

CHAPTER

6



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6.1 PURPOSE

The purpose of this chapter is to provide design standards applicable to the physical development of a parcel or project site within a district.

6.2 ACCESS AND CIRCULATION

A) Pedestrian Access.

1. **Purpose.** The purpose of this section is to ensure safe, accessible, direct and convenient off-street multi-modal circulation within a development site and provide connectivity to adjacent parcels and systems.
2. **Applicability.** All developments in Residential and Mixed-Use districts, except for all building types that are single-household and two-household dwellings, triplexes, quadplexes, and townhomes.
3. **On-site multi-modal infrastructure connectivity.** All on-site multi-modal facilities must provide safe, direct and convenient pedestrian pathways based on the following:
 - a. Connect all building entrances within the development to one another.
 - b. Connect any required off-street parking areas, storage areas, recreational facilities, and common areas (when applicable) to the primary building entrance and all other primary uses on the lot.
 - c. Pedestrian access may be placed in Montana Department of Transportation Right-of-way or Missoula County right-of-way when those facilities have been allowed by the respective agency.
 - d. The Zoning Officer may determine that a multi-modal facility is impractical due to physical or topographic conditions (e.g., highways, railroads, steep slopes, sensitive lands, and similar physical constraints), buildings or other existing development on-site or on adjacent properties that prevent a connection, or sites where a recorded legal instrument (easements, covenants, etc.) prohibits the connection.
4. **On-site pedestrian facility design.**
 - a. Required on-site pedestrian access must consist of an accessible, easily discernible, and ADA-compliant walkway.
 - b. Required pedestrian access surfaces located on private property must be paved with fixed, nonslip semi-pervious or impervious materials.
 - c. Pedestrian access routes between buildings and parking must be physically separated from drive aisles, except where required to cross a drive aisle.
 - d. Where a pedestrian walkway crosses a drive aisle, the walkway must have a contiguous, differentiated surface treatment across the drive aisle.

COMMENT: Refer to the Missoula County Public Works Manual for road construction standards.

5. **Primary Entrance Connection.**

A pedestrian access route must be constructed to connect the primary entrance of each building to an abutting street. The primary entrance is the main entrance to the building.

- a. For multi-family buildings where a primary entrance from each home does not exist, one connection to the street is required per building.

B) Vehicular Access.

- 1. **Purpose.** The purpose of this section is to ensure safe, accessible, direct and convenient off-street circulation within a development site and provide connectivity to adjacent parcels and systems.

- 2. **Applicability.** All developments in Residential, Mixed-Use and Industrial districts except for all building types that are single-household and two-household dwellings, triplexes, quadplexes, and townhomes.

3. **Curb cuts and driveways**

- a. All curb cuts and driveways onto a public street require approval from Missoula County Public Works, the Montana Department of Transportation, and/or other agencies with jurisdiction. In the case where these standards and the approvals of these agencies conflict, the approval of the agencies shall apply.

- b. Curb cuts and driveways.

- i. Driveway access for a corner lot must be from the street with the lower roadway classification.

- ii. A lot is allowed one driveway access to a street, not including an alley, except that the number of approaches should be the minimum number necessary to provide reasonable access to the property. Additional driveways may be allowed as follows:

Table 1 Access Permitted

STREET FRONTAGE	DRIVEWAYS (MAX.)
150' or less	1
151' to 300'	2
301' or more	3

- iii. When allowed, driveways serving the same lot or project site on the same street frontage must be spaced 150 feet apart, measured from centerline to centerline.
- iv. Driveways may be no closer than 75 feet to the intersection of two streets, not including an alley, measured from the centerline of the driveway to the edge of the road surface.
- v. Whenever a lot is adjacent to an alley, vehicular access to the property shall be provided by the alley only.
- vi. The minimum width of an approach shall be sixteen (16) feet and maximum width shall be thirty (30) feet as measured at the throat.



4. **Shared access and vehicular cross-access.**

- a. All development abutting an arterial or collector road in a Commercial Center (CC) district must provide for future cross-access between other lots or project sites zoned CC by constructing a driveway or providing a stub for future access to adjacent parcel(s) abutting an arterial or collector road, extending to the property line at the most logical point where a future connection could be made.
- b. A shared access may be required by Missoula County Public Works or the Montana Department of Transportation to consolidate access onto collector or arterial roads. In the case where these standards and the approvals of these agencies conflict, the approval of these agencies shall apply.
- c. Shared accesses or frontage streets shall be stubbed to adjacent developable land, so the internal driveway or street temporarily ends at the property line when the adjacent property is undeveloped or likely to redevelop.
- d. A perpetual ingress/egress access easement and an agreement for maintenance for the paved driveway and any required landscaping shall be recorded prior to issuance of a Final Certificate of Zoning Compliance.
- e. The Zoning Officer may determine that a stub to an adjacent parcel is impractical

due to physical or topographic conditions (e.g., highways, railroads, steep slopes, sensitive lands, and similar physical constraints), buildings or other existing development on site or on adjacent properties that prevent a connection, sites where a recorded legal instrument (easements, covenants, etc.) prohibits the connection, or other safety factors exist.

- f. The following uses are exempt from the vehicular cross-access requirement in the Commercial Center district:
 - i. Conservation Design Development;
 - ii. Minor utilities; and,
 - iii. Agricultural uses (excluding high-intensity agriculture).

5. **Vehicle queuing.**

- a. Adequate off-street vehicle queuing space must be made available on-site for any use having a drive-through, control gate or pick-up/drop-off area.
- b. A queuing space shall be a minimum of 20 feet in length and ten feet in width.
- c. Required queuing shall be fully contained on-site, shall not encroach into any right-of-way, and shall not be designed in a way that blocks entry or exit from other on-site parking.
- d. Queuing requirements for specific uses are as follows:

Table 2 Vehicle Queuing Requirements

USE	NUMBER OF SPACES
Eating and drinking establishment – greater than 800 square feet	6 spaces before the order board; 4 spaces between the order board and transaction window
Eating and drinking establishment – less than 800 square feet	2 spaces
Bank, pharmacy or other pick-up service	3 spaces before the transaction window
Control gate	1 space before the gate
All other uses	Determined by the Zoning Officer

6.3 PARKING AND LOADING

A) General Applicability.

1. **New construction.** Any new building or site improvement must comply with this section.
2. **Additions.**
 - a. When an existing building, use, or development is increased in gross floor or outside use area by up to 50 percent cumulatively, these parking and loading standards shall apply to the additional floor or use area only.
 - b. When an existing building, use, or site is increased in gross floor area or outside use area by more than 50 percent cumulatively, both the existing building, use, or site and the additional floor or use area shall meet these requirements.
3. **Change in use.**
 - a. Where a change in use occurs and the number of existing parking spaces exceeds the maximum number of allowed parking spaces for the new use, the additional parking spaces may remain in place.
 - b. When the use of a residential or civic structure is changed and such change creates an increase of 15% or more in off-street parking space requirements, the parking requirements of this section shall be met.
 - c. When the use of a building or structure is changed to a use with operations that include loading or unloading of goods, materials, items, or stock for delivery or shipping loading requirements in Section 6.3.H. "Vehicle Loading" shall be met.
4. **Timing.** All required parking and loading areas shall be completed before issuing a Final Certificate of Zoning Compliance for the use they serve.

B) General Provisions.

1. All driveways, drive aisles, and travel lanes shall be paved in accordance with the requirements of the Missoula County Public Works Department and the Air Pollution Control Program.



2. The following pervious or semi-pervious surface materials may be used as an alternative to the paving in 6.3.B.1. in a Residential district, as determined by Missoula County Public Works and the Air Pollution Control Program.
 - a. Reinforced grass parking systems; or,
 - b. Ring and grid systems used in conjunction with grass, pervious concrete, or permeable pavers.
3. Temporary parking may be accommodated on grass, graveled, or natural surface, with spaces appropriately marked, as long as the use of such parking does not exceed the length of time for which the permitted temporary activity has been approved.
4. The temporary storage of snow may not reduce the required parking area by more than 25 percent and shall not damage landscaped areas required by these regulations.

C) Parking Spaces Required.

1. **Method of calculation.**
 - a. Unless noted in Table 3 below, the parking requirement is based on the building's gross floor area devoted to the particular use specified.
 - b. Parking for uses not expressly provided for in Table 3 shall be determined by the Zoning Officer, who shall apply a standard set forth in the Table 3 for a use deemed most similar to the proposed use.
2. **Parking required.** The provision of off-street vehicle parking is required, as set forth in Table 3. Non-residential uses in the Live/Make district shall provide no fewer than one half of the maximum off-street vehicle parking as established in Table 3.

Table 3 Off-Street Parking Required

USE	PARKING SPACES REQUIRED (MIN.)	PARKING SPACES ALLOWED (MAX.)
Residential Uses		
Single-household dwelling	1 per home	No max.
Two-household dwelling		
Multiple-household dwelling, townhomes	1 per home	2 per home
Cottage court	1 per home	2 per home
Nursing homes	1 per 5 beds	1 per 4 beds
Community residential facility		
All social services	0.5 per bed	1 per bed
Civic Uses		
All civic uses	1 per 1,000 sq. ft. of use area	4 per 1,000 sq. ft. of use area
All recreation	No min. except ADA Compliant parking (see Section 6.3.E.)	No max.
All utilities		

Table 3 Off-Street Parking Required

USE	PARKING SPACES REQUIRED (MIN.)	PARKING SPACES ALLOWED (MAX.)
Commercial Mixed Uses*		
All day care	No min. except ADA Compliant parking (see Section 6.3.E.)	5 per 1,000 sq. ft.
All indoor entertainment venues		4 per 1,000 sq. ft.
All outdoor entertainment venues		4 per 1,000 sq. ft. of indoor space plus 3 per 1,000 sq. ft. of outdoor area
All medical, hospital		4 per 1,000 sq. ft.
All office		4 per 1,000 sq. ft.
All overnight lodging		1.25 per rented lodging room
Schools / colleges		2 per classroom
Religious assembly		2 per 4 seats/8 ft. of bench
All personal service		4 per 1,000 sq. ft.
All eating and drinking establishments		8 per 1,000 sq. ft.
All retail		4 per 1,000 sq. ft.
All vehicle sales/rental		2 per 1,000 sq. ft.
Industrial Uses*		
All manufacturing	No min.	3 per 1,000 sq. ft.
All research and development		
All vehicle service and repair		
All warehouse, storage and distribution		
All waste-related service, junk/salvage yard		No max.
Open Uses		
Agriculture (not associated with a commercial use)	No min.	No max.

* Parking maximum is based on gross floor area.

3. **Maximum parking.** Where a maximum parking standard applies according to Table 3, the number of parking spaces shall not be exceeded. The maximum number of off-street parking spaces may be increased by 50% if they are constructed of porous pavement material such as grass pavers, turf blocks, pervious concrete, or porous asphalt.
4. **Offsets and incentives.**
 - a. Long-term bicycle parking substitution. The required minimum number of off-street parking spaces for a building, development, or land use may be reduced by 0.25 spaces for each long-term bicycle space provided that exceeds the requirements of Section 6.3.F.3. "Long-Term Bicycle Parking."



D) Off-Street Parking Standards.

1. **Parking space dimensions.** All off-street parking must meet the following dimensional requirements. Parking modules consisting of rows of parking accessed from aisles must also meet the requirements of 6.3.B.2.
 - a. Width. A parking space shall be a minimum of nine feet in width.
 - b. Length.
 - i. Standard Parking Space. A standard parking space shall have a minimum length of 18.5 feet.
 - ii. Overhang with Wheel Stop. When provided, the stopping edge of any curb or wheel stop must be placed no less than two feet from the end of the parking stall. Where a curb or wheel stop is provided, the overhang of a vehicle past the curb or wheel stop may be counted as part of the required parking stall depth, up to a maximum of two feet. The length of the overhang may not reduce the width of an adjacent walkway to less than five unobstructed feet.
 - iii. Alley Access. Any parking space accessed directly from any alley shall have a minimum length of 22 feet.
 - iv. Parallel Parking Space. A parallel parking space shall have a minimum length of 22 feet.
 - c. Vertical clearance. Parking spaces shall have a vertical clearance of at least seven feet.
2. **Parking module dimensions.** A parking module is a combination of parking stalls (spaces) and aisles. A module is comprised of one aisle serving a row of stalls on one or both sides of the aisle. For purposes of these regulations, a parking module is an aisle with five or more stalls on one side, or three or more stalls on both sides. Table 4 specifies the minimum widths for parking rows, aisles, and modules (see Figures 1 and 2).

Table 4 Minimum Dimensions for Parking Modules

SINGLE ROW OF PARKING	SPACE ANGLE (IN DEGREES)				
	PARALLEL	30	45	60	90
Parking space depth	9'	18'	21'	22'	20'
Drive aisle width	12'	12'	13'	18'	24'
Total module width	21'	30'	34'	40'	44'

Table 4 Minimum Dimensions for Parking Modules

TWO ROWS OF PARKING	SPACE ANGLE (IN DEGREES)				
	PARALLEL	30	45	60	90
Parking space depth	9'	18'	21'	22'	20'
Drive aisle width	12'	12'	13'	18'	24'
Total module width	30'	48'	55'	62'	64'

FIG. 1 Single-row Parking Module

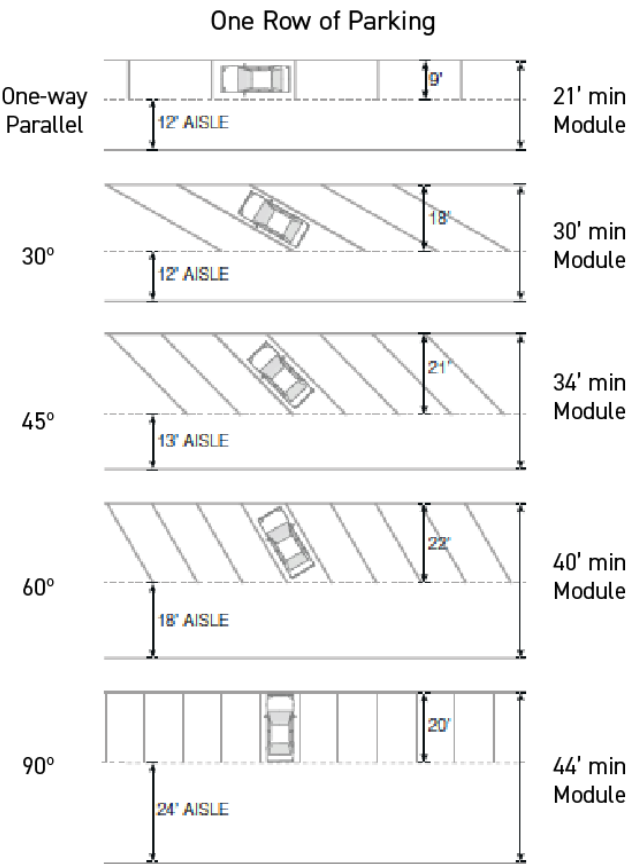
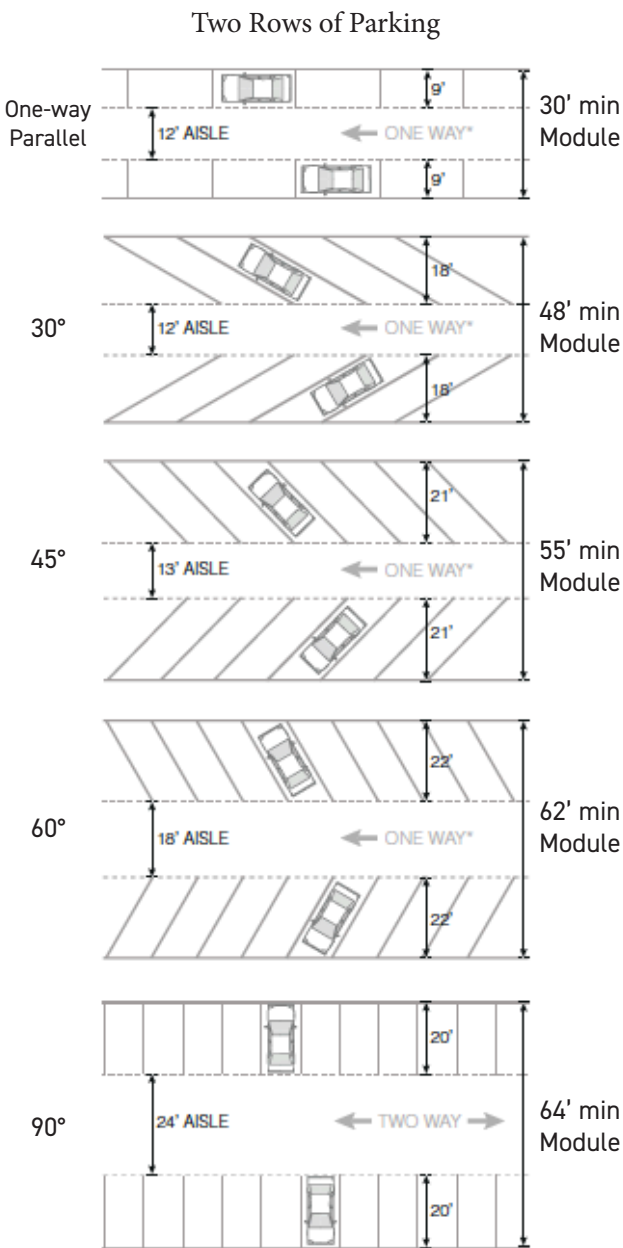


FIG. 2 Two-row Parking Module



*Increase to 24' if two-way.



E) Accessible Parking. If off-street vehicle parking is provided, accessible parking spaces must also be provided in accordance with the requirements of the Americans with Disabilities Act (ADA). If off-street parking is not required or provided accessible parking in compliance with ADA may be required by Missoula County Public Works Department.

F) Bicycle Parking.

1. Bicycle parking shall be provided in accordance with the following:

Table 5 Bicycle Parking Requirements

PRINCIPAL USE	MINIMUM BICYCLE PARKING SPACES
Multi-household dwellings	1 long-term space per home; 1 short-term space per home
Schools and educational facilities	1 space per 8 students
Office and industrial uses	1 space per 10,000 square feet of gross floor area
Any other uses with parking areas	1 space per 3,600 sq. ft. of building or structure area

2. **General standards.**

- a. Bicycle parking shall be securely-anchored bicycle racks, bicycle lockers, restricted access bicycle enclosures, or similar secured facilities.
- b. Bicycle parking spaces shall include clear and maneuverable access.
- c. No bicycle rack shall encroach into a required sidewalk or pedestrian walkway.
- d. Bicycle parking shall be located within 150 feet of the primary pedestrian entrance to a building. When there is more than one building on a site, or a building has more than one primary entrance, the bicycle parking shall be proportionally distributed to serve each entrance.
- e. If the bicycle parking is located outside, the bicycle parking areas shall be paved or surfaced with alternative materials as follows:
 - i. Reinforced grass parking systems; or,
 - ii. Ring and grid systems used in conjunction with grass, pervious concrete, or permeable pavers.
- f. Bicycle parking areas shall be connected to a required internal pedestrian circulation network.

3. **Long-term bicycle parking.** Long-term bicycle parking shall meet the following standards:

- a. Be protected from weather and access by unauthorized persons.
- b. Consist of racks or lockers anchored so they cannot be easily removed, and facilitate easy locking without interference from or to adjacent bicycles.
- c. Be of solid construction, resistant to rust, corrosion, hammers, and saws.

- d. Be accessed from outside the home.
- e. Be designed to have a minimum dimension of two feet in width by six feet in length, with a minimum overhead vertical clearance of seven feet.

G) Shared Parking.

1. **Applicability.** Shared parking is permitted for any lot with a mix of uses, or between abutting lots that can demonstrate that the minimum parking requirements for all uses can be met and the maximum parking for all uses is not exceeded.
2. **General standards.**
 - a. Parking spaces for any use shall not be located further than three hundred feet (300') from the primary entrance to each use, as measured by accessible pedestrian paths or sidewalks.
 - b. Shared parking shall require the recording of a perpetual easement and agreement for maintenance between property owners for the parking and driving areas and any required landscaping. These documents shall be recorded prior to issuance of a Final Certificate of Zoning Compliance.

H) Vehicle Loading.

1. **Applicability.** Non-residential uses with operations that include loading or unloading of goods, materials, items, or stock for delivery or shipping shall be required to provide one loading area either on-site or along the curb of the abutting street or internal drive, subject to Public Works Department

approval.

2. General standards.

- a. The minimum dimensions of a loading area required by these regulations is:
 - i. Width of 12 feet;
 - ii. Depth of 25 feet; and,
 - iii. Overhead clearance of 14 feet.
- b. When located on-site, a loading area shall be:
 - i. Located to the side or rear of the building and adjacent to the loading doors;
 - ii. Arranged to have safe and convenient access to a street, but in no case shall the loading area extend into the required aisle of a parking area;
 - iii. Located a minimum 100 linear feet from a Residential district or use; and,
 - iv. Screened according to the requirements of Section 6.4.F.3. "Screening and Buffering."

6.4 LANDSCAPING AND SCREENING

A) Purpose. This section is intended to provide standards for the landscaping and screening of property that:

1. Establish an attractive landscaped edge and screening adjacent to street right-of-way and residential development.



2. Preserve existing vegetation, maintain the tree canopy, reduce heat island effects, and improve air quality.
3. Provide opportunities for planting of native vegetation, reduce damage to ecosystems from noxious weeds and invasive species, and encourage pollinator food-source species.
4. Promote and enhance the community's appearance as viewed from the public realm.
5. Improve site permeability and reduce stormwater runoff.
6. Incorporate required water quality and stormwater management features into the overall site and landscape design that is attractive and serves as a positive part of an integrated landscape design.
7. Mitigate visual impacts on surrounding properties, open spaces, and rights-of-way arising from roof-top mechanical equipment, outdoor storage of materials and waste, surface parking lots, and other similar outdoor uses and activities.

B) Applicability.

1. Unless otherwise stated, the landscaping requirements of this section apply to all lots and project sites as follows:
 - a. Any new development or change in use in a Residential, Mixed-use, or Industrial district, including any residential development in Residential or Mixed-use districts which results in three or more total dwelling units on a single lot or project site;

- b. Additions to existing structures where the gross floor area of the structure is increased by 50 percent or more of its original footprint, or where a use is expanded by 50 percent or more of its original area on a lot or project site; and,
- c. Whenever the area of an existing surface parking lot is expanded or when a new parking lot is constructed.

2. Exceptions. A parcel or project site is exempt from these requirements when:

- a. The existing building or site is undergoing repair or maintenance, provided there is no increase in gross floor area or expansion of the use areas original footprint.
- b. A change in use where the use-specific conditions established in Chapter 5 do not require additional landscaping, provided the increase in gross floor area or expansion of the use area's original footprint is less than 50 percent.
- c. Residential development resulting in less than 3 dwelling units on a single parcel or project site.

C) General.

1. **Landscaping required.** Required on-site landscaping includes:
 - a. Street frontage landscaping per Section 6.4.F.1.;
 - b. Parking lot landscaping per Section 6.4.F.2.; and,

- c. Screening and Buffering, where applicable, per Section 6.4.F.3.
2. **Native landscaping and xeriscape required.** A minimum of 25 percent of the landscaped area required on a site shall consist of native plant materials and/or xeriscaping, except where existing non-native trees and vegetative cover are retained entirely undisturbed and encompass more than 75% of the required landscaped area. Native landscaping and xeriscaping shall consider fire-wise standards set forth in [Fire-Resistant Plants for Montana Landscapes](#) and incorporate tree and shrub species identified in the [USDA's Conservation Trees and Shrubs for Montana](#).
3. **Maintenance.**
- a. All landscaped areas required by these regulations shall be continuously maintained by the property owner, their successor, heirs, and assignees.
 - b. Maintenance means all actions necessary to keep landscaping materials healthy, neat and orderly in appearance, and free of litter and debris, including necessary watering, weeding, pruning, pest control, and replacement of dead or diseased plant materials or damaged fences or walls. In order to meet this requirement, landscaped areas may require the installation of a properly designed irrigation system.
 - c. Native landscaping and xeriscaped areas are exempt from the irrigation requirements of this section.
4. **Replacement of planting material.**
- a. Replacement of dead or diseased plant material shall be of the same type of plant material in the approved landscape plan.
 - b. Replacement of dead or diseased plant material shall occur during the growing season following the event that caused the death or disease to occur. The growing season is generally viewed as the time period between April 1 to October 1 of each year. In no event shall replacement take longer than one calendar year.
5. **Landscape plan.** A landscape plan must be submitted as part of an application for a Zoning Compliance Permit and shall contain the following:
- a. Identification and description, location, and dimension of all landscaped areas required by these regulations, including trees, shrubs, and other plant and non-living landscape materials, and landscape materials meeting the native species and xeriscape requirements of these regulations.
 - b. The location of riparian resource protection areas and buffers (as required in Section 7.4. "Riparian Resource Protection."
 - c. Existing trees, including tree canopy coverage, to be preserved.
 - d. A description of the proposed irrigations systems required



- e. A maintenance plan for all landscaped areas required by these regulations.

D) Tree preservation.

1. Applicability.

- a. During construction or demolition of any structure or use subject to landscaping requirements in a Residential or Mixed-use district, any established tree not otherwise diseased or decayed and located within the front or street-side setback areas of the lot shall be preserved.
- b. Preservation of existing trees may count toward landscaping requirements of these regulations.

- 2. **Preservation measures.** To protect an established tree from damage or destruction and to enhance the tree's chance of survival after construction activities are completed, the property owner shall take and maintain the following measures throughout demolition or construction activities:

- a. Erect and maintain temporary fencing surrounding the area beneath the tree canopy to mitigate the chance of impact injuries to the tree during demolition or construction;
- b. Refrain from operating construction equipment or storing construction materials beneath the canopy of the tree or engaging in other activities that would cause the undue compaction of the soil in the tree's root zone; and,
- c. Refrain from any excavation

beneath the tree's canopy that would cause undue destruction of the tree's roots.

- 3. **Exceptions.** If, to comply with the standards for landscaping of off-street parking areas and the off-street parking requirements, it appears necessary to remove mature, existing trees, the Zoning Officer may allow reasonable reductions through a minor waiver request in either (1) the size of required landscaped areas (to accommodate the required parking), or (2) the number of required parking spaces.
- 4. **Restoration.** Whenever a property owner violates this section's provisions and removes an existing tree from the front or street-side setback, the tree shall be replaced with a tree (or trees) approved by the Zoning Officer in consultation with the Parks, Trails and Open Lands Division.

- E) **Landscaping Materials.** The following materials are allowed and shall meet the stated size specifications at the time of planting.

1. Live plant materials.

- a. Deciduous trees at least two-inch caliper measured four inches above the ground;
- b. Ornamental and flowering trees at least 1.5 inches caliper measured four inches above the ground;
- c. Evergreen trees at least five feet tall;
- d. Evergreen spreaders and broadleaf evergreens five-gallon size minimum, with spreads no less than 18 inches;

- e. Shrubs five-gallon size minimum, with heights no less than two feet
- f. Vines and ornamental grasses one gallon in size, minimum;
- g. Ground cover;
- h. Turf or sod; and,
- i. Other similar quality and size live plant material.

2. Non-living landscaping materials.

- a. Organic mulch (including wood chips and bark);
- b. Sand or similar permeable material;
- c. A minimum of two inches of tumbled glass, rock, gravel or stone that allows for permeability; or,
- d. Hardscaping materials, for decorative or practical purposes which allow for permeability, such as walkways, patios, retaining walls, arbors, firepits/fireplaces, fountains, columns, gazebos, pergolas, benches, planters, and continuous or meandering fences/walls less than 4 feet tall.

3. Prohibited landscape species and materials.

- a. In addition to the noxious weeds and invasive species listed on the [Montana Department of Agriculture's State Noxious Weed List](#), the species listed in Table 6 are prohibited in required landscape areas.

Table 6 Prohibited Landscaping Species

COMMON NAME	SCIENTIFIC NAME
Russian olive	<i>Elaeagnus angustifolia</i>
Saltcedar	<i>Tamarix spp.</i>
Scotch broom (and other kinds of brooms)	<i>Cytis scoparius</i>
Yellow sweet clover	<i>melilotus officinalis</i>
White sweet clover	<i>melilotus albus</i>
Norway Maple	<i>Acer platanoides</i>
Boxelder	<i>acer negundo</i>
Dames rocket	<i>Hesperis matronalis</i>
Oriental poppy	<i>Papaver orientale</i>
Japanese honeysuckle	<i>Lonicera japonica</i>
Most other non-native honeysuckles	<i>L. tatarica, L. amur</i>
Baby's breath	<i>Gysophila paniculate</i>
Smooth brome	<i>Bromus inermis</i>
Crested wheat grass	<i>Agropyron cristatum</i>
Woolly mullein	<i>Verbascum thapsus</i>
Bird vetch	<i>Vicia cracca</i>



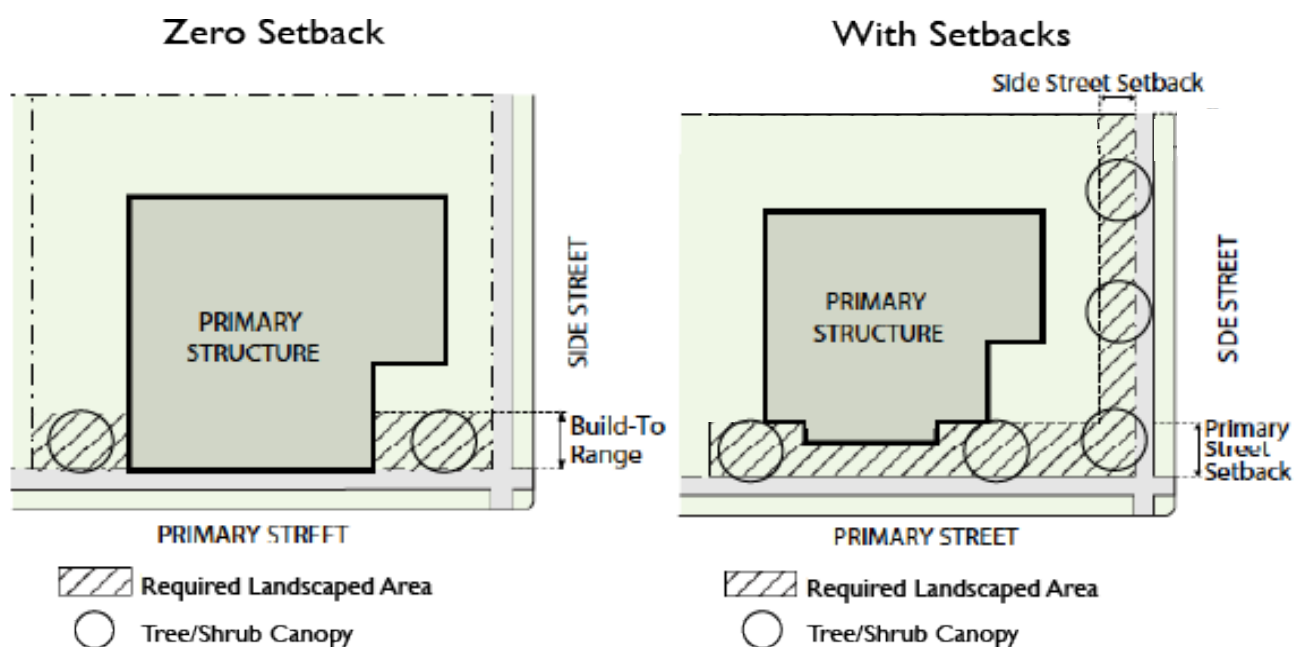
F) Landscaping Standards.

1. Street frontage landscaping

a. General.

- i. A minimum of 50 percent of the required street frontage landscaped area, exclusive of driveways, shall be landscaped with live ground cover material, and the remaining 50 percent shall be landscaped with either live or non-live landscaping material, according to Section 6.4.E. "Landscaping Materials."
- ii. The required street frontage landscaped area shall encompass all unimproved areas within a required setback and build-to zone, where applicable, adjacent to all streets, not including interstate freeways. The required landscaped area for a district with a build-to-zone shall encompass the maximum extent of the build-to-zone range (see Figure 3).
- iii. For the purpose of this section, an unimproved area means an area not occupied by a building (or structure or building element attached to the ground), pedestrian walkway, off-street parking, a permanent outdoor amenity such as an eating or drinking area, or areas required by the County or these regulations to be kept free of landscaping.

FIG. 3 Landscaping Location (except Industrial Districts)



b. Street frontage trees

- i. Trees required in street frontage landscaped areas shall be planted on-site at a rate of one tree for every linear 30 feet of street frontage or fraction greater than one half (15'). Tree spacing may vary, but the distance between trees shall not exceed 40 feet, except where building placement is within 15 feet of a street frontage property line, in which case trees may be placed elsewhere within the street frontage landscape area or in the right-of-way, with approval from the appropriate jurisdiction.
- ii. Existing healthy trees located within the required street frontage landscape areas shall be credited toward this requirement, provided they meet the landscaping material standards in Section 6.4.E. "Landscaping Materials."
- iii. Trees and shrubs in any Mixed-use district may be located in planters.
- iv. Street frontage trees that cannot meet the required 15' spacing requirement can be placed elsewhere on the project site area at the discretion of the Zoning Officer.

2. Parking lot landscaping.

a. Applicability.

- i. Parking lot landscaping includes interior and perimeter landscaping and is required for all paved off-street surface vehicle parking areas with more than ten spaces. Underground and covered parking areas, including all levels of parking structures, are not required to provide parking lot landscaping.
- ii. When a parcel or a project site contains multiple separate parking areas that are connected with drive lanes, the configuration shall be considered a single parking area for the purpose of these regulations.

b. General.

- i. Required landscaping and trees shall be sited, in compliance with Section 4.7. "Sight Triangle" to achieve maximum shading of parked vehicles, pedestrian walkways, and respite areas.
- ii. On-site drainage shall be incorporated into parking lot landscaped areas to the maximum extent feasible

c. Surface parking lot perimeter landscaping.

- i. The standards in Table 7 below shall be applied to parking lot perimeters within a Residential district where an off-street parking area abuts a residential use or zoning district, unless separated by an alley.
- ii. The standards in Table 8 below shall be applied adjacent to the boundary of any surface parking lot along the entire parking lot perimeter, excluding driveways, within a Mixed-use or Industrial district.
- iii. Perimeter parking lot landscaping is not required adjacent to buildings or when buildings are separated from parking areas by a walkway.



Table 7 Parking Lot Perimeter Landscaping Standards, Residential Districts

ZONING DISTRICT	PARKING LOT PERIMETER LANDSCAPING REQUIRED DEPTH	PLANTING REQUIRED	FENCE REQUIRED
Residential, (R)	5'	One minimum 6' tall at planting deciduous tree for every 30 feet of linear frontage. Tree spacing may vary, but distance between trees may not exceed 40 feet. Non-living landscaping materials meeting the standards in Section 6.4.E. can make up no more than 20% of the parking lot perimeter landscaping.	N/A
Residential, Medium (RM)	5'		
Live/Make (LM)	5'		
Neighborhood Residential (NR)	5'		

Table 8 Parking Lot Perimeter Landscaping Standards, Mixed-Use and Industrial Districts

ZONING DISTRICT	PARKING LOT PERIMETER LANDSCAPING REQUIRED DEPTH	PLANTINGS REQUIRED	SCREENING REQUIRED
Neighborhood Center (NC)	6'	Live plant material meeting the standards in Section 6.4.E., including one minimum 6' tall at planting deciduous tree for every 30 feet of linear frontage. Tree spacing may vary, but the distance between trees may not exceed 40 feet. Non-living landscaping materials meeting the standards in Section 6.4.E. can make up no more than 20% of the parking lot perimeter landscaping.	A minimum 4' tall opaque fence, wall, landscaping, and/or an earth berm with plantings in compliance with Section 6.4.F.3. "Screening and Buffering" shall be installed along parking lot perimeters that are adjacent to Residential districts, residential uses, parks, trails, and open space lands, not including property boundaries adjacent to an alley.
Commercial Center (CC)	15'		
Civic Employment Center (CEC)	10'		
Industrial Center, Light (ICL)	5'		
Industrial Center, Heavy (ICH)	10'		

d. Surface parking lot interior landscaping standards.

Table 9 Surface Parking Lot Interior Landscaping Standards

SURFACE PARKING LOT SIZE	LANDSCAPED AREA REQUIRED	PLANTINGS REQUIRED WITHIN INTERIOR LANDSCAPED AREA	DESIGN REQUIREMENTS FOR INTERIOR LANDSCAPED AREA
10 parking spaces or less	No requirement		
11-100 parking spaces (See Figures 4 and 5)	Landscaped area equal to at least 5% of the gross square footage of the area of surface parking stalls, exclusive of circulation drives, shall be provided.	<ul style="list-style-type: none"> The parking lot interior shall be landscaped with 50% live planting material and the remaining 50% with either live or non-live material in compliance with Section 6.4.E.; and, For every 50 linear feet of double-loaded parking rows, or portions thereof, at least one deciduous tree, minimum 6' tall at time of planting, shall be installed in the parking lot interior landscaped area. 	<ul style="list-style-type: none"> Minimum width: 6' Maximum row length: 15 contiguous parking stalls Landscape areas must be within or immediately adjacent to the parking rows and may be in a strip along the center of a double-loaded row or in one or more islands at the ends or interspersed between parking rows and stalls. A landscaped area along the center of a double-loaded row may serve as the required pedestrian walkway location if the minimum width is increased to 9 feet.
101 or more parking spaces (See Figure 6)	A landscaped area equal to at least 10% of the gross square footage of the area of surface parking stalls, exclusive of circulation drives, shall be provided.	<ul style="list-style-type: none"> The parking lot interior shall be landscaped with 50% live planting material and the remaining 50% with either live or non-live material in compliance with Section 6.4.E.; and, For every 200 square feet or part thereof of required parking lot interior landscaped area, at least one deciduous tree and 2 shrubs shall be included in the required parking lot interior landscaped area. 	<ul style="list-style-type: none"> Minimum width: 6' Maximum row length: 15 contiguous parking stalls A landscaped area along the center of a double-loaded row may serve as the required pedestrian walkway location if the minimum width is increased to 9 feet.



FIG. 4 Surface Parking Option A

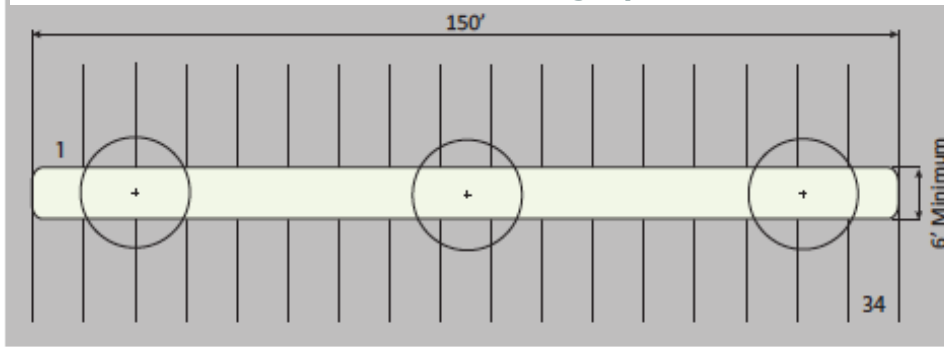


FIG. 5 Surface Parking Option B

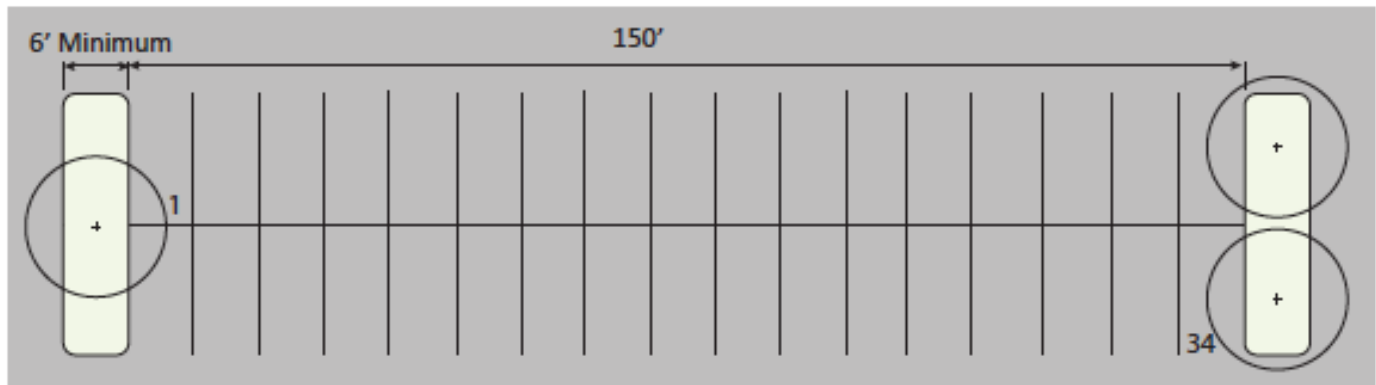
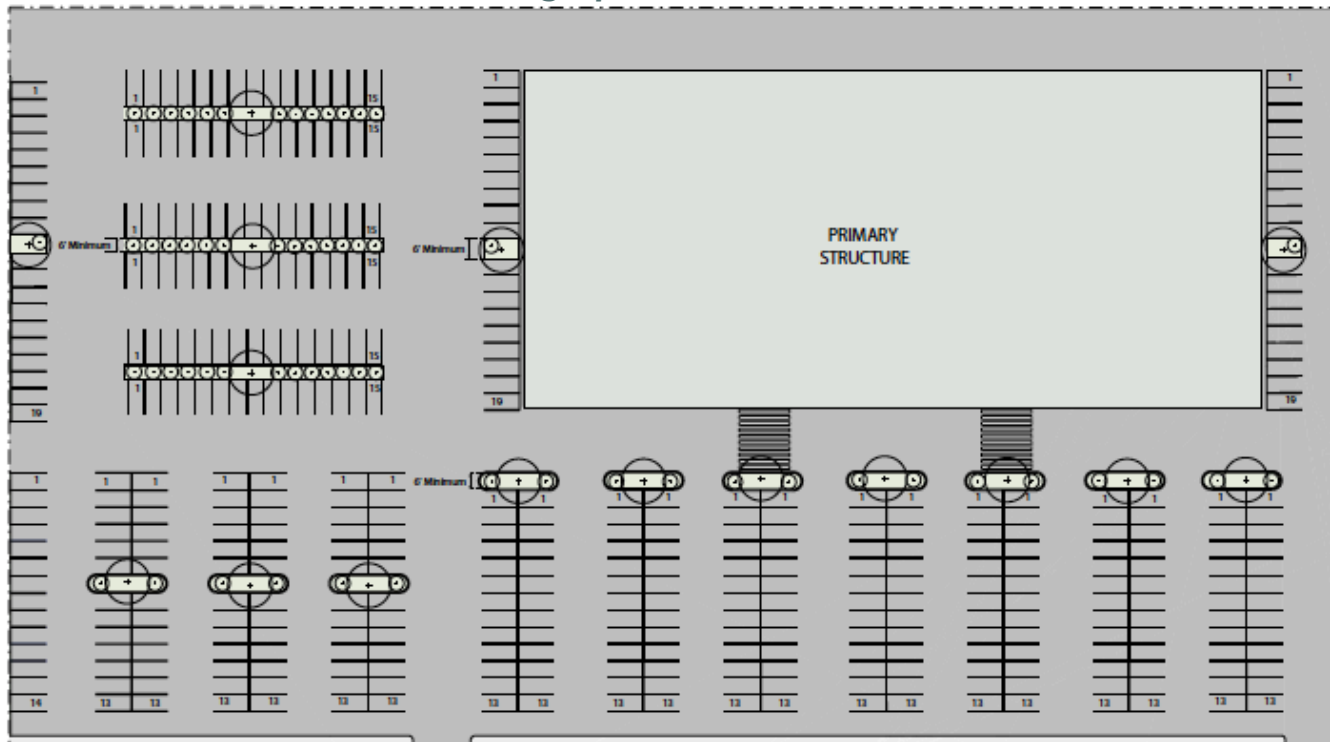


FIG. 6 Surface Parking Option C



- Required Landscaped Area
- + Required Trees
- ⊙ Required Shrubs

3. Screening and Buffering

a. Applicability

- i. Wherever these regulations require screening as a condition or limitation on an activity or use, such screening shall consist of landscaping, fences, and/or walls of a design and density adequate to visually screen the use or activity as required by Table 10 below.
- ii. In addition to the requirements of this section, landscaping, fence, and wall materials required for screening shall comply with the applicable material requirements set forth in Sections 6.4.E. "Landscaping Materials" and 6.4.F.3.e. "Fence and Wall Standards."
- iii. Required screening shall be a minimum of six feet tall unless otherwise stated.

- b. **General standards.** Table 10 prescribes the screening required by use and by district, along with any exceptions to these standards.

Table 10 Screening Standards

USE/DISTRICT	SCREENING REQUIRED	TYPE OF SCREENING	EXCEPTIONS
Loading/unloading areas – Open air	Along any adjacent property, street, park, trail, open space land, sidewalk, or right-of-way (excluding alleys).	Fences, walls, berms, landscaping, or a combination thereof, providing an opaque screening year-round.	These requirements do not apply when a loading/unloading area is less than 50 square feet in size
Loading/unloading areas - Enclosed		Garage door or similar.	
Drive-through windows and lanes	Along any adjacent property, street, alley, park, trail, open space land, sidewalk, or right-of-way.	Fences, walls, landscaping, or a combination thereof, provided that opaque screening is present year-round.	These requirements do not apply to walk-up only service windows
Homeless shelter and meal center	Along any adjacent Residential district or residential use.	Fences, walls, berms, landscaping, or a combination thereof, provided that opaque screening is present year-round.	These requirements do not apply when the use area is less than 50 sq. ft. in size
Dog kennels, outdoor runs			
Outdoor sales and display			
Sports fields and performance areas			



Table 10 Screening Standards

USE/DISTRICT	SCREENING REQUIRED	TYPE OF SCREENING	EXCEPTIONS
Outdoor storage	Along any adjacent property, street, park, trail, open space land, sidewalk, or right-of-way (excluding alleys).	Solid fence or wall.	
Outdoor trash and recycling collection and storage areas (when accessory to multi-household dwellings and non-residential uses)		Areas shall be located behind any street-facing facade of the principal structure on a lot. Areas shall be fully enclosed by screening, except that one side may contain an opening (e.g., gate) for access.	
Industrial uses and districts	Where an Industrial district abuts a Residential or Mixed-use district.	Fences, walls, berms, landscaping, or a combination thereof, providing screening that is present year-round per Section 6.4.F.3.f. "Screening and Buffering for Industrial Districts."	When fences are installed along a frontage to meet the screening requirement, they may exceed the maximum 20% opacity allowed by Table 11 "Fence and Wall Standards" in Section 6.4.F.3. (to a maximum of 75% opacity)
Travel plaza/truck stop	Along any adjacent Open Land and Agricultural, Residential, or Mixed-use district, and along any adjacent residential land use, park, trail or open space land	Fences, walls, berms, landscaping, or a combination thereof, providing an opaque screening is present year-round.	
Open air storage			
Junk & salvage yard			
Waste and recycling facilities			
Mini-warehouse (when located in a Mixed-Use district)			
Roof-mounted mechanical or utility equipment	Along the ground-level view from adjacent property and adjacent street right-of-way (excluding alleys).	Opaque fence or wall.	Screening height may be less than 6' if it effectively screens the mechanical or utility equipment
Wall or ground-mounted mechanical or utility equipment	Along or within 50 feet of an adjacent street right-of-way (excluding alleys).	Fences, walls, landscaping, or a combination thereof, provided that opaque screening is present year-round.	Screening height may be less than 6' if it effectively screens the mechanical or utility equipment

c. Landscape buffer standards.

- i. When landscaping is required per Table 10 above, by condition of approval, or by these regulations, it shall include primarily live plant material as listed in Section 6.4.E. "Landscaping Materials" to adequately separate adjacent land uses, providing a six-foot-tall visual buffer of 50% opacity at time of planting or installation.
- ii. It may also include non-living landscaping material listed in Section 6.4.E.
- iii. Unless otherwise stated, a required landscape buffer shall be a minimum of 10 feet deep.

d. Landscape berm standards.

The following standards shall apply to all constructed earth berms as part of required landscaping and screening per Table 10 above.

- i. Berms shall be designed and constructed with an undulating appearance which mimics, as much as is practicable, a natural topographical feature of the site.
- ii. Berms shall be planted live plant material, including ground cover and shrubs as provided for in Section 6.4.E. "Landscaping Materials." No berm shall consist entirely of turf grass, vegetative ground cover,

mulch or similar material.

- iii. Landscape berms shall have a maximum height of four feet, a minimum height of eighteen inches, a minimum crown width of two feet, and a side slope with a width to height ratio of no greater than three to one (3:1).
- iv. Berms with plantings shall not extend more than eight feet above grade, inclusive of all vegetation except trees which may exceed this maximum height.
- v. No structures, including fences, shall be placed on a berm unless approved as part of the landscaping plan.
- vi. Berms shall not be used for the display of vehicles or other merchandise.
- vii. Berms shall be designed to prevent standing water and not impede the flow of stormwater from adjacent properties.
- viii. Berms shall be fully installed, planted, stabilized and a plan for maintenance established prior to issuance of a Final Certificate of Zoning Compliance.

e. Fence and wall standards.

The following standards shall apply to all fences and walls installed as part of required screening per Table 10 above or when a fence or wall is subject to a building permit.



- i. No wall or fence shall be constructed within a public utility easement or right-of-way unless granted permission by the applicable agency.
- ii. Unless otherwise permitted by these regulations, fences and walls shall only be constructed of one or more of the following materials:
 - a) Wood
 - b) Brick, stone, or cast stone
 - c) Stucco over standard concrete masonry blocks
 - e) Glass block
 - f) Wrought iron or decorative metal
 - g) Composite fencing
 - h) PVC Vinyl
 - i) Other material approved by the Zoning Officer
- iii. Concertina wire, corrugated or sheet metal, salvaged doors, tires, car doors, or other similar discarded materials are prohibited from use as fencing materials in all districts.
- iv. The maximum length of a continuous, unbroken, and uninterrupted permanent fence or wall plane shall be 100 feet. Breaks shall be provided by using columns, landscaped areas, transparent sections, or a change in material.
- v. Table 11 prescribes height and location standards for fences and walls subject to these regulations. Fence and wall height shall be measured from natural grade to the highest point of the fence or wall above that grade.

Table 11 Fence and Wall Standards

ZONING DISTRICT CLASSIFICATION	MAXIMUM HEIGHT			MATERIALS
	IN THE FRONT OR STREET-SIDE SETBACK*	IN THE SIDE OR REAR SETBACK	OUTSIDE OF SETBACK	EXCEPTIONS
Open Land and Agricultural Districts	4'	6'	8' when designed to exclude deer or elk from residential gardens, provided there are no gaps more than 18 inches between horizontal fence components, no barbed wire is used, and the top rail is highly visible (flags may be used).	Barbed wire, in addition to those materials permitted in Section 6.4.F.e.ii
Residential and Mixed-Use Districts	4'	6'	6'	N/A
Industrial Districts	6'; or 7' when open fence, such as chain link or mesh is installed with not more than 20% opacity.	7'	10'	Chain link and barbed wire fencing is permitted, in addition to those materials permitted in Section 6.4.F.e.ii

* Including along side property lines in this portion of the street side yard.

- f. **Screening and buffering for Industrial Districts.** Where an Industrial district abuts a Residential or Mixed-use district, a combination of landscaping, screening, and additional setbacks are required according to the following.
- i. A 30-foot wide buffer is required in all yards on the subject property or project area that abut a Residential or Mixed-use district. The 30-foot buffer shall include the following:
 - a. A landscaped screen meeting the requirements of 6.4.F.3.c. shall be located along the property boundary; or



- b. Screening using a fence or wall per 6.4.F.3.e. or a landscape berm per 6.4.3.d. which is at least 6 feet in height. The screen, fence, wall, or berm shall be located outside the 15-foot wide landscaped buffer.
- ii. In the Industrial Center, Heavy district (ICH), a setback of 20 feet applies in addition to the 30-foot wide buffer. No structures or uses are allowed in the 20-foot setback except for improvements related to access and circulation, and parking and loading.

6.5 OUTDOOR LIGHTING

A) Applicability.

1. The requirements of this section apply to all new outdoor light fixtures, including street lighting, in the County installed after the effective date of these regulations, with the following exceptions:
 - a. Uses in Open Land and Agricultural districts.
 - b. Single and two-household dwellings.
2. The requirements in this section shall also apply to the expansion,

COMMENT: Any light mounted on a pole or feature more than 8' above ground is required to obtain a building permit and/or an electrical permit through the Missoula County Public Works-Building Division.

alteration, or redevelopment of existing structures or land use areas, under the following conditions:

- a. When there is a change to the primary use of the property.
 - b. When an existing building or structure is expanded in size by 25 percent or more;
 - c. When the area of an existing parking area is expanded in size by 25 percent or more;
 - d. When an existing outdoor use or activity area (e.g., outdoor storage, vehicle sales) is expanded in size by 25 percent or more.
 - e. The stated thresholds in items b., c. or d. apply to a single addition or cumulative additions occurring after the effective date of these regulations.
3. Light fixtures installed before the effective date of these regulations which do not comply with the requirements of this section may continue as nonconforming light fixtures without any time limit for as long as they remain unchanged, unless operation of such fixtures constitutes a safety hazard. The following exceptions will initiate a process of voluntary compliance pursuant to Section 12.6 to notify the property owner that the light fixture does not comply with this section and that the fixture(s) shall be replaced or shielded within

COMMENT: Service connections for all freestanding lighting fixtures must be installed underground.

one year after the date of the first notice. Noncompliance may result in enforcement pursuant to Chapter 12.

- a. Public complaints regarding a light fixture containing one or more unshielded flood lamp rated 880 mean lumens or greater, with or without a motion sensor, or
 - b. Public complaints regarding a light fixture generally used as a pole- or building-mounted high-pressure sodium (HPS), mercury vapor, or metal halide light with a dropped, unshielded diffuser.
4. Whenever an existing light fixture is changed or replaced, including the mounting type or location, the lamp, ballast, starter, photo control, housing, lens, or other components of a light, the lighting fixture shall comply with the requirements of this section even if the original lighting fixture was purchased and/or installed before the effective date of these regulations.
- a. Replacement of a singular fixture within an assembly or group of singular fixtures may be the same as existing unless such replacements are no longer available. In such cases, the replacement fixture shall comply with these regulations.
 - b. Routine maintenance of light fixtures is exempt from this section.

B) Exempted Light Installations. The following outdoor light fixtures are exempt from the requirements of this section:

1. All lighting required by state or federal agencies.
2. Seasonal displays using multiple low wattage bulbs (approximately fifteen lumens or less), provided that they do not constitute a fire hazard, create a nuisance, and are maintained in a safe condition.
3. Lighting used during an emergency.
4. Light fixtures attached to a multiple-household residential building which are less than 2,000 lumens and mounted below the eave.
5. Lighting placed underwater to illuminate swimming pools or fountains.

C) Prohibited Light Fixtures. The following outdoor light fixtures shall not be used in any lighting installation:

1. Lighting that could be confused for a traffic control device.
2. Lighting that is oriented upward, except as otherwise provided for in these regulations.
3. Blinking, flashing, moving, scintillating, flickering, changing intensity, and changing colors light fixtures not otherwise permitted by the sign regulations in Chapter 8.

COMMENT: Outdoor lighting can enhance nighttime security through the use of active controls such as timers and motion-sensing switches. Motion sensors should be adjusted according to manufacturers' specifications in terms of both trigger sensitivity and trigger duration. Trigger duration should not exceed five (5) minutes, at which point the lamp is extinguished. All-night "security" lighting should be avoided.



4. Any lamp or bulb when not within a light fixture and which is visible from the property boundary line of the parcel on which it is located, except for landscape ornamental lighting.
5. A string of lights, individual lamps larger than 45 lumens, suspended between 2 or more objects (e.g., between 2 poles) unless used only for seasonal decorations.
6. Mercury vapor light fixtures.
7. Any lighting fixture or device that is operated in such manner as to constitute a hazard or danger to persons, or to safe vehicular operation.
8. Floodlights and flood lamps;
9. Search lights, laser source lights, or any similar high-intensity light except for those used in emergencies by police and fire personnel or at their direction, or for approved temporary lighting under a special event permit issued by the County.
10. Light fixtures that lack color correction or do not allow for uniform site lighting.

D) Maintenance. Lighting installations shall be maintained to ensure ongoing compliance with the requirements of this section.

E) Measurement.

1. Unless otherwise specified, illumination shall have maintained intensities and uniformity ratios in accordance with the current recommended practices of the Illuminating Engineering Society of North America (IES) , as from time to time amended. Illumination

levels shall be no more than 125% of the minimum IES recommended horizontal foot-candles for the given task or activity.

2. Measurements shall be made at ground level, free of snow or other obstructions, with the light-registering portion of the meter held parallel to the ground pointing up.

F) General Standards.

1. **Illumination.** Outdoor lighting shall be oriented to direct glare and illumination away from adjacent properties, street rights-of-way, and pedestrian facilities and may not result in light spillover on adjoining property in accordance with the following.
 - a. The maximum light level of any sending source fixture shall not exceed 0.5 vertical foot-candles as measured at the closest property line of a receiving Residential or Open Land and Agricultural district.
 - b. The maximum light level of any sending source fixture shall not exceed 1.0 vertical foot-candles as measured at the closest property line of a receiving Mixed-Use or Industrial district.
2. **Building-mounted light fixtures.**
 - a. Building-mounted light fixtures shall not be attached to a sloped roof and unless otherwise specified shall not exceed 20' or the height of the building, whichever is less.
3. **Pole-mounted light fixtures.**
 - a. Unless otherwise stated, pole-mounted light fixtures shall not

exceed 30' in height in Mixed-Use and Industrial districts, with the following exceptions:

- i. Pole-mounted fixtures within parking lots with fewer than 75 spaces shall not exceed 20', and
 - ii. Light fixtures located within 50 feet of a Residential or Open Land and Agricultural district boundary shall not exceed 15 feet in height.
- b. In Residential districts, pole-mounted light fixtures shall not exceed 25' or the height of the building, whichever is less, except that light fixtures located within 50 feet of property located in a Residential or Open Land and Agricultural district shall not exceed 15 feet in height.
4. Unless otherwise stated, all light fixtures must be full cutoff fixtures.
 5. Outdoor lighting fixtures may not exceed a correlated color temperature of 3000 Kelvin (K).
 6. No lighting fixture or device may be operated in such manner as to constitute a hazard or danger to persons or safe vehicular operation

G) Exterior Building Lighting.

1. Lighting may be used to accentuate an architectural or aesthetic element of a building façade, and not the entire building, as long as direct illumination is focused exclusively on the building façade element or feature and away from adjoining properties and street rights-of-way.
2. Upward-aimed illumination shall

not exceed 4,000 mean lumens per architectural or aesthetic element, shall be fully shielded, and mounted as flush to the wall as possible.

3. Lighting exceeding 4,000 mean lumens per architectural or aesthetic element shall be aimed downward, fully shielded, and mounted as flush to the wall as possible.
4. Accent building-mounted luminous tubing (such as neon) may be used as long as only one horizontal luminous tube is located at the top of the parapet wall or at the leading roof edge of the highest roof system (eaves and rakes). Any luminous tubing installed below the parapet wall or leading roof edge of the highest roof system shall be cutoff by building appendages or shielded so that the fixture is not visible.

H) Historic, Period, or Pole Top Decorative Light Fixtures.

1. To promote a unified development theme, pole top light fixtures (also referred to as period lighting or decorative lighting) may be used under the following circumstances:
 - a. They are equipped with cutoff or semi cutoff optics;
 - b. They are no taller nor mounted higher than 16';
 - c. Lamp lumen output is no more than 17,600 initial lumens (175-watt pulse start metal halide lamp); and,
 - d. Light spillover complies with the requirements of this section.



- I) Site Features.** For the purposes of this section, site features may include such objects as flag poles, statues, monuments, sculptures and artwork, and plantings, among other common outdoor display objects. Site features may be illuminated, provided the following standards are met:

1. Direct illumination is focused on the site feature.
2. The light fixture lamp or lens shall be fully shielded from direct view by pedestrians and vehicular traffic.
3. Upward-aiming light fixtures shall be set back from the site feature no more than 30% of the object height nor should the light fixture be closer than 15% of the object height unless it can be demonstrated that a closer mounting of the light fixture results in less sky illumination.
4. The light fixtures shall not collectively exceed 40,000 initial lumens.

J) Outdoor Recreation Areas, Sports Fields, and Performance Areas.

1. Light fixtures shall not exceed 60 feet in height from finished grade unless approved through a Special Exception Permit in accordance with Chapter 11.
2. All fixtures must be equipped with a glare-control package, including louvers, shields, or similar devices.
3. Light fixtures must be aimed so that their beams are directed and fall within the primary playing or performance area.
4. Light fixtures used to illuminate the field or performance area shall be

turned off within one hour after the last event.

K) Outdoor Vehicular Display, Parking Areas and Parking Structures.

1. Parking structures, outdoor parking areas and vehicular display areas shall be illuminated in accordance with the latest edition of the IES standards.
2. Light fixtures located on the top floor of a parking structure, which is open to the sky, shall be located a minimum of 15 feet in from the structure's external edge.
3. Light controls shall be used to reduce lighting levels by 50% in all vehicular display areas and in non-residential outdoor parking areas containing 20 parking spaces or more one hour after the business closing and no later than 12:00 a.m., whichever occurs first, until one hour before the business opens. If lighting levels are already below 50% of the permitted levels, no lighting adjustment is required.

L) Canopy Lighting. This includes lighting associated with a canopy used for vehicular shelters, such as gas stations and car washes.

1. Fixtures permitted as part of a canopy include the following as long as no light source is visible from or causes glare on streets or adjacent properties and lighting is substantially confined to the ground surface directly beneath the perimeter of the canopy:
 - a. Recessed fixtures incorporating a lens cover that is either recessed or flush with the bottom surface of the canopy.
 - b. A fixture incorporating shields

or shielded by the edge of the canopy itself, so that light is restrained to five degrees or more below the horizontal plane of the underside of the canopy.

- c. Surface-mounted fixtures incorporating a flat glass that provides a cutoff design or shielded light distribution.
- d. Surface-mounted fixtures measuring no more than two feet by two feet, with a lens cover that contains at least two percent white fill diffusion material.
- e. Indirect lighting where light is beamed upward and then reflected down from the canopy's underside provided the fixture is shielded so that direct illumination is focused exclusively on the canopy's underside.

M) Externally Illuminated Sign Lighting.

Lighting fixtures illuminating signs shall comply with the provisions of Section 8.3.H. and any other applicable standards found in Chapter 8.

N) Street Lighting. The following standards apply to street lighting in public and private road rights-of-way; however, these standards do not apply to traffic signals and other traffic safety and control devices.

- 1. Mercury vapor bulbs or lamp shall not be installed in street lights after the effective date of these regulations.
- 2. Street light fixtures installed after the effective date of these regulations shall not be mounted any higher than 30' above finished

grade. Where a street width is such that a fixture mounted at 30' precludes proper illumination, such lighting shall be mounted no higher than 45' above finished grade. The owner of the lighting shall demonstrate via photometric calculations the need for this deviation from the 30' mounting height limitation.

O) Application Procedures and Review

- 1. An outdoor lighting plan prepared by a lighting professional as defined in Chapter 13 is required for all new outdoor lighting installations. A lighting plan prepared by a lighting professional shall include at least the following information, if applicable:
 - a. Fixture manufacturer specification sheets, cut-sheets, catalog sheets, or manufacturer-provided information for all proposed outdoor fixtures showing compliance with the provisions of these regulations.
 - b. A drawn site plan showing light fixture locations, light fixture types, mounting heights, and aiming instructions as required providing a clear expression of the proposed outdoor light fixture installation design.
 - c. An iso-foot candle plot or contour drawing showing calculated light levels for the area of proposed work. The iso-foot candle plot shall extend no less than 10 feet beyond the property line and to the middle of the street to indicate compliance with light spillover requirements of these regulations.



- d. If building elevations are proposed for illumination, drawings for all relevant building elevations showing the fixtures, the portions of the elevations to be illuminated, calculated average, peak, and minimum vertical foot candles in the illuminated area, and the proposed aiming direction of the light fixture(s). The submittals must indicate how light is to be controlled for compliance with the exterior building illumination section of these regulations.
 - e. Any other information necessary to determine compliance with these regulations.
2. For modification or retrofit of existing outdoor lighting systems or replacement of fixtures in an existing lighting system, except for replacement of a single fixture pursuant to Section 6.5.A.4.a., a lighting plan shall include the following information, if applicable:
 - a. Fixture manufacturer specification sheets, cut-sheets, catalog sheets, or manufacturer-provided information for all proposed outdoor fixtures showing compliance with the provisions of these regulations.
 - b. A description of the proposed lighting system change. The description may be a plan, a drawing, or a written description.
 - c. Any other information necessary to determine compliance with these regulations.

6.6 NOISE & VIBRATION

A) Purpose. Certain noise or vibration levels are detrimental and contrary to public health, welfare, and safety. These standards are intended to protect from unnecessary, excessive, and unreasonable noise and vibration from fixed sources in the community which are prolonged, unusual in their time, place, or use, and are detrimental to public health, safety, comfort, convenience, and enjoyment of property.

B) Applicability

1. The requirements of this section apply only to fixed noise or vibration sources, such as speakers/amplifiers, machinery, pumps, fans, compressors, air conditioners, and refrigeration equipment.
2. The requirements of this section shall not apply to any mobile noise or vibration source, such as vehicles and hand-held power equipment.

C) Measurements.

1. All noise or vibration measurements shall be taken at the closest point to the noise or vibration source on the adjacent property or any other property affected by the noise or vibration.
2. Sound levels shall be measured in decibels by the use of the "A" frequency weighted (dB(A) or dBA) and "fast" time averaging, with a sound level meter which meets or exceeds the requirements pertinent for type S2A meters in American National Standards Institute (ANSI) specifications for sound level meters, or the most

recent version thereof.

D) Performance Standards.

1. No fixed source of disturbing, excessive, or offensive noise shall cause the noise level on any other property to exceed the maximum levels set forth in Table 12 below. Disturbing, excessive, or offensive noise is characterized by sound which causes or tends to cause an adverse physiological or psychological effect on human beings and which conflicts with the criteria of noise levels established in this section.

Table 12 Noise Standards

RECEIVING ZONE	TIME PERIOD	MAXIMUM NOISE LEVEL (DBA)
Open Land and Agricultural Districts	7:00 a.m. - 10:00 p.m.	70
	10:00 p.m.- 7:00 a.m.	65
Residential Districts	7:00 a.m. - 10:00 p.m.	55
	10:00 p.m.- 7:00 a.m.	50
Mixed-Use Districts	7:00 a.m. - 10:00 p.m.	65
	10:00 p.m.- 7:00 a.m.	60
Light Industrial District (ICL)	Anytime	70
Heavy Industrial District (ICH)	Anytime	75

2. For legacy zoning districts, the most restrictive noise standard for the comparable district, as determined by the Zoning Officer, shall apply.
3. No fixed source of disturbing, excessive, or offensive vibration shall cause the vibration level on any other property to exceed the vibration perception threshold of an individual at the closest property line to the vibration source, such that a reasonable person of average sensitivity is aware of the vibration. The minimum perception threshold is presumed to be a motion velocity of 0.01 inch/second over the range of one to 100 Hz.

E) Noise and Vibration Evaluation Criteria. The characteristics and conditions which will be considered in determining whether a violation of this section exists shall include, but not be limited to the following:

1. The volume of the noise or amplitude of the vibration;
2. Whether the nature of the noise is usual or unusual;
3. Whether the origin of the noise or vibration is from a natural source or a mechanical source;
4. The level of ambient noise;
5. The proximity of the noise or vibration to sleeping areas and facilities;
6. The nature and zoning of the area from which the noise or vibration emanates and the



area where it is received;

7. The time of day or night the noise or vibration occurs;
8. The duration of the noise or vibration; and,
9. Whether the noise or vibration is recurrent, intermittent, or constant.

F) Exceptions. The provision of this section shall not apply to noise or vibration caused by the following:

1. The performance of emergency work necessary to restore property to a safe condition following a public calamity, work to protect persons and property from imminent exposure to danger, or work by utilities to restore services, including the operation of emergency generators and pumps or other equipment necessary to provide services during an emergency.
2. Warning devices necessary for the protection of public health, safety, and welfare including but not limited to civil defense, fire sirens, and theft alarms.
3. Public sewer, water, and electrical utility system facilities.
4. Construction activities which occur during authorized hours or operation.
5. Fireworks display authorized by a permit from Missoula County.
6. The operation of air traffic equipment.
7. Agriculture operations.

G) Plans and Permits. Any plans for plumbing, electrical or mechanical permits for stationary equipment shall

be accompanied by documentation or a written statement signed by the property owner verifying that the equipment noise and vibration levels shall not exceed the standards of this section.

H) Existing Noise or Vibration Sources.

Noise or vibration sources in place and operating prior to the effective date of these regulations which are subsequently found to not be in compliance shall be brought into compliance within one hundred and eighty days of the date of established noncompliance.

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