

# Commercial Zoning Update Working Group



## Meeting Agenda Wednesday, August 31, 2022 5:00 p.m. – Village Hall Court Room 3930 N. Murray Ave., Shorewood WI

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Written comments on any of the following agenda items may be submitted to [bgriepentrog@shorewoodwi.gov](mailto:bgriepentrog@shorewoodwi.gov) through 3:00 pm the day prior to the meeting. Comments received prior to the deadline will be shared with the Working Group. Comments after that deadline will need to be shared verbally within the meeting during available public comment periods.

1. Call to order
2. Roll call
3. Discussion of Module 2 (535-22 Building Design and 535-23 Landscape & Site Design)
4. Future discussion items
5. Public comment
6. Adjournment

**Dated at Shorewood, Wisconsin, this 30<sup>th</sup> day of August, 2022**

Village of Shorewood  
Toya Harrell  
Village Clerk

Should you have any questions or comments regarding any item on this agenda, please contact Bart Griepentrog, Planning Director, Planning & Development Department, at (414) 847-2640. Upon reasonable notice, efforts will be made to accommodate the needs of all individuals.

It is possible that members of and possibly a quorum of members of other governmental bodies of the municipality may be in attendance at the above stated meeting to gather information; no action will be taken by any governmental body at the above stated meeting other than the governmental body specifically referred to above in this notice.

## 535-22. BUILDING DESIGN

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### INTERIM DRAFT EXPLANATION

#### INITIAL DRAFT REVIEW KEY

**green text** is pulled directly from the current code and will be removed once the appropriate metric is agreed upon. **[green text in brackets]** is current code regulation for information/comparison only.

**pink text** highlights items to discuss during initial draft phase and will be removed for the public review draft unless additional input is needed on the specific item. Many of these questions are in the form of footnotes that will also be removed once answered. (Footnotes that are informational will be left in as directed and will be black text in public review draft.)

**blue text** indicates linked cross-references that are digitally linked and will remain blue in the final code.

**XXX** indicates references to future sections to be developed in module 2.

An "exception" noted throughout this document is a relief process that will be discussed in module 2.

## 535-22 Building Design

### 535-22B General Regulations

#### 535-22A GENERAL REGULATIONS

##### 535-22A(1) APPLICABILITY

The regulations of this section apply to all buildings in all commercial and mixed-use zones, unless otherwise stated.

##### 535-22A(2) INTENT

The regulations of this section, [535-22](#), along with the building type regulations in [535-21](#), are intended to improve the physical quality of buildings, improve the long-term value and durability of buildings, enhance the pedestrian experience, and protect the historic form and scale of the village.

- (a) **Durable, High Quality.** Ensure the use of well-tested, high-quality, durable, weather-resistant, exterior-grade materials on the majority of finished building surfaces, while permitting a wider range of materials for details. High quality materials can improve how well buildings weather, reduce material failure rate, require lower maintenance, have a longer life cycle and sense of permanence, and maintain longer term value.
- (b) **Clearly Articulated, Human-Scaled Facades.** Promote clearly articulated, well-organized facades that are easy to understand, have a clear hierarchy, and yield building proportions and details comfortable to and in line with the scale of people.

##### 535-22A(3) EXCEPTIONS

Modifications to specific building design regulations noted in this section, [535-22](#), may be approved by the DRB through the exceptions process, provided the design meets the intent of the building design regulations.

#### 535-22B ROOF TYPES

##### 535-22B(1) REGULATIONS APPLICABLE TO ALL ROOF TYPES

- (a) The major components of any roof shall meet the requirements of one or a combination of the roof types allowed on building type per the building type regulations in [535-21](#).
- (b) Roofs for bay or bow windows and dormers are not required to meet a roof type.
- (c) Terraces, green roofs, rooftop gardens, and other outdoor facilities are and are allowed on any roof and are not considered a roof type, except as follows:
  - [1] Any permanently covered, open-air area applies to the overall height as regulated by the building type regulations ([535-21](#)), or may be treated as an interior building tower per [535-22B\(6\)](#).

- [2] Any fully enclosed structure on a roof must meet the tower regulations per [535-22B\(6\)](#).
  - [3] Where any canopy or cover is visible from any public way or open space, the cover must comply with a roof type per this section, [535-22B](#).
  - [4] Terraces and other outdoor facilities for people may not occur within 15 feet of an adjacent lot line of an R district.
  - [5] Commercial activities may not occur on any rooftop that abuts an R district.
- (d) Roofs, including all eaves or overhangs, must be fully located within the property lines of the lot except as encroachments into yards allowed per [535-21\(6\)](#). See [535-21](#) for setback regulations.

##### 535-22B(2) OTHER ROOF TYPES

Other roof designs not defined in this section may be approved by the DRB through a design exception process with the following requirements:

- (a) **Occupied Building Space.** The roof type must not create additional occupiable floor space beyond that permitted by the building type. See [535-21J](#) for definition of occupied building space.
- (b) **Other Design.** The shape of the roof **should** be different from those defined in this section, [535-22B](#), such as a dome, spire, or vault and not an allowed pitched roof, parapet roof, or flat roof, except as otherwise expressly stated in this section, [535-22](#).
- (c) **Warrant.** The building **should** warrant a separate status from the majority of buildings in the district, with a correspondence between the form of the roof and the building use or location. For example, a dome for planetarium or a unique, singular roof for a more distinctive museum or cultural facility.

##### 535-22B(3) PARAPET ROOF TYPE

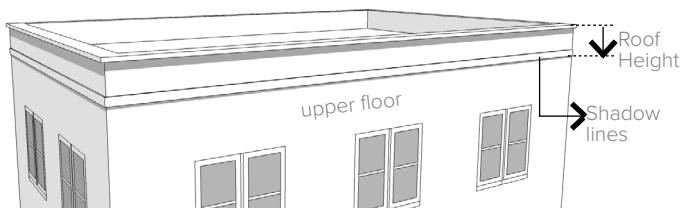
A parapet is a low wall projecting above a building's roof along the perimeter of the building on all street facades and other primary facades. See [Figure 2-A](#) Example of a Parapet Roof.

- (a) **Parapet Height.** Height is measured from the top of the upper story to the top of the parapet.
  - [1] Minimum height is 1.5 feet with a maximum height of 6 feet.
  - [2] Roof slope beyond the parapet must not be visible above the parapet.

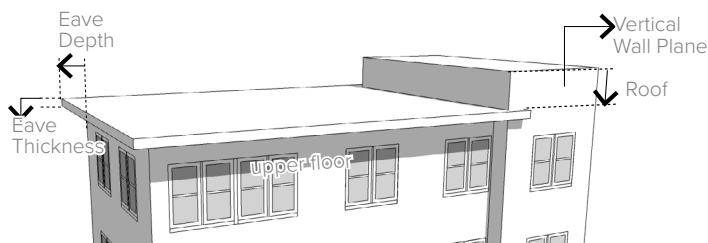
- [3] A shadow line must be located within 2 feet of the top of the uppermost story. See [535-21J](#) for definition of shadow line.
- [4] A shadow line must be located at the top of the parapet. See [535-21J](#) for definition of shadow line.
- [5] Parapets may be faced with a sloped, shingled roof detail, provided the detail does not exceed the allowable height of the parapet and the shingles are **clay tiles!** An alternative material may be approved through the design exception process.

- (b) Occupied Building Space.** Occupied building space must not be incorporated behind this roof type. See [535-21J](#) for definition of occupied building space.
- (c) Rooftop Appurtenances.** With the exception of solar panels and wind energy systems, any rooftop appurtenances must be located towards the rear or interior of the parapet roof. Rooftop appurtenances should be located such that the parapet blocks their

1 Note that most of these details on parapet roofs in the village are clay tiles. It is common for these to be replaced by asphalt shingles. One consideration is they tend to be more visible on single-story buildings; perhaps require clay tiles only on 1-story buildings.



**Figure 2-A. Example of a Parapet Roof Type**



**Figure 2-B. Example of a Flat Roof Type**

view from the sidewalk across the street or may be located within a tower per [535-22B\(6\)](#). See [535-22G\(4\)](#) for additional regulations of mechanical equipment.

**535-22B(4) FLAT ROOF TYPE**

This roof type is a visibly flat roof with overhanging eaves. See [Figure 2-B](#) Example of a Flat Roof.

- (a) Maximum Slope.** The maximum slope is 2:12; however, the roof must not appear to be visibly sloped from the street or other primary frontage.
- (b) Eaves.** Eaves are required on all street and other primary frontages.
  - (1) Eave Depth.** Eaves must have a depth of at least 14 inches. Eave depth is measured from the building facade to the outside edge of the eave.
  - (2) Eave Thickness.** Eaves must be a minimum of 6 inches thick. Eave thickness is measured at the outside edge of the eave, from the bottom of the eave to the top of the eave.

- (c) Interrupting Vertical Walls.** Vertical walls may interrupt the flat roof and extend above the top of the eave with no discernible roof type.
  - [1] No more than one-third or 20 feet, whichever is less, of any primary facade may consist of an interrupting vertical wall.
  - [2] Vertical walls shall extend no more than 8 feet above the top of the eave.

- (d) Occupied Building Space.** Occupied building space shall not be incorporated within this roof type, including the flat roof and vertical wall. See [535-21J](#) for definition of occupied building space.

- (e) Rooftop Appurtenances.** With the exception of solar panels and small wind energy systems, rooftop appurtenances may not be located on the flat portion of this roof type. Any rooftop appurtenances may be located behind the interrupting vertical wall with no visibility from the sidewalk across the street per [535-22G\(4\)](#) or may be located within a tower per [535-22B\(6\)](#).

**535-22B(5) PITCHED ROOF TYPE**

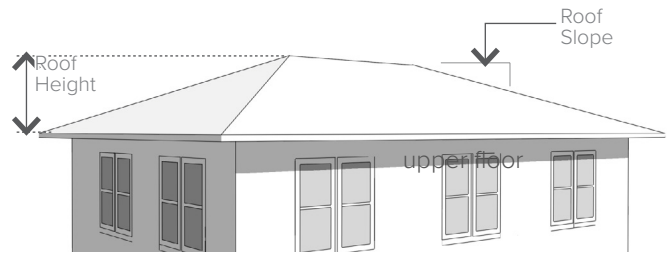
This roof type is a sloped or pitched roof, where the slope appears on all street and other primary facades. Slope is measured with the vertical rise divided by the horizontal span or run. See [Figure 2-C](#) Examples of Pitched Roof type.

535-22 Building Design  
**535-22B Roof Types**

(a) **Pitch Measure.** The roof may not be sloped less than a 4:12 (rise:run) or more than 14:12. Slopes less than 4:12 are permitted to occur on second story or higher roofs.

(b) **Configurations.**

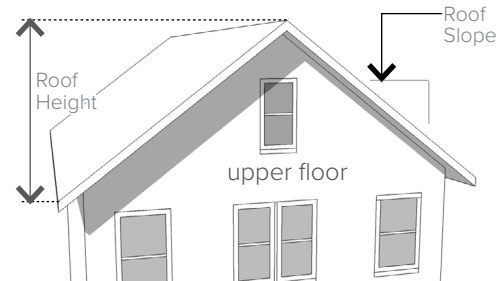
- [1] Hipped, gabled, and combination of hips and gables with or without dormers are allowed. When the ridge line runs parallel to any primary frontage, (a) or (b), below, must occur:
  - [a] A gabled end or perpendicular ridge line must occur at least every 100 feet of roof; or
  - [b] One dormer must be provided for every 15 feet of ridge line on any street or primary frontage with at least one dormer per frontage.
  - [c] Occupied building space within the roof is allowed and counts as a half or full story. See [535-21I\(10\)](#) for definition of half story and any half-story limitations per the building type regulations. See [535-21J](#) for definition of occupied building space.
- [2] Gambrel and mansard roofs<sup>2</sup> are allowed per the following:
  - [a] Gambrel roofs with the ridge line perpendicular to the street are allowed.
  - [b] Gambrel roofs with the ridge parallel to the street and mansard roofs are allowed where one dormer is provided for every 20 feet of ridge line on any street or primary frontage with at least one dormer per frontage.
  - [c] The steepest portion of the roof must be no greater than the tallest permitted height of one upper story.
  - [d] Occupied building space is required beneath the roof and counts as a half or full story, based upon the percentage of footprint allowed for a half story within the building type regulations. See [535-21I\(10\)](#) for definition of half story. See [535-21J](#) for definition of occupied building space.
- [3] Butterfly (or inverted gable or V-shaped roof) and shed roofs are allowed only with a design exception approved by DRB. The following applies:



Low Pitched Roof Type (Hip Roof)

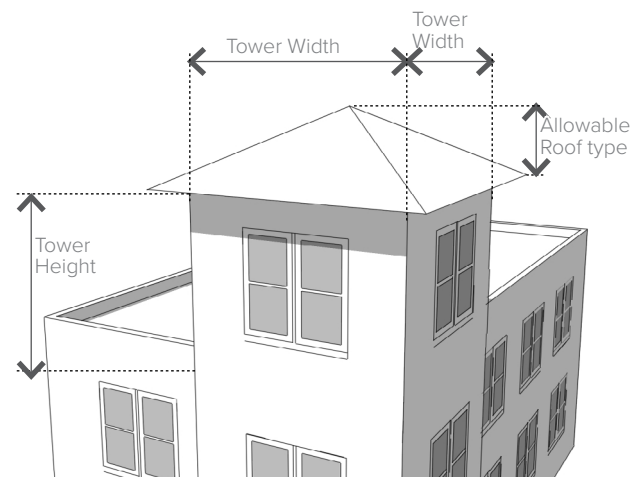


Parallel Pitched Roof Type



Pitched Roof Type (Gable Roof)

**Figure 2-C. Examples of Pitched Roof Type**



**Figure 2-D. Example of Tower**

<sup>2</sup> Not sure these should be allowed - inconsistent with current building form. Mansard roof portion on face of parapet is handled in the parapet roof type.

- [a] Negative impacts on neighboring properties, such as shading or glare, are mitigated.
- [b] The butterfly or shed roof must not exceed 8 feet in total height, inclusive of overhang.
- [c] The roof must not be significantly higher than the surrounding context, unless the visibility of the roof is screened from the street and neighbors by the building.
- [d] Occupied building space within the roof is allowed and counts as a half or full story. See [14.20.10535-21I\(10\)](#) for definition of half story and any half-story limitations per the building type regulations. See [535-21J](#) for definition of occupied building space.

**(c) Maximum Roof Height.** Roofs without occupied building space and/or dormers must have a maximum height on primary and non-primary frontage facades equal to no more than 1.5 times the upper-story floor-to-floor height utilized on the building.

**(d) Half Stories in Roof.** See [535-21I\(10\)](#) for definition of half story.

**(e) Rooftop Appurtenances.** With the exception of solar panels, antennae, and wind energy systems, any rooftop appurtenances must be recessed within the pitched roof with no visibility on any street elevation drawing. See [535-22G\(4\)](#) for additional regulations of rooftop mechanical equipment.

#### **535-22B(6) TOWERS**

A tower is a vertical element used with other roof types. See [Figure 2-D](#) Example of Tower.

**(a) Degree of Enclosure.** A street-facade tower must be fully enclosed. Any interior building tower may be partially or fully enclosed. A fully open structure, such as a rooftop gazebo is not a tower.

**(b) Quantity.** Unless otherwise defined in the building type regulations, the following is allowed:

- [1] Street Facade Towers. A maximum of 2 towers located within 15 feet of any street facade is permitted on any building. Street facade towers enhance the facade design.
- [2] Interior Building Towers. Two additional towers are permitted provided the towers are located a minimum of 30 feet from any street facade. Interior towers are typically functional, providing housing for utilities or access to the roof.

#### **(c) Tower Height.**

- [1] Maximum height, measured from the top of the uppermost floor of the building to the top of the tower shaft, not including the tower roof, is the equivalent of the height of one upper floor of the building to which the tower is applied.
- [2] A tower allows up to one additional story of height within the tower footprint to any building type where permitted and is not included in the overall maximum height of the building.

#### **(d) Tower Footprint.**

- [1] A tower footprint may be polygonal (simple, e.g. hexagonal or octagonal), rectilinear, or cylindrical in plan.
- [2] The maximum width in any direction of the footprint of any tower is 1/3 the width of any street or primary facade or 20 feet, whichever is less.

#### **(e) Tower Spacing.**

- [1] Street facade towers, within 15 feet of any street facade, must be spaced a minimum of 120 feet from other street facade towers.
- [2] Interior building towers must be located a minimum of 60 feet from any other tower.

**(f) Transparency.** For facades of towers taller than 5 feet and located within 30 feet of a street facade, the minimum primary street, upper-story transparency requirement must be met.

**(g) Horizontal Shadow lines.** If the tower extends the building up to a 5th or higher story, a shadow line is required between the 4th and 5th stories on any tower street facade. Shadow lines required by the roof type used on the tower also apply.

**(h) Occupied Building Space.** Towers may be occupied by the same uses allowed in upper stories of the building type to which it is applied. See [535-21J](#) for definition of occupied building space.

**(i) Rooftop Appurtenances.** No rooftop appurtenances are permitted on tower roofs. Roof appurtenances may be housed within a tower.

**(j) Tower Roof.** The tower may be roofed by any roof type defined in this subsection [535-22B](#) or approved as an other roof type per [535-22B\(2\)](#).

535-22 Building Design  
**535-22C Entrance Types**

**535-22C ENTRANCE TYPES**

**535-22C(1) REGULATIONS APPLICABLE TO ALL ENTRANCE TYPES**

Entrance types are allowed per building type, see [535-21](#). The following applies to entrance types on any street or courtyard facades.

- (a) **Retaining Walls.** See [535-23B\(1\)](#) for retaining walls located in any street yard.
- (b) **Railings.** Railings for all porches or ramps must be constructed of steel or cast stone on all building types.
- (c) **Design Exception.** Other configurations for any entrance type may be approved by the DRB through the design exceptions process, provided the intent of the entrance type is maintained.

**535-22C(2) STOREFRONT ENTRANCE TYPE**

(a) **Intent.** Storefront entrance types are intended to provide at grade access between the store and adjacent sidewalk creating a high level of permeability. See [Figure 2-E](#).

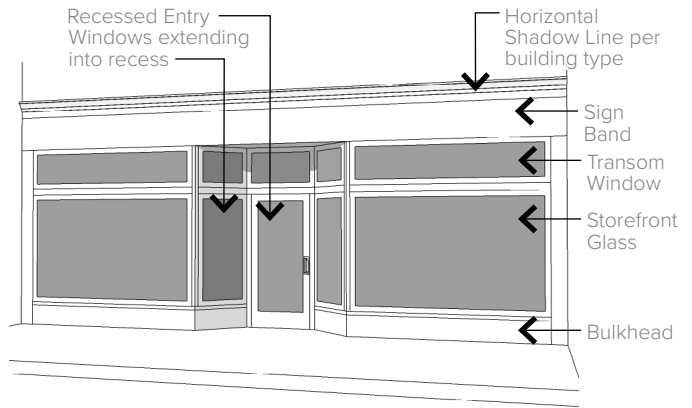
(b) **Recessed Entrance.** Where the sidewalk outside the storefront is less than 7 feet in width, measured perpendicular to the facade, entrances must be recessed as follows:

- [1] The door must be recessed between 3 and 8 feet deep, measured from the facade.
- [2] The maximum width of the recess is 10 feet.

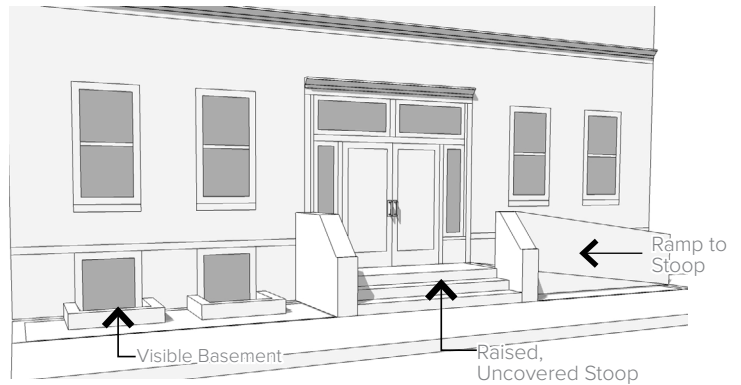
(c) **Transparency.** A minimum amount of ground-story storefront glass is required per the building type regulations.

- [1] The storefront entrance must meet the minimum transparency requirements.
- [2] The glass shall turn the corner of any recessed entry as shown in [Figure 2-E](#).
- [3] Transom windows.
  - [a] Transom windows above doors and windows are required where the top of the door is lower than the top of the window.
  - [b] Existing transom windows must be retained.
- [4] See [535-22E\(2\)](#) for general window regulations.

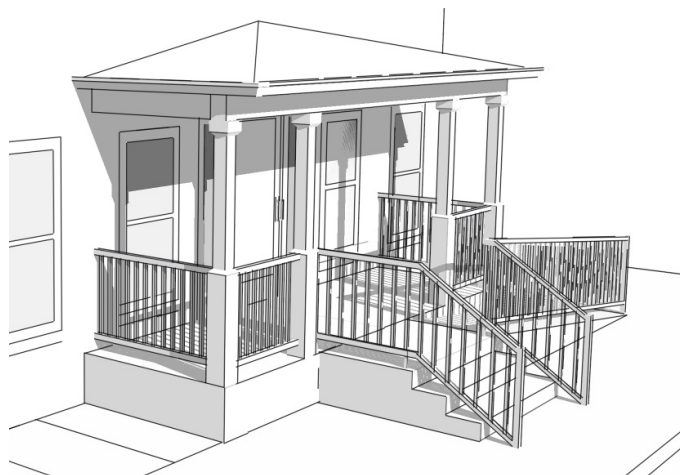
(d) **Bulkhead.** Where a bulkhead is incorporated, the maximum height is 24 inches. A bulkhead is the lower



**Figure 2-E. Example of a Storefront Entrance**



**Figure 2-F. Example of Stoop Entrance**



**Figure 2-G. Example of Porch Entrance**

set of panels or low wall upon which the storefront windows rest. See [Figure 2-E](#). The bulkhead may be constructed of wood, metal, concrete, spandrel glass, or masonry. Concrete masonry units may not be exposed. See [535-22D](#) for allowed facade materials.

- (e) **Security Shutters.** External roll down shutters are not allowed. Any necessary security grills must be located inside the shop windows, and shall not be solid. Preferred security systems are glass shock or breaker sensors, or electronic alarms.

### 535-22C(3) STOOP ENTRANCE TYPE

A stoop is a small, open platform that may include a canopy or roof cantilevered off the building. See [Figure 2-F](#).

- (a) **Location.** Stoops on any street facades in the commercial and mixed-use districts must be located within the build-to zone **unless a planning exception<sup>3</sup> is approved by the plan commission.**
- (b) **Stoop Size.** Stoops must be a minimum of 4 feet wide and 3 feet deep.
- (c) **Orientation to Door.** The stoop, if covered, shall be centered on the doorway, including sidelights, and shall not extend greater than 3 feet in either direction.
- (d) **Floor Height.** The floor height of any stoop shall be at or within 8 inches of the front entry height.
- (e) **Canopy.** A canopy over a stoop must be located within 3 feet of the top of the ground story.
- (f) **Elevated Stoop.** Where a stoop entrance is located above 3 feet, the lower level is considered a visible basement and the following applies:
  - [1] See [535-22C\(1\)](#) for general retaining wall regulations.
  - [2] Street facade transparency requirements of the building type apply to any visible basement facade. See [535-21J](#) for definition of visible basement. Openings without windows or doors are not allowed on primary street facades.
  - [3] Elevated Stoops must be a masonry or concrete structure, faced with an allowed major facade material if exposed. Wood decking or open metal platforms attached to the building are not allowed.
  - [4] Ramps must be designed as part of the stoop as required by any building accessibility regulations.

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<sup>3</sup> the name of this exception may change

### 535-22C(4) PORCH ENTRANCE TYPE

A porch is a raised, roofed platform open on all sides not abutting the building. See [Figure 2-G](#).

- (a) **Location.** Porches on any street facade in the commercial and mixed-use districts must be fully located within the build-to zone **unless a planning exception<sup>4</sup> is approved by the plan commission.**
- (b) **Porch Size.**
  - [1] Minimum porch size is 5 feet deep and 8 feet wide.
  - [2] Maximum depth of porches is 10 feet.
- (c) **Floor Height.** The floor height of any porch shall be at or within 8 inches of the front entry height.
- (d) **Height.** Porch roof height shall be a maximum of ~~one-story~~ 2 stories, each story meeting the floor-to-floor story height of the building type. ~~A second-floor-deck-with-railling may be allowed, subject to approval of a design-exception.~~
- (e) **Unenclosed.** At least 50% of the exterior wall area shall be open; mesh screened areas, glazing and guardrails shall be considered enclosed.
- (f) **Elevated Porch.** Where a porch entrance is located more than 3 feet above the public sidewalk, the lower level is considered a visible basement and the following applies:
  - [1] See [535-23B\(1\)](#) for general retaining wall regulations.
  - [2] Street facade transparency requirements of the building type apply to any visible basement facade. See [535-21J](#) for definition of visible basement. Openings without windows or doors are not allowed on primary street facades.
  - [3] Ramps must be designed as part of the stoop as required by any building accessibility regulations.

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<sup>4</sup> the name of this exception may change

**535-22D FACADE MATERIALS**

**535-22D(1) MAJOR FACADE MATERIALS**

Allowed major facade materials are listed in [Table 535-22-1](#). [Figure 2-1](#) illustrates major and minor facade materials.

**(a) Street and Other Primary Facades.** Major materials are required on all street and other primary facades, unless otherwise stated, and are intended to serve as the main surface material on street-facing and other primary facades. See [535-21D\(7\)](#) for other primary facades including courtyard facades. Major materials must be used on a minimum of 65%<sup>5</sup> of applicable facades, not including window and door areas.

**(b) Simplicity of Facade Materials.** The intent of these regulations is the use of fewer facade materials resulting in simpler, clearer building designs.

**(1) Single Major Material.** A single major facade material must be used for the street and other primary facades of the building.

**(2) Design Exception.** A design exception may be approved by the DRB for dividing the building into segments with at least one segment 120 feet or greater. Each segment may utilize a different major facade material. [Figure 2-1](#) illustrates major and minor facade materials.

<sup>5</sup> This version of 2/3 (65%) major material to 1/3 (35%) minor is one version. An alternative is 3/4 & 1/4 (75% & 25%): a 4 story building might have up to one story faced in a minor material. Or higher?

- [a] Building segments must be separated by a minimum 3 feet setback.
- [b] Courtyards may count as a separate building segment.

**(c) Side and Rear Facades.**

- [1] For any rear and side facades that are generally perpendicular to a street or other primary facade, allowed major materials on the street or primary facade must extend along that side or rear facade a distance equal to the horizontal distance to the side facade of the adjacent building or a maximum of 30 feet, whichever is less.
- [2] All major materials may be used on side and rear facades.
- [3] See [Table 535-22-2](#) for facade materials that may be utilized on 100% of side and rear facades.

**(d) Original Facade Materials.** Where brick or stone is an existing building's original major facade material, the following applies:

- [1] The original brick or stone may be maintained if in good condition or repaired or the brick or stone may be replaced by new brick or stone.
- [2] A different major material may not be installed over the original brick or stone except with approval of a design exception by the DRB.



**Figure 2-1. Example of Major and Minor Materials on a Facade**

**535-22D(2) MINOR FACADE MATERIALS**

- (a) **Maximum Minor Materials for Street Facades.** A maximum of 35% of each street facade surface, not including window and door areas, may be composed of minor facade materials per [Table 535-22-3](#).
- (b) **Accents and Details.** Additional materials are allowed for trim, accents, and details per [Table 535-22-4](#), not included in the maximum facade area.

**535-22D(3) PITCHED ROOF MATERIALS**

The following materials are allowed on pitched roofs: dimensional asphalt composite shingles, wood shingles and shakes, metal tiles or standing seam, slate, ceramic tile, and engineered wood or slate.

**535-22D(4) APPROPRIATE GRADE OF MATERIALS**

All doors, windows, and hardware must be of commercial grade quality with the exception of those on Row buildings.

**535-22D(5) MATERIAL INSTALLATION**

The following material installation requirements are intended to advance the quality of construction, durability, and aesthetics of new buildings, specifically related to application and detailing of facade materials.

- (a) **Changes in Facade Materials.** Changes in facade materials, whether major materials or minor materials, should occur mainly at concave corners or changes in building planes.

- (b) **Materials Hierarchy.** A hierarchy of materials must be maintained on the building facade, where "heavier," articulated unit materials (brick, concrete masonry units, stone) are located at the base of the facade and "lighter," constant surface materials with fewer seams (stucco, panels) are located above those on the facade.
- (c) **Shadow Lines on Surfaces.** Shadow lines must delineate changes in materials with solid materials of a thickness that is greater than 1.5 inches, such as cast stone, masonry, or stone. For example, cast stone elements or brick may be offset to create a shadow.

**535-22D(6) OTHER MATERIALS**

Materials that are not listed in this section as allowed major, minor, accent/detail, or roof materials may not be installed on any facade or roof unless approved as a design exception by the DRB.

- (a) **Intent.** Other materials may be allowed if the applicant demonstrates the material in its proposed application meets the intent of the facade material standards.
- (b) **Examples.** Samples and examples of successful high-quality local installation in the region and the manufacturer’s warranty and industry ratings must be provided by the applicant.
- (c) **Prohibited Materials.** Materials listed as prohibited on [Table 535-22-5](#) may not be approved as acceptable materials.

**Table 535-22-1. Allowed Major Materials on Street & Primary Facades [min. 65% of facade]**

BUILDING TYPE				
MATERIAL (alphabetical)	STOREFRONT BUILDINGS	COMMERCIAL BUILDING	GENERAL BUILDINGS	ROW BUILDINGS
<b>A</b> <b>Brick</b> full dimensional, economy, unit, face brick, unglazed, no black <sup>1</sup>	●	●	●	●
<b>B</b> <b>Concrete Masonry Units</b> architectural, minimum 3 inch depth, “artisan stone” look, varied sizes, (Echelon Masonry or approved equal), “stone” face, “hewn stone”, rock cut	●	●	●	●
<b>C</b> <b>Stone</b> natural, units	●	●	●	●

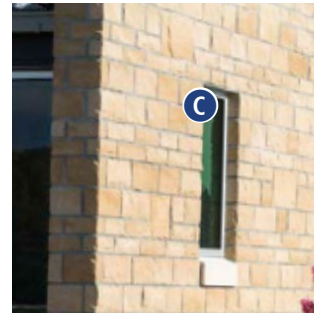
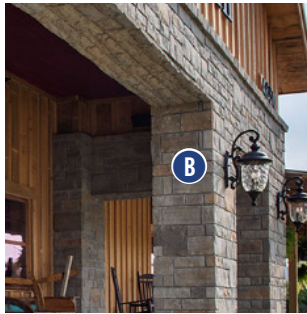
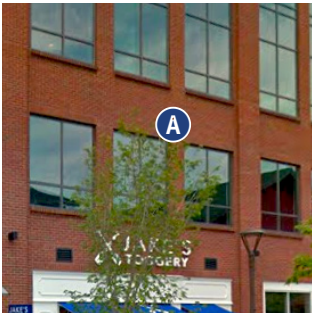
<sup>1</sup> Black brick or glazed colored brick may be used as a minor material, but not the major material for the building. Gray brick is allowed.

535-22 Building Design  
**535-22D Facade Materials**

**Table 535-22-2. Allowed Side & Rear Facade Materials [min. 65% of facade]**

All allowed major facade materials for street & primary facades may be used for rear and side facades, unless otherwise listed as prohibited in Table 535-22-5.

MATERIAL (alphabetical)	BUILDING TYPES			
	STOREFRONT BUILDINGS	COMMERCIAL BUILDING	GENERAL BUILDINGS	ROW BUILDINGS
<b>E</b> <b>Concrete Masonry Units</b> minimum 3 inch depth, split-faced, burnished/ground face, glazed, or honed	●	●	●	●
<b>F</b> <b>Fiber Cement Board</b> finished panels, finished lap siding or shingles	●	●	●	●
<b>H</b> <b>Metal, Architectural</b> articulated architectural panel, cladding system (steel, titanium, zinc, corten steel)	●	●	●	●
<b>J</b> <b>Stucco</b> synthetic or with elastomeric finishes	●	●	●	—
		3rd or higher stories only		

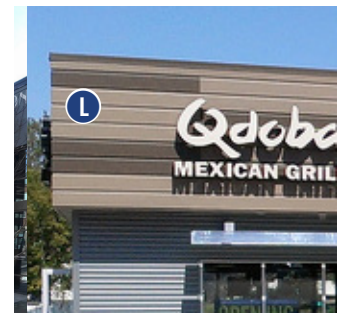


**Table 535-22-3. Allowed Minor Facade Materials [up to 35% of facade]**

All allowed major facade materials for street & primary facades may be used for minor facade materials, unless otherwise listed as prohibited in Table 535-22-5.

MATERIAL (alphabetical)	ALLOWED ON BUILDINGS IN THESE ZONES	ALLOWED LOCATION	MAXIMUM AMOUNT ON ALLOWED FACADES
<b>Brick</b> full dimensional, economy, unit, face brick, glazed, black	All	All facades	35%
<b>D Concrete Surfaces</b> finished, stained, painted, treated concrete & precast panels	All	All facades, below ground floor only	10%
<b>E Concrete Masonry Units</b> minimum 3 inch depth, split-faced, burnished/ground face, glazed, or honed	All	Street facades	20%
<b>F Fiber Cement Board</b> finished panels, finished lap siding or shingles	All	All facades, stories above the ground story only	35%
<b>G Glass</b> curtain wall	All	All facades; see 535-22F for bird friendly design	35%
<b>H Metal, Architectural</b> articulated architectural panel, cladding system (steel, titanium, zinc, corten steel)	All	All facades, stories above the ground story only	35%
<b>I Metal, Corrugated, Other</b> ribbed, corrugated, sheet panels <sup>1</sup>	All	All facades, no more than 100 s.f. continuous area	10%
<b>Stucco</b> cement-based, 2-3 layer hard coat	All	All facades, 3rd or higher stories only	35%
<b>J Stucco</b> synthetic or with elastomeric finishes	All	All facades, 3rd or higher stories only	35%
<b>Terra Cotta or Ceramic</b> tiles or panels	All	All facades	20%
<b>K Wood</b> painted, stained, treated, natural, or aged lap siding, shingles, board & batten	All	All facades, no more than 100 s.f. continuous area	20%
<b>L Wood, Composite</b> lap siding, shingles, board & batten, rainscreen system	All	All facades, no more than 100 s.f. continuous area	35%

<sup>1</sup> Add minimum gauge, thickness



535-22 Building Design  
**535-22D Facade Materials**

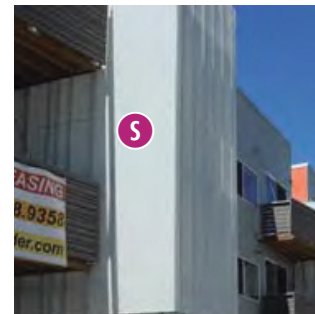
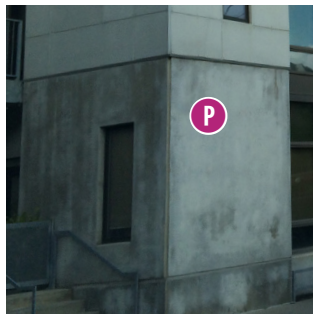
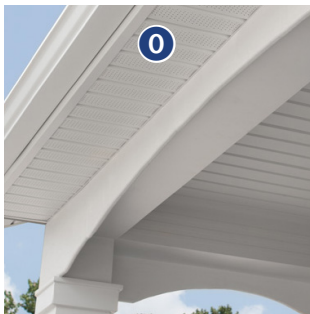
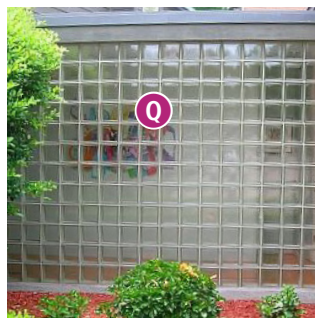
**Table 535-22-4. Allowed Detail & Accent Materials**

All permitted major and minor facade materials may be used for details, trim, and accents.

<b>M</b>	<b>Concrete Details</b> precast stone ornamentation, lintels, sills, banding, columns, beams
-	<b>Fiber Cement Details</b> trim, soffits
<b>N</b>	<b>Metal Details</b> trim, ornamentation, lintels, beams, columns
-	<b>Wood and Wood Composite Details</b> painted/treated trim, soffits, other approved details
<b>O</b>	<b>Vinyl Details</b> limited to soffits, window trim; minimum .04 inches thick

**Table 535-22-5. Prohibited Materials**

-	<b>Brick</b> thin veneer
<b>P</b>	<b>Concrete, Unfinished</b> untreated, unstained, unpainted
-	<b>Fiberglass and Acrylic Panels</b> all
<b>Q</b>	<b>Glass Block</b> clear or patterned units with or without color
<b>R</b>	<b>Metal, Aluminum Composite</b> aluminum composite materials (ACM) or panels (ACP)
<b>S</b>	<b>Plastic Panels</b> all, including high-density polyethylene and polycarbonate panels
<b>T</b>	<b>Stucco Moldings or Synthetic Stucco Moldings</b> trim, sills, cornices, banding, columns, pilasters or other 3 dimensional details
-	<b>Vinyl &amp; PVC Siding</b> minimum .040 in. thick
-	<b>Wood</b> unfinished, untreated plywood siding or panels



## 535-22E FACADE ELEMENTS

### 535-22E(1) EXCEPTIONS

Allowed design and planning exceptions to facade elements are noted throughout this subsection and must be approved per XXX.

### 535-22E(2) WINDOWS

Windows on street and other primary facades of all buildings must be consistent with the following requirements:

- (a) **Amount.** Each building must meet the transparency requirements per the building type regulations. See [535-21](#).
- (b) **Bird-Friendly Design.** See XXX for bird-friendly design regulations applicable to all windows, storefront glass, and curtain-wall glass, and any other non-opaque surface.
- (c) **Recessed.** All windows, with the exception of ground-story storefront systems and glass curtain wall systems, must be recessed with the glass a minimum of 1.5 inches from the facade surface material or adjacent trim.
- (d) **Vertically Oriented.** A minimum of 70% of street facade windows must be individually vertically oriented, but may be grouped in a set. See [Figure 2-J](#).
- (e) **Operable Windows.** With the exception of ground-story storefront glass and glass curtain wall systems, operable windows are required as follows:
  - [1] A minimum of 70% of all street facade windows on all buildings must be operable.
  - [2] Examples include single-hung, double-hung, pivot, casement, and awning windows; fixed or picture windows are not operable.
  - [3] A design exception may be approved by the DRB.
- (f) **Visibility Through Glass.** Reflective glass and glass block are prohibited on street and other primary facades. Windows must meet the transmittance and reflectance factors established in the transparency definition. See [535-21\(11\)](#).
- (g) **Expressed Lintels.** For masonry construction, the expression of lintels must be included above all windows and doors by a change in brick coursing or by a separate detail or element. See [Figure 2-J](#) for illustrations of expressed lintels on masonry facades.
- (h) **Garage Doors.** Garage doors utilized for patio access, open air dining, or display and not utilized for vehicular

access, may be used for storefronts or other window requirements on any building type, provided the doors contribute to and meet the transparency requirements. Garage doors do not count as an entrance.

- (i) **Unobstructed Windows.** Ground-story, street-facade windows, other than those for residential uses, must be unobstructed. Window displays on the inside of the building may be used, blocking up to 70% of the window area, but the surfaces of windows must be clear. The remaining window area must have views into the occupied space of the building. See [445-11](#) for window signs.

### 535-22E(3) DOORS

Doors on street and other primary facades of all buildings must be consistent with the following requirements:

- (a) **Amount.** Each building must meet the entrance requirements per the building type regulations. See [535-21](#).
- (b) **Recessed.** All doors, with the exception of those in ground-story storefront systems and glass curtain wall systems, must be recessed with the door panel a minimum of 3 inches from the facade surface material or adjacent trim.
- (c) **Visibility Through Glass.** Doors on primary facades must include at least 35% transparent glass, meeting the transmittance and reflectance factors established in the transparency definition. See [535-21\(11\)](#). A design exception may be approved by the DRB for a lower transmittance, such as frosted glass.

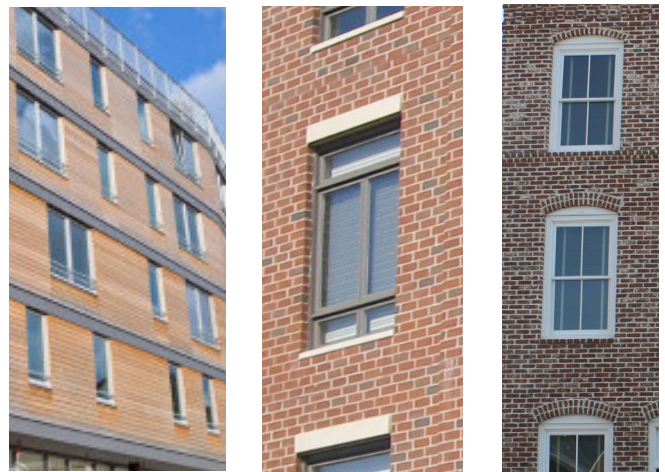


Figure 2-J. Vertically Oriented Windows

## 535-22 Building Design

### 535-22E Facade Elements

(d) **Open, Operable Doors.** All doors on a primary facade must be fully operable as follows:

- [1] False doors are not allowed.
- [2] The minimum number of required doors on a facade per the building type regulations must be open and operable during the business hours of the tenant behind the door.
- [3] A **planning** exception may be approved by the plan commission for the open door requirement based upon the use in the building.

#### 535-22E(4) SHUTTERS

When shutters, whether functional or not, are utilized on a street or other primary facade of any building type, the shutters must meet the following requirements. See [Figure 2-K](#).

- (a) **Size.** All shutters must be sized for the windows, so that, if the shutters were to be closed, they would not be too small for complete coverage of the window.
- (b) **Materials.** Shutters must be wood, metal, or fiber cement. Synthetic and engineered woods are allowed provided that the applicant submits a sample and examples of high-quality, local installations of the material.

#### 535-22E(5) AWNINGS & CANOPIES

Removable awnings and canopies attached to buildings and located on any street or primary facade must be constructed consistent with the requirements of this section. See [Figure 2-L](#) for examples of awnings.

- (a) **Material.** All awnings and canopies shall be canvas or metal. Plastic awnings are prohibited.
- (b) **Lighting.** Backlighting is allowed only on metal awnings.
- (c) **Structures.** Frames must be metal and wall-mounted. Support poles from the ground are prohibited except where the awning is over 8 feet in depth and utilized for outdoor eating areas or entrances.
- (d) **Canopies & Light Shelves.** Permanent canopies, projections, or overhangs used as architectural features, light shelves, or shading devices are allowed and not intended to be regulated by this subsection [535-22E\(4\)](#).
- (e) **Right-of-Way.** Awnings or canopies extending into any right-of-way require a permit per the municipal code, [466-18](#).
- (f) **Clearance.** All portions of any awning or canopy shall provide at least 7 feet of vertical clearance over any



Inappropriately Sized Shutters.



Appropriately Sized Shutters

**Figure 2-K. Examples of Shutters**



Metal Awning



Canvas Awning

**Figure 2-L. Examples of Awnings**

walkway and 15 feet of vertical clearance over vehicular areas.

**(g) Signs.** See [445-8](#) for signs on awnings and canopies.

**535-22E(6) BALCONIES**

Balconies on a facade facing any street or other primary facade shall be consistent with the requirements of this subsection. See [Figure 2-M](#) for examples of balconies.

**(a) Definitions.** For the purpose of this subsection, [535-22E\(6\)](#), the following definitions apply:

- (1) Balconies.** balconies include any roofed or unroofed platform that projects from the wall of a building above grade more than 18 inches and that is enclosed only by a parapet or railing. This definition does not include false balconies, Juliet balconies, or balconettes.
- (2) Balconettes.** Balconettes are false balconies, sometimes referred to as Juliet balconies, consisting of a rail and door, either without an outdoor platform or with an outdoor platform less than 18 inches in depth.

**(b) Balconettes.** Balconettes are allowed and not subject to any of the balcony regulations in this subsection.

**(c) Size.** Balconies must be a minimum of 4 feet deep and 5 feet wide.

**(d) Facade Coverage.** A maximum of 35 percent of street facades, calculated separately for each facade, may be covered by balconies. The balcony area is calculated by drawing a rectangle on the facade elevation around the following: the platform or floor of the balcony; any rails, walls, columns, or indentations; and any ceiling, roof, or upper balcony.

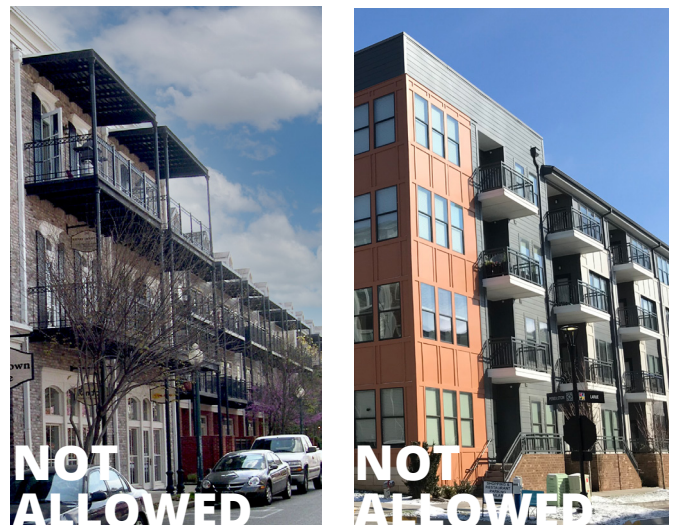
**(e) Integrated Design.** Balconies must be integrated within the design of the facade, avoiding tacking the balconies onto the facade after the elevation has been designed.

- [1] A minimum of 50 percent of the perimeter of each balcony must abut an exterior wall of the building, partially enclosing the balcony.
- [2] The balcony support structure must be integrated with the building facade; separate columns or posts supporting any balcony from the ground are not allowed.

**(f) Platform.** The balcony platform must be at least 3 inches thick and any underside of a balcony that is visible from any street or public way shall be finished.



Balconies Appropriately Attached to or Incorporated into Facade.



Balconies: Covers More than Allowed Facade Area

Balconies: Extending Off (Tacked onto) Facade

**Figure 2-M. Examples of Balconies**

## 535-22 Building Design

### 535-22E Facade Elements

- (g) **Build-to Zone Requirement.** When the balcony is in the build-to zone, the portion of the facade behind it is exempt from meeting the build-to zone requirement.
- (h) **Design Exception.** A design exception may be approved by the DRB for an alternative balcony design, provided the design meets the intent of these regulations.

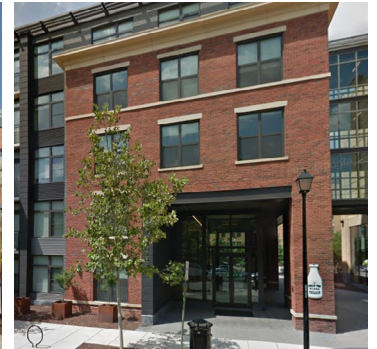
#### 535-22E(7) PRINCIPAL ENTRYWAY

See [Figure 2-N](#) for examples of defined principal entryways. Principal entrances to all buildings or units, except storefronts, must be visible from the street and clearly delineated through **one or more** of the following design features:

- (a) **Roof or Canopy.** The entryway is covered by a roof or canopy differentiating it from the overall building roof type.
- (b) **Porch.** The entryway is through a porch on any building type except a Storefront building.
- (c) **Sidelights and Transom.** Sidelights or transom windows are included around the entryway.
- (d) **Articulation.** The entryway is included in a separate bay of the building that extends up at least 2 stories or in a recessed bay with a change in material.
- (e) **Design Exception.** Other structural methods of substantially differentiating the entrance from the facade similar in scope to the examples of this section and not including paint, trim, or materials may be approved through the design exception process. See XXX.

#### 535-22E(8) GROUND STORY AT SLOPING FACADES

- (a) **Intent.** Grade transitions on any building facade along a significantly sloped sidewalk or street must be designed to minimize blank walls and maximize pedestrian-scale frontages between waist and eye level. See [Figure 2-O](#) for examples of positive facades along slopes.
- (b) **Storefronts.** The following regulations apply to storefront facades along sloping streets or other primary frontages:
  - [1] The interior floor level must step to match the exterior grade within 3 feet and/or changes in grade may be accommodated by a storefront window display space.
  - [2] Knee walls and bulkheads must not exceed 24 inches in height except a maximum 10% or one 10-foot section, whichever is greater, may be up to 36 inches in height.



**Figure 2-N. Examples of Defined Principal Entryways**



**Figure 2-O. Examples of Ground Story along Slopes Streets and Sidewalks**

[3] Retaining walls at sloped facades must not exceed 18 inches in height except a maximum 10% or one 10-foot section, whichever is greater, of walls may be up to 30 inches in height.

[4] If the grade change is more than 9 feet in height along a single block face, entrance requirements may be increased to one entrance per 90 feet of building frontage.

[5] If the grade change is more than 9 feet along a single block face, building entrances adjacent to the street must be within 3 feet of the grade of the adjacent sidewalk.

**(c) Non-Storefronts.** The following regulations apply to all non-storefront facades along sloping streets:

[1] Multiple front entrances along the street **must** activate each segment of building section at each grade.

[2] The interior floor level must step to match the changes in exterior grade within a 3-foot range and/or deeper transition zones between the sidewalk and building facade of porches, terraces, and landscape areas may be used assist with grade changes.

[3] Changes may be accommodated by terraced planters and retaining walls. Retaining walls must not exceed 18 inches in height except a maximum 10% or one 10-foot section, whichever is greater, of walls may be up to 30 inches in height.

[4] When the elevation of the first floor is more than 3 feet above grade, windows must be provided into the basement or lower floor elevation. See definition of visible basement in [535-21J](#).

**(d) Design Exception.** An alternative method of addressing significant slopes along street and primary frontages may be approved as a design exception by the DRB<sup>6</sup>, provided the design meets the intent of these regulations.

**535-22E(9) VISTAS**

Views down streets that terminate at parcels must be considered when locating buildings, parking, and building elements on those parcels. [Figure 2-P](#).

**(a) Rears of Buildings.** The location of open space and streets shall not create views of the rear of buildings or

<sup>6</sup> Once the exception process is defined, each instance will be searched and replaced with the same or similar language.

parking behind buildings from primary streets and open or civic space.

**(b) Parking.** Parking structures and surface parking lots are not permitted at the termination of a street vista.

**(c) Street Termini.** When a street terminates at a parcel, the parcel must be occupied by one of the following:

**(1) Courtyard or Open Space.** A courtyard or other open space must be located at the street terminus for the width of the subject street right-of-way. A vertical element shall terminate the view. Acceptable vertical elements include, but are not limited to, a stand or group of trees, a sculpture, a pergola or other public structure, or a fountain. Any open space must be treated as expanded streetscape per XXX.

**(2) Building.** The facade of a building, whether fronting a primary street or not, must terminate the view for the width of the subject street right-of-way. The building must incorporate one of the following treatments to terminate the view: an allowed tower per [535-22B\(6\)](#), a bay, an allowed courtyard per the building type regulations ([535-21](#)), or an articulated, principal entryway per [535-22E\(7\)](#). That portion of the facade must be treated as a primary facade.

**535-22E(10) GARAGE DOORS**

The following requirements apply to garage doors provided on any street facade.



**Figure 2-P. Example of a Terminated Vista.**

535-22 Building Design  
**535-22E Facade Elements**

- (a) **Location.** Allowed locations for vehicular garage doors on street and non-street facades are regulated by the building types in [535-21](#).
- (b) **Recessed from Facades.** Garage doors located on street-facing facades must be recessed a minimum of **3 feet<sup>7</sup>** from the dominant facade of the principal building facing the same street.
- (c) **Design.** Garage doors facing a street or visible from a street must meet the following:
  - [1] The doors must be clad with high-quality materials in a color used in the building facade.
  - [2] The minimum transparency of the building must be met on the garage door, unless otherwise approved by a design exception.
  - [3] Upgraded architectural doors or carriage-style doors are required on Row buildings.

<sup>7</sup> The door on Kensington into the Cornerstone garage is setback about 12 inches, but it is only a single car entrance.



**Figure 2-Q. Example of a Parking Structure**

**535-22E(11) PARKING FACADES ALONG STREETS**

See [Figure 2-Q](#) for one illustration of a parking facade on a street. Parking facades are allowed only on non-primary street facades per the building type regulations in [535-21](#) and either as a separate accessory structure on the lot or in the rear of the building. The following standards apply to any parking facade visible from any street or other public way.

- (a) **Materials.** Major and minor material requirements, per [535-22D](#) shall be met on **all street facades**. An additional permitted minor material is stained, finished concrete on any story.
- (b) **Ramps and Slopes.** Ramps and slopes shall not be located on any street facades.
- (c) **Vertical Divisions.** Vertical divisions extending the full height of the structure are required every 30 feet to deemphasize the horizontal decks. Divisions shall be a minimum of 2 feet in width with a minimum projection of 3 inches.
- (d) **Screening of Vehicles.** Visibility of parked motor vehicles must be screened from the street by walls with a minimum opacity of 50%. Alternative screening may be approved through a design exception by the DRB.
- (e) **Blank Wall Limitations.** No rectangular area greater than 30 percent of any story's facade, as measured from floor to floor, and no horizontal segment of a story's facade greater than 15 feet in width may be solid wall without an opening.
- (f) **Entrances.**
  - [1] For all Storefront buildings, a pedestrian entrance directly into the parking structure from the street is required.
  - [2] Unless provided through a building lobby, all pedestrian entrances directly into the garage must be separate from the vehicular entrance and directly accessed from the sidewalk.
  - [3] All exterior pedestrian entrances into any garage must meet the principal entryway regulations in [535-22B](#). Stairwells must be located inside a tower per [535-22B](#) with windows at a transparency rate of 65%.
- (g) **Cap.** The top story of the parking structure shall include a parapet or other roof type along all facades. Refer to roof types defined in [535-22B](#).
- (h) **Vehicular Entrances.** Drive access location and width is regulated by the building type in [535-21](#).

## 535-22F BIRD-FRIENDLY DESIGN

### 535-22F(1) INTENT

The intent of the bird-friendly building design regulations is to reduce the bird injury and mortality from in-flight collisions with buildings.

### 535-22F(2) APPLICABILITY

The regulations of this section, [535-22F](#), apply to all facades of the building and all sites.

### 535-22F(3) NON-OPAQUE MATERIALS

All sites must be designed to make building facades and structures visible as physical barriers to birds.

- (a) **Material Threat Factor.** Material threat factors (MTF) are determined per the most recent version of the American Bird Conservancy's Bird Collision Deterrence: Summary of Material Threat Factors.
- (b) **Fritted Glass.** Any glass including windows, door glass, storefront glass, and glass curtain wall must be ceramic fritted glass with a material threat factor (MTF) of 41<sup>8</sup> or less.
- (c) **Fly-Through Conditions.** Locations where one or more panels of glass provide clear line of sight through such elements, creating the illusion of a void leading to the other side, must be constructed with materials with a MTF of 25 or less. For example, a building corner consisting of 2 intersecting panels of glass.
- (d) **Other Non-Opaque Materials.** All other non-opaque building materials, allowed per [535-22D](#), must meet a material threat factor of 25 or less.
- (e) **Adjacency to Green Roofs.** Any exterior facade located adjacent to a green roof must be constructed of materials with a MTF of 25 or less.
- (f) **Design Exception.** An alternative design solution to non-opaque materials may be approved as a design exception by the DRB provided the MTF is lower than required by this section, [535-22F](#).
- (g) **Site Structures.** Freestanding non-opaque site structures other than buildings, such as handrails, guardrails, shelters, canopies, must be constructed entirely of materials with a threat factor (MTF) of 15 or less.

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<sup>8</sup> 41 is chosen because it is the highest MTF of glass below clear glass. New York's regulation uses 25 generally and 27 for storefront glass.

## 535-22G MECHANICAL EQUIPMENT

Mechanical equipment is necessary for any building design, but can have a negative visual impact and detract from the quality of the design of a building. The purpose of the regulations in this section, [535-22G](#), is to ensure that the visual impact of mechanical equipment and appurtenances is minimized to the maximum extent feasible.

### 535-22G(1) "MECHANICAL EQUIPMENT" DEFINED

When the following regulations refer to "mechanical equipment," any mechanical equipment or utility appurtenance, such as but not limited to HVAC systems, boilers, condensers, transformers, generators, vents, meters, ducts, are being referenced, except solar and wind energy systems, subject to [XXX](#) in accessory structure regulations.

### 535-22G(2) DESIGN EXCEPTION

Alternate locations for mechanical equipment other than those defined in this subsection, [535-22G](#), may be approved by the DRB as a design exception, provided the applicant proves the equipment cannot function in the locations allowed by these regulations and the equipment is screened to the maximum extent possible by methods other than only landscape.

### 535-22G(3) MECHANICAL EQUIPMENT IN BUILDING

Mechanical equipment must be located within the building, unless the applicant demonstrates that locating the equipment within the building would conflict with the equipment's function. See tower regulations in [535-22B\(6\)](#), as allowed per building types ([535-21](#)), for rooftop building structure to potentially accommodate mechanical equipment.

### 535-22G(4) ROOFTOP MECHANICAL EQUIPMENT

Any rooftop mechanical equipment shall be located consistent with the following. See [Figure 2-R](#) for an example.

- (a) Incorporate equipment into the roof design consistent with the applicable standards of roof types in [535-22B](#).
- (b) Set the equipment back a minimum of 15 feet from any street, trail, or alley facade.
- (c) Rooftop equipment must be screened from any street or trail.

### 535-22G(5) MECHANICAL EQUIPMENT ON STREET FACADES

- (a) Mechanical equipment must not be located on a street facade unless the applicant demonstrates that locating the equipment in a different location would conflict with the equipment's function.

## 535-22 Building Design

### 535-22G Mechanical Equipment

(b) Any mechanical equipment approved on a facade must be located consistent with the following standards:

(1) **Street Facade.** The mechanical equipment may be located on a street facade only if all of the following requirements are met:

- [a] The equipment is located on a surface perpendicular (and not parallel) to the adjacent street. The equipment may be located on a facade parallel to the street only with approval of a design exception by the DRB.
- [b] The equipment extends from the facade surface no more than 3 inches.
- [c] The equipment must be designed as part of the facade, integrating with windows and materials. See examples in [Figure 2-S](#).

(2) **Air Vents or Grills.** Air vents and grills may be successfully incorporated into storefront window systems, provided the transparency requirements are met by the actual windows in the system.

(3) **Alignment.** Multiple pieces of mechanical equipment must be organized on the facade in a regular pattern and aligned. Compliance with this standard must be illustrated on the drawing elevations submitted as part of the application.

(4) **Material Coordination.** To the extent practicable, facade-mounted mechanical appurtenances shall be located on a material that limits their visibility. For example, dark colored vents will be more visible on light colored fiber cement panels than a textured, darker surface such as brick.

#### 535-22G(6) MECHANICAL EQUIPMENT ON OTHER HORIZONTAL SURFACES

Mechanical equipment, such as electrical transformers and air conditioners, located on the ground, decks, or horizontal surfaces other than the roof must be located consistent with the following standards:

(a) **No Encroachment.** Mechanical equipment shall not extend into any right-of-way or any easement, unless otherwise approved by the village.

(b) **Allowed Yard Location.** See [535-21J](#) for definition of yards.

(1) **Primary Street Yard.** Mechanical equipment and appurtenances must not be located in the primary street yard, except as defined in [535-22G\(6\)\(e\)](#).

(2) **Non-Primary Street Yard.** Mechanical equipment may be located in the non-primary street yard only when the equipment cannot function or be located in a rear or side yard, and provided the equipment is screened from the street per [XXX](#).

(3) **Rear and Side Yard.** Mechanical equipment may be located in any rear or side yard.

(c) **Screening from Streets or Open Spaces.** All equipment must be screened from view from any streets or civic open space per the following:

- [1] Walls for screening must be consistent with the building design, colors, and materials, faced with an allowed major-facade material.
- [2] Where landscaping only is employed, the following must be met:
  - [a] The utility must be located in a larger landscape area and the landscape screen designed as part of the larger planting bed design.
  - [b] Shrubs must fully screen the equipment within 1 year of installation. Grasses that go dormant during winter months, but do not die to the ground are acceptable.
  - [c] The DRB may require additional landscape materials to fully screen the equipment.

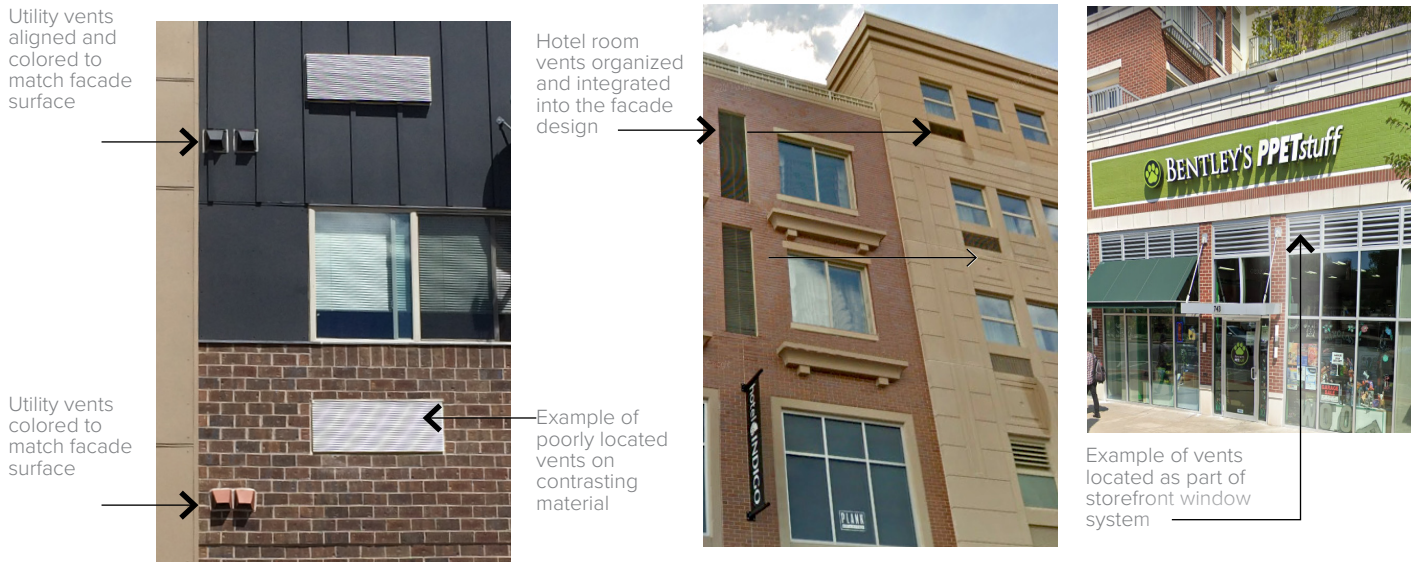
(d) **Screening from Adjacent Parcels.** All equipment must be screened from adjacent parcels using the side and rear buffers in [535-23F](#).

(e) **Street or Primary Yard Location.** Mechanical equipment located in a street yard or other primary frontage yard is allowed only if all of the following are met:

- [1] The applicant demonstrates that the equipment cannot be located in a rear yard, non-primary street yard, or in a side yard.
- [2] No other utility cabinets, boxes, or other appurtenances are within 100 feet along the same side of the street as the proposed utility appurtenance.
- [3] The equipment is located a minimum of 15 feet from a street intersection, measured from the intersection of the curb line, and does not impact the visibility at intersections governed by [535-32B\(3\)](#).
- [4] The equipment is fully screened in a manner that is consistent with the building design, colors,



**Figure 2-R. Rooftop Utilities Screened from the Public Way by a Parapet**



**Figure 2-S. Utility Appurtenances located on Facades**



**Figure 2-T. Examples of Poorly Located Utility Appurtenances on Primary Streets**

## **535-22G Mechanical Equipment**

and materials; the screen height is the minimum to adequately screen the equipment; and the equipment and screening does not block any facade transparency. See [Figure 2-T](#) for examples of poorly located, unscreened equipment on primary streets.

# 535-23. LANDSCAPE & SITE DESIGN

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# 535-23 Landscape & Site Design

## 535-23A General Regulations

### 535-23A GENERAL REGULATIONS

#### 535-23A(1) PURPOSE

The landscape and site design regulations of this article are intended to provide the following.

- (a) To protect the appearance of the village through context-sensitive, high-quality landscape and fencing that supports the goal of walkable corridors.
- (b) To increase the compatibility of adjacent uses and minimize the adverse impacts created by adjoining or neighboring uses.
- (c) To promote the prudent use of water through sustainable, functional landscapes.
- (d) To reduce energy demands through the shading of buildings and pavement, reducing urban heat island effects.

#### 535-23A(2) APPLICABILITY

The regulations of this section 535-23 apply to all commercial and mixed-use zones as follows<sup>1</sup>:

- (a) **New Development and Expansions.** New buildings constructed or whenever an existing building is enlarged or expanded by 5,000 square feet or more, unless otherwise stated in this article.
- (b) **New Landscape and Site Elements.** New landscape and site development elements constructed that are regulated by this section, [535-23](#), such as landscaping, parking or loading areas, outdoor seating or dining areas, and other vehicular areas (e.g. drive-through facilities, fueling stations).
- (c) **Expansion of Existing Parking, Loading Areas, or other Vehicular Areas.** Whenever an existing parking, loading, or other vehicular area (e.g. drive-through facilities, fueling stations, vehicular sales lots) is enlarged or expanded by more than 2,500 square feet, parking lot landscape, frontage buffers, and side and rear buffers must be applied per this article.
- (d) **Expansion of Outdoor Seating/Dining Areas.** Whenever an existing outdoor seating or dining area is enlarged or expanded by more than 500 square feet.

#### 535-23A(3) VISION SETBACK

See 535-32B(3) for regulations requiring clear vision on corner lots at street intersections.

#### 535-23A(4) STORMWATER

Stormwater detention, retention, or filtration systems, such as bioswales or rain gardens, may be located in any street

<sup>1</sup> These have not yet been fully vetted with staff.

yard or other required site landscape area, provided all other regulations are met.

#### 535-23A(5) SIDEWALK CONNECTIONS

Continuous sidewalks must connect all building entrances to public sidewalks via the shortest possible route.

- (a) A minimum of 6 feet of pavement area must be clear to count as a sidewalk connection.
- (b) Building entrances located in the rear are exempt from this requirement when directly opening onto a public alleyway.

#### 535-23A(6) PLANTERS OR PLANTING BEDS

All planters or planting beds must include shrubs, ornamental grasses (not turf or lawn grass), ground cover, vines, annuals, or perennials.

- (a) A minimum of 60% of any bed area must be covered in plant material at maturity. The remaining portion of the bed may be covered with natural, non-living permeable materials, such as mulch or pine straw. Colored rock is not allowed.<sup>2</sup>
- (b) Annual beds must be maintained seasonally, replanting as necessary.
- (c) All species in planting beds must be native or naturalized for the area, and non-invasive per [220-1B](#).

#### 535-23A(7) LAWNS

See [220-3](#) for grass lawns and natural lawn management plans.

### 535-23B SITE STRUCTURES

#### 535-23B(1) RETAINING WALLS

The following applies to all retaining walls in any street yard:

- (a) **Height.** Retaining walls must be no more than 18 inches in height above grade.
- (b) **Material.** Retaining walls must be faced in an allowable major facade material.
- (c) **Steep Slopes.** Multiple retaining walls with sloped landscape in between may be used to accommodate taller elevations. Landscape beds may not be sloped greater than 3:1.
- (d) **Design Exception.** Alternative retaining wall designs may be approved through a design exception by the DRB provided the walls are necessary for development of a site.

<sup>2</sup> This would allow natural rock or gravel. Okay?

**535-23B(2) DECKS<sup>3</sup>**

**(a) Yard Location.** Decks may not be located in any primary street yard.

**(b) Non-Primary Street Yards<sup>4</sup>.** In non-primary street yards, the following applies:

- [1] Decks must be located a minimum of 1 foot from any lot line with landscape planting bed between any public streetscape sidewalk and the deck.
- [2] Deck floors may not be located more than 12 inches above any public sidewalk.
- [3] Deck rails must be metal, or a metal frame with wood and no higher than 42 inches.

**(c) Rear or Side Yards.** In rear or side yards, the following applies:

- [1] Decks must be set back a minimum of 3 foot from any lot line.
- [2] Decks may be no higher than 3 feet above the grade of the abutting lot line.

**535-23B(3) PATIOS**

**(a) Definition.** Patios include any hard-surfaced outdoor area, minimum 64 square feet and with minimum dimensions of length and width of at least 6 feet, that is designed for people and not for the storage or access of motor vehicles.

**(b) Street Yards.** Patios may be located in any street yard only when constructed within the following parameters:

- [1] No more than 30% of any street yard may be covered by a patio.
- [2] One entire side of a patio must be adjacent to the principal structure of the lot.
- [3] Street yard patios shall not be located closer than 3 feet to the any lot line abutting a street.
- [4] Patios may not exceed six inches above grade in any street yard.
- [5] All materials must be of high quality, such as cut stone, Lannon or blue stone, or decorative concrete
- [6] The patio surface must be screened from public view by year-round, continuous, natural vegetation

of at least 18 inches in height, such as shrubs, ornamental grasses or perennial plants that provide screening through the winter months. High quality, decorative masonry or concrete walls, and permanent planters, no higher than 3 feet as measured from the surface of the patio, may be used in combination with natural vegetation to achieve year- round screening. No fences shall serve as the primary screening materials.

**(c) Side and Rear Yard.** ~~Patios shall not be located in the minimum side setback or rear setback of the building type.~~ Patios must be set back a minimum of 3 foot from any lot line.

**(d)** ~~A scaled drawing of the proposed layout of the front yard or street side yard patio must be completed, along with a list of proposed materials to be used in construction, all of which shall be submitted to the Design Review Board for review and approval.<sup>5</sup>~~

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<sup>5</sup> Will be handled through site plan review. Proposing that the patio in a commercial -mu district does not require a design exception.

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<sup>3</sup> Commercial decks and patios are moved from 535-9 to consolidate regulations specific to commercial and mixed-use sites. 535-9 will later be rewritten specifically for R districts.

<sup>4</sup> Allow here?

535-23 Landscape & Site Design  
**535-23C Landscape Installation**

**535-23C LANDSCAPE INSTALLATION**

**535-23C(1) INTENT**

The following provisions aid in ensuring that all required landscaping is installed and maintained properly.

**535-23C(2) APPLICABILITY**

These provisions apply to landscape installation required by this section, [535-23](#).

**535-23C(3) GENERAL INSTALLATION REQUIREMENTS**

**(a) Plant Size Requirements.** Plant material must be sized according to [Table 535-23-1](#) unless otherwise noted in this section.

**(b) Condition and Selection of Planting Materials.** The plant materials used must be free from visible signs of disease, infestation, or physical defect at the time of planting. Plant materials must:

- [1] Be appropriate for the conditions of the location, including sun and wind exposure, air quality, salt exposure, soil type, expected moisture content of soil, and slope.
- [2] Not be an invasive or a potentially invasive species.
- [3] Be, wherever possible, native or naturalized to the Shorewood region.

**(c) Compost, Mulch, and Organic Matter.** Compost, mulch, and organic matter must be utilized within the soil mix to reduce the need for fertilizers and increase water retention.

**(d) Maintenance.** All installed plant material must be fully maintained, including watering, mulching, fertilizing, and replacement as necessary per [220-3](#).

**535-23C(4) TREE INSTALLATION**

**(a) Permeable Surface.** For each tree planted, a minimum amount of permeable surface area is required, unless otherwise stated in this code. See [Table 535-23-2](#) for estimated tree canopy sizes at maturity, soil volumes, and permeable area recommended per tree.

- [1] At least 50% of the limits of the mature canopy must be located above a permeable surface.
- [2] Permeable area for one tree cannot count towards that of another tree.

**(b) Suspended Pavement System.** When the required soil surface area of a tree (see [Table 535-23-2](#)) will extend below any pavement, a modular suspended pavement

system (Silva Cells, Root Space, or an approved equivalent), must be used below that pavement to ensure root growth and access to air and water

**Table 535-23-1. Plant Material Size at Installation**

PLANT MATERIAL TYPE	MINIMUM SIZE
Deciduous Shade/Overstory Tree	1.5 in. caliper/ 8 ft. height
Evergreen Tree	8 ft. height
Understory Tree	6 ft. height
Ornamental Tree	1.5 in. caliper
Shrubs - Deciduous	5 gallon container or 18 in. balled & burlapped
Shrubs - Evergreen	5 gallon container or 18 in. balled & burlapped
Groundcover	3 in. height

**Table 535-23-2. Estimated Canopy & Permeable Surface Area by Tree Size**

TREE SIZE	ESTIMATED MATURE CANOPY SIZE	MINIMUM REQUIRED PERMEABLE SURFACE AREA	RECOMMENDED PERMEABLE SURFACE AREA (70% OF CANOPY SIZE)
Small	300 sq. ft.	100 sq. ft. (e.g. 4 ft. x 25 ft.)	210 sq. ft. (e.g. 4 ft. x 52.5 ft.)
Medium	700 sq. ft.	225 sq. ft. (e.g. 4 ft. x 56.25 ft.)	490 sq. ft. (e.g. 5 ft. x 98 ft.)
Large	1,000 sq. ft.	400 sq. ft. (e.g. 4 ft. x 100 ft.)	700 sq. ft. (e.g. 7 ft. x 100 ft.)

## **535-23D STREET YARD LANDSCAPE**

Street yard landscape addresses treatment of the private street yard, the area between any building facade and the lot line abutting the street right-of-way.

### **535-23D(1) INTENT**

To ensure the space between any building and the street is treated as a cohesive landscape design, including planting and paving areas, that enhances the pedestrian experience.

### **535-23D(2) PUBLIC STREETScape**

- (a) Any damage to any existing public streetscape during construction or as a result of any construction on the private lot must be repaired or replaced per [Article V of Chapter 466](#).
- (b) Replacement or revision of any element of public streetscape requires approval of the public works department. The new design must be consistent with the existing public streetscape and coordinated with any street yard landscape design.

### **535-23D(3) MINIMUM STREETScape AREA**

In locations where the minimum streetscape area of [535-21D\(8\)](#) applies, the minimum area located in the street yard must be treated as part of the streetscape, matching the abutting and adjacent public streetscape design.

### **535-23D(4) STREET YARD AREAS**

All areas between the lot line abutting the street right-of-way and the building must be designed as an extension to the existing public streetscape, but may include varying degrees of landscaped and paved areas as follows:

- (a) **Storefront Windows.** Streetscape pavement must extend up to the storefront windows in the build-to zone on any Storefront Building, continuing the pavement design of the Village-installed public streetscape.
- (b) **Maximum Site Coverage.** Landscape areas, decks per [535-23B\(2\)](#), and patios per [535-23B\(3\)](#) may be incorporated into street yards, but the site must not exceed the maximum site coverage area. See building type regulations in [535-21](#).
- (c) **Courtyards.** Courtyards in the street yard are allowed or required as part of the building type. See Primary Streetwall Variation in supplemental regulations of certain building types, [535-21](#).
- (d) **Outdoor Seating Areas.** Outdoor seating or dining areas in the build-to zone are allowed or required as part of the building type. See Primary Streetwall Variation in supplemental regulations of certain building types, [535-21](#).

### **535-23D(5) STREET YARD LANDSCAPE ELEMENTS**

The following applies to landscaped and paved areas in any street yard:

- (a) **Paving.** Additional paving materials may be introduced, provided the design incorporates elements of and coordinates with the public streetscape. For example, expansion or control joints in concrete in the streetscape and street yard must align.
- (b) **Courtyards and Seating Areas.** Courtyards and outdoor seating or dining areas in the supplemental regulations for each building type ([535-21](#)) have specific requirements for furnishings and other amenities. Additionally, one of the following landscape area requirements must be utilized:
  - (1) **Plaza.** Where 60% or more of the area is paved, a minimum of 5% of the area must include landscape planters or pots, tree wells, or in-ground or raised planter beds.
  - (2) **Green.** Where less than 60% of the area is paved, a minimum of 30% of the area must include landscape planters or pots, tree wells, or in-ground or raised planter beds.
- (c) **General Street Yard Planting Bed.** The following applies to any street yard area outside of a courtyard or seating/dining area, per the building type:
  - [1] When any unpaved street yard area is shallower than 6 feet, the entire area must be planting bed per [535-23A\(6\)](#).
  - [2] When any unpaved street yard area is deeper than 6 feet, the unpaved area must include a minimum of 30% planting bed planting bed per [535-23A\(6\)](#).
- (d) **Trees.** Street yard areas must include at least one tree per every 1400 square feet of courtyard area. See [535-21](#) for allowed courtyards in building types. See [village tree list for allowed trees](#).<sup>6</sup>
- (e) **Fences and Walls.** Metal fences or masonry walls may be incorporated into any street yard area to separate distinct seating areas.
  - (1) **Primary Street Yard.** In the primary street yard, fences and walls may not exceed 24 inches in height.

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<sup>6</sup> To be coordinated with DPW.

535-23 Landscape & Site Design  
**535-23E Frontage Buffer**

- (2) **Non-primary Street Yard.** In the non-primary street yard, fences and walls may not exceed 48 inches in height.<sup>7</sup>
- (3) **Fence Materials.** Metal fences must be steel or iron, and have a maximum opacity of 60%.<sup>8</sup>
- (4) **Design Exception.** Other fence or wall designs may be approved by the DRB as a design exception.<sup>9</sup>

**535-23E FRONTAGE BUFFER**

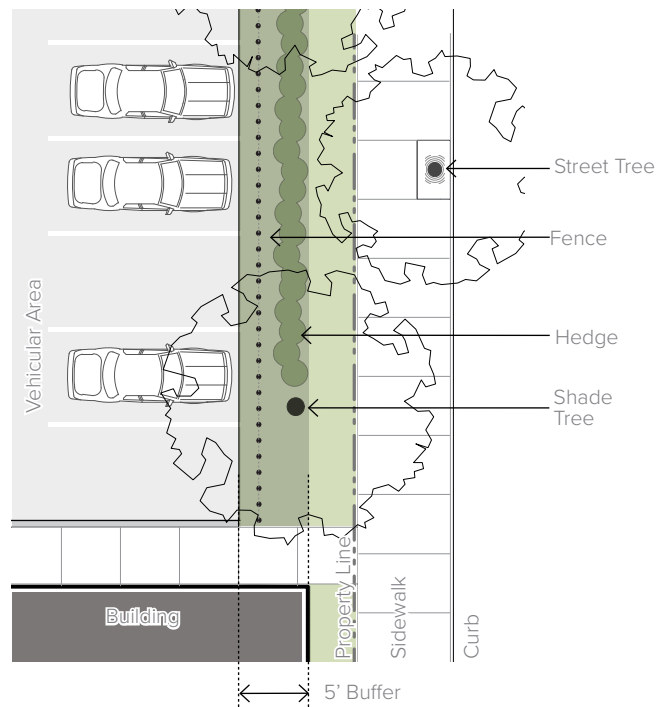
**535-23E(1) INTENT**

To lessen the visual impact of on-site vehicular parking, loading, and other activities from the street.

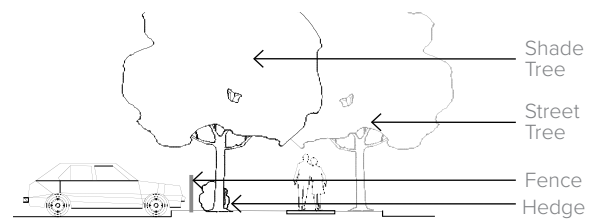
**535-23E(2) APPLICABILITY**

The frontage buffer is required on all lots for all building types in the commercial and mixed-use zoning districts in accordance with the following:

- (a) **Vehicular Areas along Street Frontages.** Along the perimeter of any off-street surface parking, driveway, loading, fuel pump, drive-through, or other vehicular areas fronting a street right-of-way, not including along any alley.



Front Buffer Plan



Front Buffer Section

**Figure 3-A. Frontage Buffer Plan & Section**

7 Height of Fiddleheads fence. Is it aluminum?  
 8 Allow aluminum? Not as big an issue since cars will not be parked next to it.  
 9 Is there a minimum height for fences separating areas that serve alcohol anymore?

**(b) Vehicular Areas along Open Space.** Along the perimeter of any off-street surface parking, driveway, or loading areas abutting any P3 zoning district or other open or civic space.

**535-23E(3) REQUIREMENTS**

Refer to [Figure 3-A](#) for illustration of these requirements.

- (a) Buffer Depth.** The required buffer area must be a minimum 5 feet in depth, measured from the street-facing lot line into the lot.
- (b) Buffer Location.** The required buffer area must extend the width of the vehicular area, but may allow for the perpendicular crossing of driveways.
- (c) Fence.** A continuous fence is required in the frontage buffer as follows:
  - (1) Fence Location.** The fence must be located 2 feet from the back of curb or edge of the vehicular area into the buffer and a minimum of 3 feet from the front of the buffer.
  - (2) Fence Alignment.** The fence must be either aligned directly with any adjacent buildings or deeper into the lot than the building. In order to align the fence with the building, the buffer may need to be located deeper into the lot to maintain the fence location requirements in (1), above.
  - (3) Gate or Opening.** One pedestrian opening, maximum 4 feet in width, is permitted for every 30 feet of fence.

**(4) Fence Materials.** The fence must be black, gray, or dark green aluminum, steel or colored PVC. Masonry columns (maximum 2.5 feet in width) and base (maximum 18" in height) are allowed, but not required.

**(5) Fence Height.** The fence must be a minimum of 3 feet and a maximum of 4 feet in height.

**(6) Fence Opacity.** The fence must be a minimum of 25 percent and a maximum of 60 percent opaque.

**(d) Buffer Landscape.** The following landscape is required within the buffer.

- (1) Shade Trees.** If no street trees exist in the streetscape abutting the buffer area, medium or large shade trees are required at a minimum of 40 feet on center, with at least one shade tree required for each segment of buffer. If street trees exist, any buffer trees provided should alternate spacing with street trees.
- (2) Shrubs.** A single row of shrubs is required on the street side in front of and along the fence.
  - [a] The shrubs must have a minimum mature width and height of 24 inches.
  - [b] The height of the shrubs must be maintained at no more than 36 inches.
  - [c] The shrubs must be spaced no more than 36 inches on center.
- (3) Existing Vegetation.** The **DRB** may credit existing vegetation toward meeting buffer requirements.

**Table 535-23-3. Side & Rear Buffer Required**

BUFFER REQUIRED ON LOTS ZONED:	ABUTTING LOTS ZONED:					
	CX	MX1, MX2	GX1, GX2, GX3	RX	R	P2, P3
CX	-	-		BUFFER	BUFFER	BUFFER
MX1, MX2	-	-		BUFFER	BUFFER	BUFFER
GX1, GX2, GX3	-	-	-	BUFFER	BUFFER	FENCE
RX	-	-	-	-	FENCE	-

See [535-23F\(4\)](#) for activities triggering buffer requirement.

**535-23F SIDE & REAR BUFFERS**

**535-23F(1) INTENT**

To minimize the impact that one zoning district may have on a neighboring district and to provide a transition between districts.

**535-23F(2) APPLICABILITY**

A side and rear buffer is required along the side and rear lot lines of all lots for all building types per this subsection, [535-23F](#).

**535-23F(3) EXCEPTIONS**

The buffer width may be reduced in accordance with the following:

(a) **Alleys.** Buffers are not required abutting alleys.

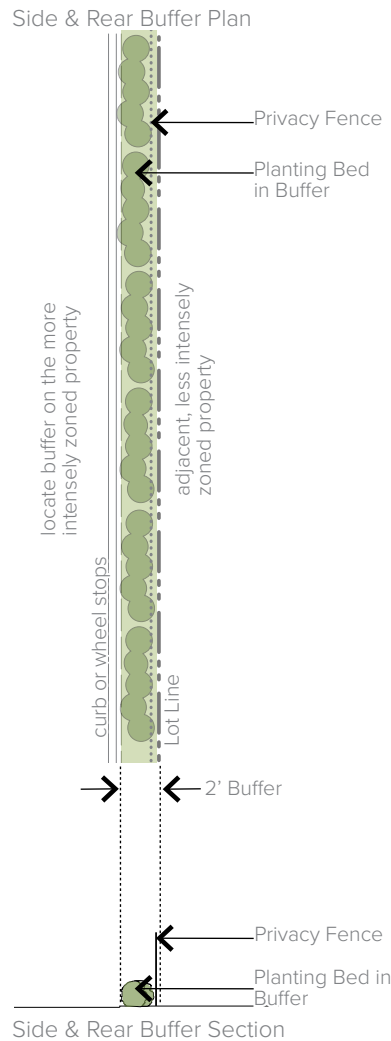
(b) **Existing Landscape.** Where the buffer will interfere with existing mature, healthy landscape, the **DRB** shall determine the extent of the needed buffer.

(c) **Access Points.** Driveways and other access points may interrupt buffers as necessary.

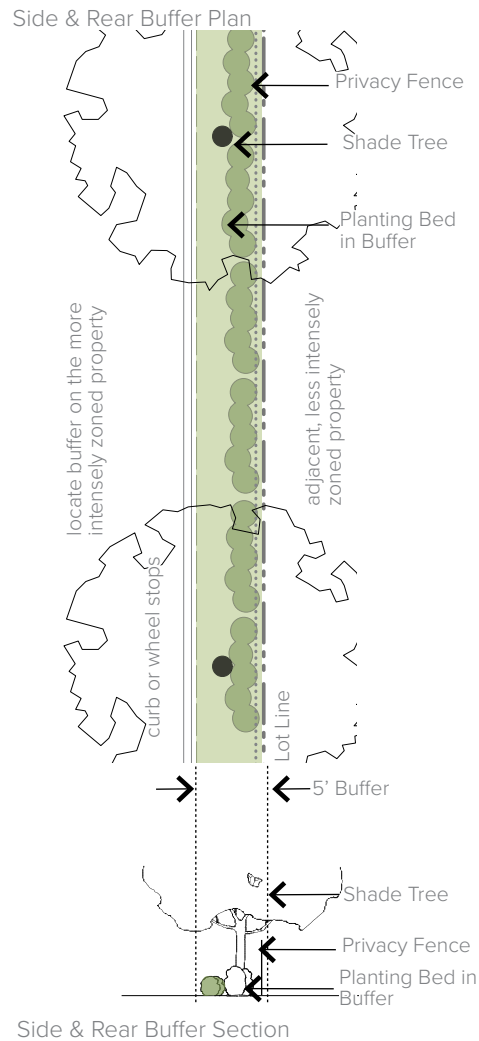
**535-23F(4) ACTIVITIES REQUIRING BUFFERS**

(a) Side and rear buffers are required where the following occurs in the rear or side yards of a lot:

(1) **Motor Vehicle Areas.** Any vehicular areas, abutting or adjacent to districts designated in [Table 535-23-3](#). Vehicular areas include such areas as parking



**Figure 3-B. Fence Buffer**



**Figure 3-C. Landscape Buffer**

lots or spaces, drives, drive-through uses, fueling stations, truck parking, and structured parking.

- (2) **Loading Areas.** Any loading areas abutting or adjacent to districts designated in [Table 535-23-3](#). Loading areas include such areas as loading bays, loading docks, service bays, garage doors, other outdoor trucking facilities.
- (3) **Service Areas.** Any service areas abutting or adjacent to districts designated in [Table 535-23-3](#). Service areas include such areas as delivery doors, refuse and recycling areas, outdoor employee break areas.
- (4) **Other Areas.** Other outdoor activities emitting sounds, smells, or other by-products, such as outdoor dining, as determined by the plan commission<sup>10</sup>.

#### **535-23F(5) BUFFER LOCATION ON LOT**

Side and rear buffers must be installed in one of the following locations on the lot:

- (a) **Abutting the Lot Line.** Along the lot line of lot requiring the buffer.
- (b) **Abutting the Activity.** The buffer may be located at the edge of the activity being buffered, provided the area between the buffer and the lot line is landscaped and includes at least one tree per every 2,000 square feet.

#### **535-23F(6) FENCE BUFFER**

See [Table 535-23-3](#) where required. See [Figure 3-B](#) for illustration.

- (a) **Buffer Depth.** A minimum 2-foot wide buffer, measured from the lot line onto the subject lot, is required.
- (b) **Privacy Fence.** A 6-foot opaque, privacy fence screening the activity must be located in the buffer adjacent to the lot line.

[1] Allowed materials include PVC, composite wood, FSC wood (cedar, redwood, or other approved by the zoning administrator), stone, or brick. Concrete panels and concrete masonry units are not allowed, except when faced on all sides with brick or stone.

[2] When located abutting an R or RX district front yard, the fence must step down to a 3-foot height within 20 feet of the street right-of-way or the depth of the abutting R or RX district yard, whichever is less.

- (c) **Curbs or Wheel Stops.** A curb or wheel stops must be provided along the buffer edge, minimum 18" from the fence, at any vehicular area to prevent motor vehicles from damaging the fence. Parking may not overhang into the buffer.

- (d) **Landscape.** The buffer area must be landscaped.

#### **535-23F(7) LANDSCAPE BUFFER**

See [Table 535-23-3](#) where required. See [Figure 3-C](#) for illustration.

- (a) **Buffer Depth.** A minimum 5-foot wide landscape buffer, measured from the lot line onto the subject lot, is required.
- (b) **Privacy Fence.** A privacy fence is required. See [535-23F\(6\)\(b\)](#) for fence requirements.
- (c) **Shade Trees.** Medium or large shade trees are required at a minimum of 40 feet on center, with at least one shade tree required for each segment of buffer.
- (d) **Landscape.** The buffer area must be landscaped with a continuous shrub hedge, consisting of a staggered, double row of shrubs with a minimum mature width of 24 inches each, spaced no more than 36 inches on center, and height maintained between 48 and 72 inches.

<sup>10</sup> Need to revisit this -- what triggers the plan commission determining it?

535-23 Landscape & Site Design  
**535-23G Interior Parking Lot Landscape**

**535-23G INTERIOR PARKING LOT LANDSCAPE**

The parking lot interior is the area dedicated to parking on a given parcel from the edge of pavement to edge of pavement, and including any islands or medians. See [Figure 3-D](#) for illustration of these requirements.

**535-23G(1) INTENT**

To provide shading of pavement surfaces to reduce heat island effects and to improve the appearance of parking lots by breaking up the large expanses of pavement with trees and landscaped islands.

**535-23G(2) APPLICABILITY**

All off-street surface parking lots with more than 10 spaces and/or more than one drive aisle must meet the interior parking lot regulations.

- (a) See [535-23E](#) for required perimeter buffer along street frontages and [535-23F](#) for required perimeter buffers at side and rear lot lines.
- (b) When the number of required off-street parking spaces on a lot conflicts with the provision of the required landscape islands, the landscape islands shall be supplied and the number of off-street parking spaces reduced by the least amount possible.

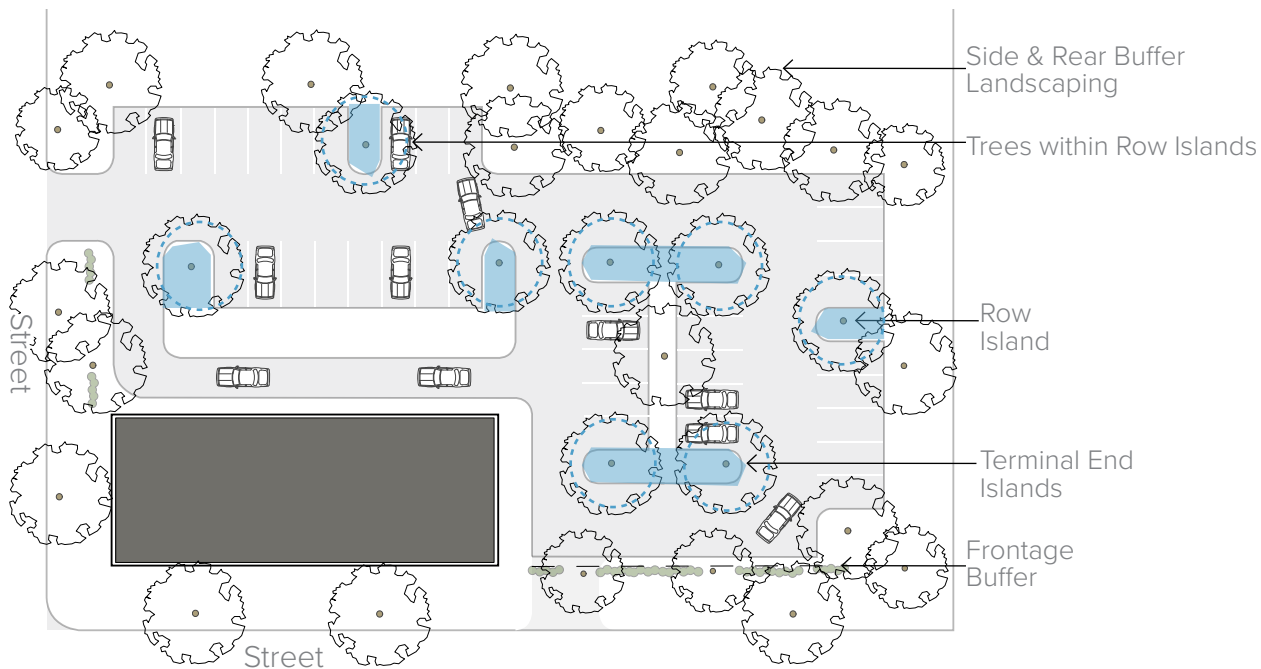
**535-23G(3) REQUIRED LANDSCAPE ISLANDS**

- (a) **Terminal End Islands.** Landscape islands are required at the terminal ends of freestanding rows or bays of parking. Freestanding rows or bays of parking are those not abutting the parking lot perimeter or building face, and may have a single or double row of parking.
- (b) **Row Islands.** For rows of parking with more than 10 spaces, a landscape island is required to result in no more than 10 continuous parking spaces in a row without a landscape island.
- (c) **Island Width.** The minimum width for an island is 5 feet, measured perpendicular to the adjacent parking space, and the depth of the island is equal to the depth of the adjacent parking space.

[1] Islands less than 15 feet in width must utilize a suspended pavement system per [535-23C\(4\)](#) under any paved surface within a tree's critical root zone equal to 50% of the mature canopy diameter.

[2] Islands less than 9 feet in width must install an aeration system and utilize permeable paving within the mature tree canopy area.

- (d) **Minimum Number of Trees.** All of the following must be met for any interior parking lot.



**Figure 3-D. Interior Parking Lot Landscape**

- (1) **Island Trees.** A minimum of 1 medium or large shade tree is required within each island.
- (2) **50-foot Rule.** Each parking space must be located within 50 feet of a tree.
- (3) **Shading Requirement.** At maturity, tree canopies must shade a minimum of 30 percent of the interior of the parking lot. Refer to [Table 535-23-2](#) for mature canopy sizes.

**535-23G(4) LANDSCAPE AREAS**

Areas in the parking lot not specifically designed for use as drive aisles, parking spaces, loading, refuse, or sidewalks must be unpaved, landscape areas. The intent is to reduce pavement area to that which is required for a functioning parking lot.

**535-23H SCREENING OF REFUSE & UTILITY AREAS**

**535-23H(1) INTENT**

To reduce the visibility of open storage, refuse areas, loading, and utility appurtenances from public areas and adjacent properties.

**535-23H(2) APPLICABILITY**

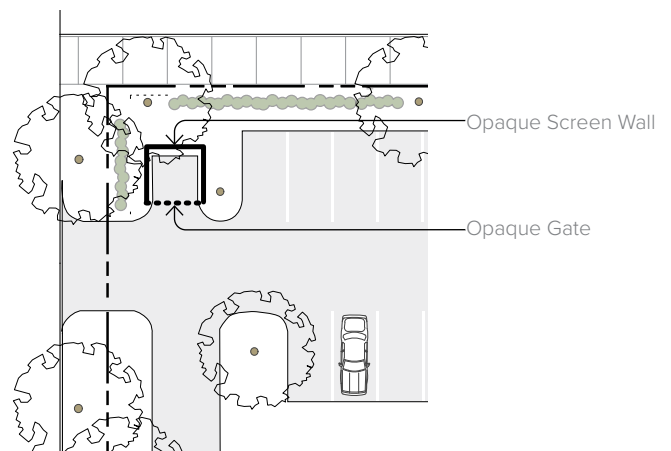
All dumpsters, loading areas, refuse areas, mechanical equipment, and utility appurtenances must be screened as follows.

**535-23H(3) LOCATION**

- (a) **Refuse and Recycling.** See [535-21D\(5\)](#) for building type regulations, including allowed location of refuse and recycling areas.
- (b) **Loading.** See [535-21D\(6\)](#) for building type regulations, for the allowed location of loading areas.
- (c) **Utility Equipment.** See [535-22G](#) for the allowed location of mechanical and utility equipment and appurtenances.

**535-23H(4) LOADING AND REFUSE AREAS**

- (a) **Concrete Pad.** For all loading, refuse and recycling areas, a concrete pad is required.
- (b) **Opaque Screen.** An opaque masonry, wood, or composite wood screen wall is required on at least 3 sides of the loading or refuse area.
- (c) **Screen Height.** The height of the screen wall must be tall enough to screen the use inside, and a minimum



**Figure 3-E. Screening of Refuse Area**

## 535-23 Landscape & Site Design

### 535-23H Screening of Refuse & Utility Areas

of 6 feet. The DRB may request additional height as needed for complete screening.<sup>11</sup>

(d) **Gate.** An opaque gate is required on the 4th side.

#### 535-23H(5) UTILITIES

##### (a) Large Private Mechanical Equipment.<sup>12</sup>

- (1) **Definition.** Large private mechanical equipment includes ground-mounted equipment at least 4 feet in height.
- (2) **Fence or Wall.** An opaque wood fence or brick-faced masonry screen wall is required on all sides facing street right-of-way.
- (3) **Shade Trees.** Medium or large shade trees are required at a minimum of 40 feet on center, with at least one shade tree required for each segment of buffer.<sup>13</sup>
- (4) **Shrubs.** Planting beds consisting of a double row of mixed shrubs with a minimum mature width of 24 inches each, spaced no more than 36 inches on center, and height maintained between 30 and 72 inches.

##### (b) Small Private Mechanical Equipment.

- (1) **Definition.** Small private mechanical equipment includes ground-mounted equipment less than 4 feet in height.
- (2) **Screening.** Landscape screening with shrubs is required as follows:
  - [a] Shrubs must be spaced no more than 30" on center, fully screening the equipment within within 2 years.
  - [b] Shrubs must be incorporated into a larger landscape bed and design.

<sup>11</sup> What is the trigger for DRB to request additional height? Site plan review?

<sup>12</sup> Not sure this would occur anywhere in the commercial-mixed-use zones?

<sup>13</sup> Purpose of the trees to avoid a fence and shrubs surrounding it sitting in the landscape without any context. Too much?

## 535-23I COMMERCIAL OUTDOOR LIGHTING<sup>1</sup>

[Added 2-16-2016 by Ord. No. 2060]

#### 535-23I(1) PURPOSE AND INTENT

The purpose of this subsection is to provide for adequate and safe lighting and limit light spillover and glare onto adjacent properties and public streets.

#### 535-23I(2) APPLICABILITY

Except as set forth in this subsection, all outdoor lighting installed or any interior lighting fixture that projects light outside the structure in the commercial and mixed-use districts after the effective date of this subsection shall comply with the requirements of this subsection.

#### 535-23I(3) PERMITS AND APPROVAL PROCESS

- (a) Installation or modification of any outdoor light fixture in commercial and mixed-use districts shall require an electrical permit.
- (b) On all developments or projects requiring site plan approval, all exterior light fixtures shall be depicted and described on said site plan, required prior to development of a property or project, or on a separate lighting plan submitted with the site plan.
- (c) A photometric plot plan, indicating the location of all lighting fixtures proposed, mounting and/or installation height in feet, and overall illumination levels (in footcandles) all around the site and at property lines.
- (d) The Design Review Board must review and approve all lighting plans.

#### 535-23I(4) GENERAL REQUIREMENTS.

- (a) Light fixtures shall be selected with care to ensure that they are appropriately scaled in relation to their setting and to ensure that they are of a style that is compatible with the character of their immediate environment.
- (b) Luminaires shall be aimed, shielded, or relocated so as to minimize glare. All light fixtures shall be located, aimed or shielded so as to eliminate stray light trespassing across property boundaries.
- (c) All luminaires mounted or recessed into the lower surface of service station canopies shall be shielded and utilize flat lenses.
- (d) The maximum allowable light spillover to an adjacent property shall be 2 average footcandles, measured across three photometric points.

<sup>1</sup> Current regulations verbatim, reformatted.

535-23 Landscape & Site Design  
**535-23H Commercial Outdoor Lighting**

(e) Illumination of uses shall be in accordance with Illuminating Engineering Society of North America (IES) standards.

**535-23I(5) LIGHT COLOR**

Correlated color temperature of any outdoor light source shall not exceed 4,000 Kelvins within the commercial and mixed-use districts unless the light fixture is fully shielded, preventing glare.

**535-23I(6) EXTERIOR LIGHTING (ALTERNATIVE SYSTEM)<sup>1</sup>**

Site, building, and canopy-mounted lighting is intended to enhance safety and provide light levels appropriate with minimal glare, light trespass and excess site brightness. Lighting shall not be a nuisance or a hazard and shall be designed to reduce bird injury and mortality from in-flight collisions with buildings.

(a) **Canopy-Mounted Fixtures.** Light fixtures mounted under fueling station or other canopies shall be completely recessed into the canopy with flat lenses that are translucent and completely flush with the bottom surface (ceiling) of the canopy.

[1] Lights shall not be mounted on the top or sides (fascias) of the canopy.

[2] Internally illuminated/entirely translucent canopies are prohibited, except accent lighting on the sides (fascias) of the canopy may be provided.

(b) **Maximum Lighting.** Table 535-23-4 shows the maximum lumens per site and the maximum backlight, uplighting, and glare (BUG) ratings for luminaires by lighting zone, using the lighting zone designations from the Illuminating Engineering Society of North America (IESNA) recommended practices.

(c) **Light Orientation.** Luminaires must be mounted with its backlight perpendicular to any lot line located within the mounting height distance of the lot line and facing into the lot.

1 This is a more detailed approach to lighting regs taken from a model lighting ordinance prepared by the International Dark Sky Association and IESNA. <https://www.darksky.org/our-work/lighting/public-policy/mlo/>  
 Should this updated method of review be substituted? or is the current system working.  
 BUG ratings are supposedly pretty standard, though I do not find them on any Home Depot or Build.com outdoor lights.

(d) **Automatic Shut-Off.<sup>2</sup>** Exterior building fixtures that are not necessary for safety, building entrances, and circulation shall be automatically shut off from midnight until 6 a.m. Manual override capability may be provided for occasional after-hours use.

(e) **Additional Lighting.** Additional exterior lighting for a site may be approved by the DRB, using the lighting zone designations from the Illuminating Engineering Society of North America (IESNA) recommended practices.

**Table 535-23-4. Maximum Lighting by Zone**

LOCATION	COMMERCIAL & MIXED-USE ZONING DISTRICTS (LIGHTING ZONE 2)
Maximum lumens allowed per square feet of hardscape area	2.5
<b>MAXIMUM BACKLIGHT RATING</b>	
>2 mounting heights from lot line	B4
1 to <2 mounting heights from lot line	B3
0.5 to <1 mounting heights from lot line	B2
>0.5 mounting heights from lot line	B0
<b>MAXIMUM UPLIGHT RATING</b>	
Maximum Uplight Rating	U2
Allowed light emission above 90 degrees for area lighting	0%
Maximum Glare Rating	G1

2 This is new bird-friendly regs that should be added.

## 535-23 Landscape & Site Design

### 535-23J River Shorelands

#### 535-23J RIVER SHORELANDS<sup>12</sup>

##### 535-23J(1) FINDINGS OF FACT

Uncontrolled use of the shorelands and pollution of the navigable waters in the village would adversely affect the public health, safety, convenience, and general welfare and impair the tax base.

##### 535-23J(2) PURPOSE

For the purpose of promoting the public health, safety, convenience and welfare, this subsection, [535-23J](#), has been established to:

(a) Further the maintenance of safe and healthful conditions and prevent and control water pollution through:

- [1] Limiting structures to those areas where soil and geological conditions will provide a safe foundation.
- [2] Controlling filling and grading to prevent serious soil erosion problems.

(b) Protect spawning grounds, fish and aquatic life through:

- [1] Preserving wetlands and other fish and aquatic habitat.
- [2] Regulating pollution sources.
- [3] Controlling shoreline alterations.
- [4] Reducing effluent and controlling nutrients.

(c) Control placement of structures and activities through:

- [1] Prohibiting certain activities detrimental to the shoreland area.
- [2] Regulating building setbacks from the river.

(d) Preserve shore cover and natural beauty through:

- [1] Restricting the removal of natural shoreland cover.
- [2] Preventing shoreline encroachment by structures.
- [3] Controlling shoreland excavation and other earthmoving activities.

##### 535-23J(3) AREAS TO BE REGULATED.

(a) Areas regulated by this subsection, [535-23J](#), shall include all the lands (referred to herein as "shorelands") in the village which are located within the described boundaries:

<sup>1</sup> [Added 10-23-2006 by Ord. No. 1917]

<sup>2</sup> This is an existing section moved from 535-9H with the goal of 535-9 being clearly defined as applying to residential districts.

[1] South of Capitol Drive. The Milwaukee County Park System Trail to the east, East Capitol Drive to the north, the ordinary high-water mark of Milwaukee River to the west, and Village limits to the south.

[2] North of Capitol Drive. Estabrook Parkway Road, Village limits to the north, the ordinary high-water mark of Milwaukee River to the west, and East Capitol Drive to the south.

- (b) The area regulated by this subsection, [535-23J](#), generally described herein, is shown on a map dated October 1, 2006, that is maintained and available for inspection at the Village Hall. This map shall be known as the "Shoreland Zoning Map." "Ordinary high-water mark" means the point on the bank or shore up to which the presence and action of surface water are so continuous as to leave a distinctive mark, such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation, or other easily recognized characteristics.

##### 535-23J(4) COMPLIANCE

The use of any land or water, the size, shape and placement of lots, the use, size, type and location of structures on lots, the installation and maintenance of water supply and waste disposal facilities, the filling, grading, or dredging of any lands, the cutting of shoreland vegetation, and the subdivision of lots shall be in full compliance with the terms of this subsection, [535-23J](#), and other applicable local, state or federal regulations. Buildings, signs and other structures shall require a permit unless otherwise expressly excluded by a provision of this subsection, [535-23J](#). Property owners and their agents or lessees, including builders and contractors, are responsible for compliance with the terms of this subsection, [535-23J](#).

##### 535-23J(5) PERMIT.

- (a) Persons and entities seeking a permit under this subsection, [535-23J](#), shall submit an application on a form provided and with the information and certifications as described in this subsection, [535-23J](#).
- (b) The applicant shall reimburse the Village for all of the Village's costs and expenses, including professional and attorney fees, as may be incurred in reviewing the application.
- (c) If the permit application is disapproved, the Village shall detail in writing all deficiencies or reasons for disapproval.

##### 535-23J(6) INTERPRETATION

In their interpretation and application, the provisions of this subsection, [535-23J](#), shall be held to be minimum

requirements and shall be liberally construed in favor of the Village of Shorewood and shall not be deemed a limitation or repeal of any other powers granted by Wisconsin Statutes.

**535-23J(7) CERTIFICATION BY A PROFESSIONAL ENGINEER**

Within the area regulated by this subsection, [535-23J](#), a registered professional engineer hired by the owner of the lot shall certify to the Village that any grading or earthmoving, construction of footings, buildings or structures, the methods of construction and the materials used therein are adequate from an engineering standpoint so as not to:

- (a) Adversely affect the slope stability of the bluff;
- (b) Increase the runoff of water on the surface of the bluff;
- (c) Create or add to a problem of erosion on the shoreland or bluff; or
- (d) Adversely affect the structural integrity of any structure located on adjoining or adjacent lots.

**535-23J(8) SETBACKS**

(a) All setbacks are measured on a horizontal plane from the roof overhang and any cantilevered portions of the structure at the point of the structure that is nearest to the ordinary high-water mark or bluffline. Except as may be allowed under [535-23J\(8\)\(c\)](#) and (d), all buildings and structures shall be set back the greater of:

- [1] Twenty feet measured horizontally to the east from the bluffline;
  - [2] Seventy-five feet as measured horizontally from the ordinary high-water mark; or
  - [3] Such distance as to not adversely impact the stability of the bluff slope; sufficient distance from the bluff area as to prevent injury or damage to adjacent property; and sufficient distance from the bluff area to provide for the natural runoff of surface water or provide for an approved drainage according to applicable law.
- (b) The bluffline is defined as the line along the top of the bluff where the slope riverward is 12% or more as measured horizontally for a distance of not more than 50 feet or less than 25 feet. Portions of the bluffline defined herein have been surveyed and marked on the Shoreland Zoning Map dated October 1, 2006.
- (c) Conditional use permit application. Property owners and their agents and lessees, including builders and contractors, must apply for and obtain a conditional use permit under the procedures established in Article V

of this chapter before commencing activities within the area between the river ordinary high-water mark and the setbacks described within subsection, [535-23J\(8\)\(a\)](#), including:

- [1] Filling, excavation, alteration or modification of the land or modification to grade.
  - [2] Removal of vegetation as described in [535-23J\(9\)](#) and [535-23J\(11\)](#).
  - [3] Temporary access uses when these described areas may be affected by construction or other activities in the adjacent area.
  - [4] Construction of any building or structures.
- (d) Conditional use permit consideration. In considering an application for conditional use permit, the Plan Commission shall follow the process for review and approval established in [535-28](#), taking into account the purposes of this subsection, [535-23J](#), as described in [535-23J\(2\)](#) and those standards contained in [535-28](#) as may be applicable.

**535-23J(9) SHORELINE CUTTING**

Tree and shrubbery cutting is prohibited without a conditional use permit in the area bound by the ordinary high-water mark of the Milwaukee River and the bluffline described within [535-23J\(8\)\(b\)](#) or, in those portions where there is no bluffline, in the area 75 feet inward from the ordinary high-water mark.

- (a) The cutting of dead, diseased, or dying trees or shrubbery shall be subject to Village approval.
- (b) Natural shrubbery shall be preserved as far as practicable and, where removed, it shall be replaced with other native vegetation that is equally effective in minimizing runoff, preventing erosion and preserving natural beauty.
- (c) The removal of vegetation requires an application for a conditional use permit where the following information shall be provided:
  - [1] Existing vegetation with a tree inventory of all trees larger than four-inch diameter at breast height;
  - [2] Identification of any species on the Wisconsin Department of Natural Resources' Natural Heritage Inventory Working List;
  - [3] Proposed cutting and vegetation removal; and
  - [4] Proposed maintenance, landscaping and replanting plan.

## 535-23 Landscape & Site Design

### 535-23J River Shorelands

#### **535-23J(10) SHORELINE GRADING**

Any grading, excavation or filling in the area bound by the ordinary high-water mark of the Milwaukee River and the setbacks described within [535-23J\(8\)\(a\)](#) is prohibited without a conditional use permit.

#### **535-23J(11) GRADING INLAND OF THE BLUFFLINE**

Any grading within the area regulated by this subsection, [535-23J](#), but inland of the bluffline described within [535-23J\(8\)\(b\)](#) shall require a permit and approval. In addition to the requirements of Chapter 250, Article I, Construction Site Erosion Control, of the Village Code the following conditions shall be met:

- (a) The smallest amount of bare ground shall be exposed for as short a time as feasible.
- (b) Temporary ground cover (such as mulch or jute netting) shall be used and permanent vegetative cover shall be established.
- (c) Diversion berms or bales, silting basins, terraces, filter fabric fencing, and other methods shall be used to prevent erosion.
- (d) Bare ground shall be stabilized according to accepted engineering standards.
- (e) Grading shall comply with the County Floodplain Zoning Ordinance and shall not restrict a floodway or destroy the flood storage capacity of a floodplain.<sup>3</sup>
- (f) Grading shall comply with state and federal regulations pertaining to adverse impacts on wetlands.

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<sup>3</sup> Editor's Note: Amended at time of adoption of Code (see Ch. 1, General Provisions, Art. I).