Title 11

BUILDINGS AND CONSTRUCTION

Chapters:

Chapter 11.04

UNIFORM BUILDING CODE ADOPTED

Sections:

11.04.010 Adoption of the Uniform Building Code, 1997 Edition, Volumes I, II and III.

Pursuant to the powers and authority conferred by the laws of the state of Colorado, it is adopted as the building code for all of the unincorporated areas within Pitkin County, by reference thereto, the Uniform Building Code, 1997 Edition, published by International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, California, including the following appendices attached thereto: Chapter 3 Divisions II, Chapter 4 Division II, Chapter 11 Division II, Chapter 12 Division I, II, Chapter 13, Chapter 15, Volume II Appendix Chapter 16 Division I, Chapter 18, Chapter 31 Divisions I, II, and Chapter 33, 1997, Edition; and except insofar as certain sections and parts are specifi-

cally amended as set out in Section 11.04.030, all as if fully set out herein. (Ord. 99-61 § 2 (part): prior code Title VII § 1-1)

11.04.020 Copies on file.

The Aspen/Pitkin County building department shall maintain on file in its office in Aspen, Colorado, a full and complete copy of the Uniform Building Code, Volumes I, II, III, 1997 Edition, and regulations as adopted in this chapter, which copies shall be open to the public inspection during the regular business hours of that department. (Ord. 99-61 § 2 (part): prior code Title VII § 1-2)

11.04.030 Amendments to Uniform Building Code.

The following amendments to the Uniform Building Code, 1997 Edition (UBC), and appendices as adopted in Section 11.04.010, are made and incorporated in such Uniform Building Code.

A. Section 104.2.3, Right of Entry, shall be amended to read as follows:

Section. 104.2.3. Right of Entry.

When it is necessary to make an inspection to enforce the provisions of this code, or when the building official has reasonable cause to believe that there exists a condition which is contrary to or in violation of this code which makes the building or premises unsafe, dangerous or hazardous, the building official may enter the building or premises at reasonable times to inspect or to perform the duties imposed by this code, provided that if such premises be occupied that credentials be presented to the occupant and entry requested. If such building or premises be unoccupied, the building official shall first make a reasonable effort to locate the owner or other person having charge or control of the building or premises and request entry. If entry is refused, or no person having charge or control over the building or premises can be located, the building official shall obtain a warrant from the Pitkin County Court authorizing the building official to make entry onto the building or premises.

B. Section 104.2.6., Liability, is amended to read as follows:

Section 104.2.6. Liability.

The Building Official, or his authorized representative charged with the enforcement of this code, acting in good faith and without malice in the discharge of his duties, shall not thereby render himself personally liable for any damage that may accrue to persons or property as a result of any act or omission in the discharge of his duties.

This code shall not be construed to relieve or lessen the responsibility of any person owning, operating or controlling any building or structure for any damage to persons or property caused by defects on or in such premises, nor shall the code enforcement agency, any employee thereof, or Pitkin County be held as assuming any such responsibility or liability by reason of the adoption of this code or by the exercise of inspections authorized and carried out thereunder, or by the issuance of any permits or certificates issued pursuant to this code.

C. Section 105, Board of Appeals, shall be amended with the addition of the following paragraph to Section 105.1, General.

At the time of perfecting an appeal to the board of appeals, the appellant shall be required to pay an appeals fee of seventy-five dollars ($75.00), which fee may be returned to the appellant at the discretion of the Board of Appeals if the appellant is substantially sustained.

D. Section 106.3.1, Application, is amended by adding subsections 8 and 9 to read as follows:

8.) Be accompanied by a recent (within one (1) year) certified survey, plat and legal description of the proposed building site or property prepared by a registered land surveyor licensed to practice in the State of Colorado at the time of Application for building permit. The surveyor making the plat shall certify on the plat that it is correct and that the described, after which he/she shall affix his/her name and seal. Permanent reference monuments under normal geographic and topographic conditions shall be three-quarter (3/4) inch nominal iron pipe (1.05 inches long with a metal or plastic diameter) set so that no more than four (4) inches protrude from the ground and mounded with stones. Said plat should indicated the following:

(a) Type of monuments set on property corners;

(b) The location and dimensions of any easements or rights-of-way of record or in evidence on a said property;

(c) The location of any existing improvements on said property or on right-of-way or easements.

The above requirements shall not be mandatory for a building permit application to reconstruct or remodel totally within the limits of an existing building or structure.

For improvements to be located on large tracts of land (five (5) acres or over) the provisions of section 106.3.1 (8) shall not apply; but evidence satisfactory to the building official must be submitted, which shows the improvement on the property to be in compliance with appropriate laws.

9.) When construction is proposed in "special flood hazard areas," be accompanied by elevations (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures located in the special flood hazards areas. If the lowest floor is below grade on one or more sides, the elevation of the floor immediately above must also be submitted."

E. Section 106.4.4, Expiration, is amended to read by the addition of the following:

In the event a permit shall expire, the following provisions shall apply:

(A) All below grade excavation done in anticipation of construction shall be filled and made safe within thirty (30) days. Where construction has advanced beyond excavation, all foundation work and

above grade construction shall be secured against the weather to the satisfaction of the building official and the construction site shall be otherwise returned to that condition as existed prior to the issuance of the permit.

(B) Any fences, railings, canopies or other protective barriers placed in the public right-of-way shall be removed and all hazardous conditions eliminated therefrom within ten (10) days after expiration of the permit.

F. Section 107.5.2, Fee, is amended to read as follows:

A investigation fee, in addition to the permit fee, shall be collected whether or not a permit is then or subsequently issued. The minimum investigation fee shall be equal to the amount of the permit fee required by this code. The minimum investigation fee shall be the same minimum fee set forth in Table 1-A. The second time an individual starts work without a permit the minimum fee shall be four (4) times as set forth in Table 1-A, the third time the minimum fee shall be eight (8) times as set forth in Table 1-A, and the forth time the minimum fee shall be twelve (12) times as set forth in Table 1-A, etc. The payment of such investigation fee shall not exempt any person from compliance with all other provisions of this code nor from any penalty prescribed by law.

G. Section 107, Fees, is amended by the addition of new subsection, Waiver, which shall read as follows:

Section 107.7. Waiver.

All other provisions of the code to the contrary not withstanding, no building, electrical or plumbing fee, nor inspection or re-inspection fee, shall be imposed for any improvements made pursuant to the Department of Energy, 100% Affordable Housing projects within Pitkin County Community Services Administration "Weatherization" Program as undertaken by the Northwest Colorado Council of Governments (NWCCOG), the Colorado Department of Social Services, the Skyline Six Area Agency on Aging, or Pitkin County.

H. Section. 108.2, Inspection Record Card, is amended by the addition of the following paragraph:

Section 108.2. Inspection Record Card.
(add after first paragraph)

An address board will be required at all building sites for construction as permitted through the Aspen/Pitkin Building Division. The address board shall display the site address, building permit number and must be easily legible from that road that serves the driveway to the site. No inspections shall be undertaken on projects which do not have a address board as specified herein. See UBC Section 108.3 (1997 Ed.)

I. Section 108.5.5 is amended to read as follows:

Section 108.5.5 Lath or gypsum board inspection

Only required to be made only on fire-rated assemblies after all lathing and gypsum board, interior and exterior, is in place, but before any plastering is applied or before gypsum board joints and fasteners are taped and finished.

J. Section 109.1 is amended by deleting the exception.

K. UBC Table No. 1-A, Building Permit Fees, is amended to add items 6 through 10 under, Other Inspections and Fees, to read as follows:

OTHER INSPECTIONS AND FEES

6.	Agricultural Exempt	$50.00
7.	Fence	$50.00
8.	Mobile Home	$50.00
9.	Moving a Building	$50.00
10.	Special Event	$50.00

Note: Valuation is to be based upon current building valuation data as provided by the International Conference of Building Officials and published in the Building Standards with a regional modifier of 1.3 or other evidence of value, whichever is greater, as determined by the Building Official.

L. Section 310.1, Group R Occupancies Defined, shall be amended to read as follows:

Section. 310 Group R Occupancies Defined. Group R Occupancies shall be:

Division 1. Hotels and Apartment houses. Congregate residences (each accom-modating more than 10 persons)

Division 2. Dwellings and Lodging houses with greater than 5,000 square feet of floor area.

Division 3. Dwellings and Lodging houses with no more than 5,000 square feet of floor area. Congregate residences (each accom-modating less than 10 persons)

Division 4. Dwellings in rural and remote locations where typical utilities such as water, sewer, electricity, or gas may not be available or allowable and shall have alternate systems approved by the Building Official

M. Section 310.2.2, Special Provisions, is amended to read as follows:

Section 310.2.2 Special Provisions.

Walls and floors separating dwelling units in the same building, or guest rooms in Group R, Division 1 hotel occupancies, shall not be of less than one-hour fire-resistive construction. Openings between dwelling units shall be a minimum of a twenty (20) minute rated assembly.

Group R, Division 1 Occupancies more than two stories in height or having more than 3,000 square feet (279 m2) of floor area above the first story shall not be of less than one-hour fire-resistive construction through-out, except as provided in Section 601.5.2.2.

Storage or laundry rooms that are within Group R, Division 1 Occupancies that are used in common by tenants shall be separated from the rest of the building by not less than one-hour fire-resistive occupancy separation.

For Group R, Division 1 Occupancies with a Group S, Division 3 parking garage in the basement or first story, see Section 311.2.2.

For attic space partitions and draft stops, see Section 708

Group R Division 2 Occupancies shall not qualify for exception 1 in Section 1003.3.3.

N. Section 310.4, Access and Means of Egress Facilities and Emergency Escapes, is amended to read as follows:

Section 310.4 Access and Means of Egress Facilities and Emergency Escapes.

Means of egress shall be provided as specified in Chapter 10. See also Section 1003.2.8 for exit markings) Access to, and egress from, buildings required to be accessible shall be provided as specified in Chapter 11. Basements less than 1000 square feet in dwelling units and every sleeping room below the fourth story shall have at least one operable window or door approved for emergency escape or rescue that shall open directly into a public street, public alley, yard or exit court. Basements 1000 square feet and greater shall add one additional approved window or door for each 1000 square feet increment. Two or more approved windows or doors shall conform to Sec. 1004.2.4. The emergency door or window shall be operable from the inside to provide a full, clear opening without the use of separate tools.

EXCEPTION: The window or door may open into an atrium complying with Section 402 provided the window or door opens onto an exit-access balcony and the dwelling unit or guest room has an exit or exit-access doorway that does not open into the atrium.

Escape or rescue windows shall have a minimum net clear openable area of 5.7 square feet (0.53 m2). The minimum net clear openable height dimension shall be 24 inches (610 mm). The minimum net clear openable width dimension shall be 20 inches (508 mm). When windows are provided as a means of escape or rescue, they shall have a finished sill height not more than 44 inches (1118 mm) above the floor.

O. Section 904.2.1, Fire Extinguishing Systems, is amended to read as follows:

Section 904.2.1. Where Required.

An automatic fire-extinguishing system shall be installed in occupancies and locations as set forth in this section and any occupancy more than 5000 (total square feet) shall have approved automatic fire-extinguishing system or alternate approved by the Building Official which shall consider type of construction, access for fire fighting equipment, water availability and response time.

For provisions on special hazards and hazardous materials, see the Fire Code.

P. Section 1618, Volume II, is amended to read as follows:

Section 1618 - Basic Wind Speed

The minimum basic wind speed at any site shall not be less than 80 mph. Areas where local records or terrain indicate a higher 50-year (mean recurrence interval) fastest-mile wind speeds, the higher values shall be the minimum basic wind speeds.

Q. UBC Table No. 18-1-C, Foundations for Stud Bearing Walls Minimum Requirements, is amended by the addition of footnote 6 after the word "REQUIREMENTS" to read as follows:

6. The frost line for Pitkin County shall be a minimum of 36 inches below grade. Footings and foundations shall be as required in Section 1806.1.

R. Appendix Chapter 13, Section 1302.2, is amended to read as follows:

Section 1302.2 1999 Aspen/Pitkin Energy Conservation Code adopted.
Buildings shall be designed and built to comply with the requirements of the 1999 Aspen/Pitkin Energy Conservation Code, attached and incorporated by this reference. At least one (1) copy of the Aspen/Pitkin Energy Conservation Code shall be available for inspection during regular business hours.

S. UBC Appendix Chapter 15, Section 1515.1, is amended to read as follows:

Section 1515.1 Written approval required.

The Building Division does not require a permit for re-roofing done by a licensed roofing contractor when non-rated roofs are allowed by the 1997 UBC Table A-15-A. NOTE: Zoning may require review and approval of roof material in certain zones and historic districts. The Building Division will require review of roof covering materials in wildfire hazard areas.

Any roof work involving structure, height, or footprint changes does require a permit. Roof work involving structural framing, more than one square of damaged roof deck, addition of rigid insulation, or fire-resistive roof covering does require a permit.

The building official may allow existing roof coverings to remain when inspection or other evidence reveals all of the following:

1. The roof structure is sufficient to sustain the weight of the additional dead load of the new roofing.
2. The roof deck is structurally sound.
3. Roof drains and drainage are sufficient to prevent extensive accum-ulation of water.
4. The existing roofing is securely attached to the deck.
5. Existing insulation is not water soaked.
6. Fire-retardant requirements are maintained.

T. UBC Appendix Chapter 30 Section 3011.5, Fees, shall be amended to read as follows:

Section 3011.5 Fees.

Elevator inspection fees are established and collected by the Northwest Colorado Organization of Governments.

U. UBC Appendix Chapter 16, Section 1639, Volume II, Ground Snow Loads, is amended to read as follows:

Section 1639 Ground Snow Loads

The ground snow load, Pg, to be used in the determination of design snow loads for buildings and other structures determined by the following formula:

$$Pg = Pf / CeI \qquad (40\text{-}1\text{-}1)$$

V. UBC Appendix Chapter 16, Section 11640, Volume II, Roof Snow Loads, is amended to read as follows:

Section 1640 -- Roof Snow Loads

The value of roof (or other member) snow load, Pf, shall be equal to the "recommended basic snow load" as defined in the "1989 Survey of Colorado Building Departments", prepared and published by the "Structural Engineers Association of Colorado", latest edition. The roof snow load for the city of Aspen is 75 psf.

Delete balance of section 1640.

W. UBC Appendix Chapter 23, Section 2316, Volume II, Table 2.3.2, Load Duration Factors, is amended to read as follows:

Section 2316 -- Design Specifications, Table 2.3.2 Load Duration Factors, CD
TABLE 2.3.2-LOAD DURATION FACTORS, CD

DESIGN LOAD	LOAD DURATION	CD
Dead Load	Permanent	0.9
Floor, Occupancy Live Load	Ten Years	1.0
Earthquake Load1	-	1.33
Wind Load2	-	1.33
Impact	-	2.0

(Ord. 99-61 § 2 (part): prior code Title VII § 2-1--2-23)

11.04.040 Building Permit Fees.

Total Valuation	Fee
$1.00 to $500.00	$25.00
$501.00 to $2,000.00	$25.00 for the first $500.00 plus $3.05 for each additional $100.00, or fraction thereof, to and including $2,000.00
$2,000.00 to $25,000.00	$70.75 for the first $2,000.00 plus $14.70 for each additional $1,000.00, or fraction thereof, to and including $25,000.00
$25,001.00 to $50,000.00	$408.85 for the first $25,000.00 plus $10.65 for each additional $1,000.00, or fraction thereof, to and including $50,000.00
$50,001.00 to $100,000.00	$675.10 for the first $50,000.00 plus $7.35 for each additional $1,000.00, or fraction thereof, to and including $100,000.00
$100,001.00 to $500,000.00	$1042.60 for the first $100,000.00 plus $5.90 for each additional $1,000.00, or fraction thereof, to and including $500,000.00
$500,001.00 to $1,000,000.00	$3402.60 for the first $500,000.00 plus $5.00 for each additional $1,000.00 or fraction thereof, to and including $1,000,000.00
$1,000,000 and up	$5902.60 for the first $1,000,000.00 plus $3.85 for each additional $1,000.00 or fraction thereof

Other Inspections and Fees:	
1. Inspections outside of normal hours (minimum charge -- two hours)	$55.00 per hour
2. Reinspection fees assessed under provisions of Section 305.8	$55.00
3. Inspections for which no fee is specifically indicated	$55.00
4. Additional plan review required by changes, additions or revisions to plans (minimum charge -- one-half hour)	$60.00 per hour

(Ord. 02-32, Exh. B)

Chapter 11.06

EFFICIENT BUILDING CODE ADOPTED

Sections:

11.06.010 Administrative and Interpretive Regulations.

1.0 Administration

The purpose of these regulations is to set forth the procedures and requirements for the administration and implementation of the Efficient Building ordinance. These regulations are not intended to limit the administrative discretion of the persons implementing the Efficient Building ordinance on subjects not covered herein.

Note: These regulations were adopted by the Pitkin County Commissioners on February 26, 2003, and the Aspen City Council on _____, ____.

The intent of the City of Aspen/Pitkin County Efficient Building Program (APEB) is to encourage cost-effective and sustainable building methods to conserve fossil fuels, water, and other natural re-

sources, to promote the reuse and recycling of building materials and reduce solid waste, and to promote enhanced indoor air quality in residential buildings.

1.1 Point requirements.

The provisions of this code shall apply to one and two family dwellings and multiple family dwellings (townhouses) not more than 3 stories in height. Such dwellings are required to earn points according to the following schedule:

New construction	50 points	Up to 1,500 sq. ft.
New construction	65 points	Between 1,501 and 2,500 sq. ft.
New construction, each additional 50 sq. ft.	1 point	2,501 sq. ft. or greater
Interior remodel	20 points	500-1,000 sq. ft.
Interior remodel	30 points	1,001-2,000 sq. ft.
Interior remodel	40 points	2,001 sq. ft. or greater
Additions	25 points	500-1,000 sq. ft.

Additions	50 points	Between 1,001 and 2,500 sq. ft.
Additions, each additional 50 sq. ft.	1 point	2,501 sq. ft. or greater
Detached garages	Zero points	Up to 500 sq. ft.
Detached garages	15 points	501-750 sq. ft.
Detached garages, each 25 additional sq. ft.	1 point	Over 750 sq. ft.

Square footage is as defined by the currently adopted building codes. For measures where a graduated point scale is used, the following shall apply:

Level 1 = 10%-25%,
Level 2 = 26%-50%,
Level 3 = 51%-75%, and
Level 4 = 76%-100%.

1.2 Inspection and compliance

These regulations identify the specific requirements for complying with the APEB program. The sections and numbers in these regulations correspond to the sections and numbers on the APEB Checklist. A completed APEB Checklist must be submitted with the appropriate building permit application. Permit applications will not be processed unless a completed hard copy of the APEB Checklist is included in the application packet or an electronic checklist is submitted by email to Vickim@co.pitkin.co.us. The checklist and other related documents are available at the Community Development Department; 130 S. Galena St. Aspen, CO 81611 or at www.aspenpitkin.com (see Community Development section).

Compliance with each measure described below will be demonstrated by one of two methods. If compliance is "Inspected", City/County staff will inspect these measures during their typical inspections, and shall require the submission of appropriate documentation to establish compliance. Inspections are listed as PC: Plan Check, 1: Foundation, 2: Framing, 3: Insulation, 4: Rough-in, 5: Final. (Please read the "Compliance" section of the specific measure to see which type of inspection is required). All materials marked off on the checklist classified as "Inspected", must be identified on the plans. If a measure is indicated as "Self-Certified", the applicant's signature on the APEB Checklist serves as certification that a measure will be complied with as described in each section. The City of Aspen/Pitkin County reserves the right to conduct follow-up inspections or compliance audits of self-certified measures prior to issuing a C.O. If a compliance audit is conducted, the contractor must provide documentation for these items.

1.3 Mandatory measures

Measures identified with shading (i.e. 2.1) indicate mandatory compliance for all projects. Measures identified with a dark outline (i.e. 2.1) indicate mandatory compliance for all publicly-funded affordable housing (PFAH) projects.

1.4 Total required point calculations

NOTE: Refer to Point requirement schedule in 1.1 above.

Example 1:
To calculate the required points for a 7500 sq. ft. new construction project:
The first 2500 sq. ft. requires 65 points.
In addition, every sq. ft. over 2500, requires 1 point for every 50 sq. ft.
(7500-2500) = 5000 divided by 50 =100 points.
Total points required = 65 + 100 = 165
Example 2:
To calculate the required points for a 2500 sq. ft. remodel and 5000 sq. ft. addition:
A remodel with more than 2001 sq. ft. requires 40 points.
The first 2500 sq. ft. of the addition requires 25 points;
In addition, every sq. ft. for the addition over 2500 sq. ft., requires 1 point for every 50 sq. ft. = (5000-2500) = 2500 divided by 50 = 50.
Total points required = 40 + 25 + 50 = 115

For multi-family projects, each unit must have its own checklist for compliance. Each unit may receive credit for common items such as landscaping.
(Ord. 03-09, Exh. A)

11.06.020 Construction/Demolition and Use of Recycled Materials.
2.1 Deconstruction Plan submitted with permit application 3 points
(additions, remodels, or scrape-offs only)
A completed APED Deconstruction Plan is required. The Plan can be used to create a site-specific program to reduce demolition waste. Deconstructing the building to allow for the reuse of valuable building materials is encouraged but not required.

The plan requires a description of the materials to be recovered, designation of a "deconstruction contact", site plan for collection bins, and destination of all materials expected to be recycled, reused, or resold. A significant goal is that 60% of the material be made available for reuse.
Compliance: Inspected (PC): Plan Check. Completed Deconstruction Plan must be submitted to the Community Development Department, a minimum of 45 days prior to receiving a demolition permit or building permit (whichever is obtained first). During the 45-day period, the project's "deconstruction contact", provided by the contractor, shall be available to discuss material recovery by interested parties prior to receiving building permit.

2.2 Demolition debris reduced

(4 points required for all remodels/scrap-offs) 4-37 points
Compostable and/or recyclable material must be sorted for composting and/or recycling or processed for compaction. Applicants choosing 2.26 can also earn points for items 2.2.1 thru 2.2.5.

2.2.1 Wood recycled/composted (> 75% of all wood) 3 points
2.2.2 Metal recycled (> 90% of all metals) 3 points
2.2.3 Concrete recycled (> 75% of all concrete) 3 points
2.2.4 Carpet pad recycled (> 90% of all carpet pad) 2 points
2.2.5 Compaction -- Grinding, shredding, crushing, etc. 2 points
2.2.6 Material salvaged for reuse (6 points per level) 6-24 points

Compliance: Inspected (1: Foundation). Present receipt from entity and place into permit sleeve.

2.3 Deconstruction materials donated to a non-profit organization 3 points
Non-profits such as Resource 2000, Habitat for Humanity (via Construction Junction) and others will take deconstructed materials for reuse or resale, keeping the materials out of the waste stream while benefiting the community. Pitkin County Landfill will provide services for deconstructed materials as well.
Compliance: Self-certified (S). Present receipt from entity and place into permit sleeve.

2.4 Construction debris recycled 4-10 points
(4 points required of all new & PFAH construction projects)
Recycle two or more of the following scrap materials from the construction of a new project:

2.4.1 Wood scrap recycled/composted (1 point per level) 1-4 points
2.4.2 Metal scrap recycled (> 90%) 2 points
2.4.3 Cardboard recycled (1 point per level) 1-4 points

Compliance: Self-certified (S).

2.5 Reclaimed lumber 5-20 points
(5 points per level)
Install reclaimed lumber for 10-100% of lumber. Reclaimed lumber is the re-use of already harvested lumber. Lumber is recovered from old buildings as they are torn down or from logs that have been sitting at the bottom of rivers, lakes, and streams. These timbers are often re-milled, providing a stable, trouble-free, solid building material. Points can be awarded for reclaimed timber frames.
Compliance: Self-certified (S).

2.6 Reclaimed exterior trim/siding/ interior trim/flooring 5-20 points
(5 points per level)
Install reclaimed materials for 10 to 100% of all trim, siding and flooring areas.
Compliance: Self-certified (S).

2.7 Recycled-content carpeting 1-4 point
(1 point per level)
Install recycled content carpeting and carpet pad in 10%-100% of all carpeted area.
Compliance: Self-certified (S).

2.8 Recycled-content decking materials 1-4 points
(1 point per level)
Install recycled-content decking on 10%-100% of all decks.
Compliance: Self-certified (S).

2.9 Recycled-content sheathing 1-4 points
(1 point per level)
Install recycled-content sheathing on 10%-100% of all exterior walls.
Compliance: Self-certified (S).

2.10 Recycled-content or fiber cement siding 1-4 points
(1 point per level)
Install recycled-content or fiber cement siding on 10%-100% of all exterior walls.
Compliance: Self-certified (S).

2.11 Recycled-content ceramic tile 1-4 points
(1 point per level)
Install recycled-content tile in 10%-100% of all tiled area.
Compliance: Self-certified (S).

2.12 Recycled-content roofing (1 point per level)
Install recycled-content roofing on 10 to 100% of roof. Approved roofing materials include non-combustible tiles made of recycled wood fiber and concrete, recycled plastic panels, and recycled aluminum. Steel roofing with at least 70% recycled steel content is also permitted. All roofing materials must be hail-rated for Colorado.
Compliance: Self-certified (S).

2.13 Rapidly renewable content flooring 2-8 points
(2 points per level)

Install rapidly renewable flooring for 10-100% of all flooring. Rapidly renewable content materials include, but are not limited to: wool carpet, bamboo, sisal, linoleum, or cork.
Compliance: Self-certified (S).

2.14 Built in kitchen recycling center to include 2 or more bins 2 points
Install an indoor recycling center containing 2 or more bins in the kitchen area.
Compliance: Self-certified (S). Recycling center must be identified on plans.
(Ord. 03-09, Exh. A)

11.06.030 Land Use and Water Conservation.
3.1 Keep footprint simple for cost-effectiveness 1-3 points
Reduce waste and improve energy efficiency with a simple footprint as follows for:
3.1.1 Simple rectangle (no points for 3.1.2 or 3.1.3) 3 points
3.1.2 One "L" (no points for 3.1.1 or 3.1.3) 2 points
3.1.3 Rectangle with 1 rectangle protrusion (no pts for 3.1.1 or 3.1.2) 1 point
Compliance: Inspected (1: Foundation). Verification of footprint approved at plan review.

3.2 Xeriscape Landscaping
(2 points required of PFAH
projects) 1-5 points
(1 point for each measure
Applicants can earn points by selecting xeriscape measures.
3.2.1 Addition of organic material to and aeration of soil. Organic material can include, but is not limited to, manure and compost.
3.2.2 Reduction of turf areas. No more than 25% of landscaped area or 3000 square feet (which ever is smaller) can be covered with high water demand turf, such as Kentucky bluegrass. For the Aspen/Pitkin County climate more appropriate turf can include, native, low water, bunch grasses for fringe areas.
3.2.3 All planting beds mulched with wood chips at least 2" deep. (Except desert plantings.)
3.2.4 Appropriate use of low-water-demand plants. All plants to be grouped by water needs. 75% of the landscape must use low or moderate water demand plants.
3.2.5 Zoned irrigation system. Irrigation system must be zoned to deliver different amounts of water appropriate to the different plant zones. High-water zones should have irrigation controls that include timed devices and be surrounded on 75% of the perimeter with other water zones; no high-water zones should be immediately adjacent to large hardscapes such as driveways or streets, and for efficient irrigation, high water zones should not be installed in areas less than 15 feet vide. The remainder of the landscape should include low to moderate water demanding plants, and should be irrigated with drip irrigation, bubbler, or micro-spray systems.
Compliance: Self-Certified (S).

3.3 Water conservation by performance method 1-13 points
(2 points required of PFAH projects)

Showers and faucets: Points are available for accumulated water savings over code for listed fixtures and/or for dual flush toilets, composting toilets and/or single showerheads.

3.3.1 One point is earned for every one gallon per minute savings over code.

CODE: Showerhead = 2.5 qpm; Toilet = 1.6 gpm; Lav. faucet = 2.2 gpm; Kit. Faucet = 2.2 gpm

3.3.2 Dual flush toilet (1 point each, no credit for toilet in 3.3.1) 1-4 points

3.3.3 Composting toilet (2 points each, no credit for toilet in 3.3.1) 2-8 points

3.3.4 Only one showerhead in all showers 1 point

Compliance: Self-certified (S).

3.4 No irrigation system or install a drip irrigation 5 points

Do not install a permanent irrigation system or install drip irrigation system for these point.

Compliance: Self-certified (S).

3.5 Engineered/vegetated swales to filter storm water runoff 1-4 points (1 point per level)

Submit a diagram showing water drainage patterns (paths) from developed areas and a watercourse to vegetated swales. Water from developed areas should be diverted to vegetated swales to slow and filter storm water egress flow prior to leaving the site. For city projects, an engineered site drainage plan is required by code.

Compliance: Inspected (5: Final).

3.5 Planting trees above requirements 1-4 points

Applicant receives 1 point for each additional tree (beyond code requirements). Tree planting points are limited to a maximum of 10 total points (ten trees).

Compliance: Inspected (5: Final).

3.7 Save and reuse all topsoil and/or excavated fill on site 3-8 points

3.7.1 Topsoil from the site must be reused on site 3 points

3.7.2 Use 100% of excavated fill on-site 5 points

Compliance: Self-certified (S).

3.8 Site-rock reclaimed on site 2-8 Points (2 points per level)

Reclaim 10-100% of site rock on site. Site rock is used for rock applications i.e. retaining walls, landscaping, veneer applications, etc.

Compliance: Self-certified (S). Place letter from entity in permit sleeve.

3.9 Non-potable water used for irriga-

tion 4 points
Use systems, such as rainwater catchments, to save and store water on-site for use as irrigation car use ditch water if available. Verify compliance with local and state regulations prior to construction.
Compliance: Self-certified (S).

3.10 Pervious materials in "hardscape" areas 2-8 points
(2 points per level)
Construct 10-100% of "hardscape" areas (walkways, patios and driveways) with pervious material.
Compliance: Self-certified (S).
(Ord. 03-09, Exh. A)

11.06.040 Framing and Materials.
4.1 Incorporate optimal value engineering (OVE) framing techniques
(6 points required of PFAH
projects) 1-21 points
Use advanced framing techniques in design specifications and construction. Optimum value engineering (OVE) framing techniques include:

4.1.1	24" o.c. studs (2 points per level for all framing)	2-8 points
4.1.2	Two stud corners (1 point per level for all framing)	1-4 points
4.1.3	Efficient headers (1 point per level for all framing)	1-4 points
4.1.4	Stacking joists over studs with single top plates (1 point per level for all framing)	1-4 points
4.1.5	Build with two-foot increments (> 75% of footprint)	2 points

Compliance: Inspected (2: Framing).

4.2 Oriented Strand Board (OSB) in subfloors 1-4 points
(1 point per level)
Sub floors (10-100%) constructed with Oriented Strand Board (OSB).
Compliance: Inspected (2: Framing).

4.3 Oriented Strand Board in wall sheathing 1-4 points
(1 point per level)
Use Oriented Strand Board for 10%-100% of exterior wall sheathing applications.
Compliance: Inspected (2: Framing).

4.4 Formaldehyde free OSB 1-4 points
(1 point per level)
Use formaldehyde free OSB for 10%-100% of OSB wherever OSB is specified.
Compliance: Inspected (2: Framing).

4.5 Finger-jointed studs or engineered studs for wall framing 1-4 points
(1 point per level)

Use finger-jointed studs or engineered studs for 10%-100% of all framing.

Compliance: Inspected (2: Framing).

4.6 Finger-jointed interior trim 1-4 points
(1 point per level)
Use finger-jointed trim for 10%-100% of all interior trim.
Compliance: Self-certified (S).

4.7 FSC certified sustainably harvested lumber 2-8 points
(2 points per level for all exterior walls)
Use certified sustainably harvested lumber for 10%-100% of all exterior walls.
Compliance: Inspected (2: Framing). FSC certification placed in permit sleeve.

4.8 Other FSC certified products used 2-40 points
A maximum of 20 points can be counted in this section.
4.8.1 FSC cedar shakes (2 points per level for all roofing) 2-8 points
4.8.2 FSC trim & flooring (2 points per level for all trim & flooring) 2-8 points
4.8.3 FSC cabinets (2 points per level for all cabinets) 2-8 points
4.8.4 FSC doors (2 points per level for all doors) 2-8 points
4.8.5 Outdoor structures, decking and landscaping forms made with dimensional FSC lumber (2 points per level for all exterior structures) 2-8 points
Compliance: Inspected (5: Final). FSC certification placed in permit sleeve.

4.9 Engineered lumber used in floors and roofs (3 points required of PFAH projects)
(1 point per level for floor & roof framing) 1-4 points
Install engineered lumber in framing. Engineered lumber includes, but not limited to: wood "I" joists, engineered trusses, or other remanufactured wood fiber structural materials.
Compliance: Inspected (2: Framing). Engineered material must be specified on structural plans.

4.10 Engineered lumber used to replace 2x10s or 2x12s far structural bearing applications 2 points
Replace > 75% of all 2x10's and/or 2x12's with engineered lumber. Products include, but are not limited to: gluelam, microlam, laminated veneer lumber, and parallel strand lumber.
Compliance: Inspected (2: Framing). Engineered material must be specified on structural plans.

4.11 Structural alternatives to wood-frame construction 5-20 points
(5 points per level for exterior walls)
Construct 10-100% of exterior walls with alternative material, which may include, but is not limited to: adobe, rammed earth, and straw bale.

Compliance: Inspected (2: Framing). Applicant must provide plans or designs certified by a structural engineer and in compliance with the requirements of the City of Aspen/Pitkin County.

4.12 Structural Insulated Panels (SIP's) for exterior walls and/or roofs 1-4 points
(1 point per level for non-foundation building envelope
Structural insulated panels (SIP) used for exterior walls and/or roof.
Compliance: Inspected (2: Framing).

4.13 Factory built or panelized homes 1-4 points
(1 point per level)
Factory built or panelized construction used for exterior walls and/or roof. Resource-efficient techniques must be used in off-site construction.
Compliance: Inspected (2: Framing). Provide manufacturers' specifications outlining resource efficient techniques for plan review.

4.14 Recycled-content Insulated Concrete Forms (ICFs) 2 points
(> 75% of all ICFs)
Install insulated concrete forms with recycled-content such as post-consumer plastic or fly ash for foundation walls.
Compliance: Inspected (1: Foundation).

4.15 Insulated Concrete Forms (ICFs) 1-4 points
(1 point per level for foundation walls)
Install insulated concrete forms for 10-100% of foundation walls.
Compliance: Inspected (1: Foundation).

4.16 Non-asphalt based foundation waterproofing 2 points
Use non-asphalt based damproofing on all walls receiving damproofing.
Compliance: Self-certified (S).

4.17 Frost-protected shallow foundation 3-12 points
(3 points per level)
Use this design technology for 10-100% of foundation. Provide details as per references listed in the Resource Guide.
Compliance: Inspected (1: Foundation).

4.18 Twenty percent fly ash content in all structural concrete 1-4 points

(1 point per level of all structural concrete)
Specify 20% fly ash content in 10-100% of structural concrete.
Compliance: Inspected (1: Foundation). Batch report for fly ash content in permit sleeve.
(Ord. 03-09, Exh. A)

11.06.050 Energy Code Measures.

5.1 Performance exceeding the Aspen/Pitkin County Energy Code 1-10 points
(4 points required of PFAH projects)
One point is awarded for every 5% performance over "Pass" according to MEC check energy calculations. For example: For 10% better than code performance, 2 points are earned. No points can be earned if a snowmelt system and/or a heated pool or spa is incorporated into the project.
Compliance: Inspected (PC: Plan Check).

5.2 Window quilts or insulated window shades 1 point
(> 50% of all windows)
Install insulated window shades or window quilts on > 50% of the windows.
Compliance: Self-certified (S).

5.3 Mechanical equipment centrally located 1 point
Locate mechanical equipment within the middle third (?) of the distance of the longest horizontal diagonal.
Compliance: Inspected (PC: Plan Check).

5.4 Energy Star® House (5 Star Rating) 5 points
Obtain a "Final" rating certificate for the house by Energy Rated Homes of Colorado (E-Star™), with a score of at least 5 stars. An E-Star™ "From-Plans" rating certificate can be used with building permit application as per APECC compliance and shall be submitted with building permit application.
Compliance: Inspected (5: Final). E-Star™ "Final" rating certificate placed in permit sleeve.

5.5 Energy 10 Analysis 3 points
Use Energy 10 computer software to analyze the building's energy performance. Energy 10 cannot be used for APECC compliance i.e. Calres applications.
Compliance: Inspected (PC: Plan Check.

5.6 All ductwork sealed with mastic 1 point
Use mastic to seal all duct work; duct tape is not allowed.
Compliance: Inspected (4: Rough-in).

5.7 Insulate all hot water pipes 1 point

Insulate all hot water pipes with R-3 to all locations.

Compliance: Inspected (4: Rough-in).

5.8 Unvented crawlspace 3 points

Construct all crawlspaces according to guidelines in ASHRAE Book of Fundamentals, section 23.11. Provide details demonstrating an approved design.

Compliance: Inspected (3: Insulation).

5.9 Side-arm hot water heater 2 points

Install a side-arm or indirect heat coil from the boiler for domestic hot water.

Compliance: Inspected (5: Final).

5.10 Energy efficient boiler or furnace 4-9 points

Install a minimum 87% efficient boiler or modulating boilers or sequentially staged boilers for efficient operation when demand is loss than full heat load. For a forced-air system, install a 94% efficient furnace.

5.10.1 87% (min.) efficient boiler or 94% (min.) efficient furnace 4 points

5.10.2 Modulating or sequentially-staged boilers 5 points

Compliance: Inspected (5: Final). Equipment must be specified in the energy calculations.

5.11 Outdoor reset thermostat control 3 points

Install an outdoor reset thermostat to measure both outdoor air temperature and heating system supply temperature. The reset thermostat shall regulate heating supply water temperature for a more efficient heating system.

Compliance: Inspected (5: Final).

5.12 High efficiency gas hot water heater 4 points

Install a high efficiency (> 88%) gas hot water heater.

Compliance: Inspected (5: Final).

(Ord. 03-09, Exh. A)

11.06.060 Plumbing.

6.1 Tankless water heater 2 points

Install a tankless hot water heater. The device must have a variable-set thermostat and be sized to Manual J specifications.

Compliance: Inspected (5: Final).

6.2 "On-Demand" hot water switch 3 points

Install an "on-demand" hot water circulation device installed at the plumbing fixture furthest from the hot water heater. An automatic switch-activated device recirculates water from the fixture to the hot water heater through the cold water line, while providing instant hot water at the tap. Constant circulation hot water systems do not qualify for these points.

Compliance: Inspected (5: Final).

(Ord. 03-09, Exh. A)

11.06.070 Electrical.

7.1 Energy Star® rated appliances (2 points required of PFAH projects) 1-4 points

(1 point for each appliance)

Install an energy efficient dishwasher, clothes washer, refrigerator and/or freezer. "Energy Efficient" appliance designation is indicated on the required Department of Energy "Energy Star®" label.

Appliances shall be selected from the most efficient category in the top quarter of the Energy Star® list.

Compliance: Self-certified (S).

7.2 Clothesline 1 point

Install a permanent clothesline inside or outside.

Compliance: Self-certified (S).

7.3 Energy efficient clothes washers 3 points

Select a horizontal axis washer referenced in the Resource Guide for an extra point over the Energy Star® washer.

Compliance: Self-certified (S).

7.4 Compact Fluorescent (CFL) bulbs (1 point required of PFAH projects) 1-4 points

One point will be awarded for every four bulbs/lamps, up to a maximum of 4 points (points may be awarded for additions or existing square footage as well as new construction). T8 & T5 fluorescent bulbs also qualify.

Compliance: Self-certified (S).

7.5 Efficient light controls 2 points

Control at least 2 interior spaces with efficient lighting controls. Efficient lighting controls include occupancy/motion sensors and automatic daylight dimming controls.

Compliance: Self-certified (S).

(Ord. 03-09, Exh. A)

11.06.080 Insulation.

8.1 Wall insulation is 70% recycled material 2 points
(> 75% of thermal envelope)

Install insulation with at least 70% recycled content material in exterior walls. This includes, but is not limited to insulation made from recycled newsprint, wood fiber, agricultural waste, cotton or mineral wool.

Compliance: Inspected (3: Insulation). Insulation certificate placed in permit sleeve.

8.2 Roof insulation is 70% recycled material 2 points
(> 75% of thermal envelope)

Install insulation with at least 70% recycled content material in roof/attic. Insulation made from recycled materials: newsprint, wood fiber, agricultural waste, cotton or mineral wool can be used.

Compliance: Inspected (3: Insulation). Insulation certificate placed in permit sleeve.

8.3 Blown/sprayed insulation 2 points
(> 75% of thermal envelope)

Install blown/sprayed insulation in walls and/or roofs/attics. Points are also awarded for sections 8.1, 8.2 and/or 8.3.

Compliance: Inspected (3: Insulation). Insulation certificate placed in permit sleeve.

8.4 Formaldehyde-free Insulation 2 points
(> 75% of thermal envelope)

Install formaldehyde-free insulation in wall and/or roofs/attics. Points are also awarded for sections 8.1, 8.2 and/or 8.3.

Compliance: Inspected (3: Insulation). Insulation certificate placed in permit sleeve.

8.5 Single-paned windows upgraded (additions/remodels only) 1-10 points

Applicant must replace single-pane windows with double-glazed windows according to the following schedule: (Points are awarded for one category only.)

8.5.1	Double-glazed (max U-value = 0.40)	.5 point per window
8.5.2	Double-glazed with low-e coating (max U-value = 0.35)	1 point per window
8.5.3	Spectrally selective film applied to historic windows	.5 point per window

Compliance: Inspected (5: Final). The inspector must be able to clearly identify the U-value and window type by either the National Fenestration Rating Council's sticker or the Manufacturer's label.

8.6 Existing ceiling/roof insulated to R-38 or to capacity (additions/remodels only) 7 points

Increase ceiling/roof insulation in existing structure to R-38, where possible, which is generally intended to be in ceilings below attic space, with appropriate gable or soffit ventilation.
NOTE: If existing cathedral or flat ceilings are already insulated, it is not recommended to install more insulation in the cavity. Refer to the building code for ventilation requirements.
Compliance: Inspected (3: Insulation). An insulation certificate dated on or after the date of the building permit issuance must be placed in permit sleeve.

8.7 Existing walls insulated to capacity or rigid insulation added to exterior (additions/remodels only) 5 points
Insulate walls of existing wood frame houses to capacity. The existing home qualifies only if the walls have no exiting insulation or if the insulation has settled or degraded. Wall cavities with existing insulation can be blown full of new cellulose or fiberglass to increase the density, thereby increasing the R-value. Exterior walls can be wrapped with a minimum of 1" (R-4) rigid foam to increase R-value; two inches is recommended.
Compliance: Inspected (3: Insulation). An insulation certificate dated on nor after the date of the building permit issuance must be placed in permit sleeve.
(Ord. 03-09, Exh. A)

11.06.090 Heating, Ventilating, and Air Conditioning (HVAC).
9.1 Air destratification system 1 point
Design and install a system to reduce the stratification of warm air in residential living spaces. The systems are to be used on ceilings greater than 10 feet in height, or in stairwells. The .systems can include: blade-type ceiling fans, heat siphon fan units, return ducting mounted at the high point of ceilings, calculated air flow pathways, utilizing high- and low-placed operable windows/vents in passive solar systems, or other proven, documented systems designed to reduce stratification.
Compliance: Self-certified (S).

9.2 Natural cooling (1 point required of PFAH projects) 1-5 points
One point will be awarded for natural cooling systems for each measure described below:
9.2.1 Vertical shading devices for > 75% of east and west-facing glass.
9.2.2 Reflective films on > 90% of east and west-facing glass or use windows with a Solar Heat Gain Coefficient of less than 0.45.
9.2.3 Radiant heat-reflective barriers installed on a > 90% of roof applications.
9.2.4 Landscaping that shades > 75% of east and west facing glazing during the summer season (June-August).
9.2.5 Properly sized overhangs for > 75% of south facing glazing area. The formula below will result in window overhangs that shade 100% of south-facing window glazing on June 21st (the summer solstice).
Applicants should use this formula as a guide for sizing all south-facing overhangs.
D = H/F where:
D = Distance of overhang from face of glass

H = Height from bottom of glass to top of overhang

F = 3.38 (F is a value corresponding to the noon sun altitude angle on June 21st, which results in 100% window shading).

Compliance: Inspected (5: Final). For option 9.2.5 applicant must submit a calculation for "D" that demonstrates overhangs have been designed in accordance with the equation above for all south-facing glazing.

9.3 No mechanical air conditioning 5 points

Do not install compressed refrigerant systems for temperature control.

Compliance: Inspected (5: Final).

9.4 Evaporative cooling 1 point

Install an evaporative cooling system instead of a compressed refrigerant air conditioner. No points allowed for Section 9.3 above.

Compliance: Inspected (5: Final).

9.5 Air infiltration rate below specified level 2-12 points

(4 points required of PFAH projects)

Applicant must provide blower door test results identifying the Natural Air Change per Hour (NACH) rate for the house. Points are awarded for meeting the following air infiltration rates:

9.5.1 0.40 NACH 2 points

9.5.2 < 0.35 NACH (2 additional pts for every .05 NACH reduction) 4-12 points

Note: To earn points for air infiltration rates less than or equal to .35 NACH, mechanical ventilation that allows a minimum of .35 NACH must also be installed and inspected.

Compliance: Inspected (5: Final. Place blower door test result in permit sleeve. (Note: A blower door test is included in an E-Star™ rating.)

9.6 Whole-House Fan 2 points

Install a whole-house fan with an insulated cover. The fan must be mounted in a common area ceiling on the top floor of the house. The fan must have two speeds: low speed for continuous ventilation and high speed to vent the entire house quickly. Insulation, louvered vents, and an airtight seal are required to prevent air infiltration or exfiltration. Fans should be sized to produce between 4-5 air changes per hour at top speed within the home. Fans are rated in terms of the number of cubic feet per minute (CFM) of air they move. For design purposes, to determine the appropriate size fan for your project, use the following formula:

Minimal Fan Size (CFM) = Volume of House x 4-5 air changes/hour x 1/60

Volume of House = square footage of house x average ceiling height throughout house

Compliance: Inspected (5: Final).

9.7 Convert electric resistance heat to gas (additions/remodels only) 10 points

Replace an existing whole house electric resistance heating system with a natural gas heating system sized to accommodate the heating load of the entire house.

Compliance: Inspected (5: Final). Applicant must provide documentation that conversion occurred on or after the date of building permit issuance.

9.8 Replace electric water heater with a gas water heater (additions/remodels only) 4 points

Replace an electric hot water heater with a gas water heater sized to accommodate the water-heating load.

Compliance: Inspected (5: Final). Applicant must provide documentation that conversion occurred on or after the date of building permit issuance.

9.9 Hydronic heat 3 points

Install a system that distributes hot water heat in the floor or by radiators to two or more zones. No points can be awarded if points are taken for Section 9.7.

Compliance: Inspected (5: Final).

9.10 Air to air heat exchanger (heat recovery ventilation) 8 points

Install a mechanical heat recovery ventilation system that recovers at least 60% of the heat from exhausted indoor air.

Compliance: Inspected (5: Final)

Note: Use of this equipment complies with the requirements of Section 9.5 for houses with a NACH of less than .35.

(Ord. 03-09, Exh. A)

11.06.100 Solar.

10.1 Passive solar space heating 10-20 Points

Points for passive solar space heating are obtained for either Sections 10.1.4 or 10.1.5. Install south facing glazing to capture solar energy and meet the prerequisites in Sections 10.1.1, 10.1.2 and 10.1.3.

10.1.1 Prerequisite South facing glazing is oriented within 30 degrees of east of true south or 30 degrees west of true south direction.

10.1.2 Prerequisite Size overhangs so that south facing glazing is not shaded between 10 a.m. and 2 p.m. on a clear winter solstice day and is totally shaded (by the eaves) between 10 a.m. and 2 p.m. on the summer solstice (see Section 9.25 for sizing calculation).

10.1.3 Prerequisite Solar access is unimpeded under easements, covenants, or other private agreements among affected landowners that the Building Official finds are adequate to protect continued solar access for south facing glazing.

10.1.4 Sun tempered 10 points
Install south facing glass equivalent to 6-7% of total heated floor area.
Compliance: Inspected (PC: Plan Check). Provide calculation south facing glass vs. total heated floor area on plans.

10.1.5 Passive solar 20 Points
Install south facing glass equivalent to 7-12% of total floor area. Thermal mass must be added, either in the floor or walls, for each square foot of south facing glass over 7% of the floor area.

Types of thermal mass which can be used include: concrete floors, two layers of sheetrock, exterior sheet rock, gypcrete (2 inches), tile floors, masonry, thick plaster, adobe walls, stone fireplaces, etc.
Compliance: Inspected (PC: Plan Check). Provide calculation of percentage of south facing glass and amount of thermal mass required with plans.

10.2 Solar heating system for domestic hot water 10 points
Install a solar system, which includes rooftop or ground-mounted panels (collectors), to collect and distribute solar heat to a heat exchanger and/or insulated storage tank for domestic hot water supply. Systems may be active, using pumps, or they may be a thermo siphon-type.

The collectors must be mounted to achieve a minimum 85% Orientation Adjustment Factor (refer to the Solar Table in the Resource Guide), by the combination of slope angle from the horizontal and orientation versus true south. No points can be awarded if points are taken for Sections 10.3 or 10.4.

System size is dependent on number of bedrooms. Collector size and storage tank size:

1 bedroom -- 40 sq. ft. of solar collectors, 50 gallons storage;

2 bedrooms -- 48 sq. ft. of solar collectors, 60-65 gallons storage;

3 bedrooms -- 64 sq. ft. of solar collectors, 80 gallons storage;

4 bedrooms or more -- 96 sq. ft. of solar collectors, 120 gallons of storage.

Compliance: Inspected (5: Final). Show collector panels on plans and specify panel sizes. Solar hot water systems may be installed oft-site if approved by CORE Board.

10.3 Active solar pre-plumbing 2 points
The piping is to be installed in an interior wall and shall start in the mechanical room or near the area that will house the storage tank. The piping should terminate in an attic space under the roof that will support the solar collectors, and it shall be above the insulation for easy sighting. If there isn't an attic space, the piping shall end after penetrating the roof that will support the collectors. The two runs of piping shall be type M copper and be a minimum of 3/4 inch in diameter. All joints shall be soldered with lead-free solder.

The piping shall be insulated with a minimum R-6. The insulation shall run continuously without any exposed piping. Run three conductors thermostat wire from the mechanical room to the roof. No

points can be earned if snowmelt and/or a heated pool or spa is incorporated into the project. Pre-plumbed for future active solar retrofit. No points can be awarded if points are taken for Sections 10.2 or 10.4.
Compliance: Inspected (5: Final).

10.4 Active solar space heating, with solar domestic hot water 15 points
Install a solar system, which includes rooftop or ground-mounted panels (collectors), to distribute solar heat to a heat exchanger and/or insulated storage tank in order to meet part of the winter heating load. Area of solar collectors shall be 5-7% of total heated floor area. No more than 320 square feet of collector shall be installed on a house. The collectors for the solar system must be mounted with a minimum slope from the horizontal of 40 degrees. Also the position of the collectors must result in a minimum 90% Orientation Adjustment Factor by the combination of slope from the horizontal and orientation versus true south. See the Solar Table in the Resource Guide.

The system shall also be used to provide domestic hot water. Solar system design shall have at least 2 gallons of storage for every square foot of collector. If the system is not a drain-back system, the solar hot water system must have a means of dissipating or using solar heat in the summer months.

No points can be awarded if points are taken for Sections 10.2 or 10.3.
Compliance: Inspected (5: Final). System design shall be detailed in mechanical plans. Mounting angles specified on the plans. Solar hot water systems may be installed off-site if approved by CORE Board.
10.5 Solar-Generated
Electricity 10-80 points
Install a solar-generated electric or photovoltaic system for these points. Photovoltaic panels should be mounted facing south either on a roof or on the ground, at an angle, which provides 90% rated output as per the Orientation Adjustment Factor Table in the Resource Guide. Panels shall not be shaded between the hours 10 AM-2 PM year round. Systems must be grid-tied if the electric grid is to the property line. Applicants with houses over 5000 sq. ft. installing a photovoltaic system can receive a credit towards REMP fees.

10.5.1 System size of 1 KW
10 points

10.5.2 System size of > 1.5 KW
(5 additional pts for every .5
KW) 15-80 points
Compliance: Inspected (5: Final). Applicant must submit diagrams by a qualified architect, engineer, or designer certifying the KW capacity, mounting angle meets 90% rated output of solar electric power. Solar-electric systems may be installed off-site if approved by CORE Board.
(Ord. 03-09, Exh. A)

11.06.110 Indoor Air Quality.
11.1 Low VOC Interior point
(2 points required of PFAH

projects) 1-4 points
(1 point per level)
Paint 10%-100% of interior walls with low or no volatile organic compound (VOC) paint containing less than 250 grams VOC/liter.
Compliance: Self-certified (S).

11.2 Solvent-free construction adhesives 1 point
Use construction adhesives free of aromatic hydrocarbons or solvents, throughout the house.
Compliance: Self-certified (S).

11.3 High efficiency filter on furnace 2-5 points
Install a high efficiency filter on a forced-air furnace system. Any HEPA filter must be rated at 99% efficiency or higher.

11.3.1	High Efficiency pleated air filter	2 points
11.3.2	High Efficiency Particulate Air (HEPA) filter	5 points

Compliance: Inspected (5: Final).

11.4 Rough-in for radon mitigation 3 points
Install a four-inch PVC pipe under the floor (under slab or under crawlspace vapor barrier/mat) of new construction, for future evacuation of potential radon gas, as per EPA guidelines.
Compliance: Inspected (4: Rough-in)

11.5 Radon mitigation 5 points
Design and install radon mitigation system according to generally recognized practices to remove radon from under the slab and vent to a location away from pedestrian traffic areas, per EPA regulations. No points can be awarded if points are taken for Section 11.4.
Compliance: Inspected (5: Final)

11.6 Solvent-free low-toxic wood finishes 1-4 points
(1 point per level)
Finish 10%-100% of unfinished, interior wood with solvent-free, water-based, low-toxic finishes.
Compliance: Self-certified (S).

11.7 Low toxic floor coverings 1-4 points
(1 point per level)
Install chemical free carpeting, cork, linoleum or other low-toxic floor coverings for 10%-100% of all floor coverings.

Compliance: Self-certified (S).

11.8 Carbon monoxide detector 3 points
Install an electric (hard-wired) or AC/DC carbon monoxide detector, located according to manufacturer's recommendation.
Compliance: Inspected (5: Final)

11.9 Non-atmospheric vented (sealed combustion) gas furnace/boiler & water heater (5 points for each piece of equipment) 5-10 points
(5 points required of PFAH projects)
Install a non-atmospheric vented (sealed combustion) gas furnace, boiler, and/or water heater.
Compliance: Inspected (5: Final).

11.10 Sealed mechanical room 2 points
Mechanical equipment such as the furnace/boiler and water heater must be located in a separate room. The room should be sealed off with a continuous air-barrier, to minimize air infiltration from the mechanical area to the rest of the house and be insulated to R-11. Room must be fitted with an exterior solid-core door weather-stripped to exterior specifications.
Compliance: Inspected (3: Insulation).

11.11 Exhaust fan installed in attached garage or no attached garage 5 points
For attached garages, install an exhaust fan with a timer and/or sensor. Points can also be awarded if the garage is built detached from house.
Compliance: Inspected (5: Final).

11.12 Elimination of all particleboard inside envelope of house 5 points
Do not install any formaldehyde-based particleboard inside the house.
Compliance: Self-certified (S).

11.13 Elimination of all medium density fiberboard made with urea-formaldehyde inside envelope of house 3 points
Do not install any urea formaldehyde-based MDF inside the house.
Compliance: Self-certified (S).

11.14 All exposed particleboard sealed 2 points

Seal all exposed particleboard, such as cabinets, counter tops, stair treads, shelving, etc. with 3 coats of low VOC, non-toxic sealer.
Compliance: Self-certified (S).

11.15 American Lung Association
"Health House" 5 points
Obtain certification through "Health House", American Lung Association standard.
Compliance: Inspected (5: Final). Provide certification.

11.16 Mechanical ventilation
installed 4 points
Provide 15 cfm per person as per ASHRAE Standards. See also section 9.10 for alternative method for indoor air quality improvement with air-to-air heat exchanger.
Compliance: Inspected (5: Final).
(Ord. 03-09, Exh. A)

11.06.120 Innovative Points.
12.1 Innovative product or
design 1-20 points
Provide information demonstrating exceptional performance in environmental efficiency above the measures listed in this program.
Compliance: Inspected (PC: Plan Check / 5: Final). Product and/or the design must be approved by the Building Official.

12.2 Alternative fuel infra-
structure 5 points
Install infrastructure to support current or future alternative fuel vehicle use.
Compliance: Inspected (5: Final).

12.3 Location--Efficient
Project 3 points
Locate a project within a ¼ mile radius of a transit stop.
Compliance: Inspected (PC: Plan Check).

12.4 Ground source heat pumps with wind power 15 points
Purchase wind power for 50% of the estimated electricity consumed with a ground source heat pump for heating and cooling for 20 years. Wind powered electricity shall be purchased off-site through a payment to the REMP fund. Calculation of payment shall be as follows:
Annual electricity consumption (Kilowatt hours) x 50% x $.025/kilowatt hour X 20 years.
Compliance: Inspected (5: Final).

12.5 Electronic Submittal 1-2 points

12.5.1 Submit checklist form via email 1 point

12.5.2 Submit residential Deconstruction Plan via email 1 point

Compliance: Inspected (PC: Plan Check).

(Ord. 03-09, Exh. A)

Chapter 11.08

UNIFORM MECHANICAL CODE ADOPTED

Sections:

11.08.010 Adoption of the Uniform Mechanical Code, 1997 Edition.

Pursuant to the power and authority conferred by the laws of the state of Colorado, and Pitkin County, it is adopted as a portion of the building regulation for all of the unincorporated areas of Pitkin County, by reference thereto, the Uniform Mechanical Code, 1997 Edition, published by the International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, California, including the following Appendices A, B, C and D, and insofar as certain sections and parts are specifically amended as set out in Section 11.08.040, all as if fully set out herein. (Ord. 99-61 § 2 (part): prior code Title VII § 3-1)

11.08.020 Copies on file.

The Aspen/Pitkin County building division shall keep on file in its office in Aspen, Colorado, a full and complete copy of the Uniform Mechanical Code, 1997 Edition, as adopted by this chapter, and the copies shall be open to public inspection at all times during the regular business hours of the division. (Ord. 99-61 § 2 (part): prior code Title VII § 3-2)

11.08.030 Severability.

The provisions of this chapter are declared to be servable so that in the event any section or portion of any section hereof shall be declared by a court of competent jurisdiction to be unconstitutional, unlawful, or otherwise unenforceable, the remaining sections and provisions hereof not so found shall continue in full force and effect. (Ord. 99-61 § 2 (part): prior code Title VII § 3-3)

11.08.040 Amendments to Uniform Mechanical Code.

The following amendments to the Uniform Mechanical Code, 1997 Edition, and appendices as adopted in Section 11.08.010, are made and incorporated in such Uniform Mechanical Code.

A. Section 108.8, Liability, shall be amended to read as follows:

Section 108.8 Liability.

The building official, or his authorized representative charged with the enforcement of this code, acting in good faith and without malice in the discharge of his duties, shall not hereby render himself personally liable for any damage that may accrue to persons or property as a result of any act or omission in the discharge of his duties.

This code shall not be construed to relieve or lessen the responsibility of any person owning, operating or controlling any building or structure for any damage to persons or property caused by defects on or in such premises, nor shall the code enforcement agency, any employee thereof or Pitkin County be held as assuming any such responsibility or liability by reason of the adoption of this code or by the exercise of inspections authorized and carried out thereunder, or by the issuance of any permits or certificates issued pursuant to this code.

B. Section 110, Board of Appeals, is amended by the addition of the following paragraph to Section 110.1, General:

At the time of perfecting an appeal to the board of appeals, the appellant shall be required to pay an appeals fee of seventy-five dollars ($75.00), which fee may be returned to the appellant at the discretion of the Board of Appeals if the appellant is substantially sustained.

C. Section 111, Violations, is amended to read as follows:

Section 111.1 "General:"

(a) It shall be unlawful for any person, including an owner, occupant or builder, to erect, install, alter, repair, relocate, add to, replace, remove use or maintain any plumbing, gas or drainage piping or any fixture or water treating equipment in Pitkin County or cause same to be done contrary to or in violation of any of the provisions of this code. Maintenance of equipment which was unlawful at the time it was installed and which would be unlawful under this code shall constitute a continuing violation of this code.

(b) Any person, firm or corporation violating any of the provisions of the Uniform Mechanical Code, 1997 Edition, shall be deemed guilty of a misdemeanor, and each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this code is committed, continued or permitted, and upon conviction of any such violation such person shall be punished by a fine of not more than one thousand dollars ($1,000.00) or by imprisonment for not more than ninety (90) days or by both such fine and imprisonment.
(Ord. 99-61 § 2 (part): prior code Title VII § 3-4)

Chapter 11.12

NATIONAL ELECTRICAL CODE ADOPTED

Sections:

11.12.010 Adoption of the National Electrical Code.

Pursuant to the power and authority conferred by the laws of the state of Colorado and Pitkin County, Colorado, it is adopted as the electrical code of Pitkin County, the National Electrical Code, most current edition, published by the National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts, 02269, and the Uniform Administrative Code Provisions for the National Electrical Code, most current edition, published by the International Conference of Building Officials, 5360 Workman Mill Road, Whittier, California, 90601-2298, and insofar as certain sections and parts are specifically amended as set out in Section 11.12.040, all as if fully set out herein. (Ord. 99-61 § 2 (part): prior code Title VII § 4-1)

11.12.020 Copies on file.

The Aspen/Pitkin County building division shall keep on file in its office in Aspen, Colorado, a full and complete copy of the National Electrical Code, most current edition, as adopted by this chapter, and the copies shall be open to public inspection at all times during the regular business hours of the division. (Ord. 99-61 § 2 (part): prior code Title VII § 4-2)

11.12.030 Severability.

The provisions of this chapter are declared to be servable so that in the event any section or portion of any section hereof shall be declared by a court of competent jurisdiction to be unconstitutional, unlawful, or otherwise unenforceable, the remaining sections and provisions hereof not so found shall continue in full force and effect. (Ord. 99-61 § 2 (part): prior code Title VII § 4-3)

11.12.040 Amendments to National Electrical Code.

The following general amendments are made to the provisions of the Uniform Administrative Code Provisions for the National Electrical Code, most current edition, herein adopted by reference:

A. Section 203, Board of Appeals, is amended to read as follows:

Section 203.1 "General". In order to hear and decide appeals of orders, decisions or determinations made by the building official relative to the application and interpretation of this code, there shall be and is hereby created a Board of Appeals consisting of members who are qualified by experience and training to pass on matters pertaining to building construction and who are not employees of the jurisdiction. The building official shall be an ex officio member of and shall act as secretary to said board but shall have no vote on any matter before the board. The Board of Appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business, and shall render all decisions and findings in writing to the appellant with a duplicate copy to the building official.

At the time of perfecting an appeal to the Board of Appeals, the appellant shall be required to pay an appeal fee of seventy-five dollars ($75.00), which fee may be returned to the appellant at the discretion of the board of appeals, if the appellant is substantially sustained.

B. Section 301.2, Exempt Work. The following shall be deleted as exemptions for electrical permits:

12. Electrical wiring, devices, appliances, apparatus or equipment operating at less than 25 volts and not capable of supplying more than 50 watts of energy.

13. Low-energy power, control and signal circuits of Class II and III as defined in this code.

C. Section 304.1, Permit Fees, and Table 3-A, Electrical Permits Fees, are deleted and amended to read as follows:

Section 304.1 Where a permit is required by this article there shall be imposed an inspection fee as determined by the schedule adopted in C.R.S. 1973, Section 12-23-117, as it exists or may hereinafter be amended.

D. The following general amendments are made to the provisions of the National Electrical Code, most current edition, adopted by reference:

All 125 volt, single phase, 15 and 20 ampere receptacles to serve counter top spaces installed within six (6) feet of a sink, shall have ground-fault circuit interrupter protection for personnel.

All storage areas and similar rooms in Residential Occupancies shall have surface mounted lighting fixtures with a maximum lighting capability of 1 watt per square foot and 1 duplex outlet per 100 square feet of floor area or fraction thereof.

Article 210-52(d) Bathrooms. In dwelling units, at least one wall receptacle outlet shall be installed in bathrooms within 36 in. (914mm) of the outside edge of each basin. The receptacle outlet shall be located on a wall that is adjacent to the basin and within 12 in of the top of the basin. See Section 210-8(a)(l).

Receptacle outlets shall not be installed in a face up position in the work surfaces or countertops in a bathroom basin location.
(Ord. 99-61 § 2 (part): prior code Title VII § 4-4)

11.12.050 Compliance required--Penalty.

Any person, firm or corporation violating any of the provisions of the National Electrical Code, most current edition, shall be deemed guilty of a misdemeanor, and each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this code is committed, continued or permitted, and upon conviction of any such violation such person shall be punished by a fine of not more than one thousand dollars ($1,000.00) or by imprisonment for not more than ninety (90) days or by both such fine and imprisonment. (Ord. 99-61 § 2 (part): prior code Title VII § 4-5)

11.12.060 General requirements for light, power or heating installations.

No certificate of inspection shall be issued unless the electric light, power or heating installation and all other electrical apparatus connected with it are in strict conformity with all the provisions of this chapter and the code adopted by reference in this chapter and unless they are in conformity with the latest and most approved methods of construction for safety to life and property. The regulations laid down in the National Electrical Code, most current edition, of the National Fire Protection Association shall be prima facie evidence of such latest and most approved methods. It shall be unlawful to energize any electrical installation or equipment until a certificate of inspection has been issued. (Ord. 99-61 § 2 (part): prior code Title VII § 4-6)

11.12.070 Specifications for installations generally.

All service conductors outside a building shall be in approved conduits to the first point of overcurrent protection. The service cabinet shall be so arranged that it shall not be over six feet above a permanent floor. The cabinet may be located inside or outside the walls of buildings in the nearest accessible place to the point where the wires enter the building. Approved frangible padlocks may be placed on switch handles to prevent opening and closing by unauthorized persons with the prior approval of the electrical inspector and the fire marshal. Current metering devices shall be located outside the building or in a location always accessible to the electric utilities which complies with the National Electrical Code requirements for service panel access. (Ord. 99-61 § 2 (part): prior code Title VII § 4-7)

11.12.080 Recordkeeping required for building inspector.

The building department shall keep a record of all permits issued and inspections made under the provisions of this chapter. (Ord. 99-61 § 2 (part): prior code Title VII § 4-8)

11.12.090 Liability for damages.

This chapter shall not be construed to relieve from or lessen the responsibility or liability of any party owning, operating, controlling or installing any electrical equipment for damages to anyone injured or any property destroyed by reason of the performance of any inspection authorized by this chapter, or the issuance of any certificate of inspection under the provisions of this chapter. (Ord. 99-61 § 2 (part): prior code Title VII § 4-9)

11.12.100 Installation of meters.

No electric meter shall be installed within Pitkin County by any utility company without first having received the approval of the building inspector for such installation. (Ord. 99-61 § 2 (part): prior code Title VII § 4-10)

11.12.110 Electrical Permit Fees.

Inspection Fees

A. Residential: This fee (based on the enclosed living area only), includes construction of, or remodeling or addition to a: single family home, duplex, condominium, town house. If you are ONLY changing or providing a service and not wiring and portion on the above, see section B below for correct permit fee.

Not more than 1,000 square feet	$46.00
1,001 square feet and not more than 1,500 square feet	$51.75
1,501 square feet and not more than 2,000 square feet	$63.25
Per 100 square feet in excess of 2,000 square feet	$3.45

B. All Other Fees, including service hookups to modular homes and temporary construction meters, shall be computer on the dollar value of the electrical installation, including time and materials, whether they are provided by the contractor or the property owner. Such fees shall be computed as follows:

(See Section C for the fees for inspections in mobile home and travel parks)

Not more than $300.00	$46.00
$301.00 but not more than $2,000.00	$51.75

$2,001.00 but not more than $50,000.00	$19.55 per thousand or fraction thereof
$50,001.00 but not more than $500,000.00 or fraction thereof plus $57.50 base fee	$18.40 per thousand
More than $500,000.00 or fraction thereof plus $632.50 base fee	$17.25 per thousand
C. Mobile homes and travel trailer parks	$46.00 per space
D. Reinspections	$51.75

(Ord. 02-32, Exh. C)

Chapter 11.16

INTERNATIONAL PLUMBING CODE ADOPTED

Sections:

11.16.010 Adoption of the International Plumbing Code, 1997 Edition.

Pursuant to the powers and authority conferred by the laws of the state of Colorado and the Charter of Pitkin County, Colorado it is adopted and incorporated herein by reference as if fully set forth those regulations contained in the International Plumbing Code, 1997 Edition, published by the International Code Council, 5360 South Workman Mill Road, Whittier, California including the following Appendices B, E, G, and insofar as certain sections and parts are specifically amended as set out in Section 11.16.040, all as if fully set out herein. (Ord. 99-61 § 2 (part): prior code Title VII § 5-1)

11.16.020 Copies on file.

The Aspen/Pitkin County building division shall keep on file in its office in Aspen, Colorado, a full and complete copy of the International Plumbing Code, 1997 Edition, as adopted by this chapter, and the copies shall be open to public inspection at all times during the regular business hours of the division. (Ord. 99-61 § 2 (part): prior code Title VII § 5-2)

11.16.030 Severability.

The provisions of this chapter are declared to be servable so that in the event any section or portion of any section hereof shall be declared by a court of competent jurisdiction to be unconstitutional, unlawful, or otherwise unenforceable, the remaining sections and provisions hereof not so found shall continue in full force and effect. (Ord. 99-61 § 2 (part): prior code Title VII § 5-3)

11.16.040 Amendments to International Plumbing Code.

The following amendments to the International Plumbing Code, 1997 Edition and appendices as adopted in Section 11.16.010, are made and incorporated in such International Plumbing Code.

A. Section 103.5, Liability, shall be amended to read as follows:

103.5 Liability. The administrative authority, or his authorized representative charged with the enforcement of this code, acting in good faith and without malice in the discharge of enforcement of this code, acting in good faith and without malice in the discharge of his duties, shall not thereby render himself personally liable for any damage that may accrue to persons or property as a result of any act or omission in the discharge of his duties.

This code shall not be construed to relieve or lessen the responsibility of any person owning, operating or controlling any building or structure for any damage to persons or property caused by defects on or in such premises, nor shall the code enforcement agency, any employee thereof, or Pitkin County be held as assuming any such responsibility or liability by reason of the adoption of this code or by the exercise of inspections authorized and carried out thereunder, or by the issuance of any permits or certificates issued pursuant to this code.

B. Section 106.1, When Required, is amended by the addition of new subsections 106.1.1, 106.1.2 and 106.1.3 to read as follows:

Section 106.1.1 The issuance or granting of a permit or approval of plans and specifications shall not be deemed or construed to be a permit for, or an approval of, any violation of any of the provisions of this code. No permit presuming to give authority to violate or cancel the provisions of this code shall be valid, except insofar as the work or use which it authorized is lawful.

Section 106.1.2 The issuance or granting of a permit or approval of plans shall not prevent the Administrative Authority from thereafter requiring the correction of errors in said plans and specifications or from preventing construction operations being carried on thereunder when in violation of this code or of any other ordinance or from revoking any certificate of approval when issued in error.

Section 106.1.3 Every permit issued by the Administrative Authority under the provisions of this code shall expire by limitation and become null and void if the work authorized by such permit is not commenced within one hundred eighty (180) days. Before such work can be recommended, a new permit shall be first obtained to do so, and the fee therefor shall be one-half of the amount required for a new permit for such work provided no changes have been made, or will be made in the original plans and specifications for such work; and provided, further, that such suspension or abandonment has not exceeded one (1) year. No permit shall be extended more than once. In order to renew action on a permit after expiration, the permittee shall pay a new full permit fee.

C. Section 106.5.2, Fee Schedule, is amended to read as follows:

Plumbing Permit Fees.

Permit Issuance

1. For the issuance of each plumbing permit $25.00
2. For issuing each supplemental permit for which the original has not expired, been canceled or finaled $7.65

Unit Fee Schedule

(Note: The following do not include permit-issuing fee)

1. Fixtures and Vents

For each plumbing fixture or trap or set of fixtures on one trap (including water, drainage piping and backflow protection thereof) $10.30

For repair or alteration of drainage or vent piping, each fixture $5.00

2. Sewers, Disposal Systems and Interceptors

For each building sewer and each trailer park sewer $25.90

For each cesspool $39.15

For each private sewage disposal system $78.25

For each industrial waste pretreatment interceptor, including its trap and vent, excepting kitchen-type grease interceptors functioning as traps $20.90

Rainwater systems-per drain (inside buildings) $10.30

3. Water Piping and Water Heaters

For installation, alteration, or repair of water piping or water-

treating equipment, or both,
each $5.00

For each water heater including
vent $12.95

For vents only, see Table 3-C

4. Gas Piping Systems

For each gas piping system of one to five outlets $6.45

For each additional outlet over five, each $1.15

5. Law Sprinklers, Vacuum Breakers and Backflow Protection Devices

For each lawn sprinkler system
on any one meter, including backflow protection devices thereof $15.55

For atmospheric-type vacuum
breakers or backflow protection devices not included in Item 1:

1 to 5 devices $12.95

Over 5 devices, each $2.40

For each backflow-protection device other than atmospheric-type vacuum breakers:

2 inches (50.88 mm) and
smaller $12.95

Over 2 inches (50.8 mm) $25.90

6. Swimming Pools

For each swimming pool or spa:

Public pool $95.85

Public spa $63.80

Private pool $63.80

Private spa $31.80

7. Miscellaneous

For each appliance or piece of equipment regulated by the
Plumbing Code but not classed
in other appliance categories,
or for which no other fee is
listed in this code $10.30

Other Inspections and Fees:

1. Inspections outside of normal business hours, per hour $55.00

2. Reinspection fees assessed under provisions of Section 305.8 per inspection $55.00

3. Inspections for which no fee

is specifically indicated,
per hour $55.00

4. Additional plan review $60.00
required by changes, additions
or revisions to plans or to plans
for which an initial review has
been completed -- (minimum
charge-one half hour)

D. Section 108.4, Violations penalties, is amended to read as follows:

Section 108.4 Violation penalties. Any person who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter or repair plumbing work in violation of the approved construction documents or directive of the code official, or of a permit or certificate issued under the provisions of this code, shall be guilty of a misdemeanor, punishable by a fine of not more than one thousand dollars ($1,000.00) or by imprisonment not exceeding ninety days (90), or both such fine and imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

E. Section 109, Means of Appeal, is amended to read as follows:

Section 109.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the building official relative to the application and interpretation of this code, there shall be and is hereby created a Board of Appeals consisting of members who are qualified by experience and training to pass on matters pertaining to building construction and who are not employees of the jurisdiction. The building official shall be an ex officio member of and shall act as secretary to said board but shall have no vote on any matter before the board. The Board of Appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business, and shall render all decisions, and findings in writing to the appellant with a duplicate copy to the building official.

At the time of perfecting an appeal to the board of appeals, the appellant shall be required to pay an appeals fee of seventy-five dollars ($75.00), which fee may be returned to the appellant at the discretion of the board of appeals if the appellant is substantially sustained.

Section 109.2 Limitations of Authority. The board of appeals shall have no authority relative to interpretation of the admin-istrative provisions of this code nor shall the board be empowered to waive requirements of this code.

(Ord. 02-32, Exh. E; Ord. 99-61 § 2 (part): prior code Title VII § 5-4)

Chapter 11.20

UNIFORM HOUSING CODE ADOPTED

Sections:

11.20.010 Adoption of the Uniform Housing Code, 1997 Edition.

Pursuant to the power and authority conferred by the laws of the state of Colorado, and Pitkin County, it is adopted as a portion of the building regulation for all of the unincorporated areas of Pitkin County, by reference thereto, the Uniform Housing Code, 1997 Edition, published by the International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, California, of this title, all as if fully set out herein. (Ord. 99-61 § 2 (part): prior code Title VII § 6-1)

11.20.020 Copies on file.

The Aspen/Pitkin County building division shall keep on file in its office in Aspen, Colorado, a full and complete copy of the Uniform Housing Code, 1997 Edition, as adopted by this chapter, and the copies shall be open to public inspection at all times during the regular business hours of the division. (Ord. 99-61 § 2 (part): prior code Title VII § 6-2)

11.20.030 Severability.

The provisions of this chapter are declared to be servable so that in the event any section or portion of any section hereof shall be declared by a court of competent jurisdiction to be unconstitutional, unlawful, or otherwise unenforceable, the remaining sections and provisions hereof not so found shall continue in full force and effect. (Ord. 99-61 § 2 (part): prior code Title VII § 6-3)

11.20.040 Amendments to Uniform Housing Code.

A. Section 203, Housing Advisory and Appeals Board, shall be amended with the addition of the following paragraph to Section 203.1., General.

At the time of perfecting an appeal to the Board of Appeals, the appellant shall be required to pay an appeals fee of seventy-five dollars ($75.00), which fee may be returned to the appellant at the discretion of the Board of Appeals if the appellant is substantially sustained.

B. Section 204, Violations, is amended to read as follows:

No person, firm, or corporation, whether as owner, lessee, sublessee, or occupant, shall erect, construct, enlarge, alter and repair, move, improve, remove, demolish, equip, use, occupy, or maintain any building or premises, or cause or permit the same to be done, contrary to or in violation of any of the provisions of this code or any order issued by the building official hereunder.

Any person, firm or corporation violating any of the provisions of this code shall be deemed guilty of a misdemeanor, and each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this code is committed, continued, or permitted, and upon conviction of any such violation such person shall be punished by a fine of not more than three hundred dollars ($300.00) or by imprisonment for not more than ninety (90) days, or by both such fine and imprisonment.
(Ord. 99-61 § 2 (part): prior code Title VII § 6-4)

Chapter 11.24

UNIFORM CODE FOR THE ABATEMENT OF DANGEROUS BUILDINGS ADOPTED

Sections:

11.24.010 Adoption of the Uniform Code for the Abatement of Dangerous Buildings, 1997 Edition.

Pursuant to the power and authority conferred by the laws of the state of Colorado, and Pitkin County, it is adopted as a portion of the building regulation for all of the unincorporated areas of Pitkin County, by reference thereto, the Uniform Code for the Abatement of Dangerous Buildings, 1997 Edition, published by the International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, California, of this title, all as if fully set out herein. (Ord. 99-61 § 2 (part): prior code Title VII § 7-1)

11.24.020 Copies on file.

The Aspen/Pitkin County building division shall keep on file in its office in Aspen, Colorado, a full and complete copy of the Uniform Code for the Abatement of Dangerous Buildings, 1997 Edition, as adopted by this chapter, and the copies shall be open to public inspection at all times during the regular business hours of the division. (Ord. 99-61 § 2 (part): prior code Title VII § 7-2)

11.24.030 Severability.

The provisions of this chapter are declared to be servable so that in the event any section or portion of any section hereof shall be declared by a court of competent jurisdiction to be unconstitutional, unlawful, or otherwise unenforceable, the remaining sections and provisions hereof not so found shall continue in full force and effect. (Ord. 99-61 § 2 (part): prior code Title VII § 7-3)

11.24.040 Amendments to Uniform Code for the Abatement of Dangerous Buildings.

Section 205, Board of Appeals, shall be amended with the addition of the following paragraph to Section 105.1., General.

At the time of perfecting an appeal to the Board of Appeals, the appellant shall be required to pay an appeals fee of seventy-five dollars ($75.00), which fee may be returned to the appellant at the discretion of the Board of Appeals if the appellant is substantially sustained.
(Ord. 99-61 § 2 (part): prior code Title VII § 7-4)

Chapter 11.28

UNIFORM CODE FOR BUILDING CONSERVATION ADOPTED

Sections:

11.28.010 Adoption of the Uniform Code for Building Conservation, 1997 Edition.

Pursuant to the power and authority conferred by the laws of the state of Colorado, and Pitkin County, it is adopted as a portion of the building regulation for all of the unincorporated areas of Pitkin County, by reference thereto, the Uniform Code for Building Conservation, 1997 Edition, published by the International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, California, of this title, all as if fully set out herein. (Ord. 99-61 § 2 (part): prior code Title VII § 8-1)

11.28.020 Copies on file.

The Aspen/Pitkin County building division shall keep on file in its office in Aspen, Colorado, a full and complete copy of the Uniform Code for Building Conservation, 1997 Edition, as adopted by this chapter, and the copies shall be open to public inspection at all times during the regular business hours of the division. (Ord. 99-61 § 2 (part): prior code Title VII § 8-2)

11.28.030 Severability.

The provisions of this chapter are declared to be servable so that in the event any section or portion of any section hereof shall be declared by a court of competent jurisdiction to be un-constitutional, unlawful, or otherwise unenforceable, the remaining sections and provisions hereof not so found shall continue in full force and effect. (Ord. 99-61 § 2 (part): prior code Title VII § 8-3)

11.28.040 Amendments to Uniform Code for Building Conservation.

Section 203, Building Conservation Advisory and Appeals Board, shall be amended with the addition of the following paragraph.

At the time of perfecting an appeal to the board of appeals, the appellant shall be required to pay an appeals fee of seventy-five dollars ($75.00), which fee may be returned to the appellant at the discretion of the Board of Appeals if the appellant is substantially sustained.
(Ord. 99-61 § 2 (part): prior code Title VII § 8-4)

Chapter 11.32

ASPEN/PITKIN ENERGY CONSERVATION CODE

Sections:

11.32.010 Adoption of the 1999 Aspen/Pitkin Energy Conservation Code.

Pursuant to the powers and authority conferred by the laws of the state of Colorado, it is adopted as a portion of the building code for all of the unincorporated areas within Pitkin County, by reference thereto, the 1999 Aspen/Pitkin Energy Conservation Code, published by Aspen Pitkin County building Division, 130 South Galena Street, Aspen, Colorado, and except insofar as certain sections and parts are specifically amended as set out in Section 11.32.040, all as if fully set out herein. (Ord. 99-61 § 2 (part): prior code Title VII § 9-1)

11.32.020 Copies on file.

The Aspen/Pitkin County building division shall keep on file in its office in Aspen, Colorado, a full and complete copy of the 1999 Aspen/Pitkin Energy Conservation Code as adopted by this chapter, and the copies shall be open to public inspection at all times during the regular business hours of the division. (Ord. 99-61 § 2 (part): prior code Title VII § 9-2)

11.32.030 Severability.

The provisions of this chapter are declared to be servable so that in the event any section or portion of any section hereof shall be declared by a court of competent jurisdiction to be unconstitutional, unlawful, or otherwise unenforceable, the remaining sections and provisions hereof not so found shall continue in full force and effect. (Ord. 99-61 § 2 (part): prior code Title VII § 9-3)

11.32.040 Amendments to Energy Conservation Code.

The following amendments to the 1999 Aspen/Pitkin Energy Conservation Code are essential in order to maintain parity with new developments, partners, products, and techniques in the rapidly advancing field of energy conservation.

CHAPTER 1
ADMINISTRATION

SECTION 101 - TITLE, PURPOSE, AND SCOPE

101.1 Title. These regulations shall be known as the City of Aspen and Pitkin County Energy Conservation Code, may be cited as such and will be referred to herein as "this code".

101.2 Purpose. The purpose of this code is to provide minimum standards for the conservation of energy obtained from depletable sources by regulating and controlling the design, construction, quality of materials, location and maintenance of all buildings and structures within this jurisdiction and certain equipment specifically regulated herein.

101.3 Scope. The provisions of this code shall apply to all buildings for which an application for a building permit or renewal of an existing permit is filed or is required by law to be filed; and, that are either directly or indirectly conditioned by mechanical heating or mechanical cooling.

EXCEPTION: Qualified "Historic Buildings" as defined in Chapter 2, Section 209 of this Code. For the purpose of this exception only existing conditioned space and existing exterior building envelope elements are exempt. Building additions to or areas of complete demolition are subject to section 305 or 306. Snow melt and pool and spa installations shall be subject to section 311.

SECTION 102 - RESERVED

SECTION 103 - VIOLATIONS AND PENALTIES

103.1 Violations. It shall be unlawful for any person, including an owner, occupant or builder, to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause the same to be done, contrary to or in violation of any provisions of this code.

103.2 Penalties. A violation of any of the provisions of this code shall constitute a misdemeanor, punishable upon conviction by a fine not exceeding one thousand dollars (1,000.00), or by imprisonment not exceeding ninety (90) days, or both such fine and imprisonment. A separate offense shall be deemed committed on each day or portion thereof that the violation of any of the provisions of this code occurs or continues unabated after the time the limit set for abatement of the violation.

SECTION 104 - ORGANIZATION AND ENFORCEMENT

See Section 104 of the 1997 UBC.

SECTION 105 - BOARD OF APPEALS

See Section 105 of the 1997 UBC.

SECTION 106 - PERMITS

See Section 106 of the 1997 UBC.

106.1 Additional information for APECC Permits. Each application for a building permit subject to this code shall contain at least two copies of the documents listed below.

For all new buildings and outdoor heating system equipment regulated by this code the applicant shall file the appropriate plans. The plans and specifications shall indicate the features and performance specifications needed to comply with this code, and shall be approved by the Building Division by stamp and authorized signature.

Plans and specifications showing the characteristics of each feature, material, component, and manufactured device regulated by Chapter 3. If any characteristic of any such feature, material, component, or manufactured device is changed before the final inspection, the change shall be submitted to the Building Division.

106.2 Responsibility for Signing. Each document described in Section 106.1 shall be signed by the person responsible for its preparation. If more than one person has responsibility for building design or construction, each person may prepare and sign the document or documents applicable to that portion of the design or construction for which the person was responsible; alternatively, the person with chief responsibility for design or construction may prepare and sign the document for the entire design or construction.

106.3 Issuance of APECC permits. No permits shall be issued for any construction unless the Building Division determines in writing that the construction is designed to comply with the requirements of this code in effect on the date on which the permit application was submitted.

If a building permit has expired and there has been no construction, the Building Division shall not issue a new permit unless the Building Division determines in writing that the construction is designed to comply with the requirements of this code in effect on the date the new permit is applied for.

SECTION 107 - FEES

The APECC review and compliance fee shall be 10% of the associated permit fee. The minimum review and compliance fee for building permits shall be $20.00. Upon written request of the applicant, refunds may be approved for up to 80% of the fee paid for APECC or REMP. No refund will be approved when requested more than 180 days after the Certificate of Occupancy or Letter of Completion is issued for the permit. Any additional energy use regulated by this code and installed without approval shall be charged double the applicable fee.

SECTION 108 - INSPECTIONS

See Section 108 of the 1997 UBC

108.1 Energy Conservation Code in-spections. The Building Division shall inspect new construction to determine whether it is consistent with approved plans and specifications, and complies with this code. Certificates of Occupancy or Letter of Completion shall not be issued until such consistency is verified.

SECTION 109 - CERTIFICATES OF OCCUPANCY
See Section 109 of the 1997 UBC

SECTION 110 - CALCULATION METHODS AND ALTERNATE COM-PONENT PACKAGES
110.1 Public Domain Computer Program. In addition to the present approved public domain computer programs, the Chief Building Official may, upon written application or his/her own motion, approve additional public domain computer programs that may be used to demonstrate that the proposed building designs meet the requirements of this code.

The Chief Building Official shall ensure that user's manuals or guides for each approved program are available.

CHAPTER 2
DEFINITIONS AND ABBREVIATIONS

SECTION 201 - DEFINITIONS
201 General. For the purpose of this code certain terms, phrases, words, and their derivatives shall be construed as specified in this chapter and elsewhere in this code where specific definitions are provided. Terms, phrases, and words used in the singular include the plural and the plural the singular. Terms, words, and phrases used in the masculine gender include the feminine and the feminine the masculine.

Terms, phrases, and words not found in Chapter 2 shall be defined as in Chapter 2 of the 1997 UBC. Where terms, phrases, and words are not defined in any of the references above, they shall be defined as specified in Webster's Third New International Dictionary of the English Language, Unabridged (1986 ed.), unless context requires otherwise.

SECTION 202 -- A
ACCESSIBLE is having access thereto, but which first may require removal or opening of access panels, doors, or similar obstructions.

ADDITION is any change to a building that increases conditioned floor area and/or conditioned volume.

ALTERATION is any change to a building's water heating system, space conditioning system, or envelope that is not an addition.

ALTERNATIVE CALCULATION METH-ODS (ACMs) are the City of Aspen/Pitkin County Energy Code Public Domain Computer Programs, one of the City of Aspen/Pitkin County Energy Code Simplified Calculation Methods, or any other calculation method approved by the Chief Building Official.

APPLIANCE EFFICIENCY REGULA-TIONS is NAECA.

APPROVED BY THE CHIEF BUILDING OFFICIAL means approval under Uniform Building Code.

APPROVED CALCULATION METHOD (See ALTERNATIVE CALCULATION METHODS).

SECTION 203 -- B
BUILDING is any structure or space for which a permit is sought.

BUILDING DIVISION means Aspen/Pitkin Community Development Department, Building Division.

BUILDING ENVELOPE is the ensemble of exterior and demising partitions of a building that enclose conditioned space.

SECTION 204 -- C
CERTIFYING ORGANIZATION is an independent organization recognized by the Chief Building Official to certify manufactured devices for performance values in accordance with procedures adopted by the Chief Building Official.

CHIEF BUILDING OFFICIAL is the officer or other designated authority charged with the administration and enforcement of this code, or the Building Official's duly authorized representative.

CLIMATE ZONE is the geographic areas of Pitkin County for which the Aspen/Pitkin Regional Building Division has jurisdiction.

COEFFICIENT OF PERFORMANCE (COP) -- HEAT PUMP is the ratio of the rate of heat delivered to the rate of energy input, in consistent units, for a complete heat pump system under designed operating conditions.

COMPLIANCE APPROACH means any one of the allowable methods by which design and construction of a building may be demonstrated to be in compliance with Chapter 3.

CONDITIONED FLOOR AREA (CFA) is the floor area (in square feet) of enclosed conditioned space on all floors of a building, as measured at the floor level of the exterior surfaces of exterior walls enclosing the conditioned space.

CONDITIONED SPACE is space in a building that is either directly conditioned or indirectly conditioned.

CONDITIONED VOLUME is the total volume (in cubic feet) of the conditioned space within a building.

COVERED PRODUCT is an appliance regulated by the efficiency standards established under the National Appliance Energy Conservation Act (NAECA), 42 U.S.C. Section 6291 of 1987.

CRAWL SPACE is an unfinished space immediately under the first floor of a building adjacent to grade less than 5'6" in height.

SECTION 205 -- D

DECORATIVE GAS APPLIANCE is a gas appliance that is designed or installed for visual effect only, cannot burn solid wood, and simulates a fire in a fireplace.

DEGREE DAY, HEATING is a unit, based upon temperature difference and time, used in estimating fuel consumption and specifying nominal annual heating load of a building. For any one day, when the mean temperature is less than 65°F, there exist as many degree days as there are Fahrenheit degrees difference in temperature between the mean temperature for the day and 65°F. The number of degree days for use with this code is 8,850.

DEMISING PARTITIONS AND WALLS are barriers that separate conditioned space from enclosed unconditioned space.

DESIGN CONDITIONS are the parameters and conditions used to determine the performance requirements of space conditioning systems. Design conditions for determining design heating and cooling loads are specified in Section 305.1.7.2.

DESIGN HEAT LOSS RATE is the total calculated heat loss through the building envelope under design conditions.

SECTION 206 -- E

EFFICIENT BUILDING PROGRAM is the program adopted by the City of Aspen and Pitkin County regulating design, landscape, materials and equipment.

ENCLOSED SPACE is space that is substantially surrounded by solid surfaces.

ENERGY BUDGET is the maximum amount of source energy that a proposed building, or portion of a building, can be designed to consume, calculated with the approved procedures specified in Chapter 3.

ENERGY CONSERVATION STAND-ARDS means City of Aspen/Pitkin County Energy Conservation Code, Chapter 3.

ENERGY OBTAINED FROM DEPLET-ABLE SOURCES is electricity purchased from a public utility, or any energy obtained from coal, oil, natural gas, or liquefied petroleum gases.

ENERGY OBTAINED FROM NONDE-PLETABLE SOURCES is energy that is not energy obtained from depletable sources.

ENFORCING AGENCY is the City of Aspen and Pitkin County Community Development Departments, Building Divisions.

ENTIRE BUILDING is the ensemble of all enclosed space in a building, including the space for which a permit is sought, plus all existing conditioned and unconditioned space within the structure.

ENVELOPE means building envelope.

ERHC E-STARTM A program provided through Energy Rated Homes of Colorado which rates the energy efficiency of a structure.

EXFILTRATION is uncontrolled outward air leakage from inside a building, including leakage through cracks and interstices, around windows and doors, and through any other exterior partition or duct penetration.

EXISTING BUILDING is a building constructed prior to the adoption of the Aspen/Pitkin Energy Conservation Code dated February 12, 1996.

EXPOSED THERMAL MASS is mass that is directly exposed (uncovered) to the conditioned space of the building.

EXTERIOR FLOOR/SOFFIT is a horizontal exterior partition, or a horizontal demising partition, under conditioned space. For residential occupancies, exterior floors also include those on grade.

EXTERIOR PARTITION is an opaque, translucent, or transparent solid barrier that separates conditioned space from ambient air or space that is not enclosed. For low-rise residential occupancies, exterior partitions also include barriers that separate conditioned space from unconditioned space, or the ground.

EXTERIOR ROOF/CEILING is an exterior partition, or a demising partition, that has a slope less than 60 degrees from horizontal, that has conditioned space below, and that is not an exterior door or skylight.

EXTERIOR ROOF/CEILING AREA is the area of the exterior surface of exterior roof/ceilings.

EXTERIOR WALL is any wall or element of a wall, or any member or group of members, which defines the exterior boundaries or courts of a building and which has a slope of 60 degrees or greater with the horizontal plane. An exterior wall or partition is not an exterior floor/soffit, exterior door, exterior roof/ceiling, window, skylight, or demising wall.

EXTERIOR WALL AREA is the area of the opaque exterior surface of exterior walls.

SECTION 207 -- F

FENESTRATION PRODUCT is any transparent or translucent material plus any sash, frame, mullions, and dividers, in the envelope of a building, including, but not limited to: windows, sliding glass doors, french doors, skylights, curtain walls, and garden windows.

FIREPLACE is a hearth and fire chamber or similar prepared place in which a solid fuel fire may be burned, as defined in UBC Section 3102.2 and as further clarified in UBC Section 3102.7 these include but are not limited to factory-built fireplaces, masonry fireplaces, and masonry heaters (solid fuel burning device).

SECTION 208 -- G

GAS HEATING SYSTEM is a natural gas or liquefied petroleum gas heating system.

GAS LOG is a self-contained, freestanding, open-flame, gas-burning appliance consisting of a metal frame or base supporting simulated logs, and designed for installation only in a vented approved for burning wood device.

GLAZING (See FENESTRATION PRO-DUCT).

GROSS EXTERIOR ROOF AREA is the sum of the skylight area and the exterior roof/ceiling area

GROSS EXTERIOR WALL AREA is the sum of the window area, door area, and exterior wall area.

GROUND SOURCE HEAT PUMP is a refrigeration system that extracts heat from one substance and transfers it to another in the same system for a beneficial purpose.

SECTION 209 -- H

HABITABLE STORY is a story that contains space in which humans may work or live in reasonable comfort, and that has at least 50 percent of its volume above grade.

HISTORIC BUILDING is a building or structure that has been designated by official action of the legally constituted authority of this jurisdiction as having special historic or architectural significance.

SECTION 210 -- I
INDIRECTLY CONDITIONED SPACE is enclosed space that is not directly conditioned.

INFILTRATION is uncontrolled inward air leakage from outside a building, or unconditioned space, including leakage through cracks and interstices, around windows and doors, and through any other exterior or demising partition or pipe or duct penetration.

SECTION 213 -- L
LPG is Liquefied Petroleum Gas.

SECTION 214 -- M
MANUFACTURED DEVICE is any heating, cooling, ventilation, water heating, refrigeration, cooking, plumbing fitting, insulation, door, fenestration product, or any other appliance, device, equipment, or system subject to this code.

MECHANICAL HEATING is raising the temperature within a space for the purpose of maintaining human comfort using electric resistance heaters, fossil fuel burners, heat pumps, or other systems that require energy from depletable sources.

MODELING ASSUMPTIONS are the conditions (such as weather conditions, thermostat settings and schedules, internal gain schedules, etc.) that are used for calculating a building's annual energy consumption and that are in the Alternative Calculation Methods Manuals.

MODEL ENERGY CODE is the current document of the same name developed and supported by the U.S. Department of Energy.

SECTION 215 -- N
NAECA is the National Appliance Energy Conservation Act of 1987 (Public Law 100-12).

NATIONAL FENESTRATION RATING COUNCIL is the NFRC, certified products directory, published by NFRC, incorporated, 1300 Spring Street, Suite 120, Silver Spring, Maryland, 20910.

NONRESIDENTIAL BUILDING is any building that is not a residential building.

NON-VENTED ROOF/CEILING ASSEM-BLY as referenced in this code is an assembly that complies with the policy adopted by the Building Division for the control of moisture in the interior insulation of the roof and has been approved by the building official.

SECTION 216 -- O

OPERABLE SHADING DEVICE is a device at the interior or exterior of a building or integral with a fenestration product, which is capable of being operated, either manually or automatically, to adjust the amount of solar radiation admitted to the interior of the building.

OPTIMAL OVERHANG is an overhang that completely shades the glazing at solar noon on August 21 and substantially exposes the glass at solar noon on December 21.

SECTION 217 -- P

SECTION 219 -- R

RADIANT SLAB is in-floor hydronic heat installed in a solid thermal mass.

RAISED FLOOR is a floor (partition) over a crawl space, or an unconditioned space, or ambient air.

READILY ACCESSIBLE is capable of being reached quickly for operation, repair, or inspection, without requiring climbing or removing obstacles, or resorting to access equipment.

RELATIVE SOLAR HEAT GAIN is the ratio of solar heat gain through a fenestration product (corrected for external shading) to the solar heat gain from an unshaded single light of 1/8 inch thick clear double strength glass under the same set of conditions, excluding the effects of mullions, frames and sashes.

RENEWABLE ENERGY MITIGATION PROGRAM is designed to offset the environmental impacts and greenhouse gas emissions produced by noncomplying exterior snowmelt, pool, and spa systems and by homes exceeding 5,000 square feet. Fees collected by the program will be used to fund energy efficiency and renewable energy installations in the City of Aspen and Pitkin County and, if necessary, purchase wind energy from wind generators in Colorado or Wyoming. It will be administered by the Board of Directors of the Community Office for Resource Efficiency (CORE).

REPAIR is the reconstruction or renewal of any part of an existing building for the purpose of its maintenance.

REPAIR OR REPLACEMENT GLAZING is glazing without a frame, associated with a repair that is not an addition or alteration.

RES CHECK is the current version of a prescriptive compliance method that was developed by the U.S. Department of Energy.

RESIDENTIAL BUILDING is a one or two family dwelling or a town home not more than three stories.

SECTION 220 -- S

SERVICE SNOWMELT HEATER is an appliance designed to heat a liquid for the purpose of melting ice and snow.

SERVICE WATER HEATER is an appliance designed primarily to supply hot water for sanitary purposes for human occupancy, other than for comfort heating.

SERVICE WATER HEATING is heating of water for sanitary purposes for human occupancy, other than for comfort heating.

SHADING COEFFICIENT (SC) is the ratio of the solar heat gain through a fenestration product to the solar heat gain through an unshaded 1/8 inch thick clear double strength glass under the same set of conditions. For nonresidential, high-rise residential, and hotel/motel buildings, this shall exclude the effects of mullions, frames, sashes, and interior and exterior shading devices.

SITE BUILT WINDOWS are those products which are field constructed from elements, including framing, glazing, and weather-stripping, not sold together as a fenestration product.

SITE SOLAR ENERGY is natural daylighting, or thermal, chemical, or electrical energy derived from direct conversion of incident solar radiation at the building site.

SKYLIGHT is glazing having a slope less than 60 degrees from the horizontal with conditioned space below.

SKYLIGHT AREA is the area of the surface of a skylight, plus the area of the frame, sash, and mullions.

SNOWMELT is the mechanical melting of snow on driveways, walkways, etc.

SOLID FUEL BURNING DEVICE shall mean a burning device designed for solid fuel combustion so that usable heat is derived for the interior of a building, and includes, without limitation, solid fuel-fired stoves, wood stoves or any nature, fireplaces, pellet stoves, solid fuel-fired cooking stoves, combination fuel furnaces or boilers which burn solid fuel, or any other device used for the burning of solid combustible material. Solid fuel burning devices do not include gas log fireplaces, decorative gas appliances or electrical appliances.

SOURCE ENERGY is the energy that is used at a site and consumed in producing and in delivering energy to a site, including, but not limited to, power generation, transmission, and distribution

losses, and that is used to perform a specific function, such as space conditioning, lighting or water heating. Table 3-1 contains the conversion factors for converting site to source energy.

SPA is a unit primarily designed for therapeutic use which is not drained, cleaned or refilled for each individual. It may include, but not limited to, hydrojet circulation, hot water, cold water, mineral baths, air induction bubbles, or any combination thereof. Industry terminology for spa includes, but is not limited to, therapeutic pool, hydrotherapy pool, whirlpool, hot spa, etc.

SPA POOL-PRIVATE is a pool, not under medical supervision, that incorporates water jets and/or an aeration system used for hydro massage in connection with a single family residence, and available only to family of the householder and his private guests.

SPA POOL-PUBLIC is a pool, not under medical supervision, that incorporates water jets and/or an aeration system used for hydro massage.

SPACE CONDITIONING SYSTEM is a system that provides either collectively or individually heating, ventilating, or cooling within or associated with conditioned spaces in a building.

SWIMMING POOL is any constructed or prefabricated pool used for swimming or bathing, twenty-four (24) inches or more in depth.

SWIMMING POOL-PRIVATE is all constructed pools which are used as a swimming pool in connection with a single family residence, and available only to family of the householder and his private guests.

SWIMMING POOL-PUBLIC is any constructed pool other than a private swimming pool.

SYSTEM is a combination of equipment, controls, accessories, interconnecting means, or terminal elements, by which energy is transformed to perform a specific function, such as space conditioning, or service water heating.

SECTION 221 -- T

THERMAL MASS is solid or liquid material used to store heat for later heating use or for reducing cooling requirements.

THERMAL RESISTANCE (R) is the resistance of a material or building component to the passage of heat in (hr ? ft2 ? °F)/Btu.

SECTION 222 -- U

UBC is the 1997 edition of the Uniform Building Code.

UMC is the 1997 edition of the Uniform Mechanical Code.

UNCONDITIONED SPACE is enclosed space within a building that is not condi-tioned space.

U-VALUE is the overall coefficient of thermal transmittance of a construction assembly, in Btu/(hr ? ft2 ? °F), including air film resistance at both surfaces.

SECTION 223 -- V

VAPOR RETARDER is a material that has a permeance of one perm or less and that provides re-sistance to the transmission of water vapor.

SECTION 224 -- W

WATER STORAGE TANK is an unfired or indirectly heated water tank used for storage of hot water.

WINDOW is glazing that is not a skylight.

WINDOW AREA is the area of the surface of a window, plus the area of the frame, sash, and mul-lions.

WINDOW WALL RATIO is the ratio of the window area to the gross exterior wall area.

WOOD HEATER is an enclosed wood burning appliance used for space heating and/or domestic water heating, and which meets the requirements of the City of Aspen or Pitkin County Environ-mental Health Department.

WOOD STOVE (See WOOD HEATER).

SECTION 227 -- Z

ZONE, SPACE CONDITIONING is a space or group of spaces within a building with sufficiently similar comfort conditioning requirements so that comfort conditions can be maintained throughout the zone by a single controlling device.

CHAPTER 3
ENERGY CONSERVATION STANDARDS

SECTION 301 - ALL OCCUPANCIES – GENERAL PROVISIONS

301.1 Buildings covered. The provisions of Chapter 3 apply to all buildings (see Section 101.3) and to all snowmelt, private swimming pool and spa heating system equipment (see Section 101.3.1).

301.2 Parts of Buildings Covered. The provisions of Chapter 3 apply to the building envelope, space conditioning systems, water heating systems, snowmelt systems, and private pool and spa heating systems of buildings covered by this code.

EXCEPTIONS:

1. Packaged portable spas =< 64s q. ft. of surface water area listed by a nationally recognized testing laboratory with a minimum R12 cover.

2. Areas critical to pedestrian ingress, egress, or life safety may be snowmelted, with approval from the Chief Building Official, on a case by case basis.

301.3 Floors and Habitable Stories.

1. Only habitable floors that have at least 50 percent of their volume above grade as defined in the UBC shall be counted in determining how many habitable stories a building has.

2. All conditioned space in a floor shall comply with this code, whether or not the floor is above grade and whether or not it is habitable.

301.4 Mixed Occupancy. When a building is designed and constructed for more than one type of occupancy, the space for each occupancy shall meet the provisions of this code applicable to that occupancy.

EXCEPTION: If one occupancy constitutes at least 90 percent of the conditioned floor area of the building, the entire building may comply with the provisions of this code applicable to that occupancy.

301.5 Certification Requirements for Manufactured Devices. This code limits the installation of the following manufactured devic es to those that have been certified by their manufacturer to meet or exceed minimum specifications or efficiencies adopted by the Chief Building Official:

1. Central air-conditioning heat pumps and other central air conditioners.
2. Combination equip ment: space heating and cooling, or space heating and water heating.
3. Fenestration products.
4. Gas space heaters.
5. Insulating materials.
6. Oil fired storage water heaters.
7. Other heating and cooling equipment.
8. Plumbing fixtures.
9. Pool heaters.
10. Refrigerators, refrigerator-freezers, and freezers.
11. Room air conditioners.
12. Slab floor perimeter insulation.
13. Snowmelt Boilers.
14. Solid fuel burning devices.

15. Water heaters.
16. Ground Source Heat Pumps.

301.5.1 The certification status of any such manufactured device may be confirmed only by reference to:

1. A directory published or approved by the Chief Building Official; or
2. A copy of the application for certification from the manufacturer and the letter of acceptance from the Building Division staff; or
3. Written confirmation from the publisher of a division-approved directory that a device has been certified; or
4. A division-approved label on the device; or
5. The National Appliance Energy Conservation Act of 1987.
6. The National Fenestration Rating Council.

NOTE: Section 301.5 does not require a builder, designer, owner, operator, or enforcing agency to test any certified device to determine its compliance with minimum specifications or efficiencies adopted by the Chief Building Official.

SECTION 302 - CALCULATION OF SOURCE ENERGY CONSUMPTION.

When calculating source energy consumption, consumption of electricity, natural gas, fuel oil, and LPG shall be converted to BTUs at the rates shown in Table 3-1.

Table 3-1

Source Energy Conversion Rates

Energy Source	BTU per unit	Consumption
Electricity	10.239	BTU/kilowatt-hour
Natural Gas	100,000	BTU/therm/100 at 14.73 psia
Fuel Oil	138,400	BTU/gallon
LPG	91,080	BTU/gallon

SECTION 303 - MANDATORY REQUIREMENTS FOR SERVICE SNOW-MELT SYSTEM AND EQUIPMENT.

303.1 Any service snowmelt system or equipment shall meet the following:

1. Pilot light prohibited.
2. R-10 insulation or equivalent R-10 concrete barrier foil shall be installed under the area to be snowmelted.
3. No idling of heating equipment allowed.
4. Electric resistance heating is prohibited.

5. Controls installed for shutting off the snowmelt system (when temperature is above freezing or moisture is not present) by using an automatic temperature and surface moisture sensor.

6. Snowmelt areas to be shown on site-plan.

7. Energy calculations shall include snowmelt energy use as per Section 311.

EXCEPTIONS:

1. Roof Heating Cable.

2. Areas critical to pedestrian ingress, egress, or life safety may be snowmelted, with approval from the Chief Building Official, on a case by case basis.

SECTION 304 - MANDATORY REQUIREMENTS FOR SOLID FUEL BURNING DEVICES.

304.1 Certification. Any solid fuel burning device may be installed only if the manufacturer has certified that the device complies with all of the applicable requirements of this section and has been determined by the Aspen/Pitkin Environmental Health Department to have emissions less than or equal to 4.1 gm/hr when tested according to the most stringent test methods for certifying airtight wood stoves or pellet stoves.

SECTION 305 - RESIDENTIAL MANDATORY FEATURES AND DEVICES

Any new residential building shall meet the requirements of this Section.

305.1 Ceilings. The opaque portions of ceilings separating conditioned spaces from unconditioned spaces or ambient air shall meet the requirements of either 1 or 2 below:

1. Ceilings shall be insulated between wood framing members with insulation resulting in an installed thermal resistance of R-30 or greater for the insulation alone.

ALTERNATIVE: Insulation which is not penetrated by framing members may meet an R-value equivalent to installing R-30 insulation between wood framing members and accounting for the thermal effects of framing members.

2. The weighted average U-value of ceilings shall not exceed the U-value that would result from installing R-30 insulation between wood framing members in the entire ceiling and accounting for the effects of framing members.

When loose fill insulation is installed, the minimum installed weight per square foot shall conform with the insulation manufacturer's installed design weight per square foot at the manufacturer's labeled R-value.

305.2 Walls. The opaque portions of frame walls separating conditioned spaces from unconditioned spaces or ambient air shall meet the requirements of either 1 or 2 below:

1. Framed walls shall be insulated between framing members with insulation having a thermal resistance of R-19. Framed foundation walls of heated basements or heated crawl spaces shall be in-

sulated above the adjacent outside ground line with insulation having a thermal resistance of at least R-19.

ALTERNATIVE: Insulation which is not penetrated by framing members may meet an R-value equivalent to installing R-19 insulation between wood framing members and accounting for the thermal effects of framing members.

2. The weighted average U-value of walls shall not exceed the U-value that would result from installing R-19 insulation between wood framing members and accounting for the effects of framing members.

305.3 Floors. Concrete raised floors over unconditioned space shall be insulated to an installed thermal resistance of at least R-19. All other raised floors separating conditioned space from unconditioned space shall meet the requirements of either 1 or 2 below:

1. Floors shall be insulated between wood framing members with insulation having an installed thermal resistance of R-19 or greater.
2. The weighted average U-value of other floor assemblies shall not exceed the U-value that would result from installing R-19 insulation between wood framing members and accounting for the effects of framing members.

ALTERNATIVE: Raised floor insulation may be omitted if the foundation walls are insulated to an installed thermal resistance of R-19, and a vapor barrier is placed over the entire floor of the crawl space, and a mechanical ventilation system that meets the requirements of UBC Section 2317.7 is installed.

305.4 Installation of Fireplaces, Decorative Gas Appliances, and Gas Logs.

305.4.1 Wood burning fireplaces are prohibited in non-attainment areas of the City of Aspen and Pitkin County.

305.4.2 If a masonry or factory-built wood burning fireplace is installed, it shall have the following:

1. CLOSEABLE metal or glass doors covering the entire opening of the firebox;
2. A combustion air intake to draw air from the outside of the building directly into the fire box, which is at least 6-square inches in area; and
3. A flue damper with a readily accessible control.

EXCEPTION: When a gas log, log lighter, or decorative gas appliance is installed in a fireplace, the flue damper shall be blocked open as required by the manufacturer's installation instructions or Section 803 1997 UMC.

305.4.3 If a gas log or gas insert is installed in an existing masonry fireplace, it shall have the following:

1. CLOSEABLE metal or glass doors covering the entire opening of the firebox or approved mechanical damper;

2. Flue damper permanently block open per 1997 UMC Section 901.2;

3. A combustion air intake to draw air from the outside of the building directly into the fire box, which is at least 6-square inches in area.

305.5. Infiltration Barrier. If an infiltration barrier is installed to meet the requirements of Sections 306 and 307, it must have an air porosity of less than 5 cubic feet per hour per square foot per inch of mercury pressure difference when tested in accordance with the requirements of ASTM E-283-84. If a vapor barrier functions as an infiltration barrier it shall be located on the conditioned side of the exterior framing.

305.6 Vapor Retarders. A vapor retarder with 1 Perm or less shall be installed on the conditioned space side of all insulation in all exterior walls and ceilings to protect insulation from condensation. Penetrations of vapor barriers shall be sealed at the edge of the penetration. Recessed lights that penetrate vapor barriers shall be "air tight".

EXCEPTIONS: Vapor retarders shall not be installed:

1. On approved non-vented insulated roof ceiling assemblies. See Section 215.
2. On below grade walls.

305.7 Space Conditioning Equipment.

305.7.1 Building design heat loss rate and design heat gain rate, shall be determined using a method based on any one of the following:

1. The American Society of Heating, Refrigeration, and Air-conditioning Engineers (ASHRAE) Handbook and Product Directory, Equipment Volume (1988), Systems and Applications Volume (1987), and Fundamentals Volume (1989), or

2. The Sheet Metal Air Conditioning Contractors National Association (SMACNA) Load Calculation Manual, or

3. The Air Conditioning Contractors of America (ACCA) Manual J.

The design heat loss rate and design heat gain rate, are two of the criteria that shall be used for equipment sizing and selection.

NOTE: Heating Systems must meet the minimum heating capacity required by currently adopted building code.

305.7.2 Design Conditions. For the purpose of sizing the space conditioning (HVAC) system, the indoor design temperatures shall be 68ºF for heating and 78ºF for cooling. The outdoor heating de-

sign temperature shall be 15°F. The outdoor cooling design dry bulb temperature shall be 81°F. The outdoor cooling design wet bulb temperature shall be 59°F.

305.7.3 Source Energy Considerations -- Electric resistance space heating is not permitted, since the efficiency is approximately 35% based on source energy. Special uses will be considered for approval by the Building Code official.

305.8 Setback Thermostats. All heating and/or cooling systems other than solid fuel burning devices shall have an automatic thermostat with a clock mechanism or other setback mechanism approved by the Chief Building Official that shuts the system off during periods of non-use and that allows the building occupant to automatically set back the thermostat set points for at least 2 periods within 24 hours.

EXCEPTION: In-floor hydronic heating contained in thermal mass need not comply with this requirement.

305.9 Pipe and Tank Systems.

305.9.1 Hot water tanks shall be externally wrapped with insulation having an installed thermal resistance of R-12 or greater or have internal insulation of at least R-16 and a label on the exterior of the tank showing the insulation R-value.

305.9.2 The piping for all space conditioning and service water heating systems, in unconditioned spaces; and, the first five feet of hot and cold water pipes from the storage tanks of non-recirculating systems shall be insulated in accordance with Table 3-2.

Table 3-2

Pipe Insulation Requirements Minimum R-Value		
System	Pipe Diameter	
	Less than or equal to 2"	Greater than 2"
Domestic Hot Water	R-4	R-6
Hydronic Heating Supply Lines	R-4	R-6
Cooling Sys-	R-3	R-4

tems (pipes below 55°F)		

EXCEPTION: The following piping does not have to be thermally insulated:

1. Factory-installed piping within space conditioning equipment

2. Piping that conveys fluids that have a design operating temperature range between 55ºF and 105ºF.

3. Gas piping, cold domestic water piping, condensate drains, vents, or waste piping.

4. Where the heat gain of heat loss to or from piping without insulation will not increase building source energy use.

NOTE: Where the Chief Building Official approves a water heater calculation method for a particular water heating recirculation system, piping insulation requirements shall be those specified in the approved calculation method.

305.10 Slab Edge Insulation. Concrete slab edges shall be insulated to an installed thermal resistance of at least R-10. Material used for slab edge insulation shall meet the following minimum specifications:

1. Water absorption rate no greater than 0.3 percent when tested in accordance with ASTM-C-271.

2. Water vapor permeance no greater than 2.0 perm/inch when tested in accordance with ASTM-E-96-90.

3. Concrete slab perimeter insulation must be protected from physical damage and ultra violet light deterioration.

SECTION 305.11 Ducts and Fans.

305.11.1 Air handling duct systems shall be installed and sealed with mastic to meet the requirement of UMC Section 604. Portions conveying conditioned air shall either be insulated to a minimum installed level of R-4.2 (or any higher level required by UMC Section 604) or be enclosed entirely in conditioned space. Zone III shall be used for the purpose of this Section, unless another Zone is approved by the Chief Building Official.

305.11.2 All duct insulation product R-values shall be based on insulation only (excluding air films, vapor barriers, or other duct components) and tested C-values at 75°F mean temperature at the installed thickness, in accordance with ASTM C518-85 or ASTMC177-85.

305.11.3 The installed thickness of duct insulation used to determine its R-value shall be determined as follows:

1. For duct board, duct liner and factory-made rigid ducts not normally subjected to compression, the nominal insulation thickness shall be used.

2. For duct wrap, installed thickness shall be assumed to be 75 percent (25 percent compression) of nominal thickness.

3. For factory-made flexible air ducts, the installed thickness shall be determined by dividing the difference between the actual outside diameter and nominal inside diameter by 2.

305.11.4 Insulated flexible duct products installed to meet this requirement must include labels, in maximum intervals of 10 feet, showing the thermal performance R-value for the duct insulation itself (excluding air films, vapor retarders, or other duct components), based on the tests in Section 305.11.2 and the installed thickness determined by Section 305.11.3.3.

305.11.5 All fan systems, regardless of volumetric capacity, that exhaust air from the building to the outside shall be provided with backdraft or automatic dampers to prevent air leakage.

305.11.6 All gravity ventilating systems that serve conditioned space shall be provided with either automatic or readily accessible, manually operated dampers in all openings to the outside except combustion inlet and outlet air openings and elevator shaft vents.

EXCEPTION: The requirements do not apply to ducts and fans integral to combustion air ducts of solid fuel burning devices or fireplaces.

SECTION 305.12 - Mandatory Require-ments for Outside Private Pool and Spa Heating Systems and Equipment.

305.12.1 Certification by Manufacturers. Any pool or spa heating system or equipment may be installed only if the manufacturer has certified that the system or equipment has all of the following:

1. A readily accessible on-off switch, mounted on the outside of the heater, that allows shutting off the heater without adjusting the thermostat setting; and

2. No electric resistance heating; and

EXCEPTION:

Listed package units with fully insulated enclosures, and with tight-fitting covers that are insulated to at least R-12 up to maximum size of 64 square feet.

3. No pilot light; and

4. High efficiency circulation pump motors; and

5. For summer pools, maximum capacity of heating system shall be no more than 405,000 BTU input.

305.12.2 Installation. Any pool or spa heating system or equipment shall be installed with all of the following:

1. At least 36" of pipe between the filter and the heater, to allow for the future addition of solar heating equipment; and

2. Directional inlets and time switches for pools.

2.1 The pool shall have directional inlets that adequately mix the pool water; and

2.2 The circulation pump shall have a time switch that allows the pump to be set to run in the off-peak electric demand period, and for the minimum time necessary to maintain the water in the condition required by applicable public health standards.

EXCEPTION: Where applicable public health standards require on-peak operation.

3. Outdoor pools or spas with a surface area > 800 ft2 shall not be heated.

EXCEPTION: Pools with heating systems deriving 50% of energy from nondepletable sources as per Section 311.4 or through REMP fees as per Section 311, with a maximum area up to 1600 ft2.

SECTION 305.13 - Natural and Liquid Propane Gas Central Furnaces, Cooking Equipment, Private Pool and Spa Heaters and Snowmelt:

305.13.1 Pilot Lights Prohibited. Any natural or liquid propane gas system or equipment shall not have a continuously burning pilot light.

EXCEPTION: Listed decorative gas appliances.

SECTION 305.14 - Mandatory Requirements for Exterior Doors, Windows, and Fenestration Products.

305.14.1 Any manufactured doors or windows or manufactured fenestration product may be installed only if the manufacturer has certified to the Chief Building Official, or if an independent certifying organization approved by the Chief Building Official has certified that the product complies with all of the applicable requirements of this subsection.

305.14.1.1 Manufactured doors and windows shall have air infiltration rates not exceeding those shown in Table 3-3, when tested according to ASTM E283-91 at a pressure differential of 75 pascals or 1.57 pounds/ft2.

305.14.1.2 Manufactured fenestration products shall:

1. Be certified as to their overall U-values as rated in accordance with the National Fenestration Rating Council's NFRC-100-91 (June 28, 1991), or in accordance with "Table 5, Overall Coefficients of Heat Transmission of Various Fenestration Products", as it appears on pages 27.6 and 27.7 of the ASHRAE 1993 Fundamentals Hand-book, or in accordance with a default table method approved by the Chief Building Official; and

2. Have a temporary label, not to be removed before inspection by the enforcement agency, listing the certified U-values, and

3. Have a permanent label listing the U-value, certifying organization, and rating procedures or a label to allow tracking back to the original certification information on file with the certifying organization.

Table 3-3

MAXIMUM AIR INFILTRATION RATES		
Windows cfm/ft2 of operable sash crack	TYPE	RATE
	All	0.37
Residential Doors cfm/ft2 of door area	swinging, sliding	0.37
All Other Doors cfm/ft2 of door area	sliding, swinging (single door)	0.37
	swinging (double door)	1.0

305.14.2 Site constructed doors, skylights, and windows, including, but not limited to, field manufactured doors, skylights, and windows, shall be caulked between the door, skylights, or window and the building, and shall be weather-stripped.

EXCEPTION: Unframed glass doors and fire doors.

SECTION 305.15 - Mandatory Requirements for Joints and Other Openings. Joints and other openings in the building envelope that are potential sources of air leakage shall be caulked, gasketed, weather-stripped, or otherwise sealed to limit infiltration and exfiltration.

SECTION 305.16 - Mandatory Requirements for Ground Source Heat Pump Installations. All Ground Source Heat Pump installations (closed water source loop designs or closed ground loop designs) must meet the following requirements:

305.16.1 Coefficient of Performance of the system must be at least 3 as per American Research Institute standard performance method (ARI 330) or ISO 13256-1 (for hydronic systems use an output temperature of 115 degrees F) or equivalent procedure. Ground source heat pump installations must be designed and installed without an electric resistance heat system. Ground source systems used for exterior energy uses (Section 311) must be integrated into the building's energy system. Peak loads for interior space conditioning can be met with a propane or natural gas boiler/furnace (minimum efficiency 85%).

305.16.2 Ground loop mechanical system must be installed by a certified IGSHPA (International Ground Source Heat Pump Association) contractor. Commissioning of equipment shall be conducted to flush the piping of contaminants and verify the system is absorbing (heating) or rejecting (cooling) energy at the conditions tested against manufacturer's performance tables.

305.16.3 Ground loop system must be designed by a CGD (Certified GeoExchange Designer by Association of Energy Engineers) or licensed professional engineer with IGSHPA certification. Documentation for system design shall include:
installer and designer certifications,
heat load calculations,
loop design performed with industry recognized packaged software,
header design configuration to minimize pressure drop through loops,
and specified minimum and maximum entering water temperature with verification that specified equipment can operate with this range of entering water temperature,
loop configuration must be sited and sized properly on site plan.

305.16.4 Ground loops, either horizontally installed or vertically drilled must be permitted by the Division of Water Resources. Ground loops must be drilled by a licensed water well construction contractor or installed by a contractor certified by the State Engineer. Reference for Geothermal (Ground Source) Installation Rules -2CCR 402-10 in the records section of DWR. Piping for ground loops and grout shall meet approved standards and specifications of IGSHP.

305.16.5 Open loop ground source heat pumps are not permitted.

SECTION 345.17 - Compliance Methods. All residential buildings shall meet all of the following:

1. The mandatory requirements.
2. Either the performance standards or the prescriptive standards.

SECTION 306 - RESIDENTIAL PRESCRIPTIVE COMPLIANCE

306.1 Buildings that are certified to receive an E-STARTM rating of at least 80 points are exempt from meeting the prescriptive requirements.

EXCEPTION: Buildings that contain snowmelt, pool, or spa systems.

306.2 Buildings comply with the prescriptive or tradeoff standards if they meet the requirements of MEC CHECK, version 2.07 Chapter 2 of MEC CHECK is omitted and replaced by the mandatory requirements of Section 305.

306.3 The prescriptive standards do not allow the inclusion of snowmelt. (Snowmelt requires compliance demonstration with the performance computer standard.)

306.4 The prescriptive standards do not allow the inclusion of pool and spa energy use. (Pool and spas require compliance demonstration with the performance computer standard).

306.5 Heat transfers within the same building to adjacent spaces that are not covered by the permit and that are independently provided with space conditioning may be considered to be zero. Heat transfers to spaces not yet provided with space conditioning may be modeled as separate unconditioned zones, or as outside conditions.

SECTION 307 - RESIDENTIAL PER-FORMANCE COMPLIANCE

307.1 Performance Standards. A building complies with the performance standard if its combined calculated depletable energy use for water heating (Section 307.1.1), space conditioning (Section 307.1.2), snowmelt (Section 307.1.3), and pool and spa heating (Section 307.1.4), is less than or equal to the combined maximum allowable energy use for both water heating, and space conditioning, even if the building fails to meet either the water heating, or space conditioning, budget alone.

EXCEPTION: Buildings that are certified to meet the requirements of the E-STAR™ Program with a rating of at least 86 points and do not have snowmelt, swimming pool or spa heating system equipment comply with the performance standard and are eligible for 100% rebate of the energy permit fees.

307.1.1 Water Heating Budgets. The budgets for water heating systems are those calculated from Equation 3-1.

Equation 3-1

ANNUAL WATER HEATING BUDGET (AWB):
For dwelling units less than 2500 ft2: AWB (kBtu/yr.-ft2) = (14000) + 4.85 CFA For dwelling units equal to or greater than 2500 ft2: AWB (kBtu/yr.-ft2) = (26125) CFA Where CFA = the building's conditioned floor area in square feet.

The annual water heating budget calculated from Equation 3-1 may be met by either:

1. Calculating the energy consumption of the proposed water heating system using an approved calculation method or

2. Installing any gas storage type non-recirculating water heating system that does not exceed 50 gallons of capacity, meets the minimum standards specified in the Appliance Efficiency Standards, and either has an R-12 external insulation wrap or has been determined by the Chief Building Official to meet the annual water heating budget calculated from Equation 3-1 without an external insulation wrap.

307.1.2 Space Conditioning Budget. Space conditioning budgets shall be the calculated consumption of energy from depletable sources required for space conditioning in buildings in which the requirements for the prescriptive compliance (Section 306) are installed. To determine the space conditioning budget, use an approved calculation method.

307.1.3 Snowmelt Energy Use (not a budget). Snowmelt energy use shall be the consumption of snowmelt system and equipment energy from depletable sources used for melting snow. Snowmelt energy use for dwelling units is 34,425 BTU/yr/sq. ft. at 100% equipment efficiency. Snowmelt energy use shall be added to the subtotal source energy consumption calculated as per the requirements of Section 307.2.2.2. In the case of Ground Source Heat Pump, the efficiency of the system is 100% as source energy.

EXCEPTIONS:

1. Roof heating cable.

2. Areas critical to pedestrian ingress, egress, or life safety may be snowmelted, with approval from the Chief Building Official, on a case by case basis.

307.1.4 Pool and Spa Energy Use (not a budget). Pool and spa energy use shall be the consumption of energy from depletable sources used for heating pools and spas. Pool and spa energy use for dwelling units is calculated as follows:

Pools intended for year round use shall calculate their energy consumption at 332 KBTU/yr./sq. ft. at 100% equipment efficiency.

Pools intended for summer use only shall calculate their energy consumption at 29 KBTU/yr./sq. ft. at 100% equipment efficiency.

Spas shall calculate their energy consumption at 430 KBTU/yr./sq. ft. at 100% equipment efficiency.

Pool and spa energy use shall be adjusted for efficiency of boiler and shall be added to the subtotal source energy consumption calculated as per the requirements of Section 307.2.2.2. In the case of ground source heat pumps, the efficiency of the system is 100% as source energy.

307.2 Compliance Demonstration Requirements for Performance Standards. The application for a building permit shall include documentation which demonstrates, using an approved calculation method, the compliance version of the City of Aspen/Pitkin County Energy Conservation Code's Public Domain Computer Program calculation method approved by the Chief Building Official. All

new buildings shall be designed so that its total source energy consumption from depletable energy sources does not exceed the combined water heating and space conditioning budgets.

Supplemental energy for outdoor uses is available from Renewable Energy Mitigation Program as per REMP Section 311 and/or from on-site renewable energy systems integrated with the building energy systems as per Section 311.4. The use of supplemental energy is limited to annual consumption of 240,000,000 BTU per parcel.

EXCEPTIONS:

1. Roof heating cable.
2. Areas critical to pedestrian ingress, egress, or life safety may be snowmelted, with approval from the Chief Building Official, on a case by case basis.

307.2.1 To demonstrate compliance, the applicant's documentation shall determine the combined energy budget for the proposed building by adding the following:

1. The annual water heating budget calculated from Equation 3-1 (kBtu/yr.-ft2); and
2. The annual space conditioning budget (kBtu/yr.-ft2) as determined pursuant to Section 307.1.2.

307.2.2 Calculate the source energy consumption subtotal of the proposed building, using the proposed building's actual glazing area, orientation, and distribution, and its actual energy conservation and other features, including the actual water heating, space conditioning equipment and duct conditions and locations. To determine the subtotal source energy consumption, use an approved calculation method. Add snowmelt energy use and pool and spa energy use to obtain total source energy consumption as per Sections 307.1.3 and 307.1.4.

Include in the calculation the energy required for building cooling even if the building plans do not indicate that air conditioning will be installed.

307.2.3 The proposed building design complies if the total source energy consumption pursuant to Section 307.2.2 is equal to or less than the combined energy budget established in Section 307.2.1.

307.3 Required Calculation Assumptions. The Chief Building Official shall publish the assumptions and calculation methods it used to develop the standards for residential buildings, including those specified in Section 307.

In determining the water heating and space conditioning budgets and calculating the energy use of the proposed building design, snowmelt energy use, and private pool and private spa energy use, the applicant shall use only these assumptions and calculation methods approved by the Chief Building Official.

307.3.1 Such assumptions shall include, but not be limited to, the following:

1. The operating conditions regarding indoor temperature; occupancy loads and schedules; equipment loads and operation schedules, including lighting, HVAC, and miscellaneous electrical; and outdoor weather conditions;

2. The physical characteristics of building pressurization, interior heat transfer, film coefficients, shading coefficient and operation of installed shading devices, ground temperatures, and the method of determining slab heat loss;

3. The applicable modeling procedures for the assumptions, design conditions, and physical characteristics described in Section 307.2.

EXCEPTION: The Chief Building Official may approve alternative schedules, assumptions, and performance modeling procedures that may be used in lieu of those described in Section 307.3.1, provided such alternatives do not alter the efficiency level required by these standards.

307.3.2 The total calculated annual energy consumption shall include all energy used for comfort heating, comfort cooling, ventilation for the health and comfort of occupants, service water heating, snowmelt, and private pool and private spa heating.

EXCEPTIONS:

1. Roof heating cable.

2. Areas critical to pedestrian ingress, egress, or life safety may be snowmelted, with approval from the Chief Building Official, on a case by case basis.

307.3.3 Heat transfers within the same building to adjacent spaces that are not covered by the permit and that are independently provided with space conditioning may be considered to be zero. Heat transfers to spaces not yet provided with space conditioning may be modeled as separate unconditioned zones, or as outside conditions.

307.3.4 The total calculated annual energy consumption need not include energy from any nondepletable sources, regardless of the purpose of the energy consumed.

307.3.5 The U-value of installed manufactured fenestration products shall meet the requirements of Section 305.14. The U-value of site-built fenestration products shall be those published by the Chief Building Official, based on an approved method that determines the area weighted average U-value for generic types of products.

307.3.6 Shading coefficients for interior devices used with fenestration products shall be taken from Tables 25, 26, and 27 of Chapter 27 of the ASHRAE Handbook of Fundamentals (1989), except that the minimum shading coefficient that shall be assumed for any interior shading device is 0.66.

SECTION 308 - RESIDENTIAL ADDITIONS

308.1 Additions -- Scope. Additions to existing residential buildings shall meet the requirements of Sections 303, 304, and 305; and the requirements of this section (308.2 or 308.3 below).

308.2 Prescriptive Approach. Additions to existing buildings shall meet the requirements of either 1, 2, or 3 below, or Section 306.

1. Additions up to 50 square feet shall not exceed 40 square feet of fenestration plus the fenestration area that was removed by the addition, and the U-value shall not exceed 0.40.

2. Additions greater than 50 square feet but less than 150 square feet shall meet all the requirements of Section 306, except that the addition's total fenestration area limit is the maximum of the chosen package plus the fenestration area that was removed by the addition.

3. Additions greater than 150 square feet shall meet all the requirements of Section 306.

308.3 Performance Approach. Performance calculations shall meet the requirements of either 1 or 2, below:

1. The addition complies if the addition alone meets the combined water heating and space conditioning energy budgets (see Section 307.2).

2. The addition complies if the energy efficiency of the existing building is improved such that the total source energy consumption of the improved existing building and the addition is equal to or less than that of the unimproved existing building.

3. In cases of supplemental energy for exterior use, full compliance as per Sections 305, 306 and 311 is required. Pre-existing exterior energy uses can receive credit for supplemental energy (see Section 311.5); additions to preexisting exterior uses shall be subject to Section 311.

SECTION 309 - RESIDENTIAL ALTERATIONS

309.1 Alterations -- Scope. Alterations to existing residential buildings shall meet any requirements of Sections 303, 304, and 305 that apply to the system or envelope component being changed and the requirements of this section. The U-value of any fenestration product replaced as part of an alteration shall not exceed 0.40 as defined by the National Fenestration Rating Council (i.e. whole product performance). An increase in the area of fenestration, more than 40 sq. ft., or the installation of recessed cans in a warm/cold ceiling is not an alteration and shall meet the requirements of Section 306 or 307. In cases of supplemental energy for exterior use, full compliance as per Section 311 is required. Pre-existing exterior energy uses can receive credit for supplemental energy (see Section 311.5); additions to pre-existing exterior uses shall be subject to Section 311.

NOTE: Fenestration products repaired or replaced, not as part of an alteration, need not comply with the U-value requirements applicable to alterations.

SECTION 310 - NONRESIDENTIAL BUILDINGS Shall comply with the "Energy Guidelines for Commercial and High-Rise (more than 4 stories) Residential Buildings" in Colorado or Colorado Comcheck EZ 1.2 and Sections 303, 304 and 305 of this code.

EXCEPTION: Buildings that are certified to meet the requirements of the Leadership in Environmental and Energy Design (LEED) program certification comply with the performance standard and are eligible for 100% rebate of the energy code permit fees.

SECTION 311 - RESIDENTIAL SNOWMELT, OUTSIDE POOL, AND OUTSIDE SPA SYSTEMS AND EQUIPMENT COMPLIANCE

311.1 Scope. Residential snowmelt, outside pool, or outside spa systems and equipment may be installed only if the supplemental energy (above the energy budget as per the performance method) meets the requirements of REMP option (Section 311.2) or On-site renewable energy (Section 311.4). This section applies to all installations for which an application for a permit or renewal of an existing permit is filed or is by law required to be filed with or without an associated Building Permit. Residential snowmelt or spa systems and equipment shall meet the requirements of Section 303 and 305.12.

311.2 Renewable Energy Mitigation Program (REMP) Option. Exterior energy use for residential snowmelt systems, outdoor spas, and outdoor pools may be supplemented as per the following.

311.2.1 The REMP fee shall be paid at the time of issuance of the building permit. Fees are based on the amount of supplemental energy required above the allowable energy budget (as per the performance method). All fees collected pursuant to this section shall be recorded in a separate fund by the City Finance Director and shall be spent in accordance with a joint resolution by the Aspen City Council and Pitkin County Board of County Commissioners.

311.2.2 This REMP option is voluntary. Applicants interested in supplemental energy above the allowable budget can alternatively choose to produce renewable energy on-site (Section 311.4) with solar hot water, solar photovoltaics, or micro-hydro. Also the energy efficient technology of ground source heat pumps is permitted for supplemental energy. Electric resistance heating is not permitted for exterior energy applications.

311.2.3 Snowmelt energy consumption shall be calculated as in Section 307.1.3.

311.2.4 Outdoor pools and spas shall have their energy consumption calculated as in Section 307.1.4.

311.2.5 The REMP option is available through the permit process for each parcel. The REMP option for supplemental energy is capped at 240,000,000 British Thermal Units (BTU) or a total fee of $100,000, whichever is greater.

311.2.6 REMP fees for snowmelt, spas, or pools shall be calculated according to the following equation:

[(Supplemental Energy in BTUs per year) divided by 3412 BTU/kWh]
20 years$0.07/kWh

311.2.7 Residences using REMP for supplemental energy must use the performance method (see Section 307). Minimum standards for the performance calculations for new construction are listed in Section 305 under the mandatory requirements with the following exceptions:

Wall Insulation	R-19
Roof Insulation	R-38
Floor Insulation	R-19
Boiler Efficiency	85%
Fenestration	U = 0.40

311.2.8 The following examples are illustrated for residences using the REMP option for snow-melt, spas, and/or pools. These residences did not have BTU's available from the performance method calculations and are using an 87% efficient boiler.

Snowmelt Example
(Snowmelt requested 500 sq. ft.)
(34,425(BTU per sq. ft. per year)/.87(efficiency rating of boiler))*500(snowmelt area) = 19,784,482 (BTU/yr)/3412 (BTU per kWh) = 15798.5(kWh/yr)*20(years)*.07/kWh = $8,117.90
REMP fee will be $8,117.90

Pool Example
(Pool summer use only 600 sq. ft.)
(29000(BTU per sq. ft. per year)/.87(efficiency rating of boiler))*600(pool area) = 20,000,000 (BTU/yr)/3412 (BTU per kWh) = 5861.66 (kWh/yr) 20(years).07/kWh = $8,206.00
REMP fee will be $8,206.00

Pool Example
(Pool year round outdoor use 600 sq. ft.)
(332000(BTU per sq. ft. per year)/.87(efficiency rating of boiler))*600(pool area) = 228,965,520 (BTU/yr)/3412(BTU per kWh) = 67,105.95 (kWh/yr)*20(years)*.07/kWh = $93,948.00
REMP fee will be $93,948.00

Spa Example
(Spa 100 sq. ft. year round use)
(430000(BTU per sq. ft. per year)/.87(efficiency rating of boiler))*100(spa area) = 49,425,287(BTU/yr)/3412(BTU per kWh) = 14,485.72(kWh/yr)*20(years)*.07/kWh = $20,280.00
REMP fee will be $20,280.00

311.3 Renewable Energy Mitigation Program (REMP) for houses over 5,000 sq. ft. A new home, remodel, addition, or a project with a remodel plus an addition with more than 5000 sq. ft. (as defined by building code sq. ft.) is required to offset a small portion of their fossil fuel energy consumption through the use of on-site renewable energy system or through a flat fee payment to REMP. Renewable energy system installed for this requirement does not qualify for credit for supplemental energy.

311.3.1 This requirement applies to all installations for which an application for a permit or renewal of an existing permit is filed or is by law required to be filed with or without an associated Building Permit.

311.3.2 The on-site renewable energy requirement can be met by the installation of a two (2) kilowatt photovoltaic or equivalent renewable energy system. This requirement can be alternatively handled off-site by payment of a REMP fee as follows:

over 5,000 sq. ft.	$5,000.00
over 10,000 sq. ft.	$10,000.00

311.4 On-site renewable enemy systems for outdoor uses of energy. Total supplemental energy is capped at an annual energy use of 240,000,000 BTU per parcel. Electric resistance heating is not permitted for supplemental energy. Supplemental energy for exterior uses of energy must be calculated as per methods in Section 307.1.3 and 307.1.4.

311.4.1 Solar Hot Water Systems as on-site renewable energy.

Supplemental energy use is capped at 240,000,000 BTU (including solar portion). The solar hot water system installed for supplemental energy use must also be integrated into the building's energy system. If at least 50% of the supplemental energy is from solar hot water then the balance of the energy can be from a back-up natural gas or propane boiler. Size of solar hot water systems are limited to 500 square feet of collector area, additional supplemental energy can be purchased through a REMP fee.

Calculation of solar portion of supplemental energy shall depend on seasonal application for exterior energy use as follows:

Winter only uses:

135,000 BTU/square foot solar collector
Summer only uses:
205,000 BTU/square foot solar collector
Year round application of solar:
340,000 BTU/square foot solar collector.

These solar collector credits shall not be adjusted for efficiency of the system.

Solar Portion - Winter Use
(Supplemental energy for snowmelt = 120,000,000 BTU/yr)
120,000,000 BTU/yr. divided by 2 = 60,000,000 BTU/yr. = solar portion
60,000,000 divided by 135,000 BTU/sf solar collector = at least 444 sf of solar collector

Solar Portion - Year Round Use
(Supplemental energy for summer pool and snowmelt = 240,000,000 BTU/yr)
240,000,000 BTU/yr. divided by 2 = 120,000,000 BTU/yr. = solar portion
120,000,000 BTU/yr. divided by 340,000 BTU/sq. ft. = at least 352 ft. of solar collector for year round use.

Solar Example
Supplemental energy for snowmelt only = 240,000,000 BTU/yr)
Partial Solar Hot Water and
Partial REMP

Maximum solar snowmelt - 500 sq. ft. of collector
240,000,000 BTU/ yr. divided by 2 =

120,000,000 BTU/yr solar portion
120,000,000 divided by 135,000 BTU/sf solar collector = 888 sf of solar collector - for winter only use
Only 500 sq. ft. collector permitted on-site = 67,500,000 BTU = maximum energy for solar snowmelt
Balance of renewable energy with REMP fee for solar not on site = 888 - 500 = 388 sf
388 sf X 135,000 BTU/sf X 2 = 104,760,000 BTU/yr = REMP portion
REMP fee = (104,760,000 BTU/yr divided by 3412 BTU/kWh) X $.07/kWh 20 years =
REMP fee will be $42,984

Documentation for approval for supplemental energy includes: Solar hot water collectors located on plans, schematics of the plumbing and control layout and equipment specifications. Solar hot water system plans have to be prepared and submitted by a COSEIA (Colorado Solar Energy Industries Association) certified installer. Flat plate solar collector panels must be certified by SRCC or OG100 standards.

311.4.2 Solar Electric System as on-site renewable energy.

Solar electric (photovoltaic) systems tied to the electric grid, are eligible for credit for supplemental energy use. Annual maximum supplemental energy use is 240,000,000 BTU per parcel including 50% credit for solar. Solar electric can supply part of the supplemental energy on site and part through payment of a REMP fee. Annual solar credit for solar electric is 15,375,000 BTU per kilowatt (KW) installed as source energy. Systems must be sited, oriented and installed for solar electric panels to supply at least 90% of rated capacity of the installed KW System designer/installer must be certified by COSEIA (Colorado Solar Energy Industries Association).

Solar Electric Example
(Supplemental energy for snowmelt = 240,000,000 BTU/yr)
240,000,000 BTU/yr divided by 2 = 120,000,000 BTU per year solar portion
120,000,000 divided by 15,375,000 BTU per KW = 7.8 KW installed

Documentation for approval of supplemental energy includes: System sited on the plans, UL listing of system components, provide orientation for documentation of 90% rated capacity of panels and installers' COSEIA certification.

311.4.3 Ground source heat pumps (GSHP) as energy efficient option.

Supplemental use is permitted up to a maximum of 240,000,000 BTU. In order to use a GSHP for supplemental energy the GSHP system must supply at least 20% of the peak load for heating the house and all the supplemental energy uses. (See Section 305.16 for details on system requirements). In addition the electricity for powering the ground source heat pump for 50% of the supplemental energy uses must be from renewable energy sources. Renewable energy can be purchased for 20 years through a payment of a REMP fee as follows:

(((Total BTU per year of supplemental energy/3412 BTU per kWh)/3) *20years * $.07/kWh) times 50% = REMP fee

This calculation uses a fixed value for Coefficient of Performance (COP) of 3; COP in this equation does not vary.

GSHP Example (120,000,000 BTU per year = 3485 sq. ft. of snowmelt) (((120,000,000 BTU per year / 3412 (BTU per kWh))/3) X 20 years X .07/kwh) X 50% = REMP fee will be $8,206

311.5 Pre-existing systems

Pre-existing snowmelt, pools or spas which are being overhauled or renovated qualify for a supplemental energy credit. This credit can only be applied towards an installation of exterior energy on the same parcel. The calculation of the credit shall be based on supplemental energy.

SECTION 312 - RESIDENTIAL AND NONRESIDENTIAL REPAIRS

312.1 Scope. Repairs to building components, systems, or equipment which do not increase their pre-existing energy consumption need not comply with the APECC. If a building component, system, or piece of equipment is replaced, however, it must be treated as an alteration.
(Ord. 03-08, Exh. A; Ord. 99-61 § 2 (part): prior code Title VII § 9-4)

Chapter 11.36

CONTRACTOR LICENSING

Sections:

11.36.010 Compliance required.

It is unlawful for any person to violate any provisions of this chapter or to violate or refuse to obey any order issued by the Chief Building Official or neglect to pay any fee assessed by the Chief Building Official. (Ord. 02-33 § 10-2; Ord. 99-61 § 2 (part): prior code Title VII § 10-2)

11.36.020 Revocation and suspension.

A. The Chief Building Official shall have the authority to issue an order to show cause why the license issued hereunder to any licensee should not be suspended or revoked. Any such order shall grant the licensee ten (10) days in which to show cause and shall inform the licensee of the basis for issuance of the order.

B. The following acts or omissions of any person or firm holding a license under this chapter or any applicant for a license under this chapter shall constitute grounds for which the Chief Building Official may suspend, revoke or refuse renewal of any license or deny an application for the license:

1. Causing or allowing to exist conditions hazardous to the health, safety and welfare of workmen and the public;

2. Violation of Pitkin County Code, including but not limited to the Land Use Code, the Uniform Building Code and related Uniform Codes as adopted, and the Colorado Revised Statutes; relating to buildings or construction or contractor licensing;

3. Failure to comply with any lawful order of the building official or his or her designated representative;

4. Misrepresentation or falsification of a material fact in an application to obtain a license or permit under this and other applicable codes;

5. Conviction of a misdemeanor or felony relating to the contractor's performance of construction work or the contractor's conduct of his or her construction business;

6. Failure to obtain a building or other applicable permit for any work as required by Pitkin County Code, including but not limited to the Land Use Code, and the Uniform Building Code and Uniform Codes as adopted;

7. Failure to ensure that the person with whom a subcontractor contracts has obtained valid building or other applicable permit for any work required by this code;

8. Contracting for or performing con-struction work that requires a particular license without holding a valid license for that work;

9. Use of a contractor's license to obtain building permits for another person's project for which the contractor will not be responsible;

10. Disregard or deviation from the plans and specifications approved by the building official for which the permit was issued without the approval of the building official;

11. Failure to ensure that any subcontractor hired by the contractor is licensed in compliance with the regulations set forth in this section;

12. Failure to appear after proper notice, as set forth in this section, at a building official hearing.

13. Failure to obtain and maintain a current Pitkin County use tax license through the county finance office. (Ord. 02-33 § 10-3; Ord. 99-61 § 2 (part): prior code Title VII § 10-3)

11.36.030 Issuance of permits only to license holders or agents, and owner-builders.

A. On any work requiring a building permit(s), the permit(s) shall be issued only to licensed contractors, authorized representatives of licensed contractors, and owner-builders.

B. For purposes of this chapter, an "owner-builder" is an individual personally engaged in the construction (new or remodel) of a single-family residence or accessory, building for his or her own use. The following requirements shall apply to owner-builders seeking permits for construction:

1. The owner-builder shall not be issued more than one building permit for new home construction in any two-year period and not more than one building permit at a time;

2. The owner-builder has read applicable regulations and provisions of this chapter and applicable state law and affirmed in writing that the proposed project will comply with all such requirements;

3. It is the responsibility of the owner-builder to see that all paid personnel shall be covered by workman's compensation insurance as required by state law;

4. The owner-builder must be present at the work site during all inspections and conferences with the building division, unless prior arrangements have been made with the building officials.

In the event that any of the above listed requirements are not met at any time during the course of a permitted project, the Chief Building Official may suspend or revoke the owner-builder's permit. In the case of a suspended building permit the owner-builder shall have a reasonable time to correct the problem. If not corrected within the time period, the permit may be revoked. In the case of either a suspended or revoked building permit, the owner-builder may ask for a review at the next scheduled building code board of appeals meeting. (Ord. 02-33 § 10-4; Ord. 99-61 § 2 (part): prior code Title VII § 10-4)

11.36.040 Compliance with law and supervisory clauses as required.

All licenses enumerated in this chapter shall be issued by the Chief Building Official in accordance with the provisions of this code, and shall be subject to the supervisory clauses contained in this chapter. The Chief Building

Official is authorized to administer tests for the licenses and owner-builders as required by this chapter, as per the standards and regulations promulgated by the Board of Examiners for Standardized Testing. The Chief Building Official is further authorized to recognize, for purposes of contractor licensing and owner builder permits, results of tests administered by other jurisdictions. (Ord. 02-33 § 10-5; Ord. 99-61 § 2 (part): prior code Title VII § 10-5)

11.36.050 Approval of building official required for issuance of certain licenses.

A. No person may be issued a license to engage in the following listed trades, jobs, or contractual service as hereinafter enumerated unless approved by the Chief Building Official.

1. General Contractor (Unlimited);
2. General Contractor (Commercial);
3. General Contractor (Light Commercial);
4. General Contractor (Home Builder);
5. Specialty.

B. All persons having valid licenses with the Community Development Department to engage in the aforementioned trades, jobs, or contractual services, shall not be required to be examined by the Chief Building Official. All persons must hold a license from the state, if required by the state, before engaging in any trade, job, or contractual services within the county. (Ord. 02-33 § 10-6; Ord. 99-61 § 2 (part): prior code Title VII § 10-6)

11.36.060 Builder's licenses generally.

A. General Contractor (Unlimited). This classification qualifies the holder to contract for the construction, alteration or repair of any structure of any type of construction and occupancy group as permitted by the Uniform Building Code.

B. General Contractor (Commercial). This classification qualifies the holder to contract for the construction of any structure of any type of construction and occupancy group as permitted by the Uniform Building Code, with the exception of Type I and Type II fire-resistive construction. Also this classification qualifies the holder for the alteration or repair of any structure of any type of construction and occupancy group permitted by the Uniform Building Code.

C. General Contractor (Light Commercial). This classification qualifies the holder to contract for the construction, alteration, or repair of A-3, B, E-3, M, R, S-3 or U occupancy group of any type of construction with the exception of Type I and Type II fire-resistive construction as permitted by the Uniform Building Code.

D. General Contractor (Home Builder). This classification qualifies the holder for the construction, alteration, or repair of R-3 and U occupancies of type V-N Construction.

E. Specialty. This classification qualifies the holder to contract for work involving specialty trades regulated by the Uniform Codes, including the following:

1. Alteration and maintenance;

2. Structural wood framing;
3. Concrete;
4. Drywall;
5. Excavation;
6. Fire alarm system installation;
7. Fire sprinkler system installation;
8. Insulation;
9. Structural masonry;
10. Mechanical contractor;
11. Roofing;
12. Solid fuel and gas appliance;
13. Structural steel erection;
14. Temporary contractor.

F. For the purposes of this section a contractor or subcontractor hired specifically for one job may be issued a temporary contractors license. It shall only be valid for thirty (30) days. The applicant for a temporary contractors license shall only be required to complete an application, no testing shall be required. Only one temporary contractors license can be applied for within one year. (Ord. 02-33 § 10-7 (part); Ord. 00-8: Ord. 99-61 § 2 (part): prior code Title VII § 10-7)

11.36.070 Application for licensees who employ qualified supervisors.

Each individual who acts as a supervisor on any work for which a permit is required must be tested in accordance with the provisions of this chapter for the work proposed to be done. (Ord. 02-33 § 10-8; Ord. 99-61 § 2 (part): prior code Title VII § 10-8)

11.36.080 Examination fee.

Applications for licenses required by this chapter shall be accompanied by a fee of twenty dollars ($20.00) to cover the costs of processing if examination is required. (Ord. 02-33 § 10-9; Ord. 99-61 § 2 (part): prior code Title VII § 10-9)

11.36.090 Examinations.

A. The Chief Building Official, before issuing any license required by this chapter, shall require the applicant to take such examinations, written or oral, as the Chief Building Official may determine to be appropriate. In lieu of such examination, the Chief Building Official may recognize and accept the results of examinations administered by other governmental jurisdictions with which the county is a party to an intergovernmental agreement regarding recognition of such test results.

B. Examinations shall be given at reasonable intervals. (Ord. 02-33 § 10-10; Ord. 99-61 § 2 (part): prior code Title VII § 10-10)

11.36.100 Insurance.

Every contractor granted a license under the terms of this chapter shall be required to maintain at all times employee liability and public liability insurance with minimum limits of not less than one

hundred thousand dollars ($100,000.00) for one person and three hundred thousand dollars ($300,000.00) for any one accident, and property damage insurance with a minimum limit of not less than one hundred thousand dollars ($100,000.00) for any one accident. (Ord. 02-33 § 10-11; Ord. 99-61 § 2 (part): prior code Title VII § 10-11)

11.36.110 Annual fees.

Holders of contractors' licenses issued by the county shall pay a registration fee according to the following classifications:

Class	Fee	Renewal
General contractor (unlimited)	$265.00	$200.00
General contractor (com-mercial)	$265.00	$200.00
General contractor (light commercial)	$265.00	$200.00
General contractor (home-builder)	$100.00	$65.00
Specialty (subcontrac-tors)	$100.00	$65.00
Temporary contractor	$60.00	N/A

(Ord. 02-33 § 10-12; Ord. 99-61 § 2 (part): prior code Title VII § 10-12)

11.36.120 Compliance with chapter required for issuance of permit.

A. No permit shall be issued to any contractor who has not first obtained a license as required in this chapter or who is delinquent in the payment of annual license fees, or use taxes, or whose license has been suspended or revoked by action of the Chief Building Official.

B. A licensed contractor may apply for and be issued permits to only such work as he or she is entitled to do under their respective licenses.

C. Any application for a permit or license filed in derogation of this section shall be deemed to have been filed with fraudulent intent and shall be a nullity. Any permit or license issued on the basis of such fraudulent application shall be null and void. (Ord. 02-33 § 10-13; Ord. 99-61 § 2 (part): prior code Title VII § 10-13)

11.36.130 State license required.

All persons performing plumbing or electrical work of any type regulated or licensed by the state of Colorado must hold valid state licenses before engaging in any trade, job or contractual service within the unincorporated county. (Ord. 02-33 § 10-14; Ord. 99-61 § 2 (part): prior code Title VII § 10-14)

11.36.140 Registration of electrical and plumbing contractors.

As a condition of performing services within the county, electrical and plumbing contractors shall register with the Chief Building Official. Applicants for registration must demonstrate that they hold a valid contractor's license issued by the state. Registrations made under this section shall terminate on the last day of the year. (Ord. 02-33 § 10-15; Ord. 99-61 § 2 (part): prior code Title VII § 10-15)

11.36.150 Appeals.

Appeals of any final decision of the building official may be made pursuant to the bylaws of the building code board of appeals. (Ord. 02-33 § 10-16; Ord. 99-61 § 2 (part): prior code Title VII § 10-16)