



## Millcreek General Notes and Requirements

### General Notes:

- This building shall comply with the 2015 International Residential Code (IRC) and any applicable Utah State Amendments.
- Plan review and building inspection approvals does not relieve the contractor or design professionals from following all applicable codes and ordinances. R105.8
- Plans shall include a cover sheet with a project address, owners name, designers name, index, code edition, occupancy classification, and architects/engineers seal (if applicable). R106.1.1
- Note the square footage of each level using outside wall measurements. This shall include living space, garage, unfinished spaces, storage, decks, and patios. R106.1.1
- Approved plans shall be on site for all inspections. R105.7
- Structural engineering packet information may add additional requirements to the plans. R106.1
- Structural design criteria are as follows; 30lb snow load, 115mph wind speed, seismic category D, soil bearing 1500psf, concrete strength 2500psi, live loads per table R301.5. R301
- Swimming pools and spas shall comply with R326 and the 2015 International Swimming Pool and Spa Code.
- All products, equipment manufacturer specifications, and industry standards shall be followed. All specifications and requirements for such products shall be provided for inspections. R106.1.2
- Provide a full set of truss and truss layout specifications at time of inspection. R106.1

### General Requirements:

#### SITE & DRAINAGE & ENGINEERING

- Geotechnical Engineering approval is required for each single-family dwelling unit excavation – R106.1 & R401.4
- Note top of footing elevation on plans and provide a certificate of survey at foundation inspection. Millcreek Municipal Code 19.020.090
- Lots shall be graded to drain surface water away from foundation – R401.3 and per the Land Disturbance Permit
- Window wells shall drain properly by connecting to the building foundation drainage system or by an approved alternative – R310.2.2 & R405.1
- Provide an erosion control plan, SWPPP if over 1 acre.
- Cut slopes and grade fills steeper than 2:1 require a soils report and shoring plan addressing stability. Appendix J
- Retaining walls greater than 4' or hold a surcharge require an engineered design. Note the location, height, and linear feet of retaining walls on the site plan. R105.2, R106.1.1
- The site plan shall show, where pertinent: note of scale used, direction of North point, lot lines, together with adjacent streets, roads and rights-of-way, location of all existing structures on subject property and adjoining properties (completely dimensioned, including utility lines, poles, etc.), location of the proposed construction and improvements, motor vehicle access, including individual parking stalls, circulation patterns, curb, gutter, and sidewalk location, necessary explanatory notes to address any requirements particular to the zone in which the property is located, Building coverages and landscape or open space percentages, if required elsewhere by the title, name, address and telephone number of builder and owner, the zone and other restrictions on the property. Millcreek Municipal Code 19.02.080
- Building elevations of all sides of a building shall show, where pertinent; scale, orientation, lot lines, finish materials, original ground surface at all points, proposed finished grade at all points, finished floor elevations of all levels of a building including, but not limited to, basements, garages, patios, and decks, top of footing elevations at each corner of the building, total height of building, as measured from original ground surface to the highest point of the coping of a

flat roof, or to the deck line of a mansard roof, or to the highest point of pitched or hipped roofs, or gambrel roofs. Millcreek Municipal Code 19.020.080

- Comply with R322 if structure is located within a floor plain.

#### FOUNDATION – CONCRETE

- Provide string lines at side yards for footing inspections or a surveyor letter verifying building location on lot – R109.1.5
- Provide a footing and foundation size and reinforcement schedule. R106.1.1, R403
- Provide a perimeter drain if required by a geotechnical report. R405.2.3
- Provide a min. depth of 30" of frost protection for all footings including exterior spot footings for walkouts, decks, porches, etc. – R-403.1.4.1
- Pour continuous footings or as per plans – R403.1.2
- Anchor bolt sill plates per plan or a min. of 4' O.C., use 3" square washers – R403.1.6.1
- Waterproofing is required on all basement foundation walls – R406.1
- Concrete floor slabs, except those in unheated accessory structures, shall have a vapor retarder consisting of a 6-mil polyethylene or approved vapor barrier with joints lapped not less than 6" placed between the concrete floor slab and the base course or the prepared subgrade. R406.3.2
- Note USGS elevations of the top of footing and foundation. Millcreek Municipal Code 19.02.090

#### FRAMING & CONSTRUCTION

- Bearing walls shall be supported by double joists when joists and walls run parallel – R502.4
- Double the end joists at cantilevers – R502.3.3 & R502.4
- Install post beam connections as required – R502.9 & R602.3
- Replace or provide manufacturer's repair to cut or damaged joists – R502.8 & R502.11.3
- Fully support all girders and beams from the load down to bearing point. Girders and beams shall have a minimum 1 ½" bearing – R502.6
- Provide uplift protection and lateral bracing as per manufacturer's specifications on trusses – R802.11.1
- Rafter tie all conventional rafters at 48" o.c. – R802.3.1

- When exterior wall stud framing is at 24" o.c., all sheathing materials shall be rated for this application and verified at the 4-Way inspection – R602.10.4
- H-clips are required for roof sheathing or provide manufacturer approved alternative – R803.2.2
- Provide a minimum clear height of 30" above attic access – R807
- Chimney height shall be 24 inches taller than any part of house within 10 feet. – R1003.9
- Provide a wall bracing schedule. R602.10
- Provide size, spacing, and span of joists and rafters. R502, R802.
- Provide species and grade of all wood framing members. R502, R802
- Show exterior grade framing members for all exterior decks and similar framing. R317
- Provide structural calculations (if applicable). R106.1.1
- Note USGS elevations for each floor and roof peak. Millcreek Municipal Code 19.02.080

#### FIRE PROTECTION

- Any building elements extending within 5' of a property line shall be built with fire-resistant construction (1 hour rated soffit construction with no vents, and 1 hour rated exterior wall construction) – R302
- Garage door shall be solid core or a 20-minute rated door – R302.5.1
- Garage walls shall be finished with a minimum of ½" drywall and 5/8" Type X shall be installed on ceiling when there is living space above the garage – R302.6
- Fire blocking is required throughout – R302.11
- Vertical fire blocking shall be required every 10' between the framed wall and the basement foundation wall. Horizontal fire blocking is required between the top plate of the framed wall and the sole plate bolted to the top of the foundation wall. – R302.11
- 5" High house numbers installed at 7' or higher required – City Ordinance

#### ENERGY – INSULATION

- Minimum R-Value: Wood-framed exterior walls = 20, Basement wood-framed exterior walls = 19, Ceilings = 49, Floors = 30, and concrete on grade = 10 for 24 inches
- Minimum window U-Factor = 0.32, and skylights = 0.55
- Structure must comply with the prescriptive R values (above) or provide an energy analysis that's 3% better than code. N1101.13
- All insulation shall be verified, including rim joists spaces – R109.1.5 & N1102.4.1.1
- Insulation baffles required with vented soffits – R806.3
- Insulation Depth Markers shall be installed in the Attic spaces at time of 4-Way inspection and the Attic Access Dam shall be extended to accommodate the depth of insulation – N1101.12.1.1
- Insulate floor cavity between floor joists at combustion air duct with R-10 rigid insulation and protect adjacent water lines – R1102.1
- Provide an air barrier per table N1102.4.1.1 or an air leakage test (blower door) per N1102.4.1.2

#### MEANS OF EGRESS

- Stairway requires max. riser height of 8 inches and a min. tread depth of 9 inches (a min. tread depth of 10

inches if no nosing); min. clear headroom height of 6' - 8" and a min. stairway width of 36 inches; typical landing shall be a min. 36 x 36 inches; winder and circular stairways have other requirements – R311.7 & Utah State Amendments

- A landing or floor is required at all exterior doors. Landings are not required at the top of two or fewer risers if the door does not swing over the steps – R311.3
- Egress windows are required in each sleeping room, no higher than 44 inches off the floor, with opening of 20-inch min. width, 24 min. height, and min. size of 5.7 sf, or 5 sf at ground level – R310.1
- Window wells for egress windows shall have a min. horizontal area of 9 sf, and if deeper than 44 inches, shall have a permanent ladder – R310.2
- Tempered glazing is required in windows lower than 60 inches from the floor, and within 24 inches of a door; lower than 60 inches above the floor of a shower or bathtub and within 5 feet of the edge; adjacent to a walkway and less than 36 inches above the walking surface, and within 5 feet of the bottom step; any window pane larger than 9 sf and within 18 inches of floor; and, any window pane on a wall perpendicular to the door in a closed position that is within 24 inches of the hinge side of an in-swinging door.
- Guardrails min. of 36 inches high - R312
- Note dimensions and use of each room. R106.1.1
- All habitable rooms are to have an area not less than 70 sqft with a minimum of 7' dimension in any direction. R304
- Habitable rooms, hallways, kitchens, laundry rooms, etc. shall have a ceiling height of not less than 7' measured from the finished floor to finished ceiling, bathrooms can be 6'8". Not more than 50% of the required floor area is permitted to have a sloped ceiling less than 7' with no portion of the required floor area less than 5'. R305
- Dimension all windows and doors and state opening type. R106.1.1
- Minimum window area shall equal not less than 8% of the floor area of the room unless artificial light is provided capable of producing 6 foot-candles over the area of the room at a height of 30".
- Natural ventilation equaling 4% of the floor area shall be through windows, doors, louvers, or other approved openings to the outdoors unless an approved whole home ventilation system is provided capable of producing .35 air changes per hour throughout the home. R303

#### ROOFING & EXTERIOR WEATHER RESISTANCE

- Provide felt paper underlayment for roof shingles or as required by manufacturer – R905.2.7
- Provide ice and water shield on all porches, valleys, soffits, overhangs, etc. to 2' beyond the exterior wall line – R905.2.7.1
- Water resistive barrier required per IRC Table R703.4 behind exterior finishes – R703.2
- Flashing and weather barrier inspection is required for: Stucco, door seal, brick, rock, and all exterior siding. Provide all manufacturer requirements for systems. – R109.1.5
- Exterior stucco shall comply with ASTM C926. When ambient temperatures are below 40 degrees, products containing cementitious materials shall be evenly

heated for a minimum of 48 hours. Heaters shall not blow directly onto product. The top coat shall not be applied until the base coat has cured for a minimum of 48 hours. In temperatures above 90 degrees, stucco products shall not be used unless proof can be provided that the hydration process meets manufacturer's specifications – R703.6.5 & IBC 2512.4

- Vapor barrier required on interior of exterior walls above grade only – R702.7
- All portions of the attic shall be ventilated, including porches. R806 Unvented attics shall comply with R806.5. R806

#### PLUMBING

- Water piping shall be protected at penetrations thru the foundation – P2603.4 & P2603.5
- All Hot water lines shall be insulated per code, recirculation hot lines shall have a minimum R4 insulation – N1103.4.2
- Show a 30” wide finished space for the water closet. Show 21” clearance in front of the toilet. P2705
- Shower compartments shall not be less than 900 sqin. Shower compartments shall not be less than 30” in minimum dimension. Shower compartments having not less than 25” minimum dimension shall be 1300 sqin.
- Shower pans shall be inspected for slope and leaks – R109.1.5 & P2709
- Water heater installations - M2005 & M1305.1.3 & P2801
- Jetted tubs shall have a motor access – P2720
- A backwater valve is required in drain lines where a drain is located lower than the next nearest upstream manhole cover – P3008.1
- Show a floor drain at the water heater location. P2801
- Provide a gas line diagram showing pressure, size, length, BTU, and location of each appliance. G2413

#### MECHANICAL & HVAC

- Where supply air is provided, passive return air shall be provided – M1401.3 & Manual D Section 4-9
- Provide a manual J&D. Shall not be oversized more than 40%, coils shall not be oversized more than 25%. N1103.7
- Duct systems must be installed per SMACNA standards – M1601.4
- Ducts shall be pressure tested per N1103.3.3
- Supply ducts located outside the building thermal envelope shall be insulated per N1103.3.1
- Exhaust fan is required in bathrooms and toilet rooms with no window (window shall be min. 3 sf and one half shall open) – R303.3
- Dryer vents shall terminate at the exterior of building – M1502.3
- All exhaust fans shall terminate to the outside and shall have a back-draft damper installed – M1501.1
- All A/C line sets to be insulated with R4 pipe insulation. It shall be installed per code with weather and UV resistant materials. – M1411.5
- Install metal collar at type B-vent penetrations at floors and ceilings to maintain 1-inch clearance to combustible construction – B-vent Manufacturer's Instructions
- Insulation shield required around b-vent in attic – G2426.4

- Combustion air shall be provided for gas fired appliances – G2407
- Provide start up calculations on furnace at final inspection – Manual J
- A/C start-up report required on all condensers on project – Manual J
- Appliances in garages or in rooms connected to garages shall have an ignition source elevated 18” minimum above the floor. G2408.2
- Fuel burning appliances, including fireplaces, shall not be installed in sleeping rooms, bathrooms, or toilet rooms unless appliances are direct vent appliances or separated from the room per G2406.2
- Appliances located in garages or carports shall be protected from impact. M1307.3.1

#### ELECTRICAL

- Provide a power and lighting plan. Show locations of all receptacles, lighting outlets, switches, panels, and smoke/co detectors. R106.1.1, E3901
- Carbon Monoxide alarms are required in area outside of each sleeping room and in houses that have gas appliances or an attached garage; and, in bedrooms that have gas appliances within the room or within an adjoining bathroom – R315
- Smoke Detectors area required in each sleeping room, in area outside sleeping rooms, and at each story – R314
- Tamper-resistant receptacles where required per IRC – E4002.14
- All 125-volt, single phase, 15 and 20-amp receptacles installed in kitchens, bathrooms, garages, unfinished areas, and outdoors shall be GFCI protected – E3902.3
- Kitchen island receptacles shall not be installed under countertops extended more than 6 inches – E3901.4.5
- Recessed lighting shall meet the requirements of Energy Code (IECC) 402.4.2 for air leakage – N1102.4.4
- Electrical panel shall be in an accessible location, not in closets, bathrooms, or stairways; with a clear space in front of panel of 36 inches by 30 inches wide, and a clear height of 6.5 feet high - E3705.7 & E3405.2
- An electrical and lighting inspection is required before the Final to verify compliance with approved Energy codes – R109.1.5
- Jetted tubs require an individual GFCI branch circuit. All faucets shall be bonded, and bonding wire shall be green – E4209.1 & E4209.4