

County Zoning Amendments
"Part 1 - Capital Changes"

#5 – Hillside Standards

Below are proposed edits to Hillside Standards in Section 3.06

J. Hillside Design Standards

1. Purpose: Hillside areas of the County of Missoula are characterized by slope, vegetation, drainage, rock outcroppings, geologic hazards, and other physical factors which, if disturbed for the purposes of development, can cause physical damage to public and private property. Therefore, the development of such areas and adjacent land requires special care.

These standards, guidelines, and criteria apply to developments located on slopes over ten percent (10%) and are intended to supplement other standards within the Missoula County Zoning Regulations, in order to substantially accomplish the following objectives:

- a. The protection of hillside land and resources within the legitimate expectations of property owners and the County's overall goals;
 - b. The protection of the public from natural hazards due to seismic activity, soil characteristics which are limiting, landslides, slope instability, sedimentation, stormwater runoff, sheet flooding on frozen surfaces, soil erosion, and groundwater;
 - c. The preservation of natural features, wildlife habitat, and open space;
 - d. The retention of natural topographic features, such as drainage channels, streams, ridgelines, rock outcroppings, vistas, trees and native vegetation;
 - e. Promote design sensitive to existing vistas;
 - f. The preservation and enhancement of visual and environmental quality by use of natural vegetation and minimal excavation and terracing;
 - g. The assurance of an adequate transportation system, including non-motorized transportation, for the total hillside area that considers densities and topography with minimal cuts, fills, and other visible scars;
 - h. The establishment of on-site and off-site transportation systems that ensure ingress and egress for vehicles, including emergency vehicles, into all developed areas at all times;
 - i. The encouragement of innovative planning, design, and construction techniques for development in environmentally sensitive areas; and,
 - j. The mitigation of adverse environmental impacts, including, but not limited to, erosion and the degradation of air and water quality.
2. Lot Slope and Density within the Urban Service Area
 - a. For properties located within the Urban Service Area as defined and mapped in the Missoula County Growth Policy, permitted density is adjusted down

for land within slope categories greater than ten percent (10%). The density may be used within that slope category or may be used in a lesser slope category.

b. Density is adjusted using the table below.

Adjusted Density Calculations

Slope Category	Permitted Density
0 – 10%	Number of units permitted by zoning. No adjustment to zoning density.
10.01 – 20%	Number of units permitted by zoning x .70
20.01 and greater	Number of units permitted by zoning x .50

c. According to the goals and objectives within this section density recuperation up to the maximum allowance of fifty percent (50%) of the adjusted density may be applied to the adjusted density. Density for the hillside land in each slope category shall not exceed maximum density allowed by the underlying zone for the area of land within that slope category. Units permitted in each slope category through density recuperation shall be physically placed in that or a lesser slope category.

d. Density Recuperation is based on gross acreage and is always rounded to the nearest whole number. Density recuperation may be awarded, subject to Zoning Officer approval, as follows:

- i.) Fifty percent (50%) detached single-family dwelling units, where the building foot print does not exceed nine hundred (900) square feet of ground floor living area. Units required are always rounded up to the next whole unit. (20% Bonus)
- ii.) Providing a cluster/open space development. (20% Bonus)
- iii.) Connection to a waste water collection and treatment facility, not to include individual or community drainfield. (20% Bonus)

e. Density recuperation may be applied if the property meets the Process Requirements and Neighborhood Notice Requirements of the Density Bonus section.

3. ~~All structures Lots shall have a be constructed on a minimum two thousand (2,000) square foot contiguous~~ buildable area of two thousand (2,000) contiguous square feet of land with a slope of less than twenty-five percent (25%). Building construction on slopes greater than 25% is prohibited. Lots created prior to the adoption of Resolution #2001-011, on January 30, 2001, are exempt from this requirement.

4. Driveways - Driveways shall be designed to minimize cut and fill and site disturbance, provide year-round access, and accommodate emergency response equipment. The driveway shall substantially follow the natural contour and not

exceed the maximum grade of the regulations. Driveway plans shall be approved by the appropriate fire jurisdiction prior to issuance of a Zoning Compliance Permit.

56. Design Standards

- a. When structures are located on hillside land, they shall be designed to fit into the hillside, rather than altering the hillside to fit the structure. The design may require the use of one or more methods to fit into the hillside.

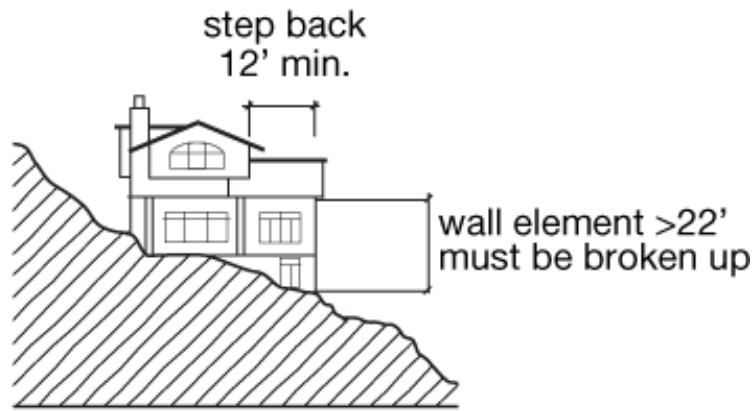
Methods for incorporating structures into hillsides are:

- i.) Reduced footprint design, where the building footprint does not exceed nine hundred (900) square feet of ground floor living area.
- ii.) Multiple "step up" or "step down" structures which follow the natural hillside slope on any buildable portion of the site.
- iii.) Orient buildings to slopes so that the greatest horizontal dimension is parallel with, not perpendicular to, the natural contour of the land.
- iv.) Use of landscape screening, if the underside of the building is exposed.
- v.) Building pads which are graded with a minimum of fill slope on downslope side.
- vi.) Other hillside design methods that meet the intent of this section and meet the goals of the adopted growth policies.

b. Building Wall Elements~~Individual wall elements shall not exceed eighteen feet (18') in height.~~

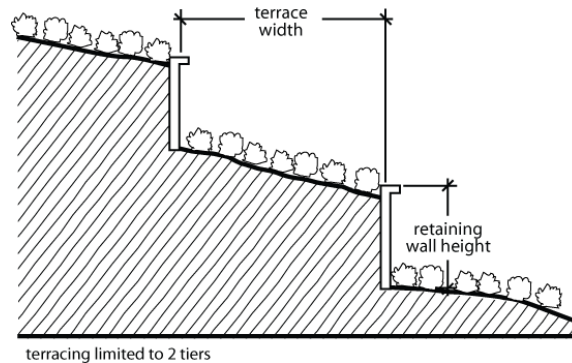
[This section (b.) is proposed to be amended in conjunction with *Capital Change #4 – Amending Building Height Definition*]

- i. Wall elements adjacent to grade shall be measured from the lowest existing grade to the underside of the eave or top of coping of a flat roof.
- ii. Wall elements not adjacent to grade shall be measured from the lowest point at which the wall element intersects any part of the adjacent building element to the underside of the eave or top of coping of a flat roof.
- iii. A gable end above the eave shall be excluded as part of the wall element measurement.
- iv. Building wall elements may not exceed twenty-two (22) feet in height (vertically). Individual wall elements may be stacked vertically if the total cumulative vertical dimensions of all stacked wall elements does not exceed twenty-two (22) feet in height or if the wall elements are offset by at least twelve (12) feet in horizontal distance. Wall elements will be considered offset for the purpose of these hillside regulations only if (1) they are separated by at least twelve (12) feet in horizontal distance, and (2) the offset occurs by stepping the building back towards the slope (uphill).



b.c. Retaining Walls

- i. Where retaining walls are used, the walls should step down from the building structure following the natural hillside contours. Maximum permitted height of a retaining wall is six feet zero inches (6'- 0") measured from finished grade.
- ii. Terracing of retaining walls is limited to two tiers. The width of the terrace between 4-foot or shorter vertical retaining walls must be at least three (3) feet. Retaining walls with a height of more than four (4) feet must be separated from any other retaining wall by a minimum horizontal distance of five (5) feet. Terraces created between retaining walls must be permanently landscaped or revegetated.



~~iii. When buildable and non-buildable areas exist on a lot or parcel, then the structures shall be set back a minimum of forty (40) feet from the top of the slope where the non-buildable area (greater than twenty-five percent (25%) slope) becomes a buildable area (twenty-five percent (25%) or less slope).~~

~~d. The maximum vertical height of a building or structure shall not exceed the building height envelope of the underlying zone.~~

~~i.) A building envelope shall be established by showing the maximum vertical height allowed by zoning from finished grade. The permitted building height is established within each zoning district;~~

~~ii.) Maximum vertical height shall be determined by measuring the elevations above sea level of the uphill and downhill corners of the building and elevation of the highest vertical distance from finished grade to the rooftop. If the fill height~~

~~above natural grade exceeds eight feet (8'), then the natural grade plus eight feet (8') shall become the measuring point for the downhill corner.~~ [This is proposed to be deleted in conjunction with *Capital Change #4 – Amending Building Height Definition*].

- d.f. The highest part of any structure shall be a minimum of eighty (80) vertical feet below the closest point on the nearest prominent hilltop or ridgeline. The ridgeline's natural contour and native vegetation must remain intact. A map locating prominent hilltops and ridgelines is available at the Planning Office. In addition, the choice of buildable area shall weigh the need to protect conservation resources, such as natural slope, areas of riparian resource and habitat for species of special concern against the need to protect the view from the valley floor. If an alternative design is proposed, the applicant shall provide a written statement stating how the design meets the intent of this section. On approving alternative designs, the Zoning Officer may require more restrictive hillside design standards.

76. Submittal Requirements

- a. Drawings showing that no part of the building or structure pierces the building envelope plane;
- b. A topographic map which shall identify the site boundaries, natural drainage courses, rock outcroppings, known landslides and other geologic hazards. The A topographic map shall be prepared by a professional engineer, licensed land surveyor or other qualified licensed professional, and shall have a scale of not less than one (1) inch to fifty (50) feet and a contour interval of not more than two (2) feet unless otherwise approved by the Planning Office.
- c. ~~The developer shall provide~~ When requested by the Planning Office, a site plan of the entire development showing areas of slope category between: 0 - 10%, 10.01 - 20%, 20.01 - 25%, and over 25%.