy:**

*Owner-occupier* permits may be obtained for a *single-unit dwelling* in the following circumstances:

1. The *owner-occupier* must be the individual seeking the permit and submitting to take the exam. An individual who has been granted Power of Attorney by the natural person who owns and occupies the single-unit dwelling may apply for a permit in the owner-occupiers' name, by providing the original, City Clerk recorded Power of Attorney to the permitting staff.
2. The *owner-occupier* of an existing *single-unit dwelling* may be issued permits and conduct work on their own *single-unit dwelling* and accessory structures after agreeing to occupy the dwelling for 12 months and passing discipline specific exams.
3. The *owner-occupier* of an existing *single-unit dwelling* may be issued permits and conduct all work in the construction of new accessory structures (including detached garages) after agreeing to remain in the dwelling for 12 months, and passing all applicable discipline specific exams. Such permits shall only be issued to the *owner-occupier* once in any five (5) year period.
4. The *owner-occupier*, who intends to construct a new *single-unit dwelling* and to occupy it for at least 12 months, may be issued permits and conduct work on their new dwelling after passing all applicable discipline specific exams. Such permits shall only be issued to the *owner-occupier* once in any five (5) year period.

<b>Subject: ISSUANCE OF OWNER-OCCUPIER (HOMEOWNER) PERMITS</b>		
<b>Approved: Michael Roach, P.E., Building Official</b>		
<b>Number: ADMIN 131.3</b>	<b>Effective Date: August 20, 2009</b> <b>Revised Date: October 17, 2011</b>	<b>Page: 2 of 4</b>

5. The *owner-occupier* must perform the work for which he/she has obtained the permit. In performing the work authorized by the owner-occupier permit the *owner-occupier* may utilize the assistance of the *designated worker*.
6. To sit for the owner-occupier exam for the work to be performed the *owner-occupier* must supply a current Colorado Photo ID or Driver's License. To assist with the test, the *designated worker* must supply a current Colorado Photo ID or Driver's License. A Colorado temporary Driver's License, other State-Issued Photo ID or Driver's License, Passport, or Federal Issued Permanent Resident Card ("Green Card") may also be accepted with the Building Official's approval.
7. The *owner-occupier* must sign the attached AFFIDAVIT OF REQUIREMENTS FOR OWNER-OCCUPIER PERMITS.
8. The *owner-occupier* must agree to all testing rules set forth by the Building Official, and delineated in the attached sheet, "Owner-occupier (Homeowner) Exam Information".

**END OF DOCUMENT**

# OAKLAND



# PERMIT APPLICATION WORKSHEET

**Planning and Building Department**  
 250 Frank H. Ogawa Plaza  
 2<sup>nd</sup> Floor, Suite 2114  
 Oakland, CA 94612  
 Tel (510) 238-3443  
 Fax (510) 238-2263  
 Hours:  
 8 am-4pm M,Tu,Th,F  
 9:30 am-4 pm Wed

**PLEASE COMPLETE ALL INFORMATION. APPLICANTS WITH INCOMPLETE WORKSHEETS MAY BE ASKED TO GET A NEW NUMBER. INACCURATE INFORMATION MAY LEAD TO SUSPENSION OF THE PERMIT. ADDITIONAL PERMITS MAY BE REQUIRED, i.e., Electrical, Plumbing, Mechanical, Sewer, Obstruction.**

TYPE OF PERMIT: (circle one)		SCHOOL FEE (SF)		ADDRESS FEE
BUILDING	SIGN	Commercial	\$0.56	\$154.91
		Residential	\$3.48	\$56.23
		Change of Address for Any Occupancy		\$403.92
TYPE OF WORK (circle one)				
(1) NEW CONSTRUCTION	(2) REPAIR	(3) ADDITION	(4) CELL SITE	(5) ALTERATION /T.I.
(6) DEMOLITION ( _____ SF)	(7) SOLAR PANELS (SE)	(8) RETROFIT	(9) C.O. /S.A.	(10) CHANGE IN USE
IS THIS APPLICATION RELATED TO ANY OTHER PERMIT? TO ANY OTHER COMPLAINT?		IF YES, INDICATE PERMIT #, PLANNING CASE FILE # OR COMPLAINT #:		
<input type="radio"/> YES <input type="radio"/> NO				
SITE ADDRESS/JOB LOCATION			ASSESSOR'S PARCEL NO.	
DESCRIPTION OF PROPOSED WORK				
WORK IS VISIBLE FROM FREEWAY/BART <input type="radio"/> NO <input type="radio"/> YES				
EXTERIOR WORK ON BUILDING <input type="radio"/> NO <input type="radio"/> YES    (PHOTOS REQUIRED. PLEASE ATTACH)				
VALUATION OF PROPOSED WORK  \$	EXISTING # OF RESIDENTIAL UNITS	# OF STORIES:	<input type="radio"/> SFD/DUPLEX <input type="radio"/> APARTMENTS <input type="radio"/> COMMERCIAL <input type="radio"/> INDUSTRIAL	
	PROPOSED # OF UNITS	FIRE SPRINKLER <input type="radio"/> YES <input type="radio"/> NO		
PROPERTY OWNER'S NAME			PROPERTY OWNER'S PHONE NUMBER	
PROPERTY OWNER'S ADDRESS (street, city and zip code)				
PERSON SUBMITTING PLANS / CONTACT PERSON		PHONE NUMBER	EMAIL	
ARCHITECT'S/DESIGNER'S NAME		PHONE NUMBER	EMAIL	
CONTRACTOR'S LICENSE NUMBER		SIGNATURE OF APPLICANT	DATE	

I ACKNOWLEDGE THAT REFUNDS ARE LIMITED PER Section 107.6 of O.B.C.. \_\_\_\_\_ INITIAL \_\_\_\_\_ DATE \_\_\_\_\_



**Construction Plans Check List**  
 (Minimum Required Data for Addition/ Alterations)

Address \_\_\_\_\_

Received _____/_____/_____	By _____
----------------------------	----------

Please check the boxes where items are included or needed.

	Included	Needed
1. <b>TITLE BLOCK</b> _____ Address of Property Designer/Contact person with daytime phone number Page number	<input type="checkbox"/>	<input type="checkbox"/>
2. <b>LIST BACKGROUND INFORMATION</b> _____ Owner's name Occupancy Type, Construction Type Zoning Square footage of Existing; Square footage of Addition Assessor's Parcel Number	<input type="checkbox"/>	<input type="checkbox"/>
3. <b>TITLE 24 ENERGY DOCUMENTATION</b> _____ Forms to be printed on plans Make certain all signatures are completed	<input type="checkbox"/>	<input type="checkbox"/>
4. <b>SITE PLAN – Scale 1/8" = 1' or 1/10" = 1'</b> _____ Show building and addition distances to property lines Show any accessory structures, retaining walls, sidewalks, streets, meters, contours, curb cuts, driveways, trees Delineate between new and existing work Show North arrow, scale	<input type="checkbox"/>	<input type="checkbox"/>
5. <b>FLOOR PLAN- Minimum Scale: 1/4" = 1'</b> _____ Label all rooms (existing and new) & indicate new walls, existing walls, & walls to remain Show all windows and doors; indicate sizes Show dimensions of addition	<input type="checkbox"/>	<input type="checkbox"/>
6. <b>ELEVATION(S) - Minimum Scale: 1/4" = 1'</b> _____ Show/indicate all finishes; new and existing Show structure height; height of finished floor Indicate roof slope	<input type="checkbox"/>	<input type="checkbox"/>
7. <b>CONSTRUCTION SECTION</b> _____ Show major section through area of work Indicate all construction aerials Delineate areas to show further detailing ( <i>See item 10</i> )	<input type="checkbox"/>	<input type="checkbox"/>
8. <b>FOUNDATION PLAN</b> _____ Show dimensions Show connections to existing & use detailing to show further information	<input type="checkbox"/>	<input type="checkbox"/>
9. <b>FRAMING PLANS (for each floor and roof)</b> _____ Show size and spacing of all joists, beams	<input type="checkbox"/>	<input type="checkbox"/>
10. <b>DETAILS</b> _____ Stairways, important connections should be detailed Fascia, railings and other design details	<input type="checkbox"/>	<input type="checkbox"/>
11. <b>STRUCTURAL CALCULATIONS</b> _____	<input type="checkbox"/>	<input type="checkbox"/>
12. <b>SURVEY</b> _____	<input type="checkbox"/>	<input type="checkbox"/>
13. <b>PHOTOS</b> _____	<input type="checkbox"/>	<input type="checkbox"/>
14. <b>OTHER</b> _____	<input type="checkbox"/>	<input type="checkbox"/>

After completing the minimum required items for submittal, please include this form and **three** copies with your submittal package to the **Building Services Department** for approval. NOTE: Plan check may require additional information after submission.



## Recommended General Standards for Drawings Submitted with Building Permit Applications Requiring Plan Check

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*If these recommended standards are followed, it will speed the permit and plan check process, provide for more durable jobsite copies, aid the department when adding standard sized City information sheets and reduce problems during construction.*

### **NOT ACCEPTABLE**

**1. DRAWINGS LESS THAN 18" X 24"** (or set with more than 4 sheets of 8 ½" x 11" or 11" x 17". *Smaller drawings make plan checking more time consuming and difficult, are more easily lost or damaged, lack of room for borders results in poor copies and lost information, and tendency to omit information if there is a lack of drawing space.*) **OR LARGER THAN 36" X 48"** (too large to handle in plan check cubicles).

**2. XEROXED COPIES** (not durable for job site).

**3. ORIGINAL DRAWINGS** (can be easily altered during permit issuance).

**4. DIFFERENT SIZE SHEETS IN A DRAWING SET** (except survey and/or plot plan may be different size from the other drawings if they are the same size as each other).

**5. DRAWINGS TAPED TOGETHER, OR SHEETS WITH SMALLER DRAWINGS TAPED, STAPLED, OR PASTED ON** (these are not durable and will tend to get torn or ripped off).

**6. DRAWINGS WITH INFORMATION ADDED IN RED EXCEPT BY CITY STAFF.**

**7. DRAWING SHEETS WITHOUT BORDERS OR WITH INFORMATION CROSSING OVER BORDERS** (information may be lost due to misalignment when having copies made at the printer).

**8. DRAWINGS WITH LETTERING LESS THAN 1/8 INCH HIGH OR ILLEGIBLE LETTERING** (not suitable for microfilming or making reduced size copies).

**9. UNBOUND, UNSTAPLED DRAWING SETS**

**10. DRAWINGS WITHOUT TITLES, PERTINENT ADDRESS AND PHONE NUMBERS, OR WITHOUT PREPARER'S WET SIGNATURE ON EACH SHEET**

**11. POOR QUALITY BLUELINE OR BLACKLINE COPIES WITH POOR CONTRAST OR DIRTY BACKGROUND.**

### **REQUIREMENTS**

**ACCEPTABLE SHEET SIZE:** 22" x 34" or 24" x 36" is preferred. 18" x 24" minimum, 36" x 48" maximum. Drawings should be standard drawing size: 18" x 24", 22" x 34", 24" x 36", 18" x 24", 30" x 42", or 36" x 48". Sets of 4 or less 8 ½" x 11" or 11" x 17" are not desirable, but will be taken in.

If drawings were done at a smaller size (11" x 17" or 8 ½" x 11"), applicant can "paste up" to a standard size and have a Xerox vellum master run at a printing company. These can be used to make the bluelines or blacklines prior to submitting for permit.

Standard size bluelines of odd-sized originals are acceptable if all information is shown on the blueline.

**BORDER REQUIREMENTS:** 1 ½" minimum at left-hand bound edge, ½" minimum elsewhere; each sheet should have borderlines.

**TITLE BLOCK REQUIREMENT:** Each sheet shall have title block indicating (1) Project title and address; (2) Owner's name, mailing address, daytime phone and fax number; (3) drawing preparer's name, address, daytime phone and fax number; (4) pertinent Consultant's name(s), mailing address, phone and fax number(s); (5) sheet number of total number or sheets (i.e.: 1 of 7, 2 of 7, etc.); (6) revision number, and (7) indication of latest date of preparation, printing.

# WASHINGTON, DC

# GUIDELINES FOR One & Two Family Units

## FUNDAMENTALS

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A permit is required as per Section 105.1 of the 2013 DCMR 12, which governs intended work in the District of Columbia. Listed below are section classifications of permits required, depending on the scope of work. For details see section 105.1.1 classification of permits.

- Building permits
- Raze permits
- Trade permits: Electrical, gas, mechanical, plumbing, elevators and conveying systems, and boilers
- Foundation and earthwork permits

## REQUIREMENTS

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When applying for a building permit, you must submit the following documents.

### Building Permit

- Prepare a [New Building Permit Application](#) available online
- Building Plan (see Page 2)
- Site-Related Plans (see Page 4)

Publications, forms and other useful information can be found online at:

[www.dkra.dc.gov](http://www.dkra.dc.gov)

Find DCRA: 1100 4<sup>th</sup> Street SW, Washington DC 20024

Permit Operations Center, 2<sup>nd</sup> floor  
Homeowner Center, 2<sup>nd</sup> floor, (202) 442-9517  
Building Plan Review, 3<sup>rd</sup> floor, (202) 442-8959  
Office of the Surveyor, 3<sup>rd</sup> floor, (202) 442-4984  
Office of the Zoning Administrator, 3<sup>rd</sup> floor, (202) 442-4576  
Inspection, 4<sup>th</sup> floor, (202) 442-9557  
Office of the Director, 5<sup>th</sup> floor, (202) 442-4400

### Hours of Operation

Mon, Tues, Wed + Friday: 8:30 am — 3:30 pm  
Thursday: 9:30 am — 3:30 pm

*This document is available in alternative formats and languages.  
Please call (202) 442-4601, TTY (202) 123-4567 for more information.*

# ONE & TWO FAMILY DWELLINGS BUILDING PLANS CHECKLIST

When applying for a permit, unless submitted electronically, you must submit 4 copies of your building plans. The plans must meet the following requirements as per section 106 of 2013 12 DCMR A.

## GENERAL

- Minimum scale of 1/8 inch = 1 foot; fully dimensioned
- Minimum sheet size: 11 x 17 inches; no pencil
- Code edition
- Name, address and occupation of the building designer
- If prepared by a District of Columbia registered architect or professional engineer, the plans must bear the **original** signature, seal and date
- Building height ([DC Office of Zoning](#) website)
- If you are using a new or unique product or material, you must submit a copy of its evaluation report from a nationally recognized listing agency, such as ICC-ES, ATI or UL, certifying it meets the requirements of the building code. This is required for products such as EIFS, adjustable columns and structural composites

## FIRE PROTECTION

- Fire sprinkler information

## SHOP DRAWINGS

- Shop drawings for sprinkler system to be submitted after building permit is issued

## ARCHITECTURAL

- Complete Building Data Information
- List of materials used, including wood species and grade, and concrete and steel strength
- List of design criteria, i.e., live load, dead load, snow load (25 psf), wind speed (90 mph), soil bearing capacity
- Manufacturer's design specifications for pre-fabricated fireplaces must be attached to the plans
- Architectural plans(s) showing the dimensions and use of all rooms, including design occupant loads
- Building height, number of stories and floor areas
- Building elevations (all sides)
- Details of approved tested assemblies for fire resistance rating
- Crawl space ventilation and

access, vapor retarder

- R-values of building insulation components
- U-factor of fenestration
- Partition schedule
- Floor to ceiling height and height from floor to underside of lowest structural member
- Any additional details or sections necessary to accurately depict intended construction
- Stair raiser and tread dimension.
- Guardrail and handrail details
- Site plan showing setbacks, property lines and building restriction lines

## STRUCTURAL

- Foundation plan & details; sill; anchor bolt type, size, & spacing
- Footing schedule
- Framing plan, cross sections and details showing all wall stud sizing & spacing & floor joist sizes & spans for each level and roof
- Connection details

- Roof live load
- Engineered Framing Specs
- Underpinning details
- Geotechnical reports where applicable

### **ELECTRICAL**

- Floor plans showing luminaries, receptacles, branch circuits (and home-runs), panels, equipment and battery packs
- Symbol legend
- Panel schedule to include:
  - ✓ Panel size, phases and voltage
  - ✓ Breaker/fuse and conductor sizes
  - ✓ Indicating if MCB (main circuit breaker) or MLO (main lug only)
  - ✓ If MLO, indicate the size of the overcurrent protection
  - ✓ If MCB, indicate sizes
  - Feeder conductor sizes and insulation types
  - ✓ Clear, evident and specific circuit identification directory
- Equipment schedules
- Riser diagrams to include:

- ✓ Size of feeder conductors and insulation types, conduits and overcurrent protection
- ✓ Connections and sizes of emergency/stand-by generator
- ✓ Size of motors.
- ✓ Main grounding at the service

### **MECHANICAL**

- Duct, piping layout for the HVAC system to include:
  - ✓ Main trunk and branch sizes
  - ✓ Size and CFM of all registers
  - ✓ Location of all equipment and outside air intake and exhaust air opening locations.
- Symbol and abbreviation list
- Calculations demonstrating compliance with the International Energy Conservation Code
- Equipment data for the HVAC system to include:
  - ✓ Make and model number, BTU rating for heating and cooling
  - ✓ Total supply and outdoor air capacities of each air handling unit

### **PLUMBING**

- Floor plans and riser diagrams showing the location of all plumbing fixtures, sanitary, water, storm and gas piping
- Identify size, slope and type of piping material and location of all required valves
- Fixture connection schedule including waste, vent, gas, hot and cold water connection sizes
- Identify all fixture symbols used on the plans and risers. Include backwater values, backflow preventers and other water control equipment
- Water pipe calculations
- Jacuzzi/whirlpool tub manufacturer's information showing loading requirements must be attached to the plans

## SITE-RELATED PLANS

The applicant shall provide a site plan whenever the application for permit involves any of the following, pursuant to section 106.1.13

- Erection of a new *building* or other *structure*.
- Addition to an *existing building*.
- Permanent construction outside the footprint of *existing buildings*.
- Construction or alteration of projections into public space.
- Erection of retaining walls.
- A major substantial improvement activity (as defined by 21 DCMR Chapter 5) or a land-disturbing activity or regulated by 21 DCMR Chapter 5.
- *Demolition* or *razing* of existing *structures* or *buildings*.
- Installation or replacement of underground utility service connections.
- Installation or replacement of site drainage systems.
- Path of the *exit discharge* to the *public way*.
- Construction in whole or in part in a *Special Flood Hazard Area* as established in Section 1612.3 of the *Building Code*.

The *code official* shall be authorized to establish minimum requirements for submittal of site plans and maximum overall size of plans acceptable for review. These limits shall also apply to zoning compliance review plans submitted pursuant to Section 106.1.12.

**106.2.1 Site Plan Information.** The applicant shall show upon the site plan: completely dimensioned and drawn to a scale indicated numerically and graphically, the site, and its orientation to the North. Also, as applicable: location of all existing and new construction on the site, distances from property lines, established street grades, and proposed finished grades. As well, features required to comply with 21 DCMR Chapter 5 including: location of utility service lines and connections thereto (with dimensions and all appurtenant features of such connections), flood hazard areas, floodways, and *design flood* elevations. For *raze* or *demolition*, the site plan shall identify the *structures* or portions thereof to be demolished and the location and size of all existing *structures* and construction that are to remain on the site.

### Problem Soils

Soil types with high water table, expansive or marine clays, or other behavioral issues are considered problem soils. If your building/addition is to be constructed on a problem soil, you may need to have your foundation designed by a licensed professional engineer. To learn more about soils in DC and to view DC soils maps, go to the [USDA](#) website. To determine if you have problem soils on your property contact [Department of Environment \(DDOE\)](#).



## PERMIT PROCESS

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When applying for a building permit, bring the required documentation (listed on Page 1) to the Permit Operations Center. DCRA staff will direct you through the multiple-agency review process. Any projects involving additions or changes to the interior work, more than 1,000 square feet, shall be filed for review.

The average review time for a file job is between 14 to 30 business days from the date of filing and payment of filing fee, depending on the complexity of the job and how well prepared the submittal documents are.

## HOMEOWNER'S CENTER

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Single Family Dwelling permits shall be processed in the Homeowners Center located on the 2<sup>nd</sup> floor of the Permit Center for projects with owner representation (owner may bring help, but must be present) including:

- Accessory structure (garage/shed) no more than 1000 sq ft. 15 ft high; alteration & repair of existing; no change in use.
- Addition to single-family dwelling up to 1000 sq. ft; no more than 1 story high at ground level; no party walls.
- Deck up to 1000 sq. ft; no more than 10 ft. above grade.
- Fence entirely on owner's private property.
- Interior renovation no more than 1,000 sq. ft. with no removal or erection of interior load-bearing walls or impact to party wall(s).
- Window/door replacement/repair (if your property is in a Historic or CFA jurisdiction, you must get approval before you apply for a permit).

If all of the required documentation is provided during the initial submission, the average homeowner processing their permit through the homeowner center should experience a 1 to 2 day turnaround.

## HISTORIC BUILDINGS

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Pursuant to Section 105.2.5, of the 2013 12 DCMR A, permit exemptions are not applicable in historic districts or to historically designated structures when the proposed scope of work would qualify to be exempted from permit pursuant to Section 105.2 of this chapter. As well, the work is to occur on the land of or the exterior of *buildings*, other *structures* located in historic districts, historically designated *buildings*, or other *structures*. An application for a building permit pursuant to Section 105.1 shall be required for the following work described in Section 105.2 Building:

1. Brick pointing
4. Repair or replacement of fences, except as deemed an ordinary repair
5. Painting of unpainted exterior masonry at a landmark property
7. Replacement in kind, except of interior ceiling tile and gypsum board
8. Garden storage shed
9. Prefabricated pools
10. Retaining walls

## TRADE PERMITS

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Mechanical, electrical, and plumbing permits can be issued only after the building permit has been issued where new construction or alteration is involved. You may apply in-person or online at [Trade Permits](#).

**\* \* \* Are you using your existing HVAC system? \* \* \***

If yes, your new addition may overload your existing equipment.  
Ask your HVAC contractor to perform a load calculation to verify its capacity.

## ADDITIONAL CONSIDERATIONS

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### **ADJOINING PROPERTY NOTIFICATION**

If construction involves adjoining property (e.g. party walls, underpinning, etc.) notification to each adjacent property owner affected by the work shall be provided pursuant to section 3307 of 2013 DCMR 12.

### **RESIDENTIAL ENERGY REQUIREMENTS**

The provision of energy conservation code shall apply to residential buildings in accordance with section 101.4.7.6 and 101.4.7.6.1 of the 2013 DCMR 12.

### **CONSTRUCTION BEYOND BUILDING RESTRICTION & PROPERTY LINES**

Any construction between the building restriction line (shown on surveyor's plat) and property lines or beyond the property lines is considered a "projection." All projections shall comply with section 3202 of 2013 DCMR 12A.

## FREQUENTLY ASKED QUESTIONS

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### 1. Is a ductless dryer permitted in DC?

**Answer:** A Listed and Labeled Condensing (ductless) clothes dryer is permitted and shall be installed in accordance with the manufacturer's installation instructions.

### 2. Where can the condensate from appliances be disposed?

**Answer:** Please refer to section 307 of the 2012 International Mechanical Code. You may also call (202) 442-8959 for more details.

### 3. Can the waste discharge from a swimming pool, spa or hot tub be connected to a storm sewer?

**Answer:** No. The waste discharge shall be connected to a sanitary sewer through indirect connection.

### 4. What are the current construction codes in the District of Columbia?

**Answer:** The current construction codes for D.C. are the 2012 International Building Code, 2012 International Mechanical Code, 2012 International Plumbing Code, 2012 International Fuel Gas Code, 2012 International Energy Conservation Code, 2012 International Swimming Pool Spa Code, 2011 National Electric Code (NFPA 70), 2012 International Fire Prevention Code, 2012 International Residential Code - One and Two Family Dwelling Codes with 2013 D.C. Supplement (DCMR 12A).

### 5. Where can we get a copy of the 2013 DC Construction Codes Supplement?

**Answer:** You can obtain a copy of 2013 DC Construction Codes Supplement from the Office of Documents located at 441 4<sup>th</sup> Street NW Washington, DC 20001, by phone at (202) 727-5090, or from the DCRA website: [www.dkra.dc.gov](http://www.dkra.dc.gov).

### 6. Can a fireplace be installed in a bedroom?

**Answer:** Yes, it is subject to provisions of Chapters 3 and 9, of the 2012 International Mechanical Code.

### 7. Can we locate a metal chimney on the exterior of a building?

**Answer:** A metal chimney can be installed on the exterior of the building subject to its Listing and Manufacturer's installation instructions. Refer to chapter 3 and 8 of the 2012 International Mechanical Code.

## 8. What are the requirements for obtaining a building permit?

**Answer:** You need to submit 4 sets of architectural, mechanical, plumbing, electrical, structural, and fire protection plans. Along with civil drawings duly sealed and signed by an architect or professional engineer, who is registered in DC for all projects except one and two family dwellings. If the building is new or an exterior addition is being built to an existing building, you need to submit a plat from our DC Surveyor's Office showing the footprint of the new building or the existing building with the proposed addition, including all set back dimensions from lot lines. Refer to section §106 of 2013 DCMR 12A for more details.

## 9. What work is exempt from obtaining a permit?

**Answer:** With the new 2013 DC Construction Code, essentially a permit is required unless explicitly exempted by the code. The following is a list of items that are exempted from a building permit but for a complete list items that are exempted from permits, please refer to section 105.2 of the 2013 DC Construction Code Supplement for details. Visit our website [dcra.dc.gov](http://dcra.dc.gov) for more details.

### Building:

- Installation of window screens and storm windows
- Repair *in kind* of existing fences
- Papering, tiling, carpeting, floor covering, cabinets, countertops, and similar finish work
- Replacement *in kind* of one of the items listed hereafter. For the purpose of this section, "replacement in kind", means replacement with a feature of like material that replicates the existing feature in proportion, appearance, texture, design, detail and dimensions
- Roofing and coping
- Siding
- Gutters and downspouts and fascia
- Private sidewalks and driveways
- Patios
- Non-rated suspended ceiling tile
- Not more than 160 square feet (14.9 m<sup>2</sup>) of gypsum board excluding installation of fire-rated gypsum wall board or shaft liner
- A single garden storage shed that does not exceed 50 square feet (4.65 m<sup>2</sup>) in area, is less than ten feet (3048 mm) in overall height, is an accessory *structure* to a *building* of Use Group R-3 or to a *building* under the jurisdiction of the *Residential Code*, and is erected on a lot with no other exempted storage shed
- Prefabricated pools, accessory to a Use Group R-3 occupancy, or accessory to *buildings* under the jurisdiction of the *Residential Code*, which are less than 24 inches (610 mm) deep, do not exceed 1000 gallons (3785.41L), are installed entirely above ground and are not designed or manufactured to be connected to a circulation system

- Retaining walls that are not over four feet (1219 mm) in height, measured from the bottom of the footing to the top of the wall, for one and two family dwellings only where the area of land disturbance is less than 50 square feet (4.65 m<sup>2</sup>)
- Swings and other playground equipment accessory to one- and two-family dwellings

**Electrical:**

- Repair portable electrical equipment
- Repair lighting fixtures
- Repair or replace ballasts, sockets, receptacles, or snap switches
- Listed cord-and-plug connected temporary decorative lighting
- Replacement of branch circuit overcurrent devices of the required capacity in the same location

**Gas:**

- Portable heating, cooking or clothes drying appliances
- Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe
- Portable-fuel-cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid

**Mechanical:**

- Portable heating appliances
- Portable ventilation appliances
- Portable cooling units
- Steam, hot or chilled water piping within any heating or cooling equipment or appliances regulated by the *Construction Codes*
- Portable evaporative coolers
- Self-contained refrigerating systems containing 10 pounds (5 kg) or less of refrigerant or that are actuated by motors of 1 horsepower (746 W) or less

**Plumbing:**

- The stopping of leaks in drains, water, soil, waste or vent pipe, provided that if any concealed trap, drainage, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in the *Construction Codes*.
- The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures, and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes, or fixtures.

**10. What is the permissible hours allowed for construction?**

**Answer:** In accordance with section 105.1.2 of 2013 DCMR 12A Construction Hours are from 7 a.m. to 7 p.m. Mondays through Saturdays, excluding legal holidays.

**11. What is the review time on a file job?**

**Answer:** All required DCRA reviews will be completed in 14 to 30 business days from the date of filing, depending on the complexity of the job.

**12. What work can be done with a postcard online permit?**

**Answer:** Follow the instructions listed the DCRA website for postcard permits (Building, Plumbing, Mechanical or Electrical). <http://dcra.dc.gov/service/permits-postcard-permit>

**13. How long is a building permit valid?**

**Answer:** Any permit issued shall become null and void if the authorized work is not begun and inspected pursuant to Section 109 within one year after the permit is issued or if the authorized work is suspended, abandoned or not inspected pursuant to Section 109 for a period of one year. In determining whether work has been suspended or abandoned under this Section 105.5, including exceptions thereto, the code official shall have the right to request documentation from the permit holder and to inspect the premises, including any building or other structure, for which the permit has been granted. For additional information see Chapter 1, Section 105 of 2013 12 DCMR A.

**14. What if I have an existing two family dwelling with NO Certificate of Occupancy.**

**Answer:** Since there is no existing C of O, you must obtain one, which includes obtaining a building permit first.

- You may apply for a [Basic Business License \(BBL\)](#) for a two family flat.
- Self-certify that the building is compliant with the current construction codes.
- Once the necessary inspections have taken place and have been approved, the C of O will be issued.

**15. When is a plat required?**

**Answer:** Check the 2013 DCMR 12A, §106.1.13 for plat requirements or online. A surveyor's plat can be ordered from the DC Surveyor's Office located at 1100 4<sup>th</sup> Street, SW, Third Floor, Washington, DC 20024. They can be reached at (202) 442-4699.

**16. Do I need a licensed architect or engineer to do a small addition to a single family dwelling?**

**Answer:** It would depend solely on the extent of construction. You may not require one if the drawings submitted are drawn to scale with full details.

**17. What is the minimum ceiling height of a habitable space for a single family dwelling?**

**Answer:** For basements the minimum ceiling height is six feet, 8 inches (6'-8"). For upper floors the minimum ceiling height is seven feet (7'-0"). Refer to "Conversion of a Single Family Dwelling to a two family Dwelling" PDF online at [dcra.dc.gov](http://dcra.dc.gov) for additional building code requirements.

**18. What is a Structural Certification?**

**Answer:** A Structural Certification is a form executed by a professional structural engineer, who is registered in the District of Columbia to certify that the structural portion of the plans submitted are in compliance with the structural requirement of the current applicable construction codes. The code official is authorized to accept the structural portions of the plans thus certified at the code official's discretion.

**19. What is the frost depth for DC?**

**Answer:** The frost depth for DC is 2 ft. 6" inches per the 2013 DCMR 12A, §1809.5.

**20. What is the snow load for DC?**

**Answer:** The basic snow load for the District of Columbia, shall be a minimum of 25 psf (1.20 kN/m<sup>2</sup>) plus drifting or 30 psf (1.44 kN/m<sup>2</sup>) equivalent uniform load, whichever is greater per section 1608 of the 2013 DCMR 12A.

**21. Can I have a window opening on a 1 and 2 family dwelling, 3 feet from property line?**

**Answer:** Window openings located within 3 ft. of the property line are NOT permitted per table R302.1(1) of the 2012 International Residential Code (IRC).

**22. Does DC require sprinklers for a 1 and 2 family dwelling?**

**Answer:** Yes. A sprinkler system is required for all new single family dwellings per Appendix P of the 2013 DCMR 12A and the Appendix P of the 2012 IRC.

For information on DCRA's affiliated agencies within the permitting process please visit the appropriate websites:

- District Department of Transportation  
<http://ddot.dc.gov/>
- District Department of the Environment  
<http://green.dc.gov/>
- District of Columbia Water and Sewer Authority  
<http://www.dcwater.com/>

**For inquiries on Zoning submittals or reviews please refer to the Office of the Zoning Administrator by visiting the DCRA website: (<http://dcra.dc.gov/service/zoning-certificates-occupancy>) or by telephone at (202) 442-4576.**

# A3

## **DESIGN TECHNICAL DRAWINGS**

- 350 SF
- 525 SF
- 800 SF

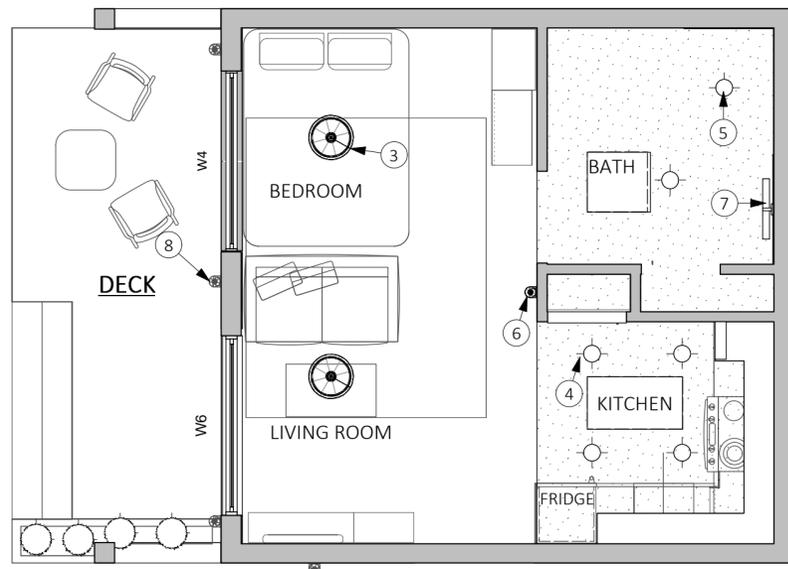


AARP  
ACCESSORY  
DWELLING  
UNITS

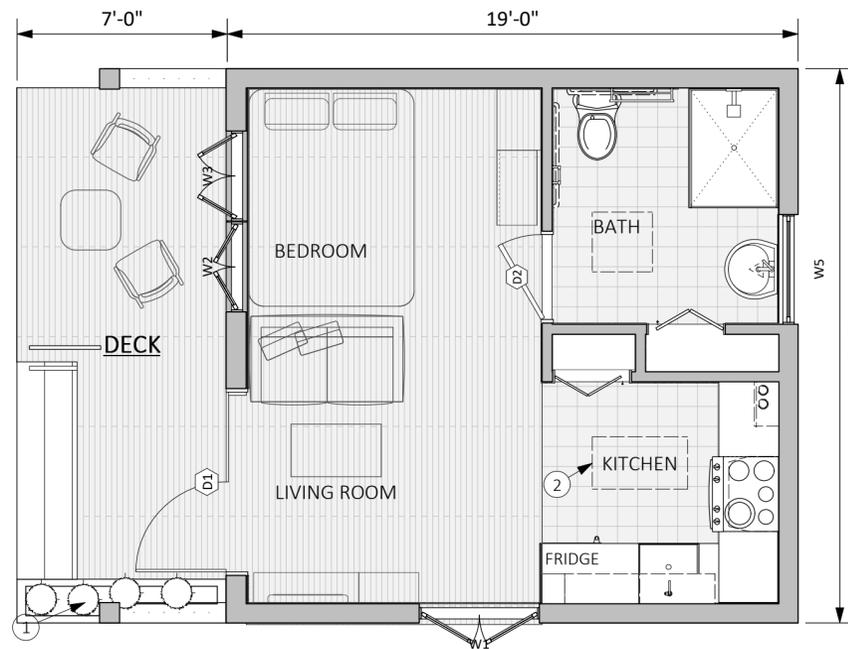
**350 SF  
UNIT**

All product and company names are trademarks of their respective holders. Use does not imply any affiliation or endorsement.

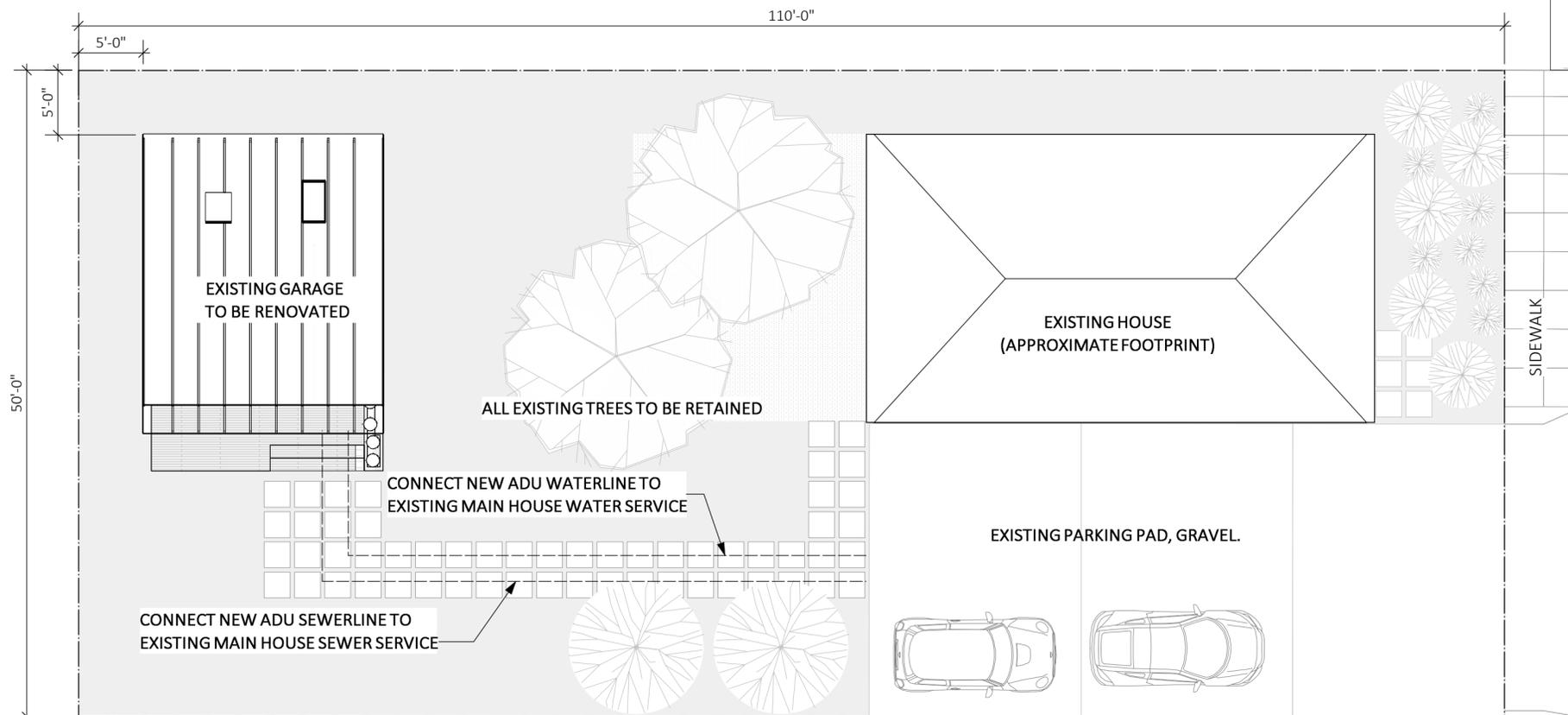
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3 REFLECTED CEILING PLAN  
Scale: 1/4" = 1'-0"



2 FLOOR PLAN  
Scale: 1/4" = 1'-0"



1 SITE PLAN  
Scale: 1/8" = 1'-0"

ZONING INFORMATION

LOT INFORMATION

ADDRESS: 331 SE 64TH STREET  
LOT & BLOCK: 069-72-3051  
LOT AREA: 5500 SF  
ZONE: R2

ALLOWABLE ADU SIZE: 250SF TO 800 SF  
PROPOSED ADU: 350 SF  
PROPOSED ADU IS LESS THAN MAXIMUM.

MAXIMUM LOT COVERAGE: 40%  
MAIN HOUSE: 875 SF  
PROPOSED COVERAGE (INCLUDE ADU) = 1225 SF (22%)  
TOTAL BUILDINGS ARE LESS THAN MAX. LOT COVERAGE.

REQUIRED SETBACK

SIDE YARD: 5FT  
REAR: 5FT  
GARAGE SITES WITHIN REQUIRED SETBACKS

NOTES

REFER TO SHEETS A1, A2 AND A3

- 1 PLANTER
- 2 SKYLIGHT [QTY. 2]
- 3 PENDANT LIGHT [QTY. 2]
- 4 DOWNLIGHT [QTY. 4]
- 5 SHOWER LIGHT
- 6 WALL SCONCE
- 7 MIRROR LIGHT
- 8 EXTERIOR LIGHT [QTY. 4]
- 9 WALL OUTLETS [ ]
- 10 WALL SWITCHES [ ]
- 11 UNDER-COUNTER FRIDGE
- 12 KITCHEN SINK
- 13 KITCHEN FAUCET
- 14 4-BURNER STOVE WITH OVEN
- 15 HOOD
- 16 WALL-MOUNTED TANKLESS WATER HEATER.
- 17 DUAL-FLUSH TOILET
- 18 BATHROOM SINK
- 19 BATHROOM FAUCET
- 20 SHOWER
- 21 SOLAR PANELS

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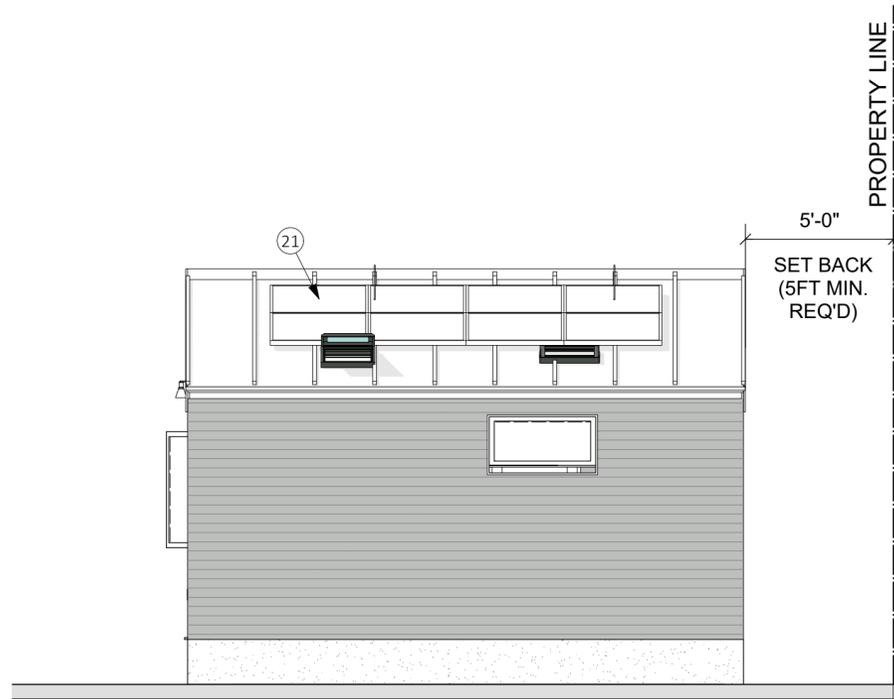
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**NOTES**  
REFER TO SHEETS A1, A2 AND A3

- 1 PLANTER
- 2 SKYLIGHT. [QTY. 2]
- 3 PENDANT LIGHT [QTY. 2]
- 4 DOWNLIGHT [QTY. 4]
- 5 SHOWER LIGHT
- 6 WALL SCONCE
- 7 MIRROR LIGHT
- 8 EXTERIOR LIGHT [QTY. 4]
- 9 WALL OUTLETS [ - ]
- 10 WALL SWITCHES [ - ]
- 11 UNDER-COUNTER FRIDGE
- 12 KITCHEN SINK
- 13 KITCHEN FAUCET
- 14 4-BURNER STOVE WITH OVEN
- 15 HOOD
- 16 WALL-MOUNTED TANKLESS WATER HEATER.
- 17 DUAL-FLUSH TOILET
- 18 BATHROOM SINK
- 19 BATHROOM FAUCET
- 20 SHOWER
- 21 SOLAR PANELS

Door Schedule								
Nominal Size								
Mark	Width	Height	Thickness	Door Operation	L Sidelit Wid	R Sidelit Wid		
2	2	8'10"	16'0"	2 3/4"		2	2'0"	2'0"
D	1	6'0"	8'0"	1"	Complex Swing		N/A	N/A
D	2	2'10"	8'0"	1 3/4"	Swing Simple		N/A	N/A

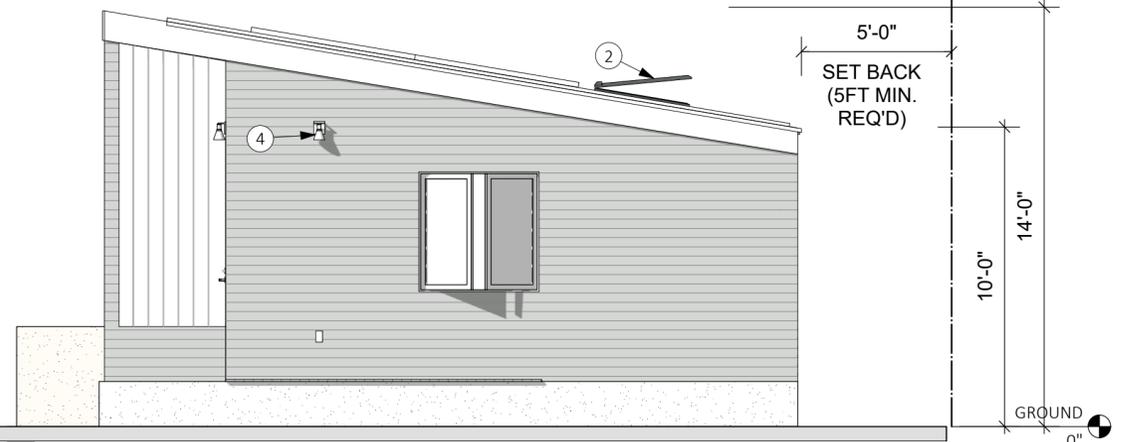
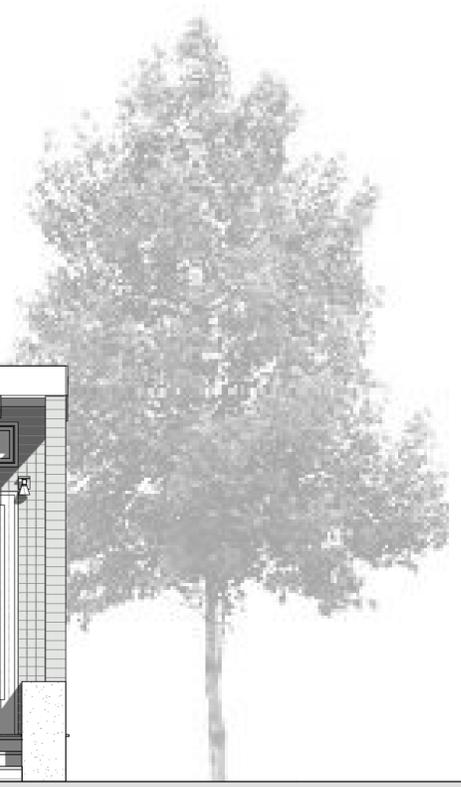
Window Schedule						
Nominal Size						
Mark	O.A. Width	O.A. Height	Sash Operation	Transom Sash	Sill	
6	6	25'8"	19'0"		6	Y 6
W	1	4'0"	4'0"	Bi-parting Casement	-	Timber
W	2	3'0"	5'0"	Bi-parting Casement	Y	Timber
W	3	3'0"	5'0"	Bi-parting Casement	Y	Timber
W	4	6'0"	1'6"	Awning	-	Timber
W	5	3'8"	2'0"	Awning	-	Timber
W	6	6'0"	1'6"	Awning	-	Timber



3 **REAR ELEVATION**  
Scale: 1/4" = 1'-0"



2 **FRONT ELEVATION**  
Scale: 1/4" = 1'-0"



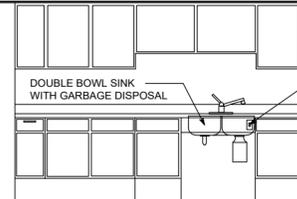
1 **SIDE ELEVATION**  
Scale: 1/4" = 1'-0"

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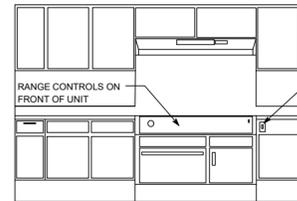
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**NOTES**  
REFER TO SHEETS A1, A2 AND A3

- ① PLANTER
- ② SKYLIGHT. [QTY. 2]
- ③ PENDANT LIGHT [QTY. 2]
- ④ DOWNLIGHT [QTY. 4]
- ⑤ SHOWER LIGHT
- ⑥ WALL SCONCE
- ⑦ MIRROR LIGHT
- ⑧ EXTERIOR LIGHT [QTY. 4]
- ⑨ WALL OUTLETS [ ⑨ ]
- ⑩ WALL SWITCHES [ ⑩ ]
- ⑪ UNDER-COUNTER FRIDGE
- ⑫ KITCHEN SINK
- ⑬ KITCHEN FAUCET
- ⑭ 4-BURNER STOVE WITH OVEN
- ⑮ HOOD
- ⑯ WALL-MOUNTED TANKLESS WATER HEATER.
- ⑰ DUAL-FLUSH TOILET
- ⑱ BATHROOM SINK
- ⑲ BATHROOM FAUCET
- ⑳ SHOWER
- ㉑ SOLAR PANELS



ALTERNATIVE LOCATION OF GARBAGE DISPOSAL CONTROLS AT KITCHEN SINK

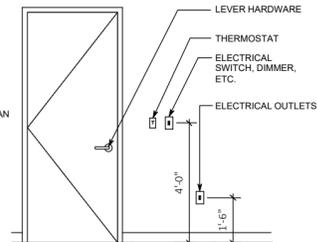


ALTERNATIVE LOCATION OF KITCHEN RANGE AND RANGE HOOD CONTROLS

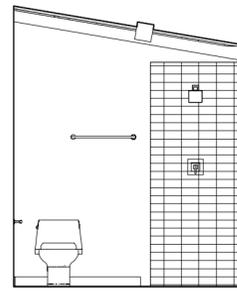
**ADDITIONAL DETAILS**

NOTE: TO ACHIEVE OPTIMAL KNEE SPACE, A 90° TRAP CAN BE USED WITH A SINK WHICH HAS REAR DRAINS

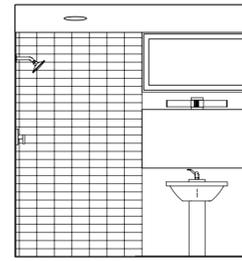
GARBAGE DISPOSAL SWITCH INSTALLED IN FASCIA



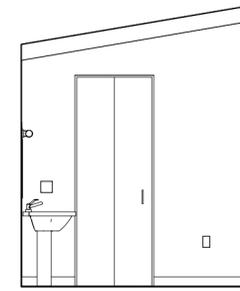
MOUNTING HEIGHTS SHOWN



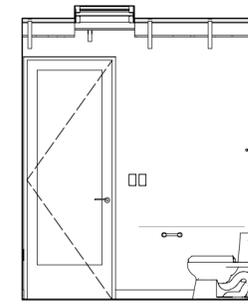
7



8



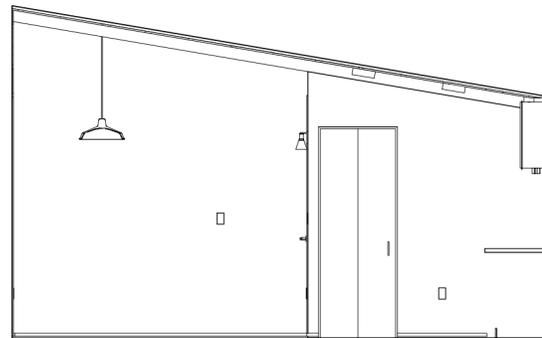
9



10

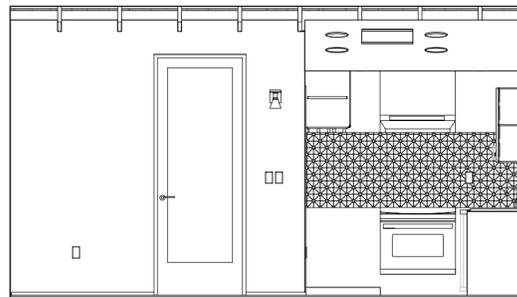
**INTERIOR ELEVATION - BATHROOM**

Scale: 1/4" = 1'-0"

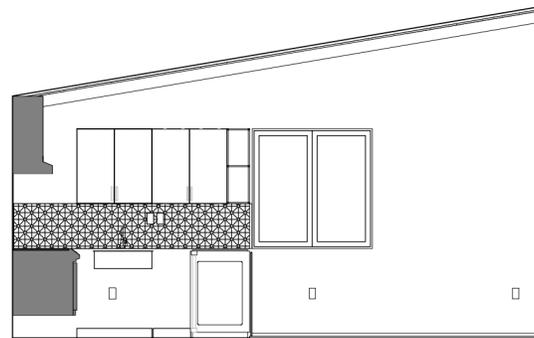


3 **INTERIOR ELEVATION - LIVING AREA / KITCHEN**

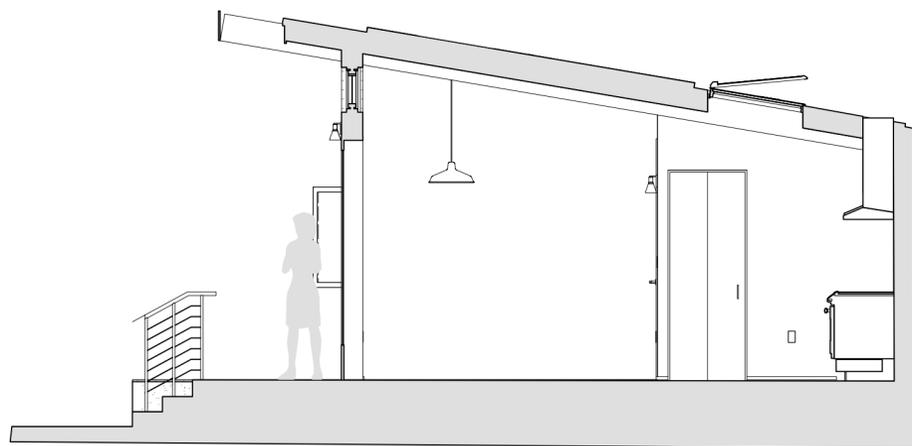
Scale: 1/4" = 1'-0"



4

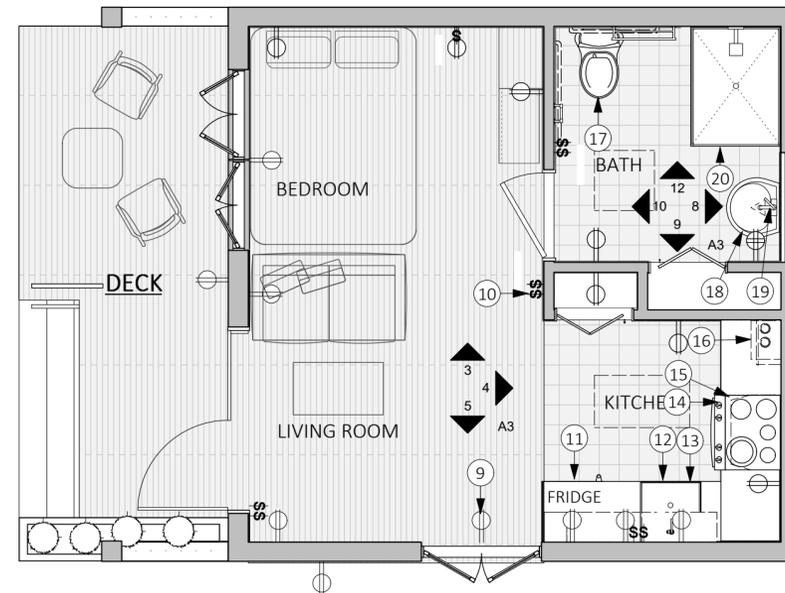


5



2 **SECTION THROUGH LIVING ROOM AND KITCHEN**

Scale: 1/4" = 1'-0"



1 **OUTLET AND LIGHT SWITCH LOCATIONS**

Scale: 1/4" = 1'-0"

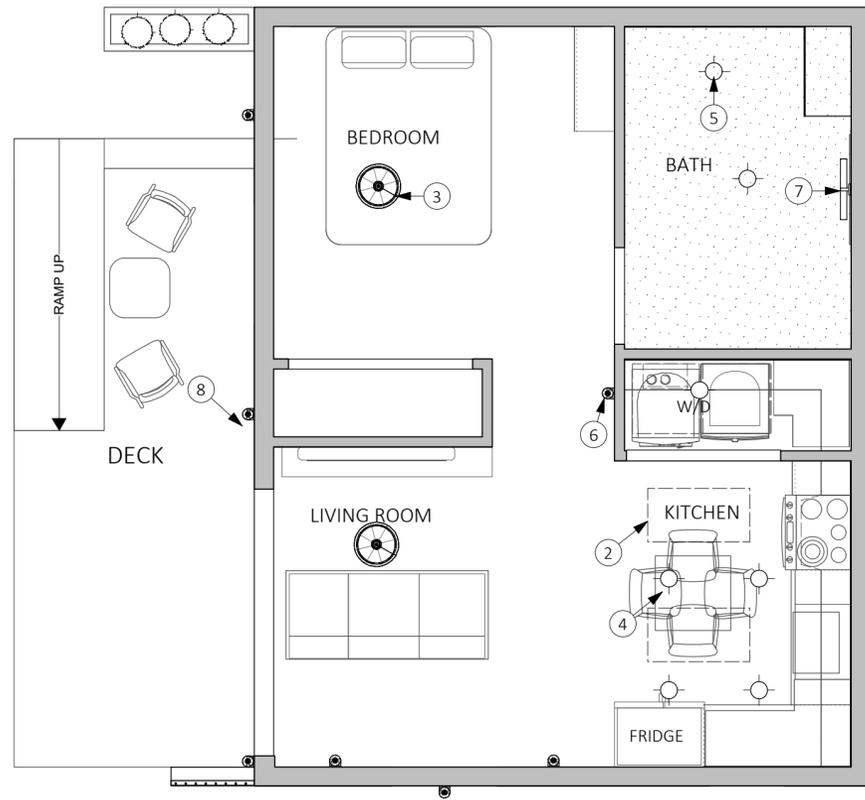
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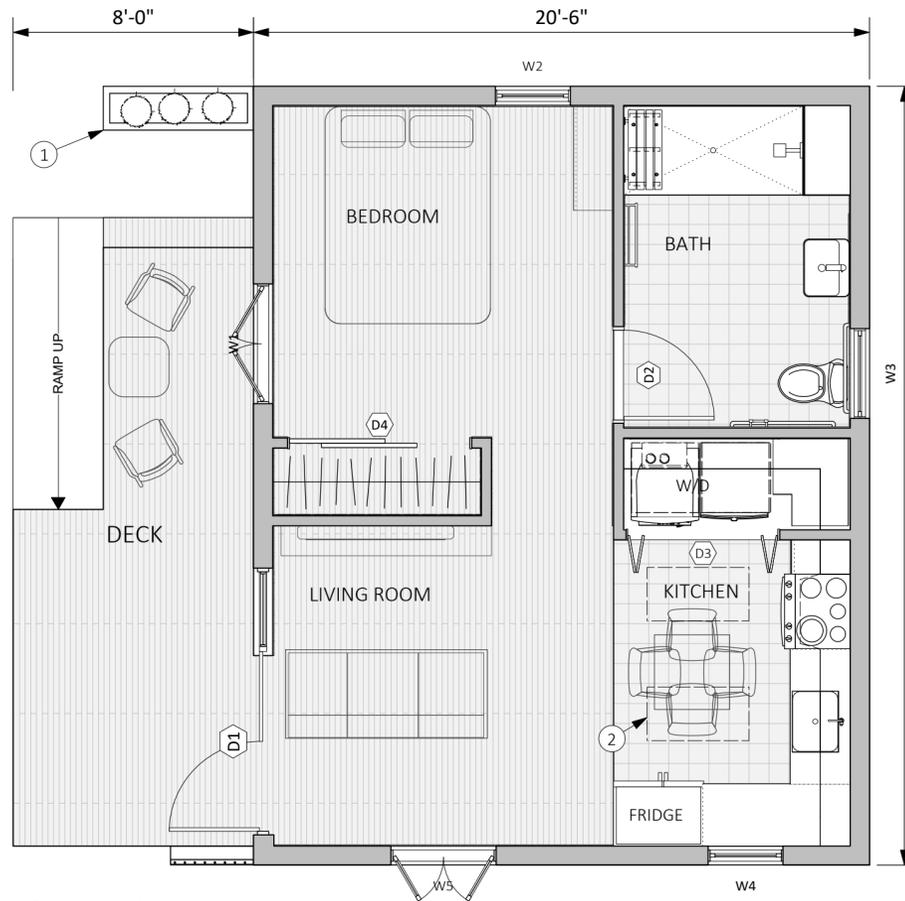


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**3 REFLECTED CEILING PLAN**  
Scale: 1/4" = 1'-0"



**2 FLOOR PLAN**  
Scale: 1/4" = 1'-0"

**ZONING INFORMATION**

**LOT INFORMATION**  
ADDRESS: 331 SE 64TH STREET  
LOT & BLOCK: 069-72-3051  
LOT AREA: 5500 SF  
ZONE: R2

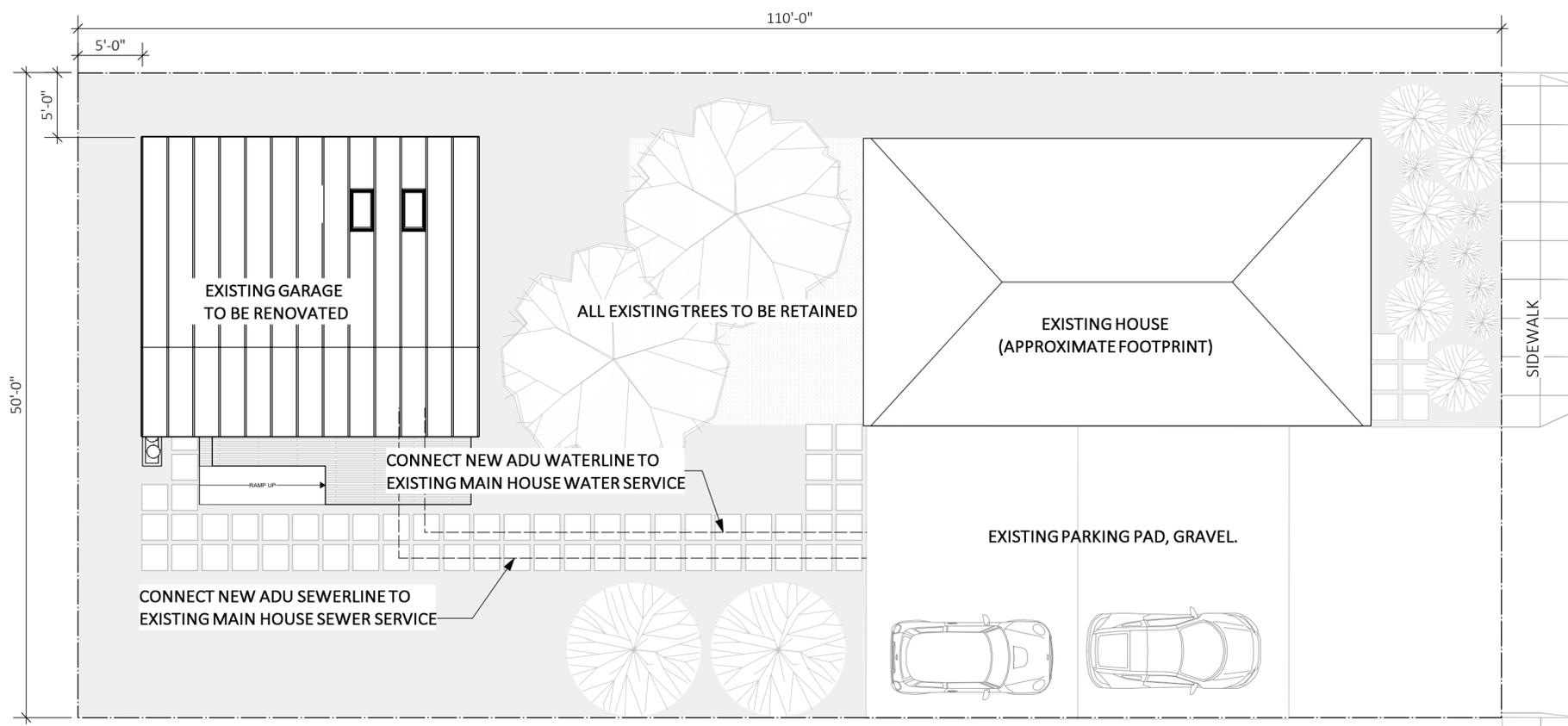
**ALLOWABLE ADU SIZE:** 250SF TO 800 SF  
**PROPOSED ADU:** 533 SF  
**PROPOSED ADU IS LESS THAN MAXIMUM.**

**MAXIMUM LOT COVERAGE:** 40%  
**MAIN HOUSE:** 875 SF  
**PROPOSED COVERAGE (INCLUDE ADU) = 1408 SF**  
(25.6%)  
**TOTAL BUILDINGS ARE LESS THAN MAX. LOT COVERAGE.**

**REQUIRED SETBACK**  
**SIDE YARD:** 5FT  
**REAR:** 5FT  
**GARAGE SITES WITHIN REQUIRED SETBACKS**

**NOTES**  
REFER TO SHEETS A1, A2 AND A3

- ① PLANTER
- ② SKYLIGHT [QTY. 2]
- ③ PENDANT LIGHT [QTY. 2]
- ④ DOWNLIGHT [QTY. 4]
- ⑤ SHOWER LIGHT
- ⑥ WALL SCONCE
- ⑦ MIRROR LIGHT
- ⑧ EXTERIOR LIGHT [QTY. 4]
- ⑨ WALL OUTLETS [ ]
- ⑩ WALL SWITCHES [ ]
- ⑪ FRIDGE
- ⑫ KITCHEN SINK
- ⑬ KITCHEN FAUCET
- ⑭ 4-BURNER STOVE WITH OVEN
- ⑮ HOOD
- ⑯ WALL-MOUNTED TANKLESS WATER HEATER.
- ⑰ DUAL-FLUSH TOILET
- ⑱ BATHROOM SINK
- ⑲ BATHROOM FAUCET
- ⑳ SHOWER
- ㉑ SOLAR PANELS
- ㉒ WASHER / DRYER



**1 SITE PLAN**  
Scale: 1/8" = 1'-0"

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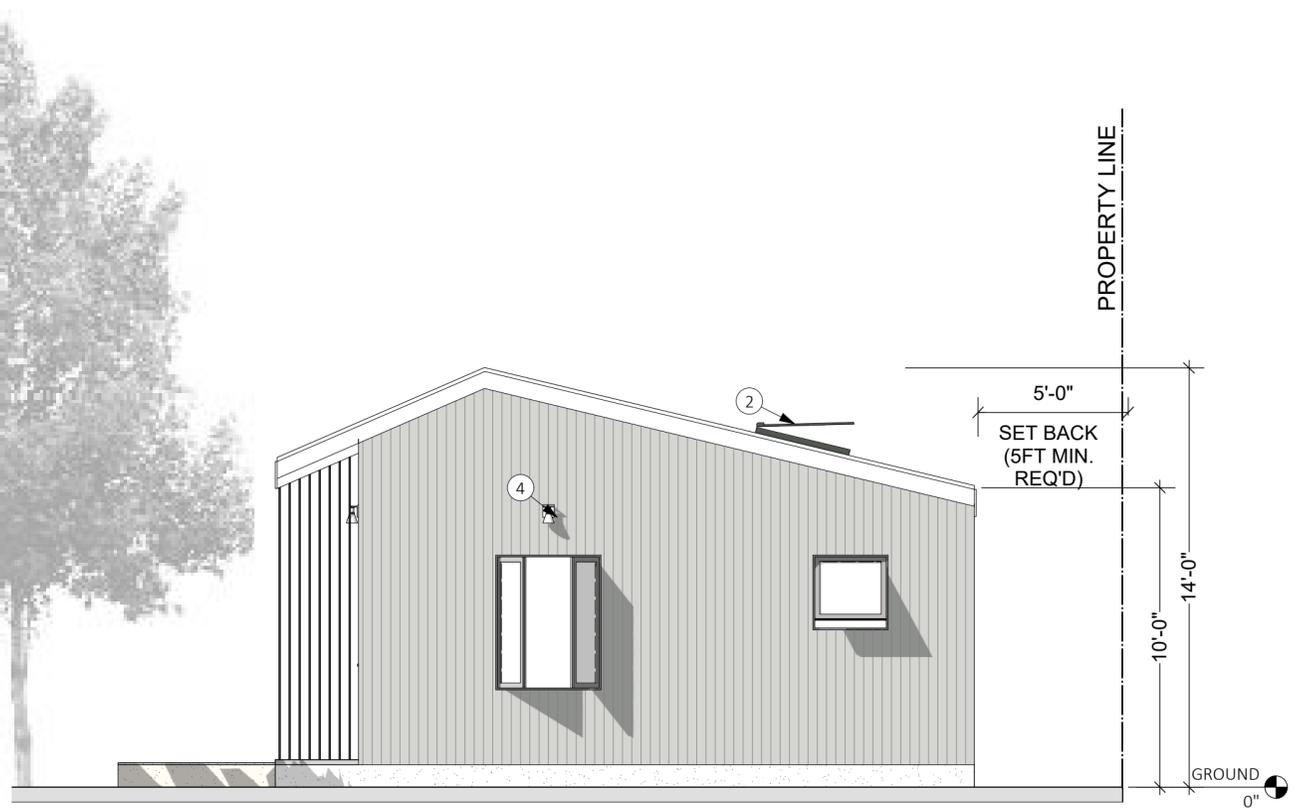
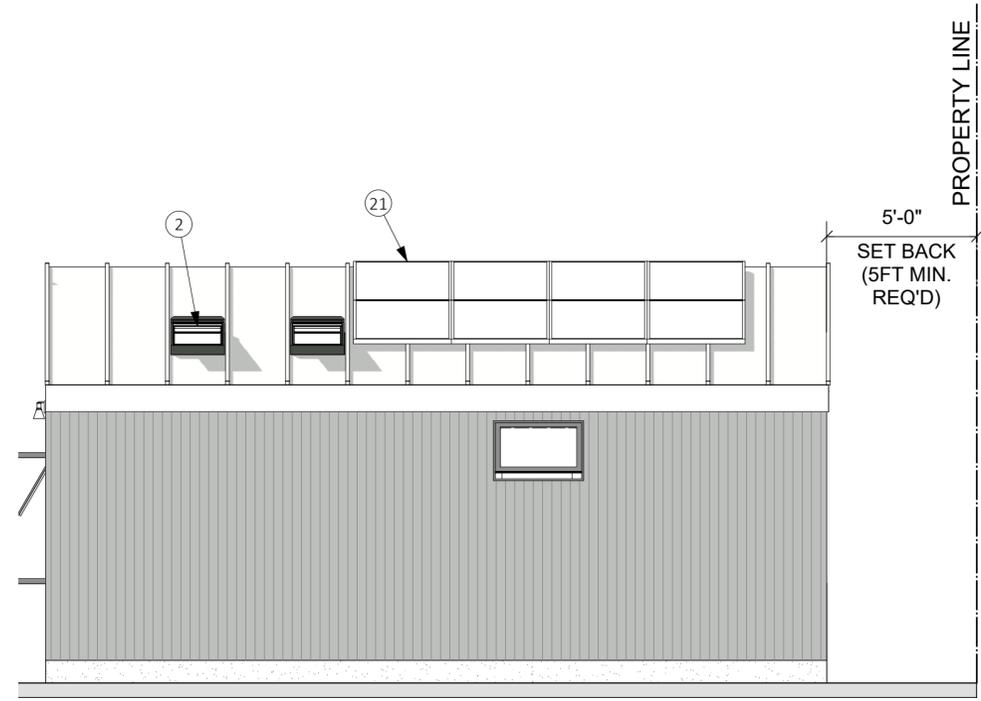
**NOTES**  
REFER TO SHEETS A1, A2 AND A3

- 1 PLANTER
- 2 SKYLIGHT. [QTY. 2]
- 3 PENDANT LIGHT [QTY. 2]
- 4 DOWNLIGHT [QTY. 4]
- 5 SHOWER LIGHT
- 6 WALL SCONCE
- 7 MIRROR LIGHT
- 8 EXTERIOR LIGHT [QTY. 4]
- 9 WALL OUTLETS [ ]
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- 11 FRIDGE
- 12 KITCHEN SINK
- 13 KITCHEN FAUCET
- 14 4-BURNER STOVE WITH OVEN
- 15 HOOD
- 16 WALL-MOUNTED TANKLESS WATER HEATER.
- 17 DUAL-FLUSH TOILET
- 18 BATHROOM SINK
- 19 BATHROOM FAUCET
- 20 SHOWER
- 21 SOLAR PANELS
- 22 WASHER /DRYER

Door Schedule										
Nominal Size										
Mark	Width	Height	Thickness	Door Operation	Slab Style	L Sidelt Wid	R Sidelt Wid			
D 4	4	20'0"	28'0"	5 1/4"		4	5'6"	3'0"		
D 1	1	6'0"	7'0"	1 3/8"	Complex Swing	Panel	2'6"	0"		
D 2	2	3'0"	7'0"	1 3/8"	Swing Simple	Glass	N/A	N/A		
D 3	3	5'0"	7'0"	3/4"	Bi-fold Bi-part	Solid	N/A	N/A		
D 4	4	6'0"	7'0"	1 3/4"	Slider	Solid	N/A	N/A		

Window Schedule						
Nominal Size						
Mark	O.A. Width	O.A. Height	Sash Operation	Transom Sash	Sill	
5	5	15'6"	18'8"	5	Y	5
W 1	1	4'0"	6'10"	Bi-parting	Y	Timber
W 2	2	2'6"	2'6"	Awning	-	Timber
W 3	3	3'0"	2'0"	Awning	-	Timber
W 4	4	2'6"	2'6"	Awning	-	Timber
W 5	5	3'6"	4'10"	Bi-parting	-	Timber



AARP  
ACCESSORY  
DWELLING  
UNITS

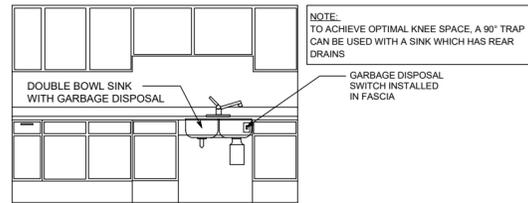
**525 SF  
UNIT**

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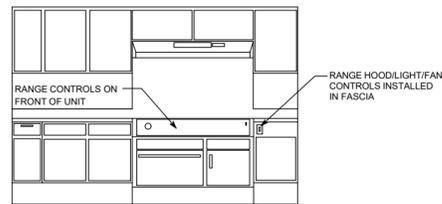
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**NOTES**  
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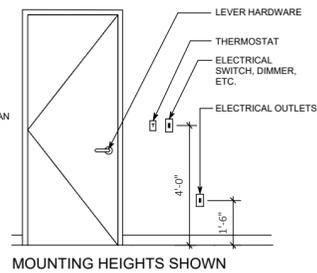
- ① PLANTER
- ② SKYLIGHT. [QTY. 2]
- ③ PENDANT LIGHT [QTY. 2]
- ④ DOWNLIGHT [QTY. 4]
- ⑤ SHOWER LIGHT
- ⑥ WALL SCONCE
- ⑦ MIRROR LIGHT
- ⑧ EXTERIOR LIGHT [QTY. 4]
- ⑨ WALL OUTLETS [ ]
- ⑩ WALL SWITCHES [ ]
- ⑪ FRIDGE
- ⑫ KITCHEN SINK
- ⑬ KITCHEN FAUCET
- ⑭ 4-BURNER STOVE WITH OVEN
- ⑮ HOOD
- ⑯ WALL-MOUNTED TANKLESS WATER HEATER.
- ⑰ DUAL-FLUSH TOILET
- ⑱ BATHROOM SINK
- ⑲ BATHROOM FAUCET
- ⑳ SHOWER
- ㉑ SOLAR PANELS
- ㉒ WASHER / DRYER



ALTERNATIVE LOCATION OF GARBAGE DISPOSAL CONTROLS AT KITCHEN SINK

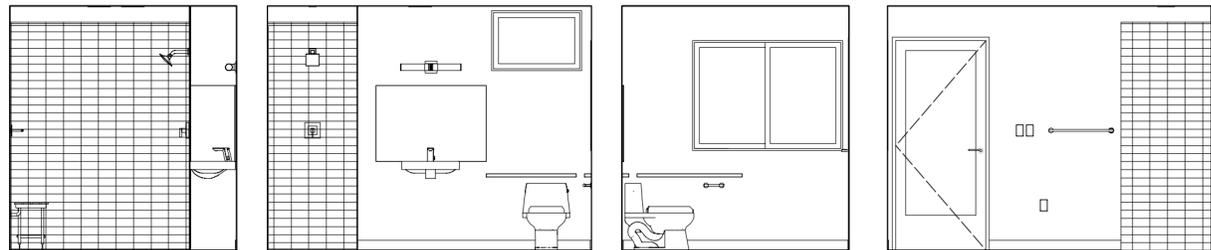


ALTERNATIVE LOCATION OF KITCHEN RANGE AND RANGE HOOD CONTROLS

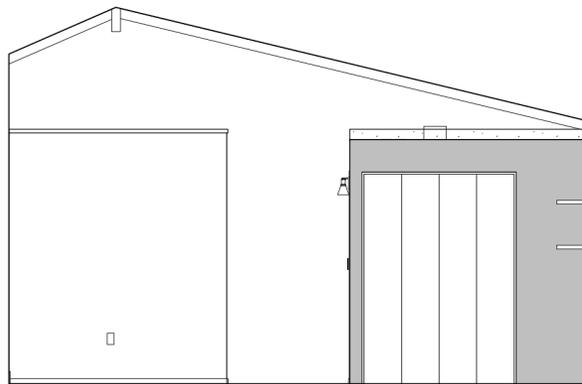


MOUNTING HEIGHTS SHOWN

**ADDITIONAL DETAILS**



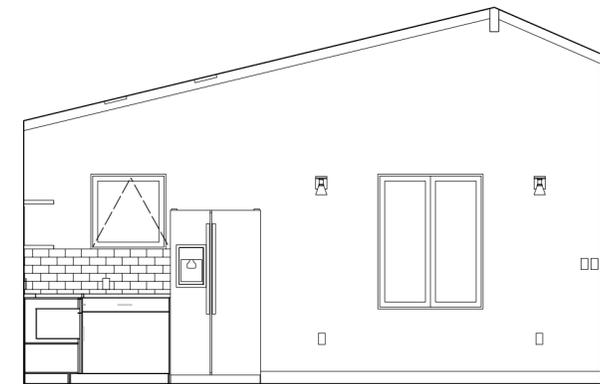
**INTERIOR ELEVATION - BATHROOM**  
Scale: 1/4" = 1'-0"



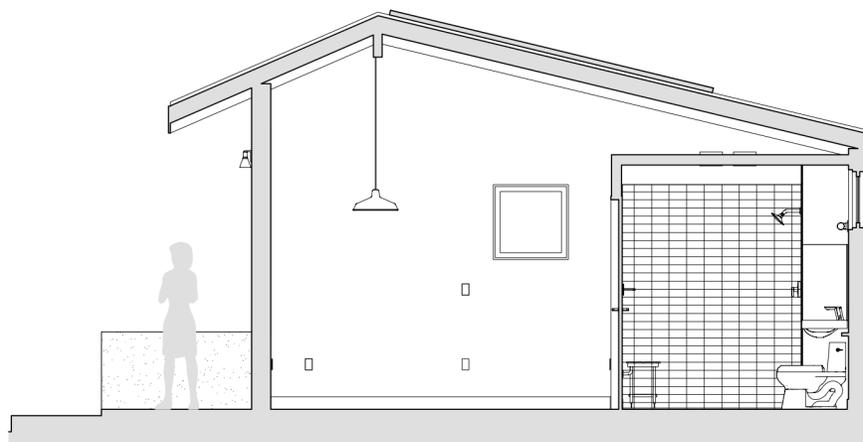
**INTERIOR ELEVATION - LIVING AREA / KITCHEN**  
Scale: 1/4" = 1'-0"



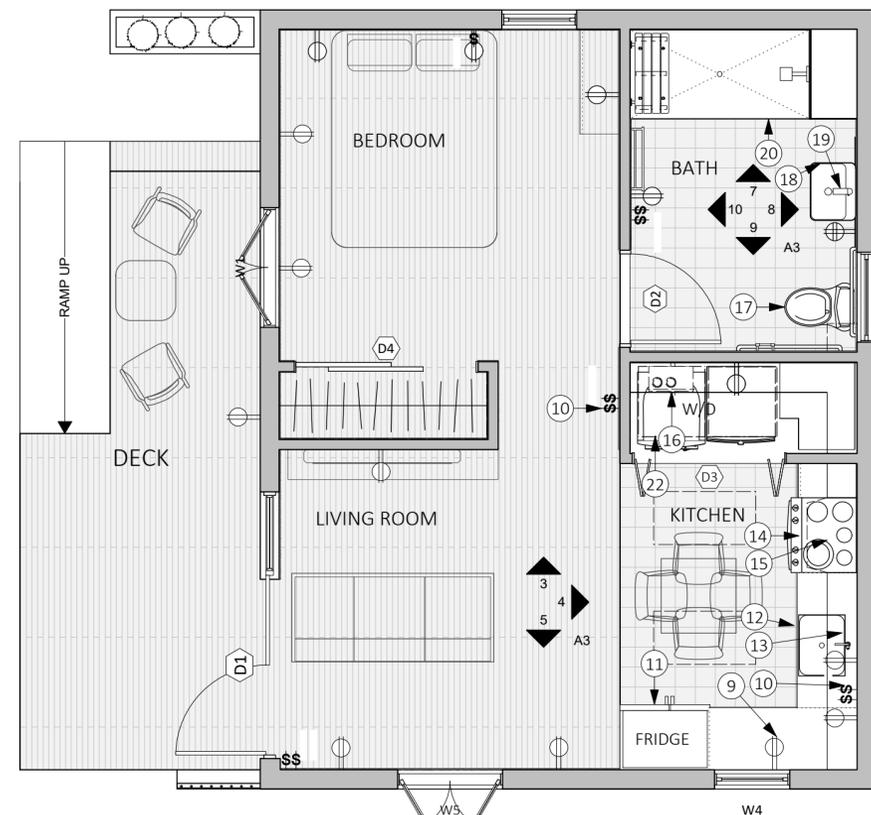
4



5



**SECTION THROUGH BEDROOM AND BATHROOM**  
Scale: 1/4" = 1'-0"



**OUTLET AND LIGHT SWITCH LOCATIONS**  
Scale: 1/4" = 1'-0"

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**AARP**  
Real Possibilities

**blink!LAB**  
architecture

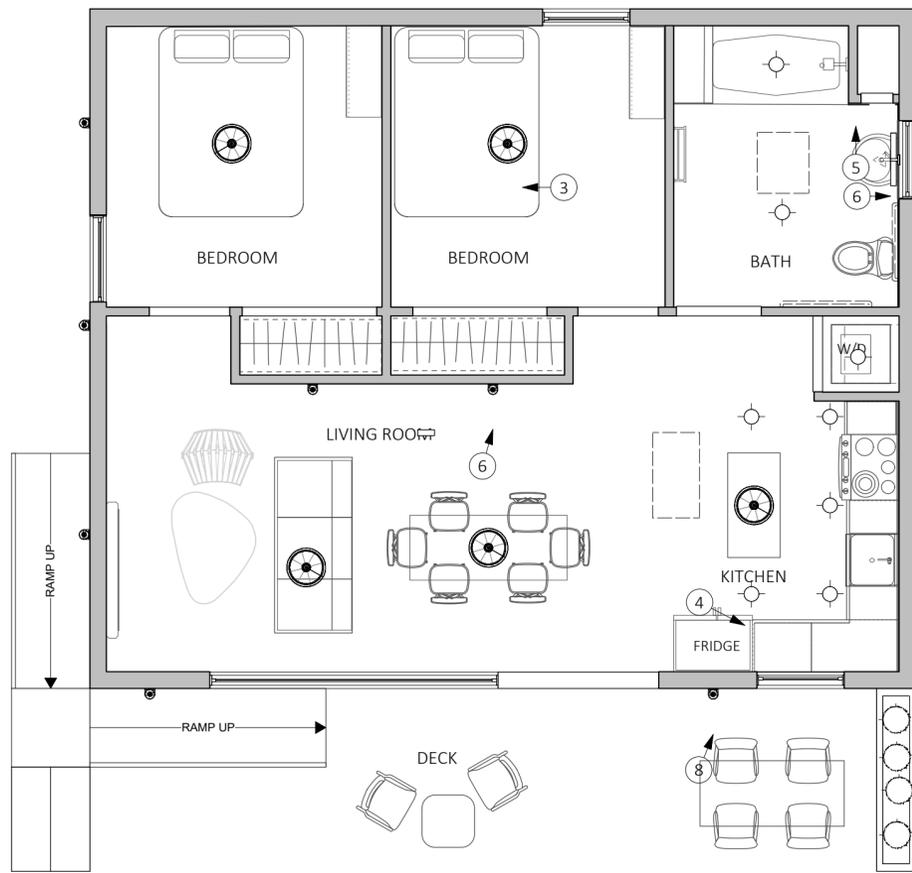
AARP  
ACCESSORY  
DWELLING  
UNITS

**800 SF  
UNIT**

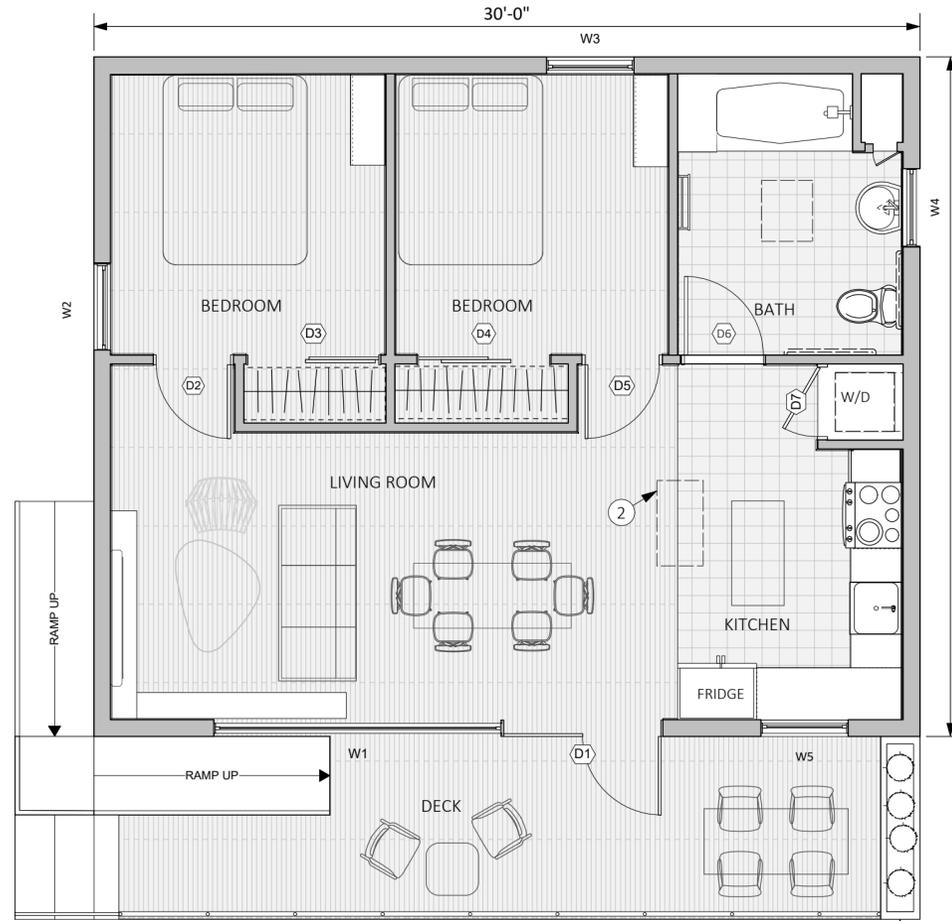
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COVER  
**A0**



**REFLECTED CEILING PLAN**  
NOT TO SCALE



**FLOOR PLAN**  
NOT TO SCALE

**ZONING INFORMATION**

**LOT INFORMATION**  
 ADDRESS: 331 SE 64TH STREET  
 LOT & BLOCK: 069-72-3051  
 LOT AREA: 5500 SF  
 ZONE: R2

**ALLOWABLE ADU SIZE:** 250SF TO 800 SF  
**PROPOSED ADU:** 800 SF  
 PROPOSED ADU IS THE MAXIMUM ALLOWED.

**MAXIMUM LOT COVERAGE:** 40%  
**MAIN HOUSE:** 875 SF  
**PROPOSED COVERAGE (INCLUDE ADU) = 1676 SF (30%)**  
 TOTAL BUILDINGS ARE LESS THAN MAX. LOT COVERAGE.

**REQUIRED SETBACK**  
 SIDE YARD: 5FT  
 REAR: 5FT  
 GARAGE SITES WITHIN REQUIRED SETBACKS

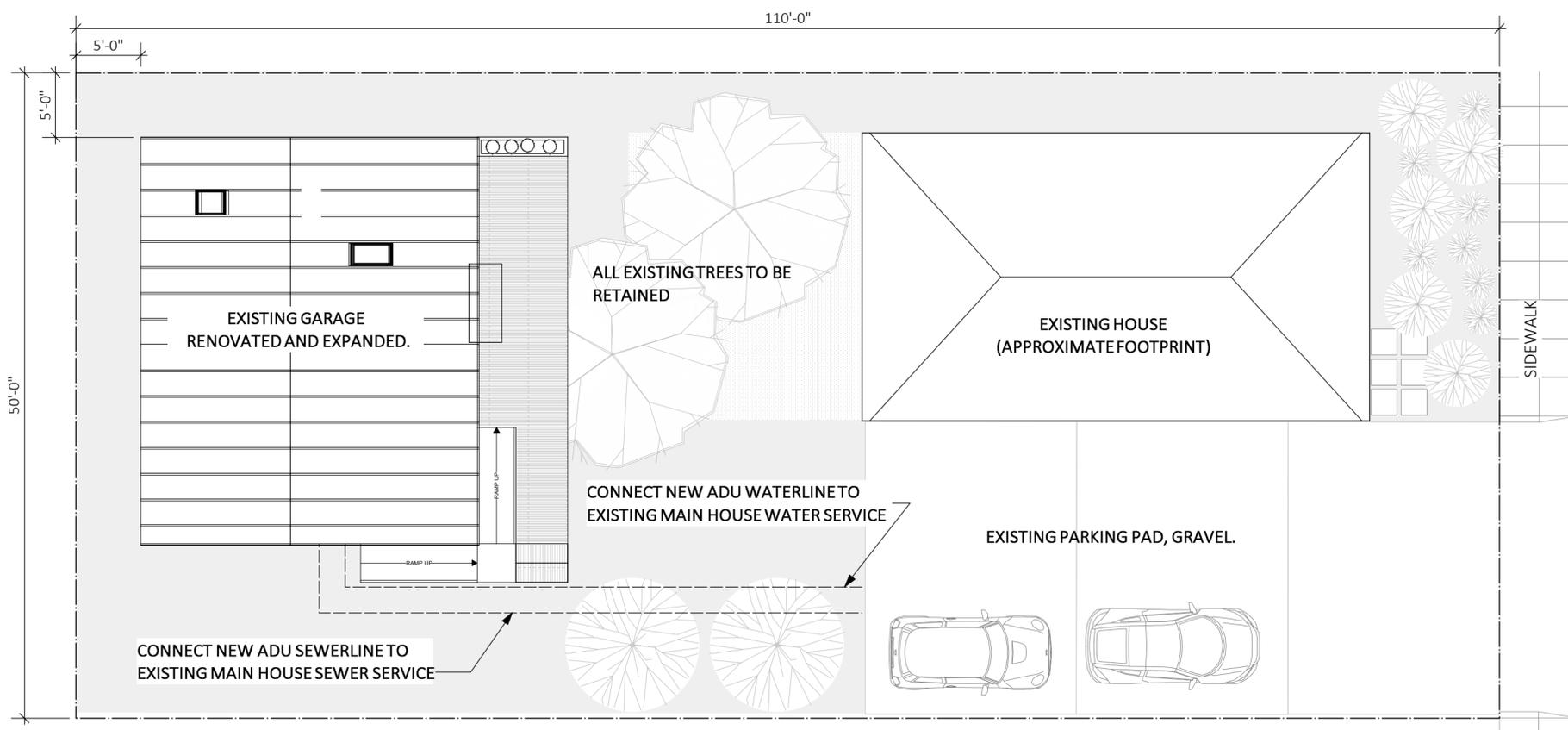
**NOTES**

REFER TO SHEETS A1, A2 AND A3

- ① PLANTER
- ② SKYLIGHT, ABOVE SHOWN DASHED [QTY. 2]
- ③ PENDANT LIGHT [QTY. 2]
- ④ DOWNLIGHT [QTY. 4]
- ⑤ SHOWER LIGHT
- ⑥ WALL SCONCE
- ⑦ MIRROR LIGHT
- ⑧ EXTERIOR LIGHT [QTY. 4]
- ⑨ WALL OUTLETS [ ]
- ⑩ WALL SWITCHES [ ]
- ⑪ FRIDGE
- ⑫ KITCHEN SINK
- ⑬ KITCHEN FAUCET
- ⑭ 4-BURNER STOVE WITH OVEN
- ⑮ HOOD
- ⑯ WALL-MOUNTED TANKLESS WATER HEATER.
- ⑰ DUAL-FLUSH TOILET
- ⑱ BATHROOM SINK
- ⑲ BATHROOM FAUCET
- ⑳ SHOWER OR BATHTUB
- ㉑ SOLAR PANELS
- ㉒ WASHER / DRYER

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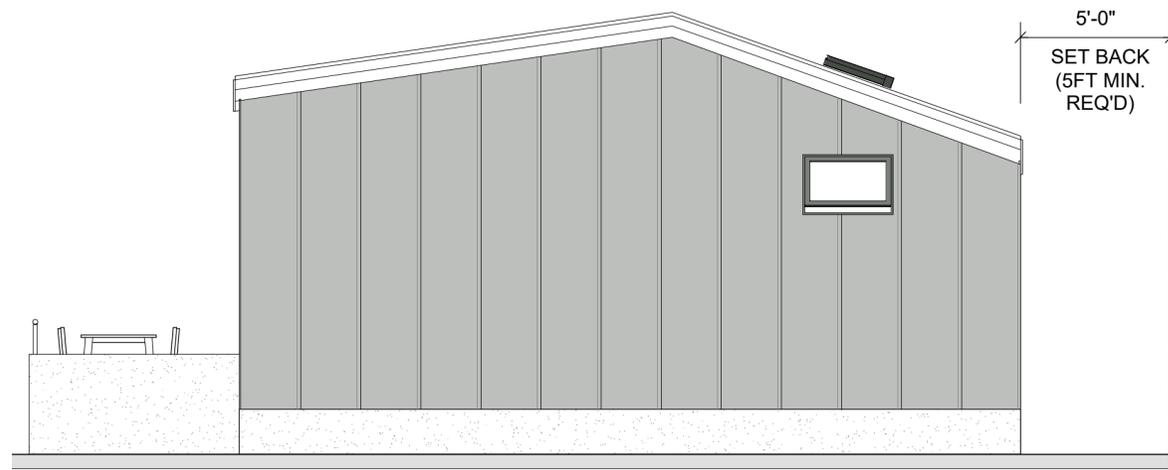
**1 SITE PLAN**  
Scale: 1/8" = 1'-0"

**NOTES**  
REFER TO SHEETS A1, A2 AND A3

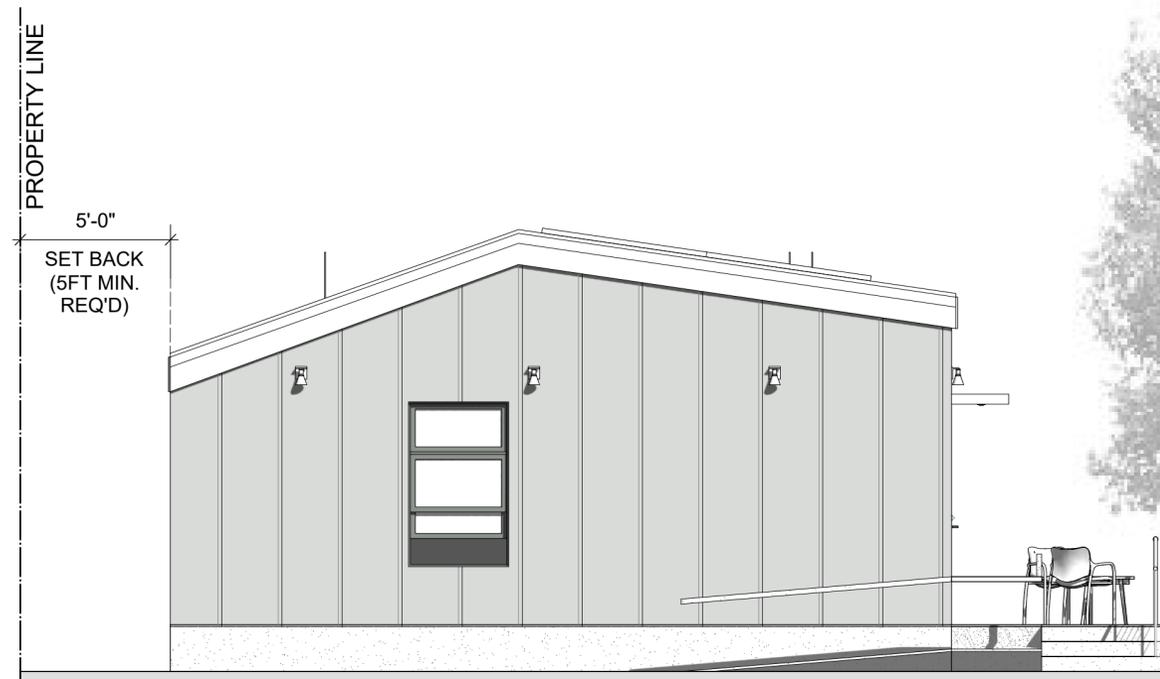
- ① PLANTER
- ② SKYLIGHT, ABOVE SHOWN DASHED [QTY. 2]
- ③ PENDANT LIGHT [QTY. 2]
- ④ DOWNLIGHT [QTY. 4]
- ⑤ SHOWER LIGHT
- ⑥ WALL SCNCE
- ⑦ MIRROR LIGHT
- ⑧ EXTERIOR LIGHT [QTY. 4]
- ⑨ WALL OUTLETS [ ]
- ⑩ WALL SWITCHES [ -69]
- ⑪ FRIDGE
- ⑫ KITCHEN SINK
- ⑬ KITCHEN FAUCET
- ⑭ 4-BURNER STOVE WITH OVEN
- ⑮ HOOD
- ⑯ WALL-MOUNTED TANKLESS WATER HEATER.
- ⑰ DUAL-FLUSH TOILET
- ⑱ BATHROOM SINK
- ⑲ BATHROOM FAUCET
- ⑳ SHOWER OR BATHTUB
- ㉑ SOLAR PANELS
- ㉒ WASHER / DRYER

Door Schedule							
Mark	Nominal Size			Door Operation	L Sidelt Wid	R Sidelt Wid	
	Width	Height	Thickness				
7	7	27'4"	9 5/8"		7	7'0"	7'0"
D 1	1	6'0"	7'5 1/4"	1 3/8" Complex S	N/A	N/A	
D 2	2	2'10"	8'0"	1 3/8" Swing Sim	N/A	N/A	
D 3	3	5'0"	7'0"	1 3/8" Slider	N/A	N/A	
D 4	4	5'0"	7'0"	1 3/8" Slider	N/A	N/A	
D 5	5	2'10"	8'0"	1 3/8" Swing Sim	N/A	N/A	
D 6	6	3'0"	8'0"	1 3/8" Swing Sim	N/A	N/A	
D 7	7	2'8"	8'0"	1 3/8" Swing Sim	N/A	N/A	

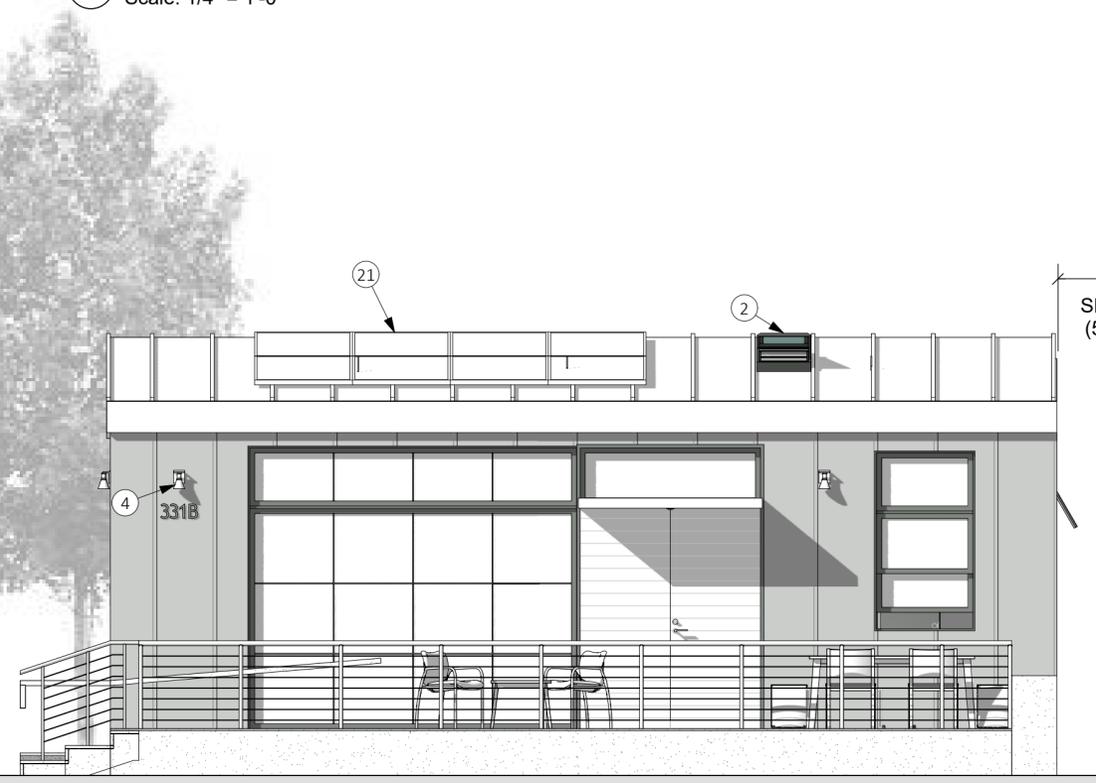
Window Schedule						
Mark	Nominal Size			Sash Operation	Transom Sash	Sill
	Width	Height	O.A.			
5	5	24'0"	28'6"	5	Y	5
W 1	1	11'0"	9'6"	Fixed Glass	Y	Timber
W 2	2	3'4"	5'6"	Double Hung	Y	Timber
W 3	3	3'4"	5'6"	Double Hung	Y	Timber
W 4	4	3'0"	2'0"	Awning	-	Timber
W 5	5	3'4"	6'0"	Double Hung	Y	Timber



④ SIDE ELEVATION  
Scale: 1/4" = 1'-0"



② SIDE ELEVATION (WITH RAMP)  
Scale: 1/4" = 1'-0"



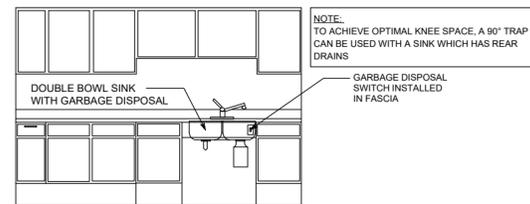
① FRONT ELEVATION  
Scale: 1/4" = 1'-0"

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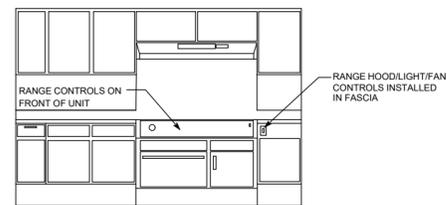
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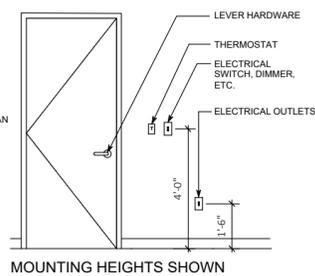


ALTERNATIVE LOCATION OF GARBAGE DISPOSAL CONTROLS AT KITCHEN SINK

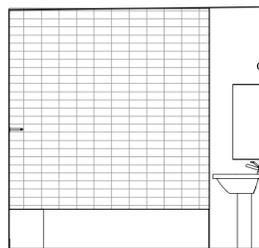


ALTERNATIVE LOCATION OF KITCHEN RANGE AND RANGE HOOD CONTROLS

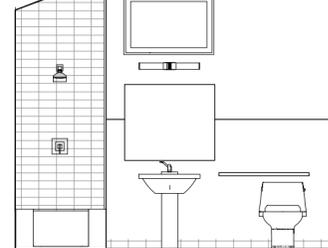
**ADDITIONAL DETAILS**



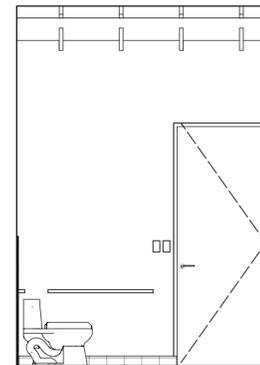
MOUNTING HEIGHTS SHOWN



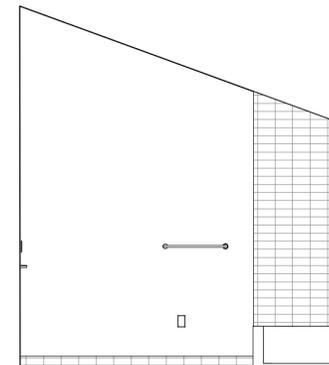
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8



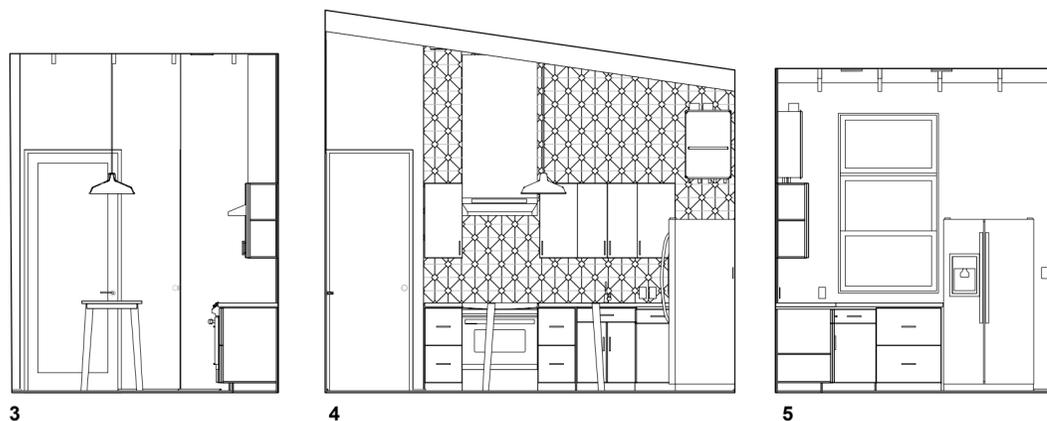
9



10

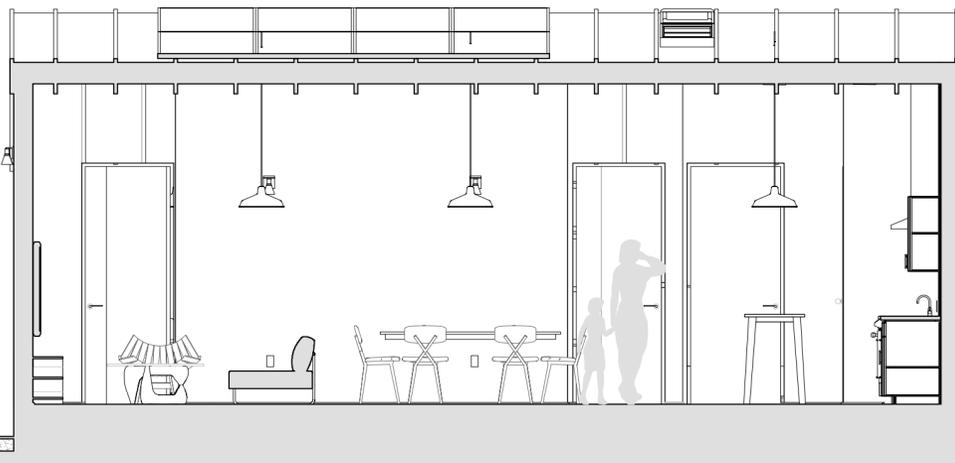
**INTERIOR ELEVATION - BATHROOM**

Scale: 1/4" = 1'-0"



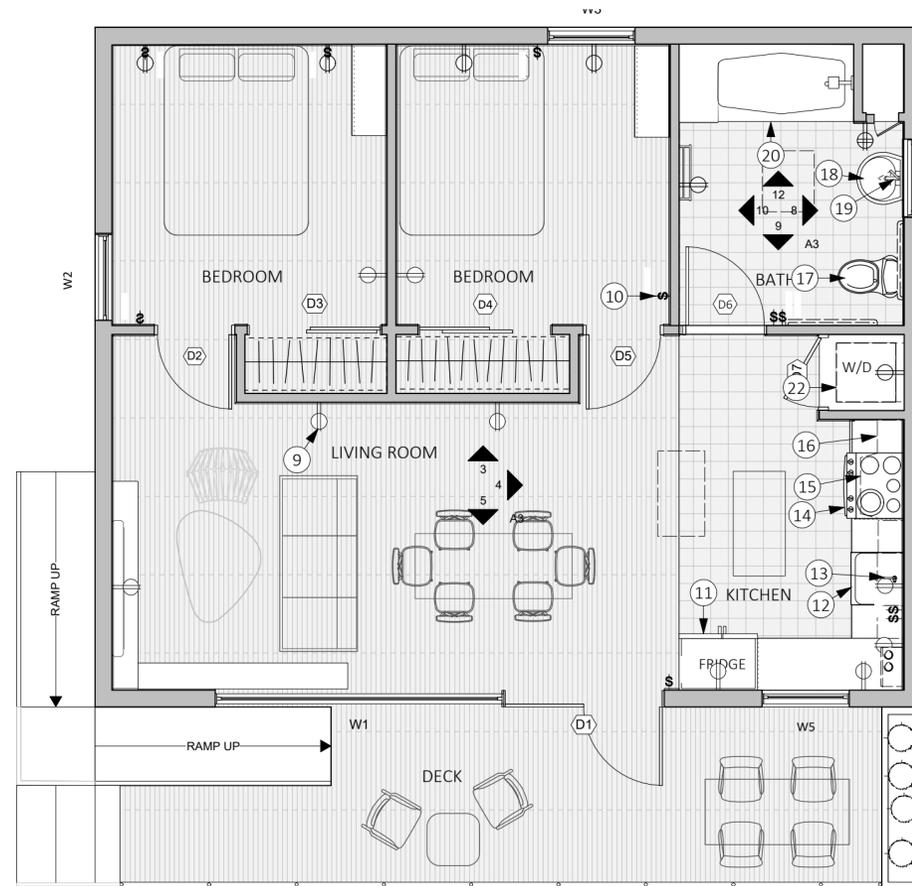
**INTERIOR ELEVATION - LIVING AREA / KITCHEN**

Scale: 1/4" = 1'-0"



**SECTION THROUGH LIVING ROOM AND KITCHEN**

Scale: 1/4" = 1'-0"



**1 OUTLET AND LIGHT SWITCH LOCATIONS**  
NOT TO SCALE

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