



# TOWN OF CARBONADO BUILDING APPLICATION

## APPLICATION REQUIREMENTS:

- FILL OUT THE COMPLETE APPLICATION
- INCLUDE PHONE NUMBER, PARCEL NUMBER AND SITE ADDRESS
- INCLUDE BUILDER'S NAME, PHONE NUMBER, ADDRESS AND CONTRACTOR'S LICENSE NUMBER. IF THE BUILDER IS YOURSELF, WRITE "SELF" IN THE BUILDER SECTION.
- SIGN AND DATE THE APPLICATION BEFORE TURNING IT IN

## SUPPORTING DOCUMENTATION:

- TWO COPIES OF THE BUILDING PLANS MUST BE SUBMITTED WITH THE APPLICATION.
- INCLUDE A PLOT PLAN TO SHOW THE LOCATION AND SIZE OF ALL BUILDINGS. ALSO NEEDS TO INCLUDE THE PROPOSED LOCATION OF THE NEW BUILDING/CONSTRUCTION OR OTHER. NOTE ALL SET BACKS FROM PROPERTY LINES.
- SET BACK INFORMATION ALONG WITH FLOOR PLAN, PLOT PLAN AND FOUNDATION PLAN EXAMPLES ARE INCLUDED IN THIS PACKET.

TURN IN YOUR COMPLETED APPLICATION ALONG WITH THE SUPPORTING DOCUMENTS TO THE TOWN CLERK AT THE TOWN HALL. FEE CALCULATIONS AND PAYMENT WILL BE DUE AFTER THE APPLICATION HAS BEEN APPROVED.

IF YOU HAVE ANY QUESTIONS CONTACT THE TOWN CLERK MONDAY THRU THURSDAY FROM 9AM TO 5PM @ 360-829-0125.

FOR ADDITIONAL BUILDING QUESTIONS OR TO SCHEDULE YOUR BUILDING INSPECTION CALL DEAN MUNDY @ 253-377-2444

# TOWN OF CARBONADO

## RESIDENTIAL BUILDING APPLICATION

BUILDING  PLUMBING  MECHANICAL

ASSESSOR'S PARCEL NO. \_\_\_\_\_  
 OWNER'S NAME \_\_\_\_\_ PHONE \_\_\_\_\_  
 OWNERS'S MAILING ADDRESS \_\_\_\_\_ SITE ADDRESS \_\_\_\_\_

LIST EXISTING BUILDINGS ON PROPERTY \_\_\_\_\_  
 BUILDER'S NAME \_\_\_\_\_ PLUMBING CONTRACTOR \_\_\_\_\_  
 BUILDER'S ADDRESS \_\_\_\_\_ MECHANICAL CONTRACTOR \_\_\_\_\_  
 CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_  
 BUILDER'S PHONE \_\_\_\_\_ CONT. LICENSE# \_\_\_\_\_ EXPIRES \_\_\_\_\_

PROPOSED BUILDING & TYPE OF USE \_\_\_\_\_  
 MANUFACTURED HOME \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
 TYPE OF HEAT:  GAS  ELEC.  OTHER \_\_\_\_\_ MAKE \_\_\_\_\_ MODEL \_\_\_\_\_ YEAR \_\_\_\_\_ SERIAL NO. \_\_\_\_\_ INSTALLERS LIC. NO. \_\_\_\_\_ LENGTH & WIDTH \_\_\_\_\_  
 ENERGY CODE PATH (circle one) CHPT. 4 CHPT. 5 CHPT. 6  
 EXISTING SQ. FTG: MAIN FLOOR \_\_\_\_\_ / SECOND FLOOR \_\_\_\_\_ / BASEMENT \_\_\_\_\_ / GARAGE \_\_\_\_\_ / CARPORT \_\_\_\_\_ / DECK \_\_\_\_\_  
 NEW SQ. FOOTAGE: MAIN FLOOR \_\_\_\_\_ / SECOND FLOOR \_\_\_\_\_ / BASEMENT \_\_\_\_\_ / GARAGE \_\_\_\_\_ / CARPORT \_\_\_\_\_ / DECK \_\_\_\_\_  
 BUILDING HEIGHT \_\_\_\_\_ NO. OF STORIES: \_\_\_\_\_ FIRE SPRINKLERS  YES  NO NO. OF BEDROOMS \_\_\_\_\_ NO. OF BATHROOMS \_\_\_\_\_  
 NEW RESIDENCE  NEW BUSINESS  DECK/PORCH  REMODEL  ACC. BLDG.  MANUFACTURED  
 ADDITION  TENANT IMPROVEMENT  GARAGE/CARPORT  OTHER

I understand that applications for which no permit is issued within 180 days following the date of application shall expire by limitation, and plans and other data submitted for review may thereafter be returned to the applicant or destroyed by the building official. Sec. 106.4.4 U.B.C.

OWNER/AGENT \_\_\_\_\_ DATE \_\_\_\_\_

SUBDIVISION _____	VALUATION.....	\$ _____
SCHOOL DISTRICT _____	BUILDING PERMIT FEE.....	\$ _____
LOT _____	PLAN CHECK FEE.....	\$ _____
LOT SIZE _____	KNOX BOX.....	\$ _____
SECTION _____ TOWN _____ RANGE _____	MECHANICAL.....	\$ _____
OCCUPANCY GROUP _____	PLUMBING.....	\$ _____
TYPE OF CONST. _____	STATE BUILDING CODE FEE.....	\$ _____
	ENERGY CODE FEE.....	\$ _____
	UTILITY'S, PARK & STREET FEES.....	\$ _____
	<b>TOTAL FEES</b>	\$ _____
	<b>PAYMENT DATE</b> _____	<b>PAYMENT</b> \$ _____
		<b>BALANCE DUE</b> \$ _____

### BUILDING APPROVAL

### MISCELLANEOUS APPROVAL

### PLANNING APPROVAL

CORRECTIONS REQUIRED \_\_\_\_\_ BLDG. SITE ELEVATION \_\_\_\_\_ ZONING \_\_\_\_\_  
 APPROVED AS REVISED \_\_\_\_\_ LOWEST FLOOR ELEV. \_\_\_\_\_ SEPA \_\_\_\_\_  
 APPROVED \_\_\_\_\_ SEPTIC/SEWER REQD. \_\_\_\_\_ SETBACKS FRONT \_\_\_\_\_  
 \_\_\_\_\_ WATER SYS. APP. \_\_\_\_\_ REAR \_\_\_\_\_  
 \_\_\_\_\_ SCHOOL DISTRICT \_\_\_\_\_ SIDE \_\_\_\_\_  
 \_\_\_\_\_ CORNER \_\_\_\_\_  
 APPROVED \_\_\_\_\_

TO BE FILLED OUT BY APPLICANT

FOR OFFICIAL USE ONLY



# Town of Carbonado Building Guidelines

# TOWN OF CARBONADO

## GUIDELINES FOR PERMIT PROCESS

The following guidelines are intended to assist you in the permit process.

### BUILDING PERMIT APPLICATION FORM:

**Assessor's Account Number:** This number may be obtained from your tax statement or the assessor's Office 475-9555

**Short Plat Number:** If the property has been short platted, provide short plat file number, lot reference (if known) and the recording number

**Address:** As soon as possible, an address application should be made to this office (no charge). Incomplete applications will not be processed.

**Contractors and Subcontractors:** Owners may act as the builder and construct all portions of a building or the owner may hire out any or all of the construction to a licensed Washington State contractor (license number is required for building permit issuance).

**Lender's Name, Address and Phone Number:** Washington State Law now requires lender information to be posted on site.

### BUILDING PERMIT PLANS:

In order to submit a complete application, two (2) copies of building plans and two copies of the plot plan drawn to scale are required; one (1) set will be reviewed and returned to the applicant, the other will be retained by the Building Department. Plans must be indelible reproductions such as blueprints or photo copy. They must be drawn to scale ie. (1/4" = 1' or 1/8" = 1") in an architectural manner. They need not be drawn by an architect, engineer or designer for residential use. Commercial buildings must be drawn by an architect or engineer who is licensed by the State of Washington.

**Plot Plan:** (see sample) Plot plans must include: the shape and size of the lot; the location and size of all buildings on the lot; the location of the sewer, water, storm, gas, power, septic tank and reserve drain field if used; the number of gallons and location of propane tanks; the name, width and direction of all streets; all setbacks from property lines; and an arrow indicating direction of North. Must show all decks, porches, roof overhangs, patios and other projections into yards. For minimum setback requirements contact the Planning Department, 829-0125.

**Foundation Plans:** Show the size and shape of the foundation, anchor bolt size and spacing, rebar schedule, size and span of beams, size, spacing and span of floor joists, posts pier footings, chimney footings, foundation vents crawl space access.

**Floor Plans:** Show the arrangement of partitions and rooms, location of plumbing fixtures, appliances, cupboards, windows and doors (show rough opening sizes), chimneys and fireplaces, directions and spacing of structure beams, rafters, ceiling joists or trusses.

**Cross Section:** Show the method of framing, roof pitch, roof braces, amount of overhang, ceiling heights, bearing partitions, posts, beams, foundation, finish grade and backfill. Show sizes and types of all materials. If trusses are to be used, supply manufacturer's engineering on all spans or styles of trusses being installed (snow load is 50lbs.). If applicable, provide whole cross section of stairs, showing rise, run, landing and headroom. If the building is being heated, show R values of insulation to be used for ceiling, walls, floors and foundations.

**Energy Information:** (see other side)

**Elevations:** Show type, sizes and spacing of all exterior materials, windows and other details.

**Plumbing and Mechanical:** The plumbing and/or mechanical permits are included on the building permit application and are issued simultaneously, therefore, it is necessary to know what plumbing fixtures will be installed and the type of heating system, as well as the size of the furnace and the name and license number of the installer.

(over)



**TOWN OF CARONADO**  
**DEPARTMENT OF COMMUNITY DEVELOPMENT**  
**ENERGY FORM**

PO BOX 92  
360-829-0125

**2015 International Energy Conservation Code, as amended by WAC 51-11 (IECC)**  
*Effective July 1, 2016.*

*Ventilation code provisions are located in the 2015 International Residential Code (IRC),  
2015 International Mechanical Code (IMC), & 2015 International Building Code*

A complete energy code application form will include information that clearly identifies compliance methods for heat sizing, thermal envelope, and whole-house ventilation. This form includes compliance instructions and information needed. Energy code compliance information, forms, worksheets, and educational information is also available on the Washington State University Extension Energy Program (WSU-EP) website. To access the website go to <http://www.energy.wsu.edu/BuildingEfficiency/EnergyCode.aspx#TEXT>

The website includes a heat system sizing calculator. Submit a completed heat sizing calculator worksheet when the building permit is submitted. In addition to the heat sizing calculator the website has helpful compliance information and worksheets for prescriptive and component performance options along with a glazing schedule.

**INSTRUCTIONS:** Complete the Town of Carbonda Energy Code application and submit with a heat sizing calculator available on the WSU-EP website, see item # 4 below:

- 1 Identify the compliance method. The most common and simplest approach is the prescriptive method for energy code compliance. See prescriptive table R402.1.1 located at the end of the instructions. The component performance approach referenced in IECC Section R402.1.4 may also be used for energy code compliance. For more information contact City of Edgewood building department staff at 253.952.3299 or WSU Energy Program at 360.956.2042.
- 2 Identify the whole-house ventilation compliance method. A ventilation system shall be installed in accordance with The International Residential Code, Section M1507. The most common ventilation methods include a whole-house ventilation system using exhaust fans (M1507.3.4) and a whole-house ventilation system integrated with a forced-air system (M1507.3.5). Other ventilation systems include whole-house ventilation system using a supply fan (M1507.3.6) and whole-house ventilation system using a heat-recovery ventilation system (M1507.3.7). If you need additional information we recommend that you discuss with your heating and ventilation system professional. In addition City of Edgewood staff will be happy to discuss the options if you are not sure which compliance option will work for you.
- 3 Identify the Additional Energy Efficiency Requirements listed in Table R406.2. The drawings included with the building permit application shall identify which options have been selected and the point value of each option. Each one and two-family dwelling unit and townhouses are required to achieve the following minimum number of credits:
  - a) Small dwelling units less than 1500 square feet of heated or cooled area and with less than 300 square feet fenestration area (skylights, doors, windows, etc). Additions to an existing building that are greater than 500 square feet of heated floor area but less than 1500 square feet. – 1.5 points
  - b) Medium dwelling units not included in a) above {small dwelling}, **OR** c) below {large dwelling} – 3.5 points **Exception:** Dwelling units serving R-2 occupancies shall require 2.5 points.

- c) Large dwelling unit is a dwelling unit that exceeds 5000 square feet of heated or cooled floor area. – 4.5 points.
  - d) Additions less than 500 square feet. – 0.5 points
- 4 Provide a completed heating/cooling system size worksheet to verify compliance to IECC R403.6. The calculator/worksheet is available on the WSU-Energy Program website at: <http://www.energy.wsu.edu/BuildingEfficiency/EnergyCode.aspx#TEXT>. Staff can also assist with preparation of the worksheet.
  - 5 To meet the prescriptive option all fenestration products shall comply with the required U-factor listed in Table R402.1.4. Windows, doors, and glazed doors shall have a tested U-factor or .30 or less. When using the small dwelling option for energy credits (a) or component performance approach provide a fenestration schedule that identifies the square feet and U-factor of each item. *Fenestration is defined in the IECC as skylights, roof windows, vertical windows, opaque doors, glazed-doors that include products with glass and non-glass glazing materials.*
  - 6 Identify the location and fuel type of the heating system, water heater, location of exhaust fans (bathroom, laundry, kitchen, etc.) and R-factor of proposed insulation for walls, floors, ceilings, and concrete slab floors on the building plans.
  - 7 Not less than 75% of all permanently installed lamps in lighting fixtures shall be high efficacy lamps. High efficacy lamps are defined in IECC Chapter 2 and are considered compact fluorescent lamps, T-8 or smaller diameter linear fluorescent lamps, or lamps with a minimum efficacy 40 lumens per watt for lamps 15 watts or less, 50 lumens per watt for lamps over 15 watts to 40 watts, and 60 lumens per watt for lamps over 40 watts.

Questions? Call Carbonado Building Department at 360-829-0125. WSEC compliance information and code text is also available on the WSU-Energy Program website at: <http://www.energy.wsu.edu/BuildingEfficiency/EnergyCode.aspx#TEXT>

**Prescriptive Requirements <sup>0,1</sup> for City of Edgewood  
Climate Zone 4-C, Table R402.1.1**

Option	Glazing Area % of Floor	Fenestration factor U-		Ceiling	Vaulted Ceiling <sup>j</sup>	Wall Above Grade	Wall int <sup>c</sup> below grade	Floor	Slab <sup>d</sup> on Grade
		Vertical (Includes doors, windows, etc.)	Skylight <sup>b</sup>						
<b>4C</b>	Unlimited	.30	.50	R-49	R-38	R-21 int <sup>k,l</sup>	10/15/21 int TB	R-30	R-10

Visit the WSU Energy Program website at: <http://www.energy.wsu.edu/BuildingEfficiency/EnergyCode.aspx#TEXT> or call 360.427.9670 ext. 352 for footnote information. Log & solid timber wall with a min. avg. thickness of 3.5" are exempt from the above grade wall insulation requirements.

**TOWN OF CARONADO BUILDING DEPARTMENT OF COMMUNITY DEVELOPMENT**  
**WSEC/ Ventilation Code Compliance Application**  
**Submit with heating/cooling system size worksheet (see instructions #4)**

Owner:		Parcel#:		Type of project:	
Total Sq. Ft. of heated area::		1 <sup>st</sup> Floor :	2 <sup>nd</sup> floor:	Heated Basement:	
<b>Heating System Type:</b> <input type="checkbox"/> Electric wall heater <input type="checkbox"/> Electric Central Furnace <input type="checkbox"/> LPG Furnace <input type="checkbox"/> Heat Pump with electric furnace <input type="checkbox"/> Heat pump with gas furnace <input type="checkbox"/> Ductless Heat Pump <input type="checkbox"/> Boiler, specify fuel type: _____ <input type="checkbox"/> Other: Specify: _____					
Compliance Method <i>Check one::</i>		<input type="checkbox"/> Prescriptive Option Table R402.1.1			
		<input type="checkbox"/> Component Performance, R402.1.3 – <i>Calculation worksheets required</i>			
		<input type="checkbox"/> Other ( <i>Specify</i> ): _____			
<i>Check one</i> <b>Ventilation System</b>		<input type="checkbox"/> Whole House Ventilation system using exhaust fans & window or wall fresh air vents ( <i>M1507.3.4</i> )		<input type="checkbox"/> Whole House Ventilation Integrated with a Forced Air System ( <i>M1507.3.5</i> )	
		<input type="checkbox"/> Other, describe: _____			
<b>Additional Energy Efficiency Requirements</b>  <i>Energy credits required:</i> _____		Referencing Table R406.2, "Additional Residential Energy Efficiency Requirements," all residential units must develop credits as specified in Table 406.2. Identify and describe which option(s) will be used to comply. If the table is not attached to this form you can access the table on our website at: <a href="http://www.cityofedgewood.org">www.cityofedgewood.org</a>			
		a) Description: Small dwelling units with less than 1500 square feet of heated or cooled space and less than 300 square feet fenestration (see definition below) <u>or</u> additions to an existing building that are greater than 500 square feet but less than 1500 square feet of heated area. To use this option complete a window schedule in order to verify that the fenestration area does not exceed 300 sq. ft. <b>Fenestration</b> is defined in the IECC as skylights, roof windows, vertical windows, opaque doors, glazed-doors that include products with glass and non-glass glazing materials. – 1.5 points  b) Medium dwelling units not included in a) above, or b) below – 3.5 points  c) Large dwelling unit is a dwelling unit that exceeds 5000 square feet of heated or cooled floor area. – 4.5 points.  d) Additions less than 500 square feet – 0.5 points			
Using Option number(s):  _____		Describe Energy Credit Option(s):			





# Table 406.2

## Energy Credits (2015 Code)

	DESCRIPTION	CREDIT(S)	Estimated Cost
1a	<p><b>EFFICIENT BUILDING ENVELOPE 1a:</b>  Prescriptive compliance is based on Table R402.1.1 with the following modifications:  Vertical fenestration U = 0.28  Floor R-38  Slab on grade R-10 perimeter and under entire slab  Below grade slab R-10 perimeter and under entire slab</p> <p><b>or</b></p> <p>Compliance based on Section R402.1.4: Reduce the Total UA by 5%.</p>	0.5	
1b	<p><b>EFFICIENT BUILDING ENVELOPE 1b:</b>  Prescriptive compliance is based on Table R402.1.1 with the following modifications:  Vertical fenestration U = 0.25  Wall R-21 plus R-4  Floor R-38  Basement wall R-21 int plus R-5 ci  Slab on grade R-10 perimeter and under entire slab  Below grade slab R-10 perimeter and under entire slab</p> <p><b>or</b></p> <p>Compliance based on Section R402.1.4: Reduce the Total UA by 15%.</p>	1.0	
1c	<p><b>EFFICIENT BUILDING ENVELOPE 1c:</b>  Prescriptive compliance is based on Table R402.1.1 with the following modifications:  Vertical fenestration U = 0.22  Ceiling and single-rafter or joist-vaulted R-49 advanced  Wood frame wall R-21 int plus R-12 ci  Floor R-38  Basement wall R-21 int plus R-12 ci  Slab on grade R-10 perimeter and under entire slab  Below grade slab R-10 perimeter and under entire slab</p> <p><b>or</b></p> <p>Compliance based on Section R402.1.4: Reduce the Total UA by 30%.</p>	2.0	
1d <sup>a</sup>	<p><b>EFFICIENT BUILDING ENVELOPE 1d:</b>  Prescriptive compliance is based on Table R402.1.1 with the following modifications:  Vertical fenestration U = 0.24</p>	0.5	
2a	<p><b>AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2a:</b>  Compliance based on R402.4.1.2: Reduce the tested air leakage to 3.0 air changes per hour maximum</p> <p><b>and</b></p> <p>All whole house ventilation requirements as determined by Section M1507.3 of the <i>International Residential Code</i> shall be met with a high efficiency fan (maximum 0.35 watts/cfm), not interlocked with the furnace fan. Ventilation systems using a furnace including an ECM motor are allowed, provided that they are controlled to operate at low speed in ventilation only mode.</p> <p>To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the qualifying ventilation system.</p>	0.5	
2b	<p><b>AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2b:</b>  Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 2.0 air changes per hour maximum</p> <p><b>and</b></p> <p>All whole house ventilation requirements as determined by Section M1507.3 of the <i>International Residential Code</i> shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.70.</p> <p>To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.</p>	1.0	

OPTION	DESCRIPTION	CREDIT(S)	Estimated Cost
2c	<p>AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2c: Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 1.5 air changes per hour maximum</p> <p><b>and</b></p> <p>All whole house ventilation requirements as determined by Section M1507.3 of the <i>International Residential Code</i> shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.85.</p> <p>To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.</p>	1.5	
3a <sup>b</sup>	<p>HIGH EFFICIENCY HVAC EQUIPMENT 3a: Gas, propane or oil-fired furnace with minimum AFUE of 94%, or Gas, propane or oil-fired boiler with minimum AFUE of 92%</p> <p>To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.</p>	1.0	
3b <sup>b</sup>	<p>HIGH EFFICIENCY HVAC EQUIPMENT 3b: Air-source heat pump with minimum HSPF of 9.0</p> <p>To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.</p>	1.0	
3c <sup>b</sup>	<p>HIGH EFFICIENCY HVAC EQUIPMENT 3c: Closed-loop ground source heat pump; with a minimum COP of 3.3</p> <p><b>or</b></p> <p>Open loop water source heat pump with a maximum pumping hydraulic head of 150 feet and minimum COP of 3.6</p> <p>To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.</p>	1.5	
3d <sup>b</sup>	<p>HIGH EFFICIENCY HVAC EQUIPMENT 3d: Ductless Split System Heat Pumps, Zonal Control: In homes where the primary space heating system is zonal electric heating, a ductless heat pump system shall be installed and provide heating to the largest zone of the housing unit.</p> <p>To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.</p>	1.0	
4	<p>HIGH EFFICIENCY HVAC DISTRIBUTION SYSTEM:</p> <p>All heating and cooling system components installed inside the conditioned space. This includes all equipment and distribution system components such as forced air ducts, hydronic piping, hydronic floor heating loop, convectors and radiators. All combustion equipment shall be direct vent or sealed combustion.</p> <p>For forced air ducts: A maximum of 10 linear feet of return ducts and 5 linear feet of supply ducts may be located outside the conditioned space. All metallic ducts located outside the conditioned space must have both transverse and longitudinal joints sealed with mastic. If flex ducts are used, they cannot contain splices. Flex duct connections must be made with nylon straps and installed using a plastic strapping tensioning tool. Ducts located outside the conditioned space must be insulated to a minimum of R-8. Locating system components in conditioned crawl spaces is not permitted under this option.</p> <p>Electric resistance heat and ductless heat pumps are not permitted under this option. Direct combustion heating equipment with AFUE less than 80% is not permitted under this option.</p> <p>To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and shall show the location of the heating and cooling equipment and all the ductwork.</p>	1.0	

OPTION	DESCRIPTION	CREDIT(S)	Estimated Cost
5a	<p><b>EFFICIENT WATER HEATING 5a:</b>  All showerhead and kitchen sink faucets installed in the house shall be rated at 1.75 GPM or less. All other lavatory faucets shall be rated at 1.0 GPM or less.<sup>c</sup>  To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum flow rates for all showerheads, kitchen sink faucets, and other lavatory faucets.</p>	0.5	
5b	<p><b>EFFICIENT WATER HEATING 5b:</b>  Water heating system shall include one of the following:  Gas, propane or oil heater with a minimum EF of 0.74  <b>or</b>  Water heater heated by ground source heat pump meeting the requirements of Option 3c.  <b>or</b>  For R-2 occupancy, a central heat pump water heater with an EF greater than 2.0 that would supply DHW to all the units through a central water loop insulated with R-8 minimum pipe insulation.  To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency.</p>	1.0	
5c	<p><b>EFFICIENT WATER HEATING 5c:</b>  Water heating system shall include one of the following:  Gas, propane or oil water heater with a minimum EF of 0.91  <b>or</b>  Solar water heating supplementing a minimum standard water heater. Solar water heating will provide a rated minimum savings of 85 therms or 2000 kWh based on the Solar Rating and Certification Corporation (SRCC) Annual Performance of OG-300 Certified Solar Water Heating Systems  <b>or</b>  Electric heat pump water heater with a minimum EF of 2.0 and meeting the standards of NEEA's Northern Climate Specifications for Heat Pump Water Heaters  To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency and, for solar water heating systems, the calculation of the minimum energy savings.</p>	1.5	
5d	<p><b>EFFICIENT WATER HEATING 5d:</b>  A drain water heat recover unit(s) shall be installed, which captures waste water heat from all the showers, and has a minimum efficiency of 40% if installed for equal flow or a minimum efficiency of 52% in installed for unequal flow. Such units shall be rated in accordance CSA B55.1 and be so labeled.  To qualify to claim this credit, the building permit drawings shall include a plumbing diagram that specified the drain water heat recovery units and the plumbing layout needed to install it and labels or other documentation shall be provided that demonstrates that the unit complies with the standard.</p>	0.5	
6	<p><b>RENEWABLE ELECTRIC ENERGY:</b>  For each 1200 kWh of electrical generation per each housing unit provided annually by on-site wind or solar equipment a 0.5 credit shall be allowed, up to 3 credits. Generation shall be calculated as follows:  For solar electric systems, the design shall be demonstrated to meet this requirement using the National Renewable Energy Laboratory calculator PVWATTs.  Documentation noting solar access shall be included on the plans.  For wind generation projects designs shall document annual power generation based on the following factors:  The wind turbine power curve; average annual wind speed at the site; frequency distribution of the wind speed at the site and height of the tower.  To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the photovoltaic or wind turbine equipment type, provide documentation of solar and wind access, and include a calculation of the minimum annual energy power production.</p>	0.5	

- a. Projects using this option may not use Option 1a, 1b or 1c.
- b. Projects may only include credit from one space heating option, 3a, 3b, 3c or 3d. When a housing unit has two pieces of equipment (i.e., two furnaces) both must meet the standard to receive the credit.
- c. Plumbing Fixtures Flow Ratings. Low flow plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following requirements:
  - 1. Residential bathroom lavatory sink faucets: Maximum flow rate - 3.8 L/min (1.0 gal/min) when tested in accordance with ASME A112.18.1/CSA B125.1.
  - 2. Residential kitchen faucets: Maximum flow rate - 6.6 L/min (1.75 gal/min) when tested in accordance with ASME A112.18.1/CSA B125.1.
  - 3. Residential showerheads: Maximum flow rate - 6.6 L/min (1.75 gal/min) when tested in accordance with ASME A112.18.1/CSA B125.1.

# Exhibit "2"

## CHAPTER 18.25 TABLE OF LAND DEVELOPMENT DIMENSIONAL REGULATIONS

**Sections:**

**18.25.010 Land development dimensional regulations table.**

**18.25.010 Land development dimensional regulations table.**

STANDARDS	RLD	RMD <sup>4</sup>	CMU <sup>4</sup>	PROS	CF
Minimum Lot Area	6,000 sf	8,400 sf	5,000 sf	0 sf	0 sf
For an Accessory Dwelling Unit	9,600 sf	8,400 sf	n/a	n/a	n/a
For a Duplex Unit	12,000 sf	10,000 sf	10,000 sf	n/a	n/a
Standard Net Density for Multiple Units	n/a	8 du/ac	8 du/ac	n/a	n/a
Maximum Net Density <sup>1</sup>	5.00 du/ac <sup>1</sup>	18.00 du/ac <sup>2</sup>	18.00 du/ac <sup>3</sup>	n/a	n/a
Minimum Lot Width	50 ft.	60 ft.	50 ft.	n/a	n/a

<sup>1</sup> The net density may not be exceeded.

<sup>2</sup> These densities can only be achieved through the development of an adult retirement community, otherwise the standard net density applies.

<sup>3</sup> These densities can only be achieved through the development of mixed business and residential developments (in the CMU zone) or the development of adult retirement community housing (in the RMD or CMU zones), otherwise the net standard density applies.

<sup>4</sup> In the RLD and RMD zones the maximum density and the minimum lot size shall be met.



# Exhibit "3"

## Chapter 18.30 TABLE OF BUILDING BULK REGULATIONS

### Sections:

18.30.010 Building bulk table.

18.30.010 Building bulk table.

STANDARDS	RLD	RMD	CMU	PROS	CF
Maximum Height	35 ft.	35 ft.	35 ft. <sup>6</sup>	35 ft. <sup>6</sup>	35 ft. <sup>6</sup>
Maximum Building Coverage <sup>1</sup>	40%	40%	40%	25%	60%
Minimum Setback from Right-of-Way including Alleys <sup>2,3</sup>	15 ft.	15 ft.	20 ft.	25 ft.	10 ft.
Minimum Side Yard Setback: Principal structure <sup>4</sup>	5 ft.	5 ft.	8 ft.	15 ft.	5 ft.
Minimum Side Yard Setback: Accessory Structure <sup>4,7</sup>	3 ft.	3 ft.	3 ft.	10 ft.	3 ft.
Minimum Side Yard Setback: Accessory Structure, residential and/or mixed uses <sup>4</sup>	5 ft.	5 ft.	8 ft.	15 ft.	5 ft.
Minimum Rear Yard Setback: Principal structure <sup>5</sup>	15 ft.	15 ft.	25 ft.	25 ft.	10 ft.
Minimum Rear Yard Setback: Rear exit garages <sup>5</sup>	20 ft.	20 ft.	20 ft.	20 ft.	20 ft.
Minimum Rear Yard Setback: Accessory Structure <sup>5,7</sup>	3 ft.	3 ft.	3 ft.	3 ft.	3 ft.
Minimum Rear Yard Setback: Accessory Structure, residential and/or mixed uses <sup>5</sup>	5 ft.	5 ft.	6 ft.	6 ft.	6 ft.

1 Maximum building coverage refers to the area in which structures occupy the site. "Structures" do not include paved parking or driveway areas.

2 Any garage or other parking structure shall be set back 20 feet to allow on-site parking on any driveway without blocking a sidewalk; for proposals without garages, there shall be sufficient area on the site to allow for required on-site parking without blocking a sidewalk.

3 Improvements such as but not limited to rockeries and retaining walls which are required by the town as part of street frontage improvements and which are located on a public easement may be constructed in the setback if no feasible alternative exists.

4 In the RMD and CMU zones, the minimum distance between primary structures located on the same parcel shall be 10 feet.

5 Emergency vehicle access requirements must be maintained. The minimum rear yard setback in the CMU and CF zone shall be 20 feet where such zones abut residential districts.

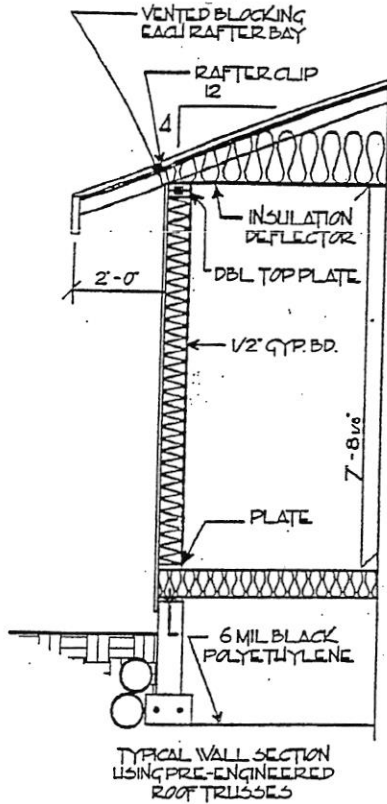
6 Limited to two stories.

7 Limited to Occupancy Group U (Section 312, IBC).

Provide proper information regarding materials, sizes, connections, and finishes for construction

**FOR A BUILDING SECTION PLEASE PROVIDE:**

- All framing members and their sizes (roof, wall, floor)
- Height of crawlspace, floors, ceiling and adjacent grade
- Footing & foundation sizes
- Indicate construction materials and finishes
- show insulation areas and U-values
- Provide information on structural ties & fasteners when used
- Ventilation requirement is 1 sq. ft. of vent per 150 sq. ft. attic/crawlspace area



FILL IN AS REQUIRED

Roofing Material: \_\_\_\_\_

Roof Sheathing Thickness: \_\_\_\_\_

Roof System: \_\_\_\_\_

Roof Insulation: \_\_\_\_\_

Roof Pitch: \_\_\_\_\_

Siding Material: \_\_\_\_\_

Wall Sheathing Req'd? (Y/N); Thickness: \_\_\_\_\_

Wall Framing: \_\_\_\_\_

Wall Insulation: \_\_\_\_\_

Floor Framing: \_\_\_\_\_

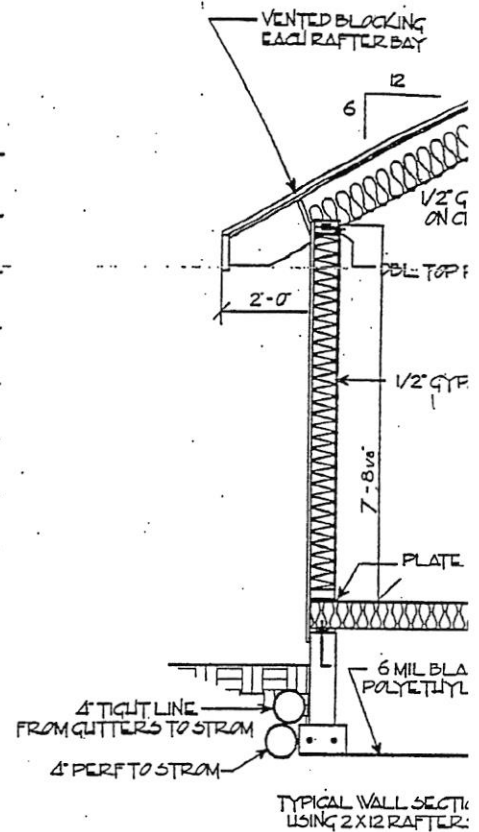
Floor Insulation: \_\_\_\_\_

Footing Width: \_\_\_\_\_

Footing Thickness: \_\_\_\_\_

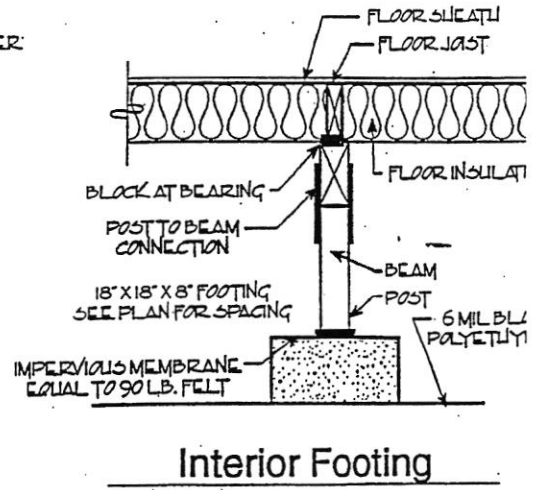
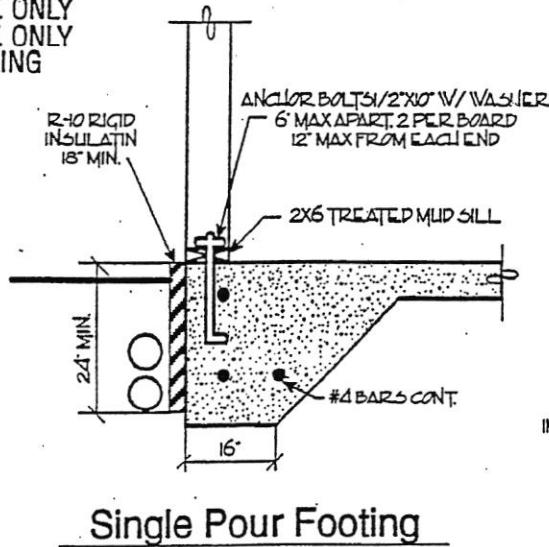
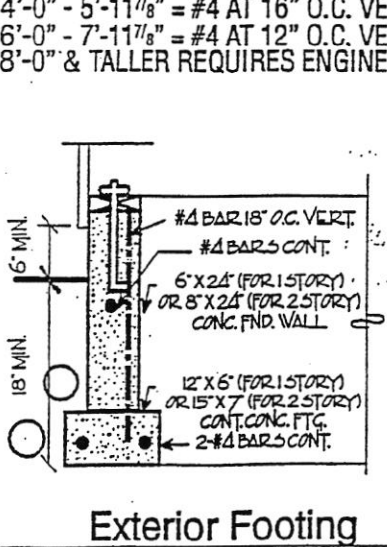
Stem Wall Height: \_\_\_\_\_

Stem Wall Thickness: \_\_\_\_\_



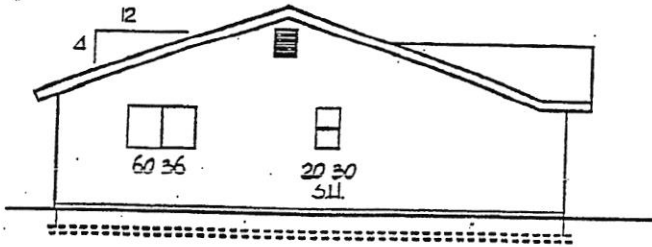
**REBAR REQUIREMENTS - CONCRETE WALLS:**

- 0 - 1' - 11<sup>7</sup>/<sub>8</sub>" = #4 AT 18" O.C. VERT. ONLY
- 2' - 0" - 3' - 11<sup>7</sup>/<sub>8</sub>" = #4 AT 18" O.C. VERT. ONLY
- 4' - 0" - 5' - 11<sup>7</sup>/<sub>8</sub>" = #4 AT 16" O.C. VERT. ONLY
- 6' - 0" - 7' - 11<sup>7</sup>/<sub>8</sub>" = #4 AT 12" O.C. VERT. ONLY
- 8' - 0" & TALLER REQUIRES ENGINEERING

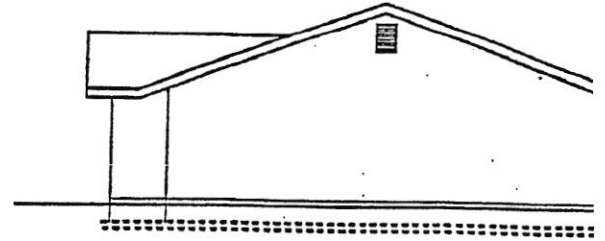


Call outs shown are examples of how information can be provided and should not be considered complete.

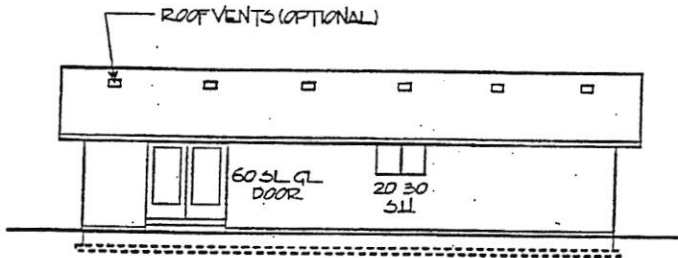
- Indicate roof pitch
- Show roof venting
- Show windows in their proper scale & location
- Show & dimension overhang



Left Side Elevation

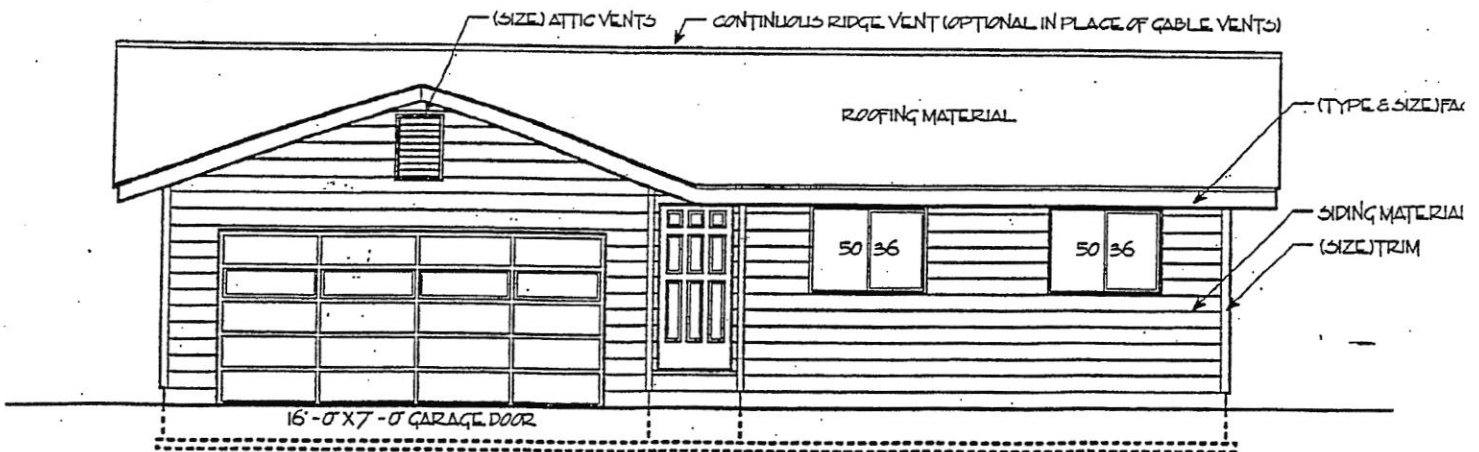


Right Side Elevation



Rear Elevation

Ventilation Requirement:  
 1sq. ft. of vent per 150 sq. ft. of attic area.  
 If 1/2 is at top & 1/2 is at eaves, ventilation requirements can be reduced to 1/300.



Front Elevation

Call outs shown are examples of how information can be provided and should not be considered complete.

## **Fire-Flow Requirements for Buildings**

### CMC 15.07.190

2015 IFC Appendix B, Fire-Flow Requirements for Buildings is amended as follows:

Section B105 of the International Fire Code is deleted in its entirety and replaced as follows:

B105 Fire-Flow requirements for buildings. Prior to the issuance of a building permit for any building, portion of a building, or substantial alteration thereto, fire-flow shall be provided in the amount required by this Section. Fire-flow shall be automatically available and supplied at a residual pressure of not less than 20 pounds per square inch (psi) (138 kPa).

B105.1 One- and Two-family dwellings. The minimum fire-flow requirements for one- and two-family dwellings (Group R-3) having a fire-flow calculation area which does not exceed 3,600 square feet shall be 750 gallons per minute (GPM) for one (1) hour for each hydrant providing fire flow. Fire-flow for buildings of 3,600 square feet or more in floor area including attached garages, covered porches and under upper story decks shall be 1,000 GPM for one (1) hour for each hydrant providing fire flow.

#### **EXCEPTIONS:**

- a) Fire-protection credits as described in Table B105.2 may be used in lieu of providing minimum fire-flow requirements for one- and two-family dwellings (Group R-3) on lots which are one gross acre or more in area.
- b) Fire-protection credits as described in Table B105.2 may be used in lieu of providing minimum fire-flow requirements for one- and two-family dwellings (Group R-3) if a water main capable of providing at least 500 GPM of fire-flow is not available to the building, portion of a building, or substantial alteration thereto. If the above fire-flow can be provided by the addition of a fire hydrant, the fire hydrant shall be installed.
- c) When at least 500 GPM is available from an approved fire hydrant, it shall be credited toward the required fire-flow for one- and two-family dwellings (Group R-3). The additional fire-flow requirements may be provided by using fire-protection credits as described in Table B105.2 in lieu of providing additional fire flow.

B105.2 Group U Occupancies. The minimum fire-flow requirements for Group U occupancies shall be 750 GPM for one (1) hour for each hydrant providing fire flow.

EXCEPTIONS:

1. Minimum fire-flow is not required for Group U occupancies meeting all of the following criteria:
  - a) It does not exceed 2,500 square feet; and
  - b) It is accessory to a one- or two-family dwelling (Group R-3) that has fire-flow or 100% of fire protection credits as described in Table B105.2; and
  - c) It has setbacks from side and rear lot lines of at least 20 feet, and is at least 10 feet from other buildings on the same lot.
2. Fire-protection credits as described in Table 105.2 may be used in lieu of providing minimum fire-flow requirements for Group U occupancies on lots which are one gross acre or more in area.
3. Fire-protection credits as described in Table B105.2 may be used in lieu of providing minimum fire-flow requirements for Group U occupancies if a water main capable of providing at least 500 GPM of fire-flow is not available to the building, portion of a building, or substantial alteration thereto. If the above fire-flow can be provided by the addition of a fire hydrant, the fire hydrant shall be installed.
4. When at least 500 GPM is available from an approved fire hydrant, it shall be credited toward the required fire-flow for Group U occupancies. The additional fire-flow requirements may be provided by using fire-protection credits as described in Table B105.2 in lieu of providing additional fire flow.

B105.3 Buildings other than One- and Two-family dwellings (Group R-3) and Group U occupancies. The minimum fire-flow requirements for buildings other than one- and two-family dwellings (Group R-3) and Group U occupancies shall not be less than that specified in Table B105.1 of the International Fire Code (IFC).

EXCEPTIONS:

1. A reduction in required fire-flow of up to 50%, as approved, is allowed when the building is provided with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the IFC. Where buildings are also of Type I or II construction and are a light-hazard occupancy as defined by NFPA 13, the reduction may be up to 75%. However, the minimum amount of fire-flow required shall at no time be less than 1,500 GPM except as noted in Exception number 2 below. Fire-flow and duration of fire-flow shall be the fire-flow and



duration of the actual fire-flow required after reductions for fire protection features described above.

2. When at least 1,000 GPM is available from an existing approved water main, or is provided by the extension of or from an existing water main, it shall be credited toward the required fire-flow. The fire-flow requirement may be reduced to that available by using fire-protection features such as approved monitored automatic sprinkler systems or fire resistive building construction as specified in Table B105.2 in lieu of additional fire-flow. Fire-flow and duration of fire-flow shall be the fire-flow and duration of the actual fire-flow required after reductions for fire protection features described above.
3. Non-combustible fueling station canopies shall be exempt from all fire flow provisions.

<b>TABLE B105.2</b>		Site Address: _____	
<b>Fire Protection Credits <sup>(1)</sup></b>		_____	
<b>Options to reduce Fire-Flow <sup>(2)</sup></b>	<b>Group R-3 &amp; U <sup>(3)</sup></b>	<b>All Others <sup>(3)(4)</sup> <sup>(5)</sup></b>	<b>Cumulative Credits</b>
	<b>% of reduction</b>	<b>% of reduction</b>	
Building less than 2,000 sq. ft.	-35%	-25%	
Building 2,000 sq. ft. to 3,600 sq. ft.	-20%	n/a	
NFPA 13 D extended coverage sprinkler system <sup>(6)</sup>	-65%	n/a	
NFPA 13 D sprinkler system	-50%	n/a	
NFPA 13 R sprinkler system	-50%	n/a	
Residential Range-top Fire Suppression System	-15%	n/a	
NFPA 13 sprinkler system	n/a	-50%	
30' minimum setback from property lines <sup>(8)</sup>	-25%	-15%	
Monitored Fire Alarm	-25%	-25%	
1-hour construction <sup>(7)</sup>	-15%	-25%	
Class A or B roof	-15%	-10%	
60% brick/stone exterior or approved non-combustible exterior	-15%	-10%	
<b>Total Credits</b>			

<sup>(1)</sup> Each portion of a building shall be considered as a separate fire area when separated by one or more four-hour fire walls with no openings and a 30-inch parapet, constructed in accordance with the International Building Code (IBC).

<sup>(2)</sup> Credits used for or with substantial alterations shall be applied to the entire structure.

- (3) Types of construction are based upon the IBC.
- (4) Shall not apply to IBC Group-H Occupancy classifications.
- (5) In Types IA and IB construction, only the three largest successive floor areas shall be used.
- (6) Consists of a 13D sprinkler system with sprinkler coverage extended into the garage, attic, small bathrooms and closets, and porch coverings.
- (7) Consists of a minimum of “type X” drywall throughout interior for Group R-3 and U occupancies. Other occupancy groups shall meet the requirements for one-hour construction specified by the IBC.
- (8) The 30-foot setback is from side and rear property lines. Front setbacks may be allowed by the zoning of the property.