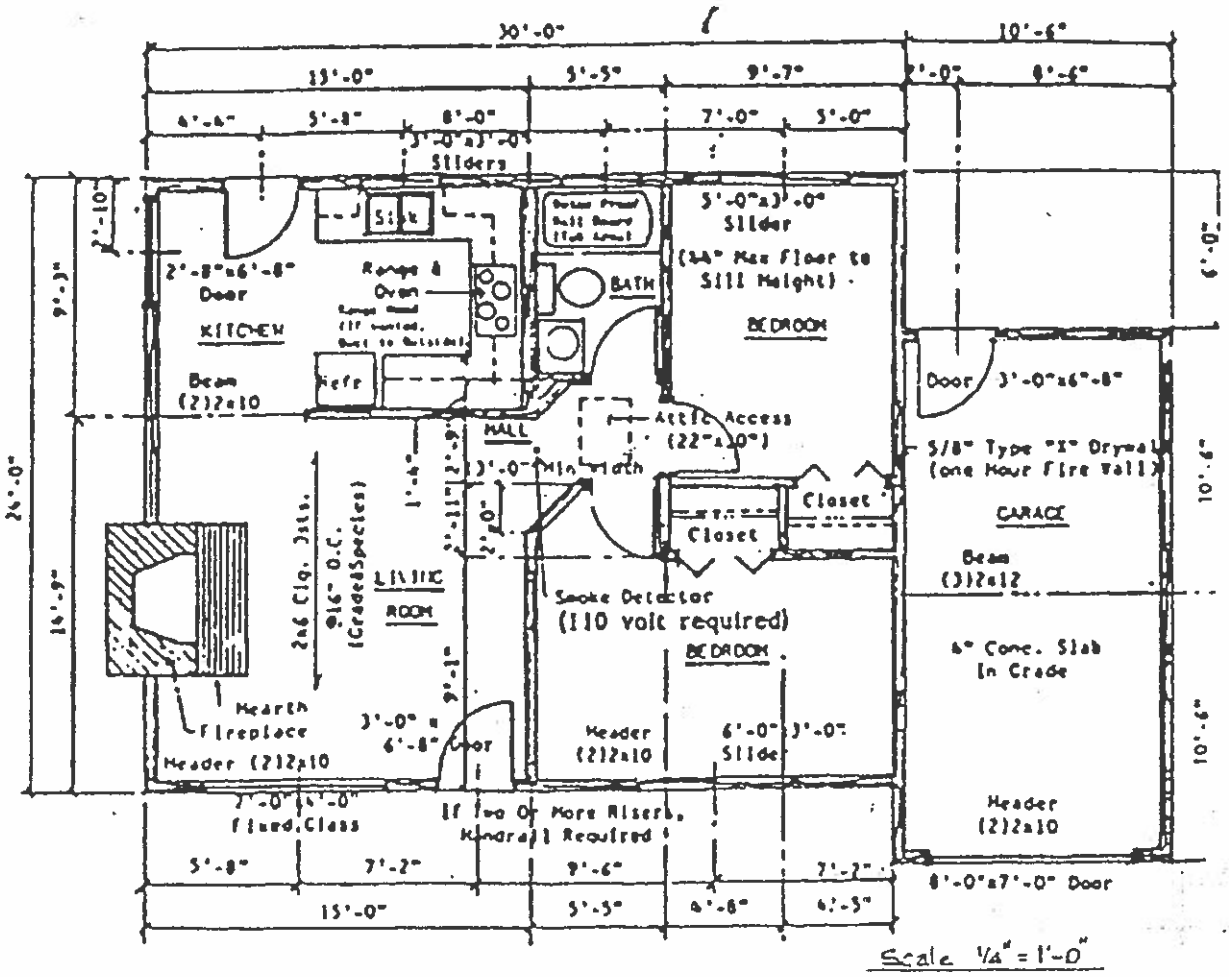
Floor Plan

The floor plan is a sketch showing permanent or structural elements of your construction, including width and shape of rooms, doors, windows, etc.

The floor plan should include:

- Scale of ¼" per foot or greater
- The arrangement of walls and rooms
- Location and size of window and doors; showing direction of opening; header/ceiling beam sizes
- Location of plumbing fixtures
- Location of electrical fixtures, receptacles (GFCI & AFCI) and switches
- Location and type of fireplaces or wood stoves
- Room use
- Indicate egress windows (basement & bedroom)
- Attic and crawl space access
- Size and location of mechanical units (furnace & fan)
- Location of smoke detectors
- Location of combustion air openings
- Location of required bracing

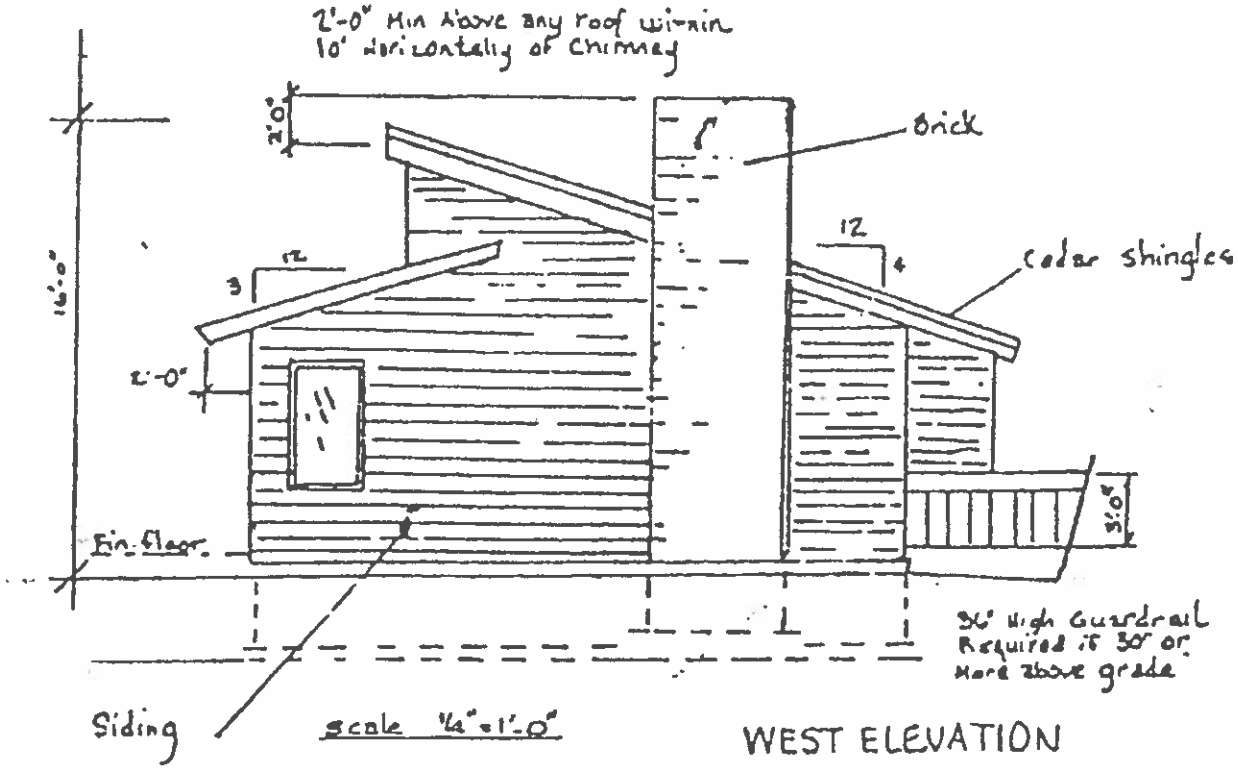


Elevations

Elevations show roughly what the exterior of the building will look like when finished.

The elevations should include:

- Scale Used
- Position and height of windows and doors
- Relationship of an addition (if applicable) to the rest of the building
- Roof slope

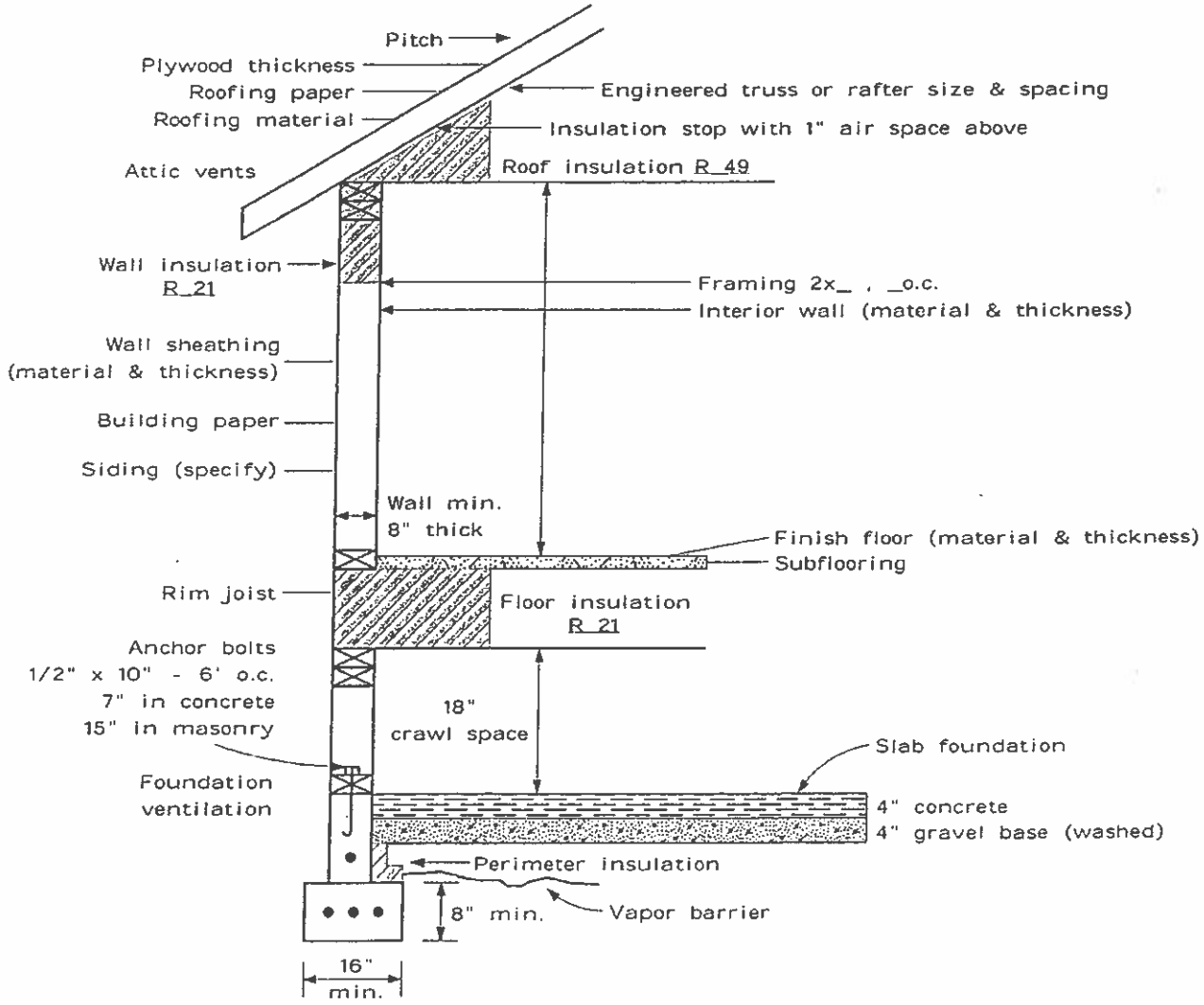


Wall Section

Section drawings literally slice through the building to show construction details.

Your drawings need not be complex, but should include:

- Scale Used
- How wall frame connects to foundation
- Roof Slope
- Ceiling heights
- Insulations locations and R-values
- Window U values
- How walls connect to ceilings/roof
- Size of framing members (rafters, studs, joist, etc.)
- How attic is vented



Scale 1/4" = 1' *(1" = 4')*

Footing and Stem Wall Inspections and General Information

R401.3 Drainage. Surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection so as to not create a hazard. Lots shall be graded so as to drain surface water away from foundation walls. The grade away from foundation walls shall fall a minimum of 6 inches within the first 10 feet.
Exception: Where lot lines, walls, slopes or other physical barriers prohibit 6 inches of fall within 10 feet, drains or swales shall be provided to ensure drainage away from the structure.

R403.1.4 All exterior footings shall be placed at least 12 inches below the undisturbed ground.

R403.1.4.1 Except where otherwise protected from frost, foundation walls, piers and other permanent supports of buildings and structures shall be protected from frost by extending below the frost line or another accepted approved method. Decks supported by a dwelling require footings that extend below the frost line.

R403.1.4.2 Interior footings supporting bearing or braced walls and cast monolithically with a slab on grade shall extend to a depth of not less than 18 inches below the top of slab.

R403.1.5 Slope. The top surface of footings shall be level. The bottom surface of footings shall not have a slope exceeding one unit vertical in ten units horizontal (10- percent slope). Footings shall be stepped where it is necessary to change the elevation of the top surface of the footings or where the slope of the bottom surface of the footings will exceed one unit vertical in ten units horizontal (10-percent slope).

R403.1.6 The wood sole plate at exterior walls on monolithic slabs and wood sill plate shall be anchored to the foundation with anchor bolts spaced a maximum of 6 feet on center for a single story dwelling. The maximum anchor bolt spacing shall be 4 feet for buildings over two stories in height. There shall be a minimum of two bolts per plate section with one bolt not located more than 12 inches or less than seven bolts diameters from each end of the plate section. Bolts shall be at least ½ in diameter and shall extend a minimum of 7 inches into masonry or concrete. Anchor bolts shall be a minimum of 10 inches long and be on job site prior to stem wall or slab pour that requires foundation anchorage.

R403.1.7.3 Foundation Elevation. On graded sites, the top of any exterior foundation shall extend above the elevation of the street gutter at point of discharge or the inlet of an approved drainage device a minimum of 12 inches plus 2 percent. Alternate elevations are permitted subject to the approval of the building official, provided it can demonstrated that required drainage to the point of discharge and away from the structure is provided at all locations on the site.

R408.1 Ventilation. The under-floor space between the bottom of the floor joists and the earth under any building (except space occupied by a basement or cellar) shall be provided with ventilation openings through foundation walls or exterior walls. The minimum net area of ventilation openings shall not be less than 1 square foot for each 150 square feet of under-floor space area. One such ventilating opening shall be within 3 feet of each corner of said building. EXCEPTION: The total area of ventilation openings may be reduced to 1/1500 of under-floor area where the ground surface is treated with an approved vapor retarder material (6 mil plastic) and the required openings are placed so as to provide cross-ventilation of the space. The installation of operable louvers shall not be prohibited. Ventilation openings are not required where continuously operated mechanical ventilation is provided at a rate of 1.0 cfm for each 50 square feet of under-floor space floor area and ground surface is covered with an approved vapor retarder material (6 mil plastic).

R408.4 Removal of debris. The under-floor grade shall be cleaned of all vegetation and organic materials. All wood forms used for placing concrete shall be removed before a building is occupied or used for any purpose. All construction materials shall be removed before a building is used for any purpose.

R319.3 Fasteners. Fasteners (bearing plate washers, nails that attach floor joists, nails through shear wall into treated plate and any hardware) for pressure preservative and fire-retardant-treated wood shall be of hot-dipped galvanized steel, stainless steel, silicon bronze or copper.
Exception: One-half inch diameter or greater steel bolts.

R310.1 Emergency escape and rescue required. Basements with habitable space and every sleeping room shall have at least one openable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room, but shall not be required in adjoining areas of the basement. For basements with bedrooms requiring window wells the minimum horizontal area of the window well shall be 9 square feet, with a minimum horizontal projection and width of 36 inches. The area of the window well shall allow the emergency escape and rescue opening to be fully opened. Window wells with a vertical depth greater than 44 inches shall be equipped with a permanently affixed ladder or steps (the ladder or steps may encroach a maximum of 6 inches into the required dimension of the window well) usable with the window in the fully opened position. Ladders or rungs shall have an inside width of at least 12 inches, shall project at least 3 inches from the wall and shall be spaced not more than 18 inches on center vertically for the full height of the window well.

Before scheduling a footing inspection have all horizontal rebar lifted 3 inches above the ground, have the UFER ground attached properly to the rebar and have the vertical rebar dowels with a 6 inch bend and any hardware being used in the footing pour on site for inspection.

Before scheduling a stem wall inspection have all foundation vents in place for crawlspace foundations (if being placed in concrete stem wall), all required rebar 1 ½ inch clearance from exterior stem wall forms, have any required hardware/hold downs and have properly size anchor bolts on job site.

THE STATE OF WYOMING

Department Of Fire Prevention & Electrical Safety

DAVE FREUDENTHAL
GOVERNOR

LANNY APPLEGATE
STATE FIRE MARSHAL

REQUIREMENTS FOR PLAN REVIEW

To determine if a plan review is required on new construction or remodeling (remodel valuation of $25,000 or more), ask the following questions and follow the indicated actions as outlined by §§W.S. 35-9-108:

	QUESTION	ANSWER	ACTION
1.	Is the building or structure owned or leased by the State or local governmental entities?	YES	Submit 4 sets of plans & 4 sets of specifications
		NO	Go to #2
2.	Is it a public building or structure over 5,000 sq. ft. of total floor area including basement?	YES	Submit 4 sets of plans & 4 sets of specifications
		NO	Go to #3
3.	Is the building or structure a multistory public building?	YES	Submit 4 sets of plans & 4 sets of specifications
		NO	Go to #4
4.	Is the building or structure a childcare center housing more than 10 children?	YES	Submit 4 sets of plans & 4 sets of specifications
		NO	Go to #5
5.	Is the building or structure to be used as a public bar, lounge, restaurant, nightclub, lodge hall, theater, church, or public meeting place regardless of size?	YES	Submit 4 sets of plans & 4 sets of specifications
		NO	Go to #6
6.	Is the installation intended for public or private aboveground fuel dispensing facilities?	YES	See appropriate submittal packet.
		NO	Go to #7
7.	Is the installation for aboveground flammable or combustible fuel storage tanks?	YES	See appropriate submittal packet.
		NO	Go to #8
8.	Is the total square footage of the new public access area and the existing public access area over 5,000 sq. ft. including the basement?	YES	Submit 4 sets of plans & 4 sets of specifications
		NO	Go to #9
9.	Does the building or structure remodel cost less than $25,000 and affect a built-in fire protection system for the building?	YES	Submit 4 sets of plans & 4 sets of specifications
		NO	Go to #10

10. No Plan Review is Required

122 W. 25[TH] STREET • HERSCHLER BLDG - I WEST • CHEYENNE, WYOMING 82002
PHONE: (307) 777-7288 • FAX: (307) 777-7119

THE STATE OF WYOMING

Department Of Fire Prevention & Electrical Safety

DAVE FREUDENTHAL
GOVERNOR

LANNY APPLEGATE
STATE FIRE MARSHAL

FIRE PROTECTION SPRINKLER SYSTEM PLAN REVIEW PACKET

PROJECT INFORMATION SHEET

Please fill out and submit this PROJECT INFORMATION SHEET and the SPRINKLER CRITERIA SHEET (page 3); provide design documents as required in the PLAN REVIEW CHECK LIST (page 2).

Proposed Construction Starting Date: _____

Name of the Building/Facility: _____

Building/Facility Address: _____ City: _____ Zip: _____

Construction (underline): Combustible Non-combustible New Existing

Building Occupancy or Use: _____

Number of Stories: _____ Building Height: _____ Total Square Footage: _____

Square Ft./Floor: Basement: _____ 1st Floor: _____ 2nd Floor: _____ 3rd Floor: _____

4th Floor: _____ 5th Floor: _____ 6th floor: _____ 7th Floor: _____ 8th Floor: _____

Estimated Valuation of Work: $ _____

Building Owner: _____

Address: _____

City/Town: _____ State: _____ Zip: _____

Telephone Number: _____ Email: _____

Note: The plan review will be returned to the submitter at the below noted address unless specific instructions are received to send it elsewhere.

Plans Submitted By: _____ Date: _____

Address: _____

City/Town: _____ State: _____ Zip: _____

Telephone Number: _____ Email: _____

Contact Person: _____

PLAN REVIEW CHECK LIST

PROJECT/NAME/ADDRESS: _____

Date: _____

☐ Plans submitted for fire protection systems and for fire detection and alarm systems must be prepared under the direct supervision of a Design Professional. (A Design Professional is defined as an individual who is legally registered to practice engineering, in the State of Wyoming, in accordance with the Wyoming State Engineer's Board of Registration.)

☐ Final plans, of fire protection systems, shall show the design completion date and bear the seal and signature of the Design Professional.

It is the responsibility of the Design Professional to coordinate the fire protection drawings with design drawings of other disciplines, to assure that the fire protection systems can be installed without interference with other trades. Such coordination is not a part of this review.

Provide four complete sets of design documents (and other data required) as follows:

☐ Site Plan, drawn to scale, showing street address, location and size of underground water mains, sprinkler feed mains, fire hydrants, valve locations, location of pumper connection(s), property lines, streets, and other structures on site. Indicate hydrant locations where the flow and pressure tests were taken in determining the sprinkler system water supply.

☐ Building Sprinkler Plans, drawn to scale, to include complete sprinkler system piping, showing: pipe sizes, pipe lengths, hanger locations, sprinkler head k-factor and temperature rating, elevation variances, type and size of all control valves including indicating valves, OS&Y valves, backflow preventers, alarm check valves, dry pipe valves, deluge valves, etc.

☐ Floor and Construction Plans, drawn to scale, identifying all rooms and their uses (occupancies). Provide details of all building construction materials, including interior and exterior walls, floors, ceilings and framing.

☐ Elevation Drawings indicating sprinkler system riser heights and sprinkler head elevation in relation to the underground piping system.

☐ Manufacturers catalog cuts of all fire protection devices and equipment to be installed. This should include sprinkler heads, sprinkler system control valves, fittings, flow switches, tamper switches, hydrants, piping and any other devices pertinent to the fire protection system.

☐ Fire Protection Technical Specifications (preferably CSI format)

☐ Sprinkler System Hydraulic Calculations and appropriate water supply information.

☐ Completed Project Information Sheet (see preceding).

☐ Completed Sprinkler Criteria Sheet (see page 3 following). Fill in all system design data shown.

☐ Plan review fee (see attached fee schedule on page 4).

☐ Postage for the return of one set of approved plans.

SPRINKLER CRITERIA SHEET

PROJECT/NAME/ADDRESS: _____

_____

Prepared by: _____ Date: _____

SPRINKLER REQUIREMENTS:

Demand _____ gpm/sq ft Demand Area _____ sq ft Hose Stream _____ gpm

Hyd. Design ___ Lt. Haz. ___ Ord. Haz. 1 ___ Ord. Haz. 2 ___ Ext. Haz. 1 ___ Ext. Haz. 2 ___

Orifice size: 1/2 in. ___ 17/32 in. ___ Other_____ K-factor _____

Spacing: _____ sq ft/head On lines: _____ ft Between Lines: _____ ft.

BOR Requirement: _____ gpm @ _____ psi Riser Height: _____ ft.

WATER SUPPLY:

Tested By: _____ Date: _____

Type of Nozzle/Size: _____ / _____ in. Discharge Coefficient: _____

Flow Test Location: _____

Residual Gauge Location: _____

Static Pressure: _____ psi Residual Pressure: _____ psi Flow: _____ gpm

PUMP:

Type: Horizontal (centrifugal) Vertical Turbine In-Line (centrifugal)

Other: _____

Driver: Electric Diesel Other: _____

Rating: _____ gpm @ _____ psi _____ rpm

Pump Manufacturer: _____ Model #: _____

Driver Manufacturer: _____ Model #: _____

Controller Manufacturer: _____ Model #: _____

Suction: Water Main (booster) Tank

Tank: Capacity: _____ gal Height: _____ ft.

PROJECT VALUATION AND PLAN REVIEW FEES

VALUATION, of a sprinkler system and/or an alarm system, shall be the estimated construction cost (based on current material and labor costs) including contractor mark-up.

TOTAL VALUATION	FEE
$1.00 to $500.00	$16.03
$501.00 to $2,000.00	$16.03 for the first $500.00 plus $2.08 for each additional $100.00, or fraction thereof, and including $2,000.00
$2001.00 to $25,000.00	$47.22 for the first $2,000.00 plus $9.55 for each additional $1,000.00, or fraction thereof, to and including $25,000.00
$25,001.00 to $50,000.00	$267.12 for the first $25,000.00 plus $6.90 for each additional $1,000.00, or fraction thereof, to and including $50,000.00
$50,001.00 to $100,000.00	$438.95 for the first $50,000.00 plus $4.78 for each additional $1,000.00, or fraction thereof, to and including $100,000.00
$100,001.00 to $500,000.00	$677.60 for the first $100,000.00 plus $3.82 for each additional $1,000.00, or fraction thereof, to and including $500,000.00
$500,001.00 to $1,000,000.00	$2,204.94 for the first $500,000.00 plus $3.25 for each additional $1,000.00, or fraction thereof, to and including $1,000,000.00
$1,000,001.00 and up	$3,824.33 for the first $1,000,000.00 plus $2.49 for each additional $1,000.00, or fraction thereof

Other Inspections and Fees:

1. Inspections outside of normal business hours..... .....$49.31/hour (Minimum charge –2 hours)
2. Re-inspection fees.....$49.31/hour*
3. Inspection for which no fee is specifically indicated.....$49.31/hour* (Minimum charge 1/2 hour)
4. Additional plan review required by revisions to plans..... $49.31/hour* (Minimum charge 1/2 hour)
5. For use of outside consultants for plan checking and inspections, or both.....Actual Costs**

*Or the total hourly cost to the jurisdiction, whichever is the greatest. This cost shall include supervision, overhead, equipment, hourly wages and fringe benefits to the employees involved.

**Actual costs include administrative and overhead costs.

SUBMIT DESIGN DOCUMENTS AND FEES TO:

Mail to: **PLAN REVIEW**
Department of Fire and Electrical Safety
122 W. 25TH STREET
Herschler Bldg - 1 West
Cheyenne, WY 82002

Or Email to: codeplanreview@state.wy.us