551 Hot Springs Boulevard
Post Office Box 1859
Pagosa Springs, CO 81147
970.264.4151 (phone)
970.264.4634 (fax)

**Town of Pagosa Springs**
**Building Department**

# COMMERCIAL PLAN SUBMISSION REQUIREMENTS

Permit applicants shall submit two (2) *COMPLETE SETS* of plans and specifications with each application for a permit. In addition, one (1) complete set of plans shall be submitted to the fire department for review. These plans will be kept on file by the fire department. Fire Department plan review fees must be paid before a building permit will be issued. Plans and specifications are typically required to be prepared by a qualified ***Architect*** *or* ***Engineer*** licensed by the State of Colorado to practice as such. Contact the building department to verify if your construction project requires an architect or engineer. Plans prepared by an architect or engineer shall have the ***stamp*** *or* ***seal*** of the architect or engineer responsible for preparation of the plans, applied directly to 1) each sheet of the reproduced drawings, 2) addenda and revisions, 3) the cover, title page, and table of contents of specifications, and 4) the title page of engineering reports. Through the seal shall appear the ***signature*** of the architect or engineer and the ***date*** of signature.
***Stamps or seals shall not be placed on reproducible drawings used to make multiple copies!(This is a violation of Colorado State Law)***

***AN ARCHITECT OR ENGINEER WILL TYPICALLY BE REQUIRED AS FOLLOWS:***
• *Building plans and specifications shall be prepared and sealed by a qualified architect or engineer when required by Title 12, Article 4 of the Colorado Revised Statutes. (i.e., Commercial and industrial occupancies, multifamily residential, etc.)*
• *Foundation plans and details shall be sealed by a qualified engineer 1) when the soil report indicates that the soils exhibit swell potential with a minimum dead load requirement in excess of 500 pounds per square foot, or 2) when basement or retaining walls exceed 4'-0" in height and retain more than 4'-0" of soil, vertically.*
• *Structural plans and details shall be sealed by a qualified engineer when required by the building department due to complexity of design.*

Plans shall be ***drawn to scale*** and shall clearly indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of the adopted model codes and standards and all other relevant laws, ordinances, rules and regulations. Plans shall be submitted on a minimum of 18 inch by 24 inch size sheets. *(Plans or details may be submitted on smaller size sheets when approved by the building department).*

**A COMPLETE SET OF PLANS SUITABLE FOR REVIEW SHOULD INCLUDE:** (*Some projects will not require all of the following information on the plans or details. Please examine the information listed below; information not applicable to a given project need not be included in the plans. Please check with the plans examiner FIRST to determine what information will be required to be submitted)* **Submittals for Building Permits will NOT be accepted when they are not bound or do not contain all of the applicable information as required below!!!**

**Soils Report.** Soils reports are required for all new construction

**Code Analysis. (Please provide all calculations)**
• Occupancy Classification
• Construction Type (Specify all elements required to be fire resistive construction)
• Allowable Area (Include all area increases taken)
• Allowable Height and Number of Floors
• Occupant Load and Required Exiting (number of exits and required widths)
• Plumbing Fixture Requirements (Appendix Chapter 29 of 1997 UBC)
• Parking Requirements (Town of Pagosa Springs Ordinance #456 Sec 3.02)

**Structural Design Criteria.** The following information regarding structural design shall be included on the plans:
• Soil bearing capacity, including minimum dead load requirements.
• Lateral earth pressure for basement and retaining walls.
• Roof design live load (65psf) & dead load.
• Floor design live & dead loads.
• Wind design speed and exposure.
▪ Seismic zone.

**Site Plan.** Site plans shall include the following information:
• Site orientation. *(North arrow)*
• Legal description and property address.
• Lot lines and property size in square feet.
• Adjacent road and street names.
• Easements, right of ways, building setbacks, water body setbacks, and building envelopes.
• Proposed and existing utility improvements. *(utility poles, transformers, culverts, and fire hydrants. Please note that fire hydrant flows must meet all fire code requirements based on the occupancy of the building(s) being proposed.)*
• Proposed and existing structures.
• Existing and finished topographical contour lines, at two foot intervals, for all disturbed areas. A storm water management plan addressing how all onsite and offsite flows will be dealt with including but not limited to detention ponds, retention ponds, culverts, landscaping, ditches and snow storage areas. Plan is to include 100 year event predevelopment run off calculations and 100 year event post-development calculations.
• Existing waterways and drainages and related Base Flood Elevations, Flood Plain and Flood Way delineation (if located near McCabe Creek or San Juan River)
• Access driveways and their grades, sidewalks, parking, paving, delineate parking spaces (based on Town of Pagosa Springs Ordinance #456) (include handicap spaces) and curb cut locations. ***Roadways and cul-de-sacs must conform to fire code standards and fire department requirements.***
• Top of foundation wall elevation related to contours on site plan.

**Foundation Plan and Details.** Foundation plans and details shall include the following information:
• Foundation material description and specifications.
• The location and size of piles and drilled caissons.
• The location and size of footings.
• The depth of footings, piles and drilled caissons.
• The location and size of all foundation walls and piers.
• The location, size, grade, and spacing of all reinforcing steel.
• Material and fasteners specifications for wood foundation systems.
• Anchor bolt size and spacing.
• Framing anchors and connectors to be embedded in concrete or masonry.
• Concrete and masonry beam pocket locations and sizes.
• Concrete slab thickness and reinforcement.

**Structural Framing Plans and Details.** The structural framing plans and details shall include the following information:
• The location of exterior and interior columns, beams and girders, headers and lintels.
• Construction details and material specifications for columns, beams, girders, headers and lintels. Grade and species of all wood components. All steel strengths and welding specifications.
• The location of all exterior and interior bearing and shear walls.
• Bearing and shear wall construction details and material specifications.
• Floor construction details and material specifications.
• Roof construction details and material specifications.
• Exterior deck and porch construction details and material specifications.
• Bearing and connection details for structural members and assemblies.

**Floor Plans.** Floor plans shall be provided for each individual floor *(including basements, lofts or mezzanines, decks and porches, etc.)*. The plans shall be dimensioned so as to clearly show the following:
• Exterior and interior walls and partitions.
• Exterior and interior wall opening locations and sizes *(windows, doors, etc.)*
• The use of each room or space.
• Exterior decks.
• Exterior and interior stairs and landings.
• Exterior and interior guardrails.
• Plumbing fixtures. *(Sinks, lavs, tubs, showers, toilets, cloths washer, water heaters, etc.)*
• Mechanical appliances and equipment. *(furnaces, boilers, fireplaces, woodstoves, etc.)*
• Permanent counters and cabinets.
• Details of accessibility for the disabled. *(ramps, maneuvering clearances, fixture elevations, etc.)*
• Square footage of each floor from exterior wall to exterior wall including stairs, mechanical rooms, storage, and unfinished areas.
• Door (and hardware) and Window schedule

**Elevations.** Exterior building elevations shall be provided for each individual elevation and shall show the following:

• Windows and doors.
• Porches, decks and guardrails.
• Finish grade, existing grade, and the line of the foundation below finish grade for each elevation.
• Roof pitches. *(rise and run)*
• Chimneys or vents for fuel burning devices and any other permanent equipment installed on the exterior of the building.

**Building Sections And Details.** Architectural building sections and details shall include the following information:

• Foundation drainage details. *(draintiled)*
• Interior wall and ceiling framing and finishes. *( stud sizes and spacing, drywall, paneling, etc.)*
• Exterior wall framing and finishes. *(stud sizes and spacing, siding, veneers, etc.)*
• Roofing details. *(underlayments and roof covering materials)*
• Fireplace construction details.
• Stairway construction details. *(material specifications, stair width, rise and run, handrails)*
• Guardrail construction details. *(material specifications, guardrail height, spacing of intermediate rails)*

**Fire-Resistive Design Criteria.** Plans and specifications for buildings requiring fire-resistive construction shall include the following information:

• Fire-resistive structural frame details. *(columns, beams and girders, girder trusses, etc.)*
• Fire-resistive wall and partition details.
• Fire-resistive floor-ceiling and roof-ceiling details.
• Fire-resistive assemblies for protection of openings. *(fire doors, fire windows, fire dampers)*
• Penetration fire stop details. *(electrical, plumbing, mechanical and communication conduits, cables, pipes and similar systems)*

- ***Materials and systems used for fire-resistive purposes shall be limited to those specified in Chapter 7 of the Building Code. Other properly tested and listed systems and assemblies will be accepted, provided they have been listed by an approved testing laboratory. The listing number and laboratory responsible for the listing as well as the installation details shall be included on the plans!***

**Mechanical Plans and Specifications.** Mechanical plans and specifications shall include the following information:

• Heating and cooling system appliance specifications.*( type of fuel, input rating, cfm, etc.)*
• Ventilation and product-conveying exhaust equipment specifications.
• Appliance venting details.
• Combustion air details.
• Duct and plenum system design, material specifications and installation details.
• Fire, smoke and radiation damper locations and specifications.
• Fuel-gas piping design, material specifications and installation details.
• Refrigeration system design, material specifications and installation details.
• Commercial hoods and kitchen ventilation design, material specifications and installation details.
• The location and specifications for vented decorative appliances, floor furnaces, vented wall furnaces, unit heaters, and room heaters.
• Miscellaneous heat-producing appliance locations and specifications.

**Plumbing Plans and Specifications.** Plumbing plans and specifications shall include the following information:
• Potable water distribution piping design, material specifications and installation details.
• Drain, waste and vent *(DWV)* piping design, material specifications and installation details.
• Plumbing fixture and appliance specifications and locations. All sand/ oil interceptors and grease traps must also be shown and properly sized.(provide calculations)
• Location and specifications for backflow prevention devices.

**Electrical Plans and Specifications.** Electrical plans and specifications shall include the following information:
• Location of outlets, lights, switches and appliances.
• Location of other loads. *(HVAC equipment, machinery, electric baseboard heat, large computers, etc.)*
• A complete one line electric service diagram and all load calculations.
• Electric service entrance location.
▪ An exterior lighting plan must be submitted to demonstrate compliance with the Town of Pagosa Springs Lighting Ordinance 517 (available at Town Hall)

**Fire Suppression and Detection Plans.**

The ***fire suppression*** *system* plans, specifications and hydraulic calculations shall include the following:
• Signature and certification number of either a registered professional engineer or a NICET level III or higher engineering technician.
• Specifications must be extremely narrative. (including cut sheets)
• Specification sheets shall provide information on component operation and primary panel configuration, along with all devices and their operation.
• All fire suppression systems shall conform with the Uniform Fire Code and the requirements of NFPA 13, 13A, 13D and 13R.

The ***fire detection*** *system* plans and specifications shall include the following:
• Specifications must be extremely narrative. (Contact the Pagosa Springs Fire Protection District if you have questions regarding plan submission requirements)
• Listing of alarm devices on equipment legend shall be color coded and correlated with colored devices on plans for easy location of such devices.
• It is recommended that the standard Fire Protection Symbols for Architectural & Engineering Drawings (NFPA 172) be used in all design work.
• Specification sheets shall be extremely narrative, providing information on component operation, primary panel configuration, along with all devices and their operation.
• All fire alarm systems shall conform with the Uniform Fire code, the requirements of NFPA 70 Article 760, National Electric Code, NFPA 72.

***The building department will not issue full building permit for buildings that require fire sprinkler or fire alarm systems until fire alarm and sprinkler plans and specifications and/or fire alarm plans and specifications are submitted, and administrative approval for full permit is approved by the Pagosa Springs Fire Protection District.***

# Town of Pagosa Springs, Colorado
# Building Design Criteria

**Roof Snow Load:** **65 psf -100% Duration** (Projects submitted under the IBC must have Roof Snow Loads determined per ASCE 7. The Ground Snow Load (Pg) = 93 psf)

**Frost Depth:** **42" min** (Frost Protected Shallow Foundations accepted in most cases for residential construction)

**Wind Speed:** **90mph -exposure "B"**

**Seismic Zone:** Must be determined per sec 1613 IBC 2006

**Heating Degree Days:** **8323**

**Air Freezing Index:** **1634**

**Max Soil Bearing:** **1500psf** (other soil bearing capacities allowed when accompanied with a soils report from a Colorado licensed geotechnical engineer. **NOTE:** Soils reports are **REQUIRED** for all **new** buildings except for 1 & 2 family dwellings)

**Current Model Codes:** Please note that there are local exceptions and amendments to the IBC, IRC & IFC.)

2006 International Building Code (IBC), including appendix J

2006 International Residential Code (IRC), including appendix E & M

2006 International Energy Conservation Code (IECC)

2006 International Mechanical Code (IMC)

2006 International Fuel Gas Code (IFGC)

2006 International Fire Code (IFC), including appendix A,B & C

**Plumbing and Electrical Permits:** must be obtained through the State of Colorado Department of Regulatory Agencies. Permits can be found on the division web site at:

**Plumbing:** http://www.dora.state.co.us/plumbing/onlinepermitsystem.htm
303-894-2300

**Electrical:** http://www.dora.state.co.us/electrical/onlinepermitsystem.htm
303-894-2300

**Manufactured Homes (HUD and Modular UBC):** are regulated under the State of Colorado Division of Housing and the Colorado Manufactured Housing Installation Program (MHIP) and permits for installations can be obtained through the town office or downloaded from the town web site. Installation requirements can be found on the division website at:
http://www.dola.state.co.us/cdh/codes/index.htm

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**The Town of Pagosa Springs is a Governmental Member of the International Code Council (ICC) and the Colorado Chapter of ICC.**