

SECTION 5: MEASURABLE STANDARDS AND RELATED GUIDELINES FOR ADDITIONS AND NEW CONSTRUCTION

The City of Houston's historic preservation ordinance requires changes to existing buildings, including additions and all new construction within the historic districts, to be compatible with contributing buildings in the context area in terms of massing, form, scale, and proportions. Property owners, builders, and architects have asked for more specific guidance to help them plan projects that are likely to be approved by the HAHC. In response to those requests, this document includes measurable (quantitative) standards which do not require interpretation; the standards are either met or they are not.

These standards were developed using the City of Houston's Geographic Information Systems data about contributing properties in the three Houston Heights Historic Districts, as well as input and feedback from the community, gathered over more than 24 months through numerous public meetings, a historic district-specific Compatible Design Survey, and comments from individuals.

This section includes measurable standards for additions and new (infill) construction. Additional qualitative design guidelines for additions are provided in Section 6. Additional qualitative guidelines for new construction are provided in Section 7.

IN THIS SECTION

- Guidelines Related to Measurable Standards.....5-3**
 - Lot Size and Orientation 5-3
 - Building Orientation..... 5-3
- Measurable Standards.....5-8**
 - Maximum Lot Coverage 5-9
 - Front Setbacks (for New Construction) 5-10
 - Side Setbacks (for Additions and New Construction) 5-11
 - Rear Setbacks 5-12
 - Building Size and Compatibility 5-4
 - Mass, Form, and Scale 5-7
 - Maximum Floor Area Ratio 5-12
 - Side Wall Length and Insets..... 5-14
 - Eave Height..... 5-15
 - Building Wall (Plate) Height 5-16
 - Porch Eave Height 5-17
 - Front Wall Width and Insets 5-18
 - Front Porch Width and Depth 5-19
 - Detached Garage Ridge Height 5-20



A streetscape with front porches and yards encourages neighborly interaction.



A streetscape of townhouses

INTRODUCTION

The collection of buildings along a blockface creates a streetscape. The size and shape of those buildings, along with their distance from the street and orientation, together affect the overall look and feel of the neighborhood.

The way that buildings relate to the street and each other affects the way that people relate to them, as well. For example, consider a block full of tall townhouses with front-loading garages and little or no lawn and landscaping between the buildings and the street. Contrast that with a neighborhood where one- and two-story houses are all set back from the street far enough to create a sizeable front yard, with room for plenty of flowers and shrubs, but close enough to the sidewalk so that neighbors sitting on their porches can converse with passersby.

To maintain a consistent streetscape, buildings must be appropriately sized and sited on their lots. In order to determine what is appropriate for the Houston Heights Historic Districts, the City has evaluated the historic buildings within the districts to determine typical lot and building sizes, massing, orientation, and setback from the street.

GUIDELINES RELATED TO MEASURABLE STANDARDS

The following guidelines are intended to supplement the measurable standards that follow.

Lot Size and Orientation

Although lot sizes vary, most lots in the Houston Heights Historic Districts are 50 feet wide by 132 feet deep, or 6,600 square feet.

Building Orientation

The way in which buildings address the street is an important characteristic of the streetscape. Most buildings in the Houston Heights Historic Districts face the street, with very few exceptions. In most cases, front doors also face the street, although some houses have inset porches with side-facing doors that open onto the front-facing porch. Some commercial buildings, which are located on corner lots, have cutaway doors at the corner of the building.

For Existing Buildings with Additions

5.1 Maintain front-facing primary facades, porches, and entry doors.

- Do not remove a front porch.
- Maintain primary entry doors that were originally side-facing and open to the porch.
- Preserve corner doors on commercial buildings where these exist.

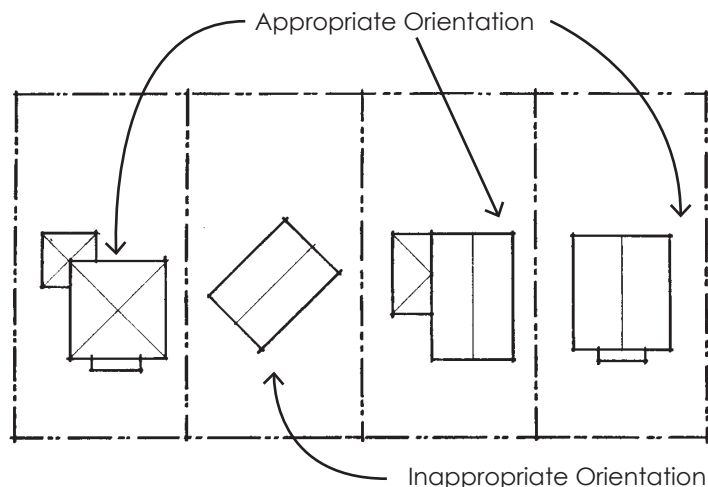
For New Construction

5.2 Design the building with a primary entry door that faces the street, rather than a side property line.

- Site a building with its front wall parallel to the street.
- A residential or commercial building on a corner lot should have a clearly identifiable primary entrance.



Orient the face of a building to the street.



A new building should be oriented to be compatible with contributing buildings in the context area.

Building Size and Compatibility

The Houston Heights Historic Districts contain both contributing and noncontributing structures. Contributing buildings, which are used to determine compatibility for alterations to existing buildings, as well as additions and new construction, are mostly one- and two-story single-family residential buildings. The districts also contains some contributing commercial buildings, which are also mostly one or two stories in height. Most of these historic commercial buildings are located in Houston Heights Historic District East.

The districts also contain noncontributing buildings of various sizes, some of which are quite large. These include houses, multi-family apartment complexes or condominiums, and commercial buildings. Many of these were constructed before protections for the historic districts were established through the historic preservation ordinance.

Some buildings have been expanded through additions. The presence of an addition does not necessarily affect a building's contributing status, but an addition that greatly encroaches on a historic building or that has resulted in the removal of substantial historic material may cause a building to be reclassified as noncontributing at some point in the future, if the district inventory is updated. Such a reclassification may result in the loss of eligibility for the Historic Site Tax Exemption program.

Because the City's historic preservation ordinance has evolved over time, some additions to contributing buildings which were previously approved by the HAHC might not be approved today. Each COA application is considered based on its own merits, the unique conditions of the property in question, and the ordinance criteria and design guidelines in place at the time of application.

For Additions to Contributing Buildings

Because contributing structures are the most important buildings in the historic district, they must remain prominent. That means that an addition should be visually subordinate to the original building.

5.1 Keep additions visually subordinate to the historic building.

- Locate the addition where it will not be highly visible from the public right-of-way.

5.2 Manage the addition's size, scale, and proportions (relationships between building elements).

- A rear addition may be one story or two stories tall. Plate heights should be similar to those of the existing building.
- One-story side additions may be added to a one-story or two-story building. Two-story side additions may be added only to two-story buildings.
- The finished-floor height of an addition should match the finished-floor height of the existing building.
- Eave heights for an addition should be the same or lower than the existing building when the addition is attached directly to the existing building. When the existing building and addition are separated by a connector, the eave height may be 12–18 inches taller, as long as the addition remains visually subordinate.
- Plate heights of an addition should match those of the existing building; in general, second-floor plate height should be less than first-floor plate height.

For Additions to Noncontributing Buildings

Additions to noncontributing structures are required to be compatible with the scale and proportion of the contributing buildings in the context area. This applies to the building overall, as well as to individual building elements.

5.3 Design an appropriately sized addition.

- Design the addition with overall height, porch eave height, main roof eave height, and ceiling (plate) heights that are consistent with the existing noncontributing structure or with contributing buildings in the context area.

For New Construction

Because contributing structures are the most important buildings in the historic district, they must remain prominent. New construction must be compatible with the scale and proportion of contributing buildings in the context area. This applies to the building overall, as well as to individual building elements. New buildings should not overshadow contributing structures within the context area.

5.4 Design a new building to be compatible with the scale and proportion of contributing buildings in the context area.

- A new building may be one story or two stories in height.
- First-floor finished-floor height may not exceed 36 inches above natural grade unless the finished-floor height of contributing buildings in the context area is greater measured at the front of the structure. (Please provide supporting data.)
- Wall cladding materials, such as siding or brick, may be traditionally-sized or larger.
- Design the building with porch eave height, main roof eave height, and ceiling (plate) heights that are consistent with contributing buildings in the context area.
- Use header heights for doors and windows that are similar to contributing buildings in the context area.

NOTE: Finished-floor height standards may change if new data becomes available. For example, if FEMA flood hazard maps, when updated, indicate that buildings in these historic districts are at risk of flooding, the maximum finished-floor height will be revisited at that time using applicable technical data. Please contact Historic Preservation Office staff with any questions.

To apply for approval of a finished-floor height above 36 inches, please see the instructions on page 5-8.

Mass, Form, and Scale

Massing, or architectural form, is the overall shape and volume of a building. The proportion of *solid* surfaces (walls, roof) to *voids* (windows, doors, porches) also affects the perception of form and volume. A building's size and shape have as much effect on its overall appearance as do stylistic details and decorative accents. In architectural terms, size and shape are more precisely described by the terms mass, form, and scale. These three characteristics are among the most important character-defining features of a historic building. (For more information about mass, form, and scale, see Section 2.)

Most contributing houses in the Houston Heights Historic Districts are relatively small, with simple rectangular shapes. Subordinate building elements are mostly rectangular and, generally, project from the main house in the form of front porches and small additions. Where additions increase both the size and complexity of contributing buildings, they are located far enough from the street to be visually subordinate to the traditional forms of the original houses.

For Additions

5.5 Preserve the original walls of the building.

Walls enclose and make visible the forms that make up a building. In architecture terms, a wall may be a single plane (that is, a flat continuous surface) or it may be articulated, with areas that are set in or project out.

5.6 Preserve the original corners of the building, wherever those occur.

5.7 Preserve the shape of the roof.

5.8 Preserve any historic porches.

5.9 Maintain the historic heights, widths, and proportions of building elements and architectural details (including doors and windows).

For Additions and New Construction

5.10 Avoid complex building forms or roof shapes, such as those typically found on 21st century houses.

5.11 Use traditional proportions of solid walls to voids (windows, doors, and porches).

MEASURABLE STANDARDS

The following pages contain the quantitative (numerical) standards for the Houston Heights Historic Districts. These standards are to be used for all context areas, unless the applicant can provide adequate documentation that contributing buildings in the proposed project's context area typically exceed these standards.

If an applicant wishes to propose alternative numbers in such a situation, they must provide the following evidence:

- A list of all contributing buildings in the context area, by street address
- For each building, the applicable measurement (to the nearest inch)
- A statement explaining how the measurements were collected; i.e., using a physical measuring tool or a digital approach
- The proposed alternative numerical standard

The Planning staff in the Historic Preservation Office will verify the data presented by the applicant and provide HAHC with the applicant's data and, if necessary, any corrections to that data.

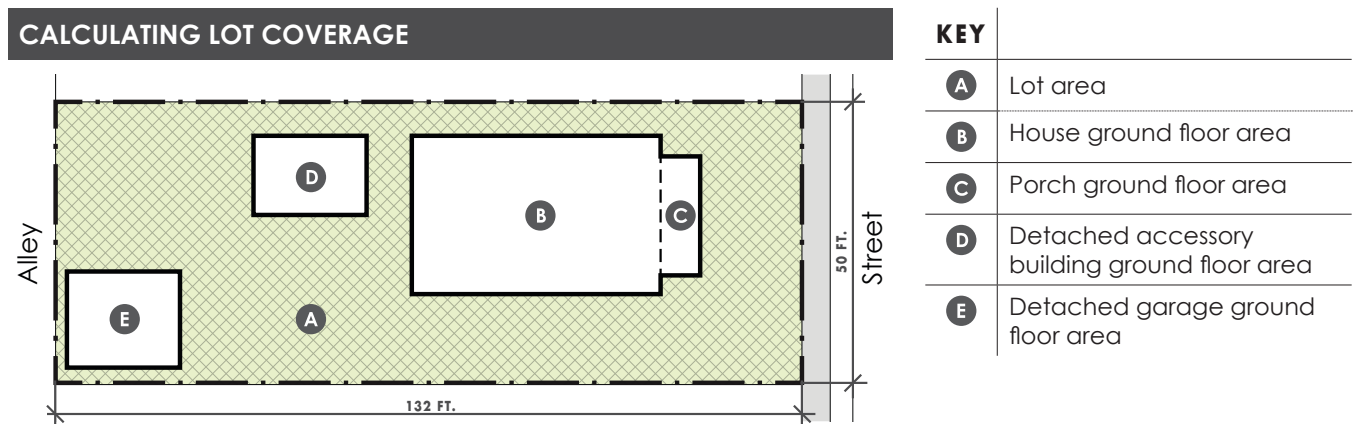
HAHC will consider the data presented and determine whether or not to use the applicant's proposed numerical standards when considering the application.

- HAHC may consider mean and/or median values, but is not obligated to do so.
- The City's Historic Preservation Ordinance defines *typical* as "being within commonly occurring values in a group. Extreme values within a group are not necessarily typical of that group." HAHC may choose to disregard outliers, such as a single, especially large building in a context area.

To request approval to increase finished-floor height based on increased risk of flooding, please provide documentation, such as photographs showing previous flooding of your property, proof of prior flooding into or close to existing structures, etc., as well as current finished-floor height measurements of all structures on the property.

Maximum Lot Coverage

Lot coverage is a measure of the percentage of a lot's surface that is covered by buildings, expressed as a decimal (such as .44). Lot coverage is calculated by dividing the total area of included building footprints by the total area of the lot, where building footprints are measured at the outside of exterior walls.



LOT SIZE	MAXIMUM LOT COVERAGE
<4000	.44 (44%)
4000-4999	.44 (44%)
5000-5999	.42 (42%)
6000-6999	.40 (40%)
7000-7999	.38 (38%)
8000+	.38 (38%)

To calculate the maximum square footage (sf) allowed for your lot, multiply the area of the lot by the percentage shown in the table.

For example:

- 6,600 sf lot x 0.40 = 2,640 sf max. coverage
- 4,560 sf lot x 0.44 = 2,006 sf max. coverage
- 9,000 sf lot x 0.38 = 3,420 sf max. coverage

Include these in lot coverage calculations:

- Primary structures (such as houses or other main buildings)
- Attached garages and storage space
- Detached garages (area over 528 square feet)*
- Sunrooms or enclosed porches with walls and windows

Exclude these from lot coverage calculations:

- Detached garages (up to 528 square feet)*
- Roof overhangs
- Open or screened-in porches; uncovered decks or patios
- Detached accessory structures other than garages or garage apartments
- Carports
- Pavement and driveways
- One-story garages attached to one-story structures (up to 264 square feet)

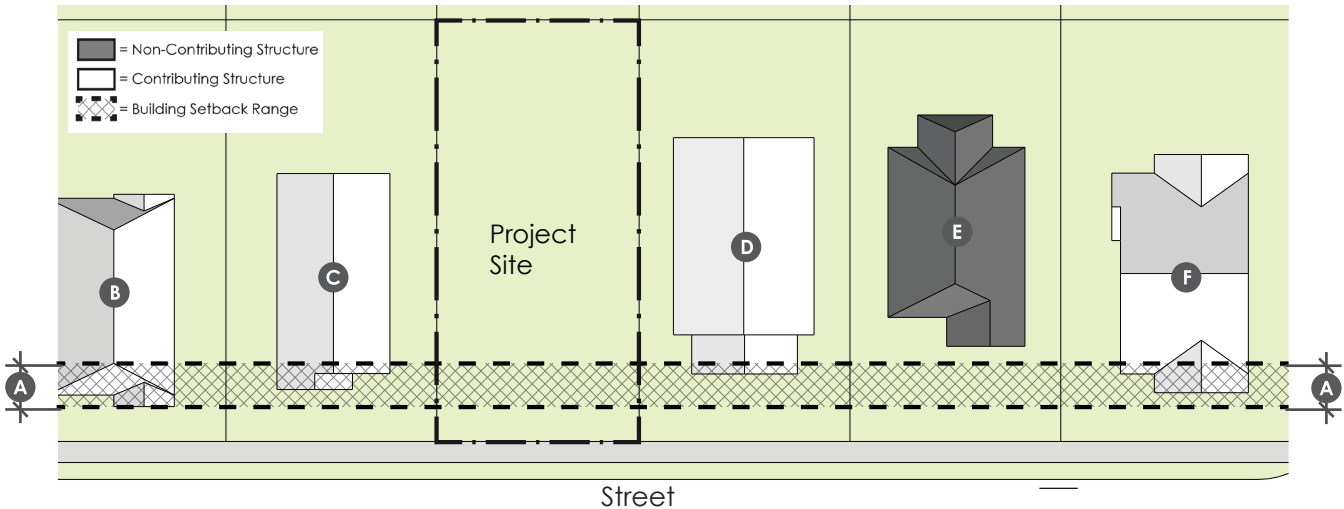
* When calculating lot coverage, you may exclude that portion of the footprint of a detached garage which measures 528 square feet or less. For example, if the footprint area of a detached garage is 316 square feet, you may exclude the entire 316 square feet from the lot coverage calculation. If the footprint area of the detached garage measures 600 square feet, you may exclude 528 square feet, leaving 82 square feet to be included.

Front Setbacks (for New Construction)

A setback is the distance from the property line to the front wall, porch, or other exterior feature of a building. The amount of setback at the front of a residential building determines the size of the front yard and affects how the building relates to the street. As a practice, when introducing a two-story house on a predominantly one-story home blockface, HAHC recommends that the two-story house be set back 1–3 feet from the prevailing setback line. If deed restrictions or minimum building line requirements also apply to a property, the most restrictive standard shall be used.

Historic Preservation Office staff may already have this data for your block; please check with them first.

FRONT SETBACK RANGE



KEY	MEASUREMENT	APPLICATION
A	RANGE	Locate the front of the primary building within the range of front setbacks for contributing buildings within the context area.

When all contributing buildings in the context area have approximately the same front setback, make new construction consistent with that.

When front setbacks vary for contributing buildings within the context area, place new construction within the range of front setbacks, as shown above. If front setbacks are varied within the context area, matching the immediately adjacent properties will yield the most compatible result.

Rear Setbacks

The City of Houston requires a minimum setback of three feet from the rear property line for all properties, except under the following circumstances:

- A front-facing garage which is located with its rear wall at the alley may have a zero-foot setback.
- An alley-loading garage generally must be located to establish a minimum of 20 feet of clearance from an opposing alley-loading garage door, the rear wall of a front-facing garage, or a fence; a 24-foot clearance is preferred.

Side Setbacks (for Additions and New Construction)

New structures and additions must be located at a minimum distance from the front and side property lines. Those distances, also known as setbacks, are measured from the property line to the closest wall, porch, or exterior feature.

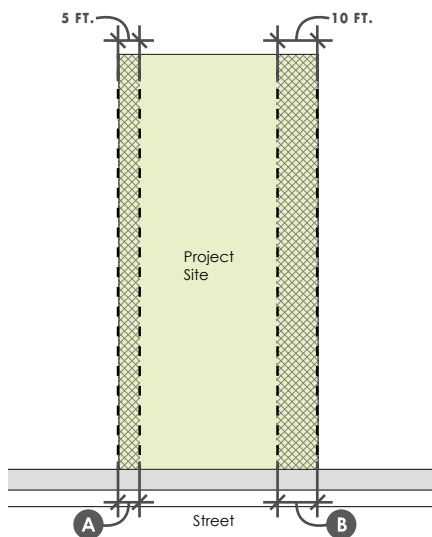
The City of Houston requires a minimum three-foot side setback for all properties, unless an easement or other agreement allows a smaller distance. On a corner lot, the building must be at least 10 feet from a “local” street on street-facing sides. A larger setback may be required for other types of streets or may be different in case of maintenance easements or if you have a neighbor’s written consent. For example, Heights Boulevard is considered a major thoroughfare and requires a minimum 25-foot setback on street-facing sides.

Within the Houston Heights Historic Districts, the side setback is increased to a minimum of five feet on each side and a cumulative total of 10 feet for one-story houses and 15 feet for two-story houses. This standard was established to reinforce traditional development patterns, and in response to numerous complaints from property owners about their neighbors building tall walls at the three-foot property line, resulting in a loss of privacy and sunlight. In combination with eave height limits, these side setback requirements are intended to move the building mass toward the center of the lot and away from the property lines.

Please note the following important points:

- If the existing house is less than five feet from the property line:
 - A one-story addition can match the side setback of the existing house or a three-foot side setback, whichever is greater.
 - A two-story addition must have a minimum five-foot setback.
- For the purpose of determining maximum allowable eave height, the side setback for the entire building is measured at the portion of the building that is closest to the property line.
- Buildings on corner lots should be consistent with the front setbacks of existing contributing buildings on both front and side streets.
- Minimum building lines on some blocks may also apply, if present.
- One-story garages with the front wall set no more than 33 feet from the back of the lot may have a 3-foot setback; two-story garages with front wall set no more than 33 feet from the back of the lot may have a 5-foot setback

SIDE SETBACKS



Note: This diagram shows just one example of a side setback configuration.

KEY	MEASUREMENT	APPLICATION
A	3 FT.	Minimum distance between side wall and the property line for lots less than 35 feet wide
	5 FT.	Minimum distance between the side wall and the property line
B	REMAINING	Difference between minimum side setback of 5 feet and minimum cumulative side setback
C	6 FT.	Minimum cumulative side setback for lots less than 35 feet wide
	10 FT.	Minimum cumulative side setback for a one-story house
	15 FT.	Minimum cumulative side setback for a two-story house

Maximum Floor Area Ratio

Floor Area Ratio (FAR) is the ratio of eligible building area to lot size. FAR is calculated by dividing the total square footage of conditioned and unconditioned space in eligible buildings by the square footage of the lot, with the result expressed as a two-digit decimal (such as 0.44). FAR applies to both new infill construction and additions to existing buildings (contributing and noncontributing).

Include these in FAR calculations:

- Primary structures (such as houses or other main buildings)
- Sunrooms or enclosed porches with walls and windows
- Attached garages and storage space
- Detached garages (area over 528 square feet)*
- Detached garage apartments (area over 400 square feet)**
- Attics with dormers in new additions, new construction, and noncontributing houses

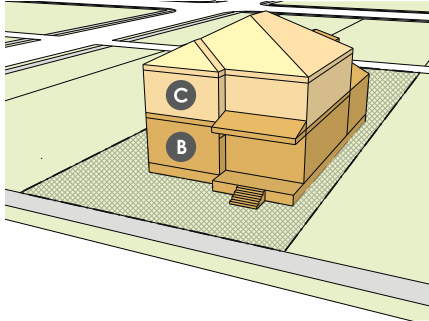
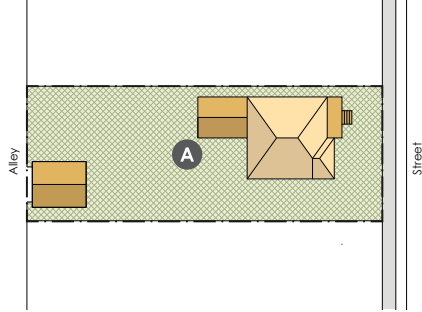
Exclude these from FAR calculations:

- Detached garages (area up to 528 square feet)*
- Detached garage apartments (area up to 528 square feet)**
- One-story garages attached to one-story structures (up to 264 square feet)
- All attics, with or without dormers, provided that the roof pitch on the second-story is within one degree of typical pitches in the context area
- Roof overhangs
- Open or screened-in porches; uncovered decks or patios
- Detached accessory structures, other than garages and garage apartments
- Carports
- Pavement and driveways

* When calculating FAR, you may exclude that portion of a detached garage which measures 528 square feet or less. For example, if the area of detached garage is 316 square feet, you may exclude the entire 316 square feet from the FAR calculation. If the area of the detached garage measures 600 square feet, you may exclude 528 square feet, leaving 72 square feet to be included.

** Additionally, you may exclude that portion of a detached garage apartment which measures 528 square feet or less.

CALCULATING FLOOR AREA RATIO



A	Lot Area
B	1st Floor Area
C	2nd Floor Area

LOT SIZE	MAXIMUM FAR
<4000	.48
4000-4999	.48
5000-5999	.46
6000-6999	.44
7000-7999	.42
8000+	.40

1. To calculate the maximum square footage allowed for your lot, multiply the area of the lot by the FAR number shown in the table (left).

For example:

$$6,600 \text{ sf lot} \times 0.44 = 2,904 \text{ sf}$$

2. Measure the square footage of existing buildings.

For example:

$$1\text{st Floor Area} = 1,307 \text{ sf}$$

$$2\text{nd Floor Area} = 1,280 \text{ sf}$$

$$\text{Detached Garage} = 480 \text{ sf}$$

3. Subtract the exemption for a detached garage or garage apartment, if applicable:

For example:

$$\text{Detached Garage} = (528 \text{ sf})$$

4. Calculate the total building area for the property.

For example:

$$1\text{st Floor Area} = 1,307 \text{ sf}$$

$$+ 2\text{nd Floor Area} = 1,280 \text{ sf}$$

$$+ \text{Detached Garage} = 600 \text{ sf}$$

$$- \text{Garage Exemption} = (528 \text{ sf})$$

$$\text{Total Building Area} = 2,659 \text{ sf}$$

5. Compare maximum allowed square footage vs. net square footage of existing buildings.

For example:

$$\text{Max. square footage} = 2,904 \text{ sf}$$

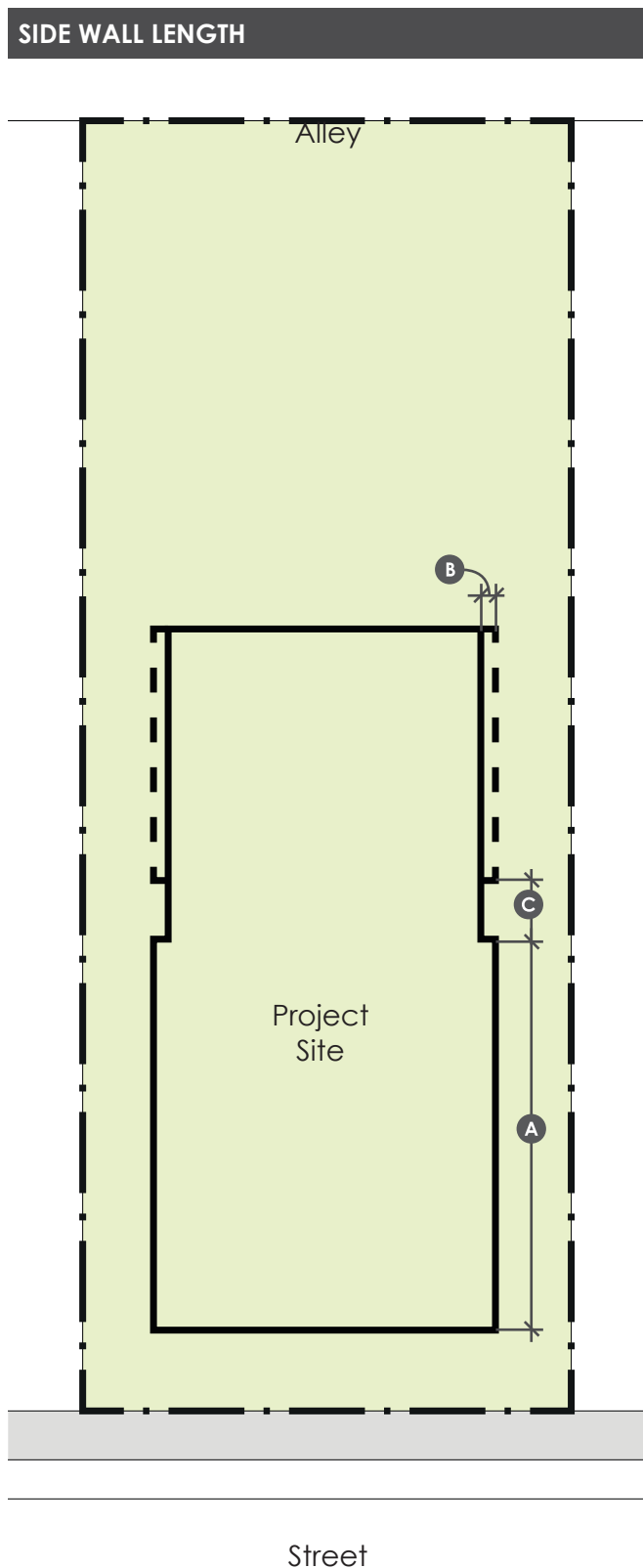
$$\text{Existing building area} = 2,659 \text{ sf}$$

Existing building area is lower than maximum square footage by 248 sf, so an additional 248 sf could be added to this property.

Note: All attic space is not included in FAR.

Side Wall Length and Insets

Maximum overall wall lengths have been established for front walls and side walls. In addition, these design standards establish how long a wall can be before a portion of a wall must be inset relative to the rest of the wall. These measurements apply to both one-story and two-story buildings.



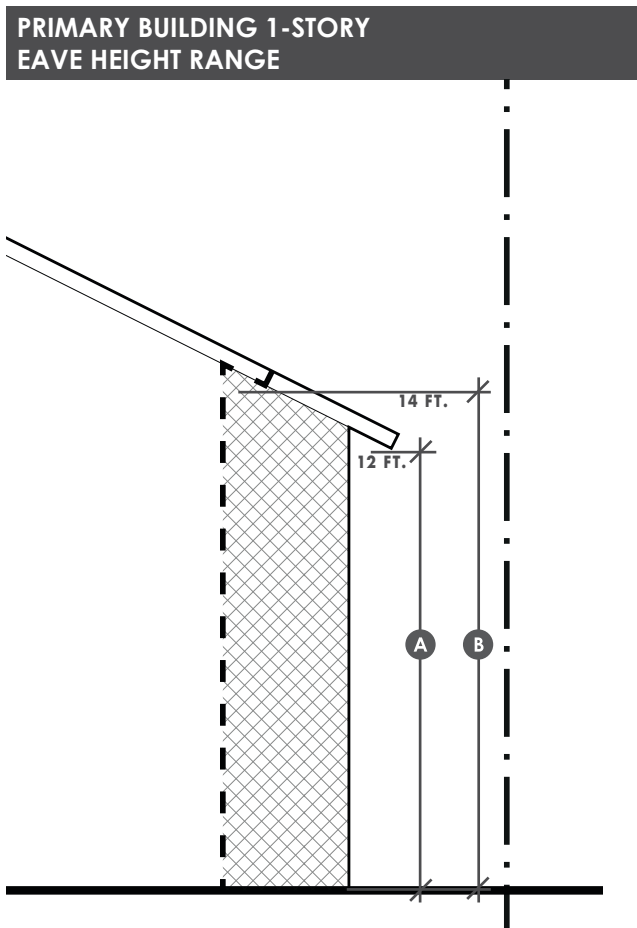
SIDE WALL LENGTH		
KEY	MEASUREMENT	APPLICATION
A	50 FT.	Maximum side wall length without inset (1-story)
	40 FT.	Maximum side wall length without inset (2-story)
B	1 FT.	Minimum depth of inset section of side wall (1-story)
	2 FT.	Minimum depth of inset section of side wall (2-story)
C	6 FT.	Minimum length of inset section of side wall

Eave Height

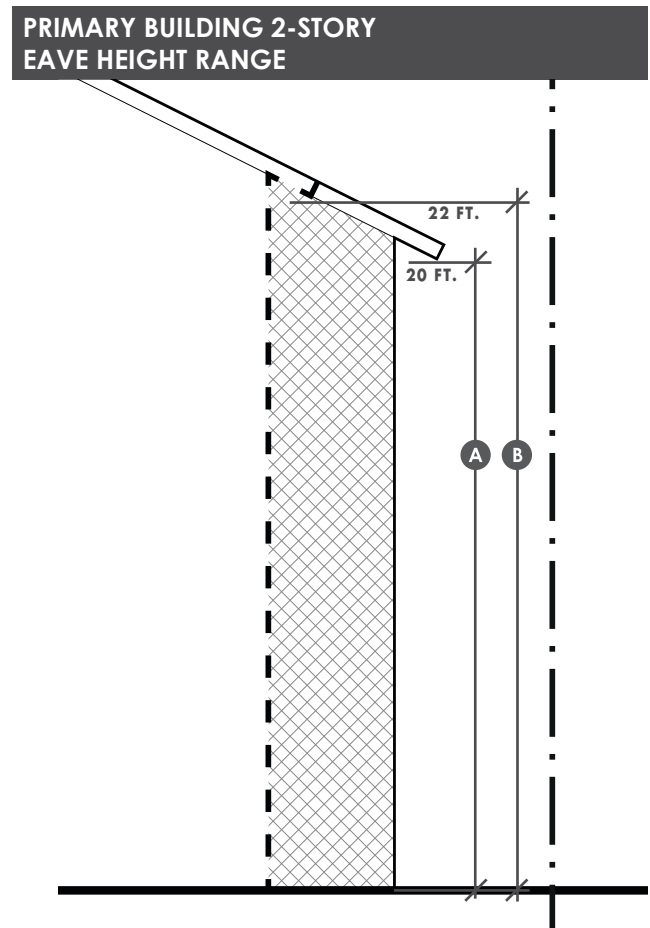
An eave is the overhanging lower edge of a roof. Eave height is the vertical distance from the ground to the eave, as measured from existing natural grade relative to a fixed point in the right-of-way, such as the crown of the street or a manhole cover. Measure to the eave where it is parallel to the ground.

Eaves on an addition should be the same height or lower than the eaves for the same floor of the existing contributing house. If the house and a new detached garage have the same number of stories, the eaves of the garage should be lower than those of the house.

For new construction, the maximum eave height is established at the minimum side setback from the property line; it can increase one foot in height for each one foot increase in side setback up to the maximum allowable eave height. Smaller increases in side setback qualify for the equivalent increase in eave height; for example, an additional seven inches of side setback would result in a maximum of 14'-7" eave height for a one-story roof.



KEY	MEASUREMENT	APPLICATION
A	12 FT.	Maximum 1-story eave height at the 5 FT. minimum side setback
B	14 FT.	Maximum 1-story eave height at 7 FT. or greater side setback



KEY	MEASUREMENT	APPLICATION
A	20 FT.	Maximum 2-story eave height at the 5 FT. minimum side setback
B	22 FT.	Maximum 2-story eave height at 7 FT. or greater side setback

Building Wall (Plate) Height

Plate height is the distance from the subfloor of a building to the top of the framed wall; in other words, it is the height of one “floor” of the building.

Additions

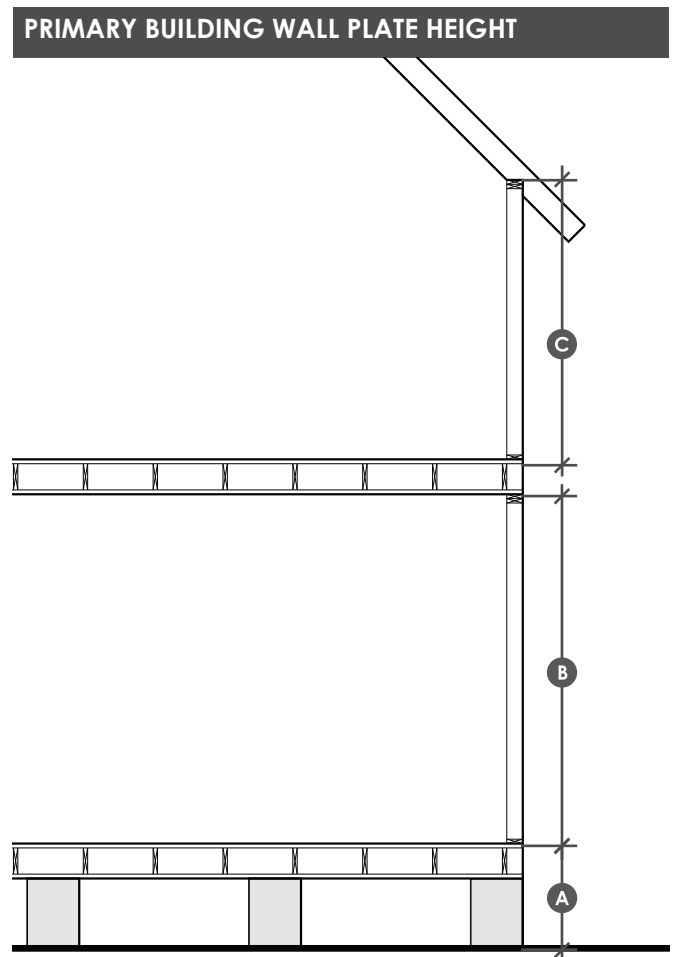
Plate heights for additions should appear to be the same or lower than those of the existing house.

New Construction

There are no plate height limits for one-story new construction.

Two-story new construction must not exceed the plate height limits shown below, unless data from contributing buildings in the context area indicates otherwise.

KEY	MEASUREMENT	APPLICATION
A	36 IN.	Maximum finished floor height (as measured at the front of the structure)
B	10 FT.	Maximum first floor plate height
C	9 FT.	Maximum second floor plate height



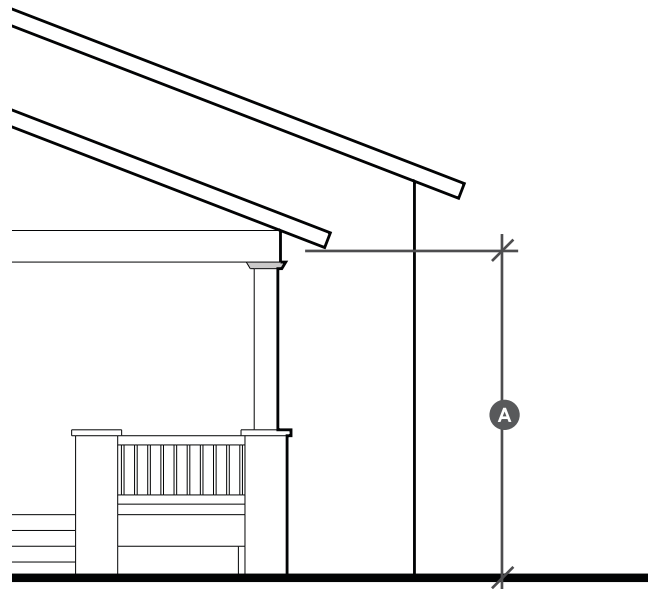
Porch Eave Height

A porch may be included as part of an addition. A porch eave is the overhanging lower edge of the porch roof. Eave height is the vertical distance from the ground to the eave, as measured from existing natural grade relative to a fixed point in the right-of-way, such as the crown of the street or a manhole cover.

Porch roofs should be lower than the main roof of the building, unless the main roof extends over the porch. Ideally, the porch beam will partially obscure the tops of the windows.

KEY	MEASUREMENT	APPLICATION
A	9-11 FT.	Minimum and maximum 1-story porch eave height.

FRONT AND SIDE PORCH EAVE HEIGHT RANGE



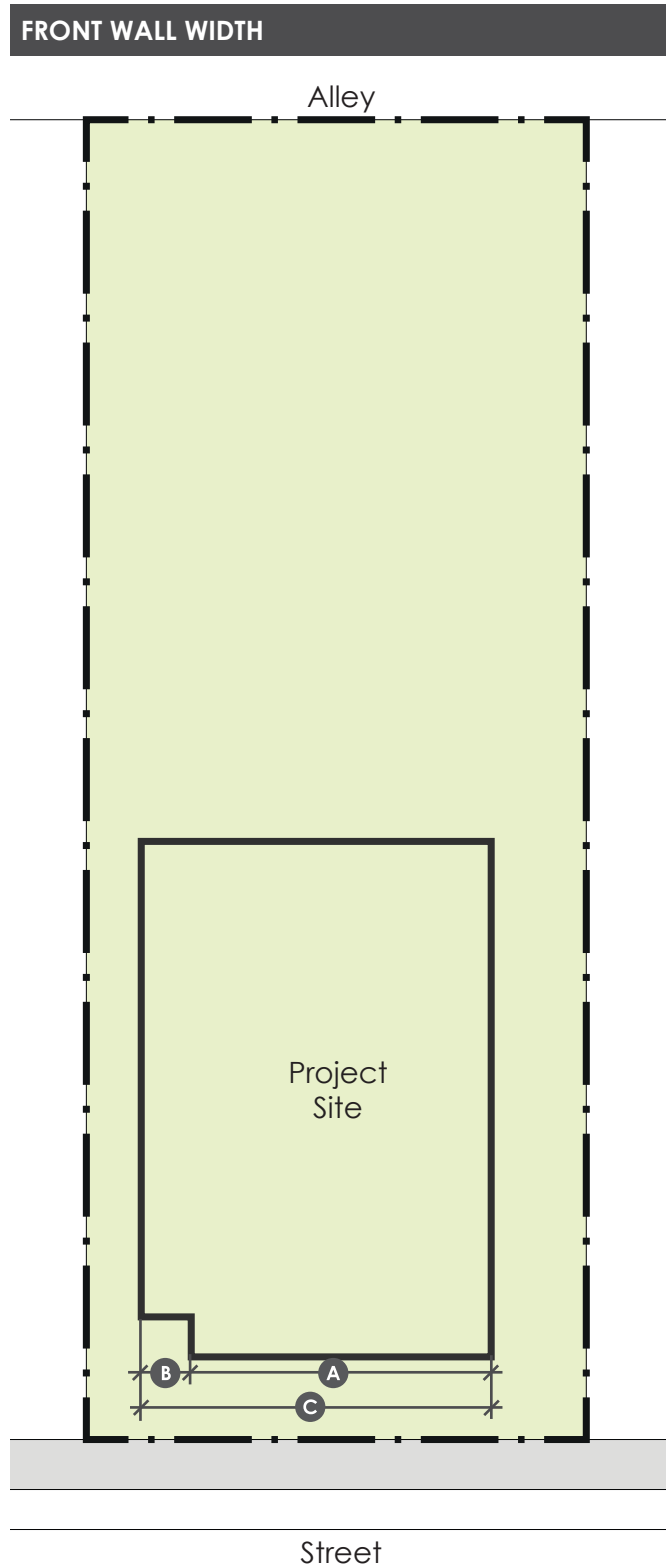
Front Wall Width and Insets

The following maximum overall widths have been established for front walls. In addition, these design standards establish how wide a wall can be before it must be inset, with a portion of a wall set farther in relative to the rest of the wall. These measurements apply to both one-story and two-story buildings.

Overall building widths are dependent on the width of the lot. The maximum width of a one-story building on a 50-foot-wide lot with a 10-foot minimum cumulative side setback is 40 feet. As a lot gets wider, the building can be wider, to a point; for every two feet of additional lot width, the building can be one foot wider. Smaller increases in lot width qualify for the equivalent increase in building width, using a 2:1 ratio; for example, a 60-foot-wide lot could have a maximum 50-foot-wide building.

Note; Use this standard when designing new construction or if you are proposing to widen a noncontributing house. Widening the front wall of a contributing house is not allowed.

KEY	MEASUREMENT	APPLICATION
A	30 FT.	Maximum front wall width before inset
B	4 FT.	Minimum width of inset section of front wall
C	40 FT.	Maximum width of 1-story building for lots \leq 50 ft wide
	35 FT.	Maximum width of 2-story building for lots \leq 50 ft wide
	50 FT.	Maximum width of building for lots $>$ 50 ft wide

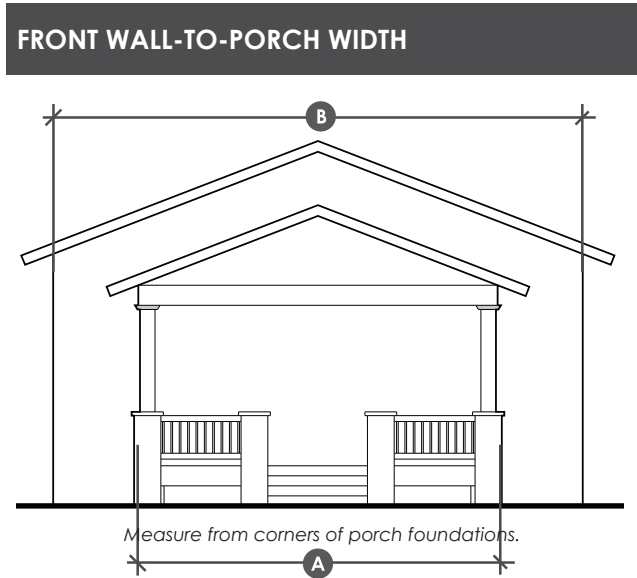


Front Porch Width and Depth

A one-story front porch must be *at least half as wide* as the front of the house. A two-story front porch may be *no more than half as wide* as the front of the house.

If a portion of the front wall is inset, the overall width (including the width of the inset section) is used for this calculation. The width of a porch is measured between the corners of the porch foundation at the front of the porch.

A front porch must be at least 6 feet deep; an 8-foot depth is recommended to accommodate porch columns while retaining usable space. Porch depth is measured from the front of the porch deck at the center of the steps, along a line perpendicular to the front edge of the porch deck, to the closest front wall of the house.

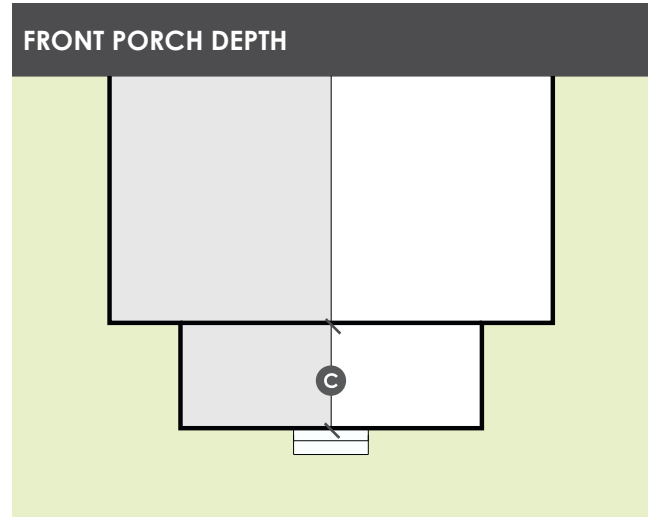


A	Porch Width
B	House Width at Front Wall

KEY	MEASUREMENT	APPLICATION
A	50%	Minimum percentage of front wall width that is covered by porch

Example:

18 ft. Porch Width
 ÷ 26 ft. Width of Front Wall of House
 0.69 (69%) Percentage of Front Wall Covered by Porch

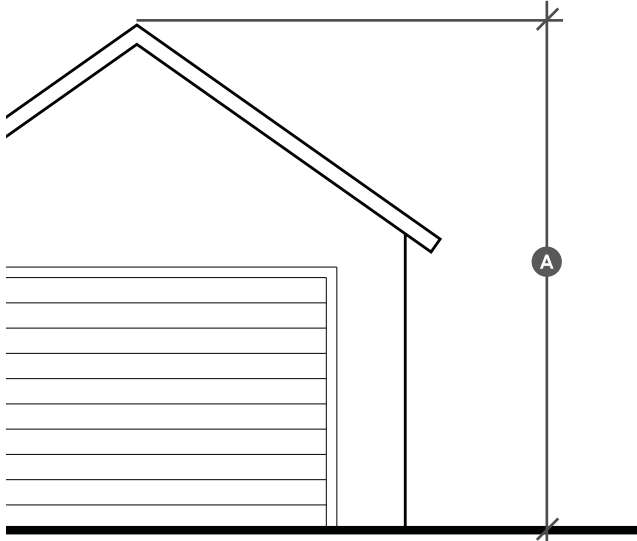


KEY	MEASUREMENT	APPLICATION
C	6 FT.	Minimum depth of front porch

Detached Garage Ridge Height

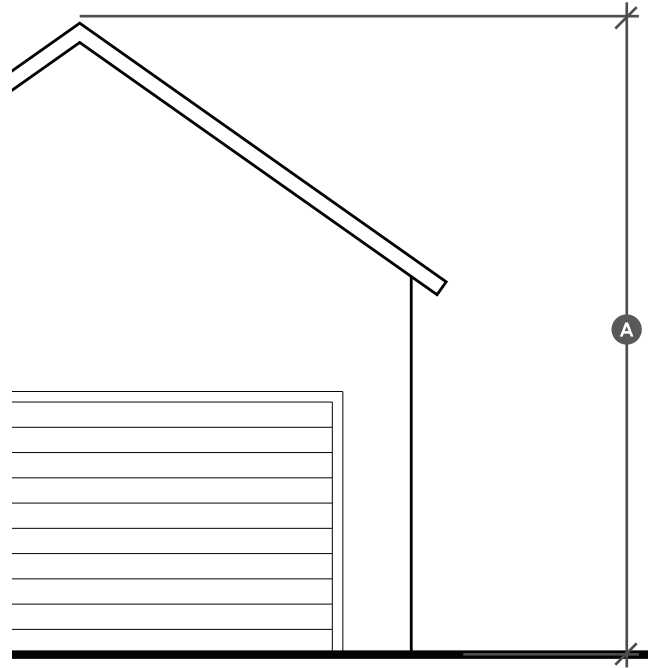
Ridge height is the distance from grade to the top of point of the roof (the “ridge”). These measurements apply to both one-story and two-story detached garages/garage apartments. For new attached garages, use the measurable standards for additions and new construction found elsewhere in this section.

GARAGE 1-STORY RIDGE HEIGHT



KEY	MEASUREMENT	APPLICATION
A	16 FT.	Maximum 1-story garage ridge height

GARAGE 2-STORY RIDGE HEIGHT



KEY	MEASUREMENT	APPLICATION
A	26 FT.	Maximum 2-story garage ridge height (for garage apartment)