

## **408 NEIGHBORHOOD CIRCULATION**

### **408-1 Purpose and Intent**

This Section is intended to implement the safe and convenient bike and pedestrian access and access to transit provisions of the administrative rule of the Oregon Department of Land Conservation and Development implementing Statewide Planning Goal 12 - Transportation, and to meet the street connectivity requirements of Title 6, Section 3 of Metro's Urban Growth Management Functional Plan. In recognition of the role that local street design plays in helping to preserve the effectiveness of the arterial and collector street system, this Section includes standards requiring a connected local street network in new development. This supports local travel needs so that local trips are not forced onto the arterial or collector street system. This Section is not necessarily intended to require a grid street system, but is intended to provide a development pattern which provides choices and convenient circulation for pedestrians, bicyclists and transit users as well as motorists.

This Section has been developed to provide a specific set of review standards which will result in a development pattern which is supportive of pedestrians, bicyclists and transit users. This section provides modification standards in recognition of the fact that any one or more of the specific review standards may not in all cases best meet the intent of the Transportation Planning Rule and/or Metro's Urban Growth Management Functional Plan.

### **408-2 Applicability**

408-2.1 Notwithstanding the requirements of Section 408-10, Within an urban growth boundary the requirements of 408-4 - 408-9 shall apply as follows:

A. To all land divisions which result in any lot or parcel less than ten (10) acres.

B. To all Type II and Type III development except for the uses listed below:

- (1) Single detached dwelling units or duplexes on a lot of record;
- (2) Temporary Uses as defined in Section 430-135;
- (3) Home Occupations as defined in Section 430-63;
- (4) Flood Plain Alterations;
- (5) Development of General Commercial and Industrial property except for the uses listed below:
  - (a) Campground (430-25);
  - (b) Campus Development uses as defined in 381-4.3;
  - (c) Convenience Grocery (430-35);
  - (d) Eating and Drinking Establishment;

- (e) Industrial Business Park (430-71) and permitted Accessory Uses (320-3.2);
  - (f) Lodging Places;
  - (g) Park and Ride Facility (430-89);
  - (h) Public Building;
  - (i) Services Establishments; and
  - (j) Transit Center (430-137).
- (6) Specific land uses, as determined by the Review Authority, may be exempt from the provisions of this Section on a case by case basis, based on findings that:
- (a) The nature of the use will create minimal demand for pedestrians and bicycle use; and
  - (b) The subject property does not front on an arterial; or
  - (c) All properties abutting the subject site that do not have frontage on an arterial are developed; or
  - (d) All properties abutting the subject site that do not have frontage on an arterial are designated as Industrial or General Commercial; or
  - (e) Walking distances to the nearest arterial from all properties abutting the subject site that do not have frontage on an arterial will not increase more than two hundred (200) feet if the subject property were found to be exempt from this Section.
- C. To construction of new parking lots or expansion of existing parking lots, except in conjunction with the land uses exempted in Section 408-2.1. B. (4) and (5).
- D. To Parks (Type I) - Section 430-97.
- E. On those undeveloped or underdeveloped lands of five acres or more that are added into the UGB after August 24, 2000, the effective date of A-Engrossed Ordinance 552, Local Street Connectivity, the provisions of Section 408-6 shall apply.

408-2.2 Outside the Urban Growth Boundary the standards of Section 408-6.2 shall apply to all proposed land divisions within an acknowledged Urban Reserve Area.

#### **408-3 Definitions**

As used in this Section, the words listed below have the following meaning:

408-3.1 "Accessway" means any off-street way which is intended for the primary use of pedestrians and/or bicycles.

- 408-3.2 "Bikeway" means any road, path, or way open to bicycle travel regardless of whether such facilities are designed for the preferential use of bicycles or are to be shared with other transportation modes. This includes a shared roadway, shoulder bikeway, bike lane or bike path.
- 408-3.3 "Greenways" means any off-street way which is intended for travel use by pedestrian and bicyclists, but also intended for recreational use. Greenways may include linear parks, open space corridors, or multi-purpose corridors, as long as they are particularly intended for travel use by pedestrians and bicyclists.
- 408-3.4 "Off-Site" shall mean all lands or facilities which are within the analysis area but is not on-site.
- 408-3.5 "On-Site" shall mean all lands in the development application and one-half ( $\frac{1}{2}$ ) the right-of-way (to centerline) of roads lying adjacent to such lands.
- 408-3.6 "Pedestrian Oriented Uses" means those land uses which by their nature or neighborhood orientation attract a greater than average level of pedestrian use. Pedestrian oriented uses include but are not limited to schools, parks, transit stops, recreation centers, and neighborhood commercial centers.
- 408-3.7 "Pedestrian Way" means any paved way designated for the use by pedestrians regardless of preferential use by other transportation modes.
- 408-3.8 "Sidewalk" means a concrete way located generally parallel to a street and is generally within the right-of-way, which meets adopted design standards and is used primarily by pedestrians as a means of travel.
- 408-3.9 "Street" means a way which provides access to property, or provides travel between places by means of vehicles or other modes. A street may serve as a bikeway or pedestrian way.
- 408-3.10 "Underdeveloped" means a lot or parcel that has not been fully improved to a use permitted by the primary district through a Type II or III procedure, excluding the following Type II uses: home occupations, temporary uses, accessory uses and structures, and a detached dwelling.

#### **408-4 Circulation Analysis**

- 408-4.1 For all development on a site of two (2) acres or less the applicant shall submit a circulation analysis which at a minimum meets the Off-Site analysis requirements of Section 404-1.4. A larger analysis area may be required in order for the applicant to demonstrate compliance with the requirements of 408-5 or 408-6.
- 408-4.2 For all development on a site which exceeds two (2) acres, the applicant shall submit a circulation analysis which at a minimum includes the subject site and the entirety of all property within 300 feet of the proposed development site. A larger analysis area may be required in order for the applicant to demonstrate compliance with the requirements of 408-5 or 408-6. This plan shall incorporate the following features both onsite and offsite:

- A. The neighborhood circulation plan shall be produced on paper that is 18" x 24" in size, or a size approved by the Director;
- B. Scale of Drawing - 1" to 100' is suggested, however, the scale may be increased or decreased at a scale approved by the Director;
- C. Existing and proposed topography for slopes of ten (10) percent of greater, with contour intervals not more than ten (10) feet;
- D. Drainage hazard areas, flood plains, and significant natural resources areas;
- E. The name, location, right-of-way, pattern and grades of all existing and approved streets, bikeways, and pedestrian ways;
- F. Proposed streets and off-street bike or pedestrian ways identified in the Transportation Plan or Community Plans;
- G. All permanent structures;
- H. Property lines;
- I. Pedestrian oriented uses within 1,000 feet of the site;
- J. Transit streets and facilities; and
- K. All streets and accessways proposed by the applicant.

**408-5 Review Standards for Development on Lands Not Designated on the Community Plan Local Street Connectivity Maps**

The following review standards shall: 1) be used to provide a generally direct and uncluttered pattern of streets and accessways to ensure safe and convenient access for motor vehicles, pedestrians, bicyclists, and transit users; and 2) to ensure that proposed development will be designed in a manner which will not preclude properties within the circulation analysis area from meeting the requirements of Section 408-5. These standards are applicable to all lands that are not designated on a Community Plan's Local Street Connectivity Map.

- 408-5.1 For single-family or duplex residential development, on-site streets shall be provided which meet the following:
- A. Block lengths for local streets and collectors shall not exceed six hundred (600) feet between through streets, measured along the nearside right-of-way line of the through street, except when the provisions of Sections 408-5.1 D., 408-5.5, 408-5.6 or 408-7 are met.
  - B. The total length of a perimeter of a block for local and collector streets shall not exceed eighteen hundred (1,800) feet between through streets, measured along the nearside right-of-way line, except when the provisions of Sections 408-5.1 D., 408-5.5, 408-5.6 or 408-7 are met.

- C. Cul-de-sacs and permanent dead-end streets shall be prohibited except where construction of a through street is found to be impracticable due to the provisions of Section 408-5.1 D., or application of Sections 408-5.5, 408-5.6 or 408-7. When cul-de-sacs or closed end streets are allowed under these provisions, they shall be limited to two hundred (200) feet and no more than twenty five (25) dwelling units unless impracticable.
  - D. The Review Authority may approve a modification to the review standards of Section 408-5.1 A., B., or C. above based on findings that the modification is the minimum necessary to address the constraint and the application of the standard is impracticable due to the following:
    - (1) Topography, although grades that may be too steep for a street are not necessarily too steep for an accessway;
    - (2) Drainage hazard areas, wetlands, flood plains, or a Significant Natural Resource area;
    - (3) Existing development patterns on abutting property which preclude the logical connection of streets or accessways;
    - (4) Abutting undeveloped or underdeveloped property is not designated R-5, R-6, R-9, R-15, TO:R9-12, TO:R12-18, TO:R18-24, FD-20, FD-10 or an urban reserve area;
    - (5) Arterial access restrictions; or
    - (6) Railroads.
  - E. Streets shall connect to all existing or approved stub streets which abut the development site.
- 408-5.2 For single-family or duplex residential development, an on-site pedestrian and bicycle circulation system shall be provided which meets the following:
- A. For blocks abutting an Arterial or Collector, when block lengths exceed 600 feet, an accessway shall be provided to connect streets for every 400 feet of frontage or portion thereof;
  - B. Accessways shall connect with all existing or approved accessways which abut the development site;
  - C. Accessways shall provide direct access to abutting pedestrian oriented uses and transit facilities which are not served by a direct street connection from the subject property. Accessways shall provide future connection to abutting underdeveloped or undeveloped property which is not served by a direct street connection from the subject property, where the abutting property line exceeds 100 feet, except for designated Industrial or General Commercial land. Where the abutting property line exceeds four hundred (400) feet, additional accessways may be required by the Review Authority based on expected pedestrian demand. The Review Authority may reduce the number of required accessways to abutting properties if a) such a reduction results in spacing of

streets and/or accessways of three hundred and thirty (330) feet or less, and b) reasonably direct routes are still provided for pedestrian and bicycle travel in areas where pedestrians and bicycle travel is likely if connections are provided.

- D. Direct connection of cul-de-sacs and dead-end streets to the nearest available street or pedestrian oriented use;
  - E. Accessways may be required to stub into adjacent developed property if the review authority determines that existing development patterns or other constraints do not physically preclude future development of an accessway on the developed property and the adjacent developed property attracts a greater than average level of pedestrian use.
- 408-5.3 For all development which is not single-family or duplex residential, on-site streets shall connect to all existing or approved stub streets which abut the development site;
- 408-5.4 For all development which is not single-family or duplex residential, an on-site pedestrian and bicycle circulation system shall be provided which meets the following:
- A. Accessways and internal pedestrian walks within the site as required by Sections 408-9.13 and 408-9.14 and 408-10;
  - B. Accessways shall provide future connection to abutting underdeveloped and undeveloped property for each abutting parcel where the property line exceeds 100 feet. Where abutting property lines exceed four hundred (400) feet, additional accessways may be required by the review authority based on expected pedestrian demand. Where the main building on the site is setback fifty (50) feet or less, the Review Authority may modify the accessway requirement to abutting properties based on a determination that the sidewalk in the public right of way provides a reasonably direct route. Accessways are not required to abutting underdeveloped or undeveloped properties that have an industrial land use designation. Additionally, accessways are not required to abutting undeveloped or underdeveloped residential property less than one acre in size.
  - C. Accessways shall connect with all existing or approved accessways which abut the development site;
  - D. Accessways shall provide direct access to nearby pedestrian oriented uses and transit streets or facilities;
  - E. Direct connection of cul-de-sacs and dead-end streets to the nearest available street or pedestrian oriented use; and
  - F. Accessways may be required to stub into adjacent developed property if the review authority determines that existing development patterns or other constraints do not physically preclude future development of an accessway on the developed property and current or probable future use of the adjacent property will generate pedestrian or bicycle trips that are likely to use the accessway.

- 408-5.5 The Review Authority may approve a modification to the review standards of Section 408-5 based on findings that strict compliance with the standards is not practicable due to topography, the standards of Sections 421 and 422, existing development patterns on abutting property which preclude the logical connection of streets or accessways, or the provisions of a Significant Natural Resource as identified in the Community Plan, and that the modification is the minimum necessary to address the constraint.
- 408-5.6 The Review Authority may approve a modification to the dimensional standards in Section 408-5 based on findings that these standards conflict with the standards of Article V or other traffic safety concerns identified through the development review process and that the modification is the minimum necessary to address the constraint.

**408-6 Review Standards for Development on Lands Designated in the Community Plan Local Street Connectivity Maps**

The following review standards shall apply to lands designated on a Community Plan's Local Street Connectivity Map and shall be used to: 1) meet Metro's street connectivity requirements; 2) provide a generally direct and unclircuitous pattern of streets and accessways to ensure safe and convenient access for motor vehicles, pedestrians, bicyclists, and transit users; and 3) ensure that proposed development will be designed in a manner which will not preclude properties within the circulation analysis area from meeting the requirements of this section.

- 408-6.1 In the event of a conflict between the standards in Section 408-6 and Local Street Connectivity maps element or specific Town Center or LRT Station Community Plan elements, the more specific Community Plan elements shall control.
- 408-6.2 For residential, office, retail, and institutional development, on-site streets shall be provided which meet the following:
- A. Block lengths for local streets and collectors shall not exceed 530 feet between through streets, measured along the nearside right-of-way line of the through street, except when the provisions of Sections 408-6.2 F., 408-6.4, 408-6.5 or 408-7 are met.
  - B. The total length of a perimeter of a block for local and collector streets shall not exceed eighteen hundred (1,800) feet between through streets, measured along the nearside right-of-way line, except when the provisions of Sections 408-6.2 F., 408-6.4, 408-6.5 or 408-7 are met.
  - C. Cul-de-sacs and permanent dead-end streets shall be prohibited except where construction of a through street is found to be impracticable due to the provisions of Section 408-6.2 F., or application of Sections 408-6.4, 408-6.5 or 408-7.
  - D. Streets shall connect to all existing or approved stub streets which abut the development site.
  - E. When cul-de-sacs are allowed, they shall be limited to two hundred (200) feet and no more than twenty five (25) dwelling units unless impracticable.

- F. The Review Authority may modify the review standards of Section 408-6.2 A., B., or C. above based on findings that the modification is the minimum necessary to address the constraint and the application of the standard is impracticable due to the following:
- (1) Topography, although grades that may be too steep for a street are not necessarily too steep for an accessway;
  - (2) Drainage hazard areas, wetlands, flood plains, or a Significant Natural Resource area;
  - (3) Existing development patterns on abutting property which preclude the logical connection of streets or accessways;
  - (4) Abutting undeveloped or underdeveloped property is not designated with an urban residential district, a transit oriented district, FD-10, FD-20 or an urban reserve area;
  - (5) Arterial access restrictions; or
  - (6) Railroads.

408-6.3 For residential, office, retail, and institutional development, an on-site pedestrian and bicycle circulation system shall be provided which meets the following:

- A. For blocks abutting an Arterial or Collector, when block lengths exceed five hundred and thirty (530) feet, an accessway shall be provided to connect streets for every three hundred and thirty (330) feet of frontage or portion thereof;
- B. Accessways shall connect with all existing or approved accessways which abut the development site;
- C. Accessways shall provide the most reasonably direct access to abutting pedestrian oriented uses and transit facilities which are not served by a direct street connection from the subject property. Accessways shall provide future connection to abutting underdeveloped or undeveloped property which is not served by a direct street connection from the subject property, where the abutting property line exceeds 100 feet, except for designated Industrial or General Commercial land. Where the abutting property line exceeds four hundred (400) feet, additional accessways may be required by the Review Authority based on expected pedestrian demand. The Review Authority may reduce the number of required accessways to abutting properties if:
  - 1) Such a reduction results in spacing of streets and/or accessways of three hundred and thirty (330) feet or less, and
  - 2) Reasonably direct routes are still provided for pedestrian and bicycle travel in areas where pedestrians and bicycle travel is likely if connections are provided.
- D. Direct connection of cul-de-sacs and dead-end streets to the nearest available street or pedestrian oriented use;

- E. Accessways may be required to stub into adjacent developed property if the Review Authority determines that existing development patterns or other constraints do not physically preclude future development of an accessway on the developed property and the adjacent developed property attracts a greater than average level of pedestrian use.

408-6.4 The Review Authority may approve a modification to the review standards of Section 408-6, based on findings that strict compliance with the standards is not practicable due to:

- A. Topography;
- B. The standards of Sections 421 or 422;
- C. Existing development patterns on abutting property which preclude the logical connection of streets or accessways, or;
- D. The provisions of a Significant Natural Resource as identified in a Community Plan.

The modification shall be the minimum necessary to address the constraint.

408-6.5 The Review Authority may approve a modification to the dimensional standards in Section 408-6 based on findings that the application of these standards creates a conflict with the standards of Article V or other traffic safety concerns identified through the development review process and that the modification is the minimum necessary to address the constraint.

**408-7 Modification of Standards For an Alternate Design Through a Type III Procedure**

The Hearings Officer may approve a modification to the circulation analysis review standards of Section 408-5 or 408-6 through a Type III procedure based on findings that:

408-7.1 The applicant has submitted an alternate design which serves the purpose of providing safe, convenient and direct pedestrian and bicycle access and access to transit consistent with the standards of the Transportation Plan, the Community Plans, the Transportation Planning Rule (OAR 660-12), and Metro's Urban Growth Management Functional Plan; and

408-7.2 The development's proposed circulation analysis for pedestrian, bicycle and access to transit meets the following criteria:

- A. Does not preclude abutting property from meeting the review standards of Section 408-5 or 408-6;
- B. Provides streets or accessway connections to all existing or approved stub streets or accessways which abut the site;
- C. Provides arterial accessways as required by Section 408-5 and 408-6;

- D. Provides a street and pedestrian/bicycle circulation system which is compatible with abutting developed property;
- E. Provides safe, convenient and generally direct access to transit and nearby pedestrian oriented uses; and
- F. Walking distances on pedestrian ways within and from the new development are not increased from what would be developed under the requirements of Section 408-5 or 408-6.

#### **408-8 Ownership, Liability and Maintenance of Accessways**

To ensure that all accessways will be adequately maintained over time, the Review Authority shall require the following:

- 408-8.1 The developer shall incorporate the accessway in a recorded tract, and shall convey the tract to the County for ownership, liability and maintenance. The assurance provisions of Section 501-8.8 shall apply or
- 408-8.2 The developer shall incorporate the accessway in a recorded easement or tract which specifically requires the property owner and future property owner(s) to provide for the ownership, liability, and maintenance of the accessway. In this case, the review authority shall determine whether the accessway shall be recorded as an easement or as a tract.

#### **408-9 Accessway and Greenway Design**

- 408-9.1 Accessways shall be direct with at least one end of the accessway always visible from any point along the accessway.
- 408-9.2 Accessways shall have a maximum slope of five (5) percent wherever practical.
- 408-9.3 Accessways shall be no longer than three-hundred (300) feet in length between streets. Accessways less than one hundred-fifty (150) feet in length shall include a fifteen (15) foot wide right-of-way with a ten (10) foot wide paved surface to safely accommodate both bicycles and pedestrians. For accessways over one hundred-fifty (150) feet a twenty (20) foot right-of-way shall be provided with a ten foot wide paved surface. The length of the accessway shall be measured from the edge of right-of-way between streets.
- 408-9.4 Fencing along or within ten (10) feet of lot lines adjacent to accessways is permitted, provided that it is constructed of metal or wood and does not exceed five (5) feet in height. Solid, opaque fences are not permitted.
- 408-9.5 The paved portion of the accessway shall be free of horizontal obstruction and shall have a nine (9) foot, six (6) inch vertical clearance to accommodate bicyclists.
- 408-9.6 All accessways shall be landscaped. New landscaping materials shall be selected and sited in conformance with Section 407-2.3, and be limited to canopy trees, shrubs, ground cover, vines, flowers, lawns, brick, bark, timber, decorative rock or other decorative materials which meet requirements of Section 407-2.2.

- 408-9.7 Existing trees within the right-of-way are subject to preservation or removal according to procedures in Section 407-3.
- 408-9.8 Where street lighting is not present at accessway entrances, pedestrian scale lighting not to exceed 16 feet in height, having a minimum of 0.5 footcandles average illumination and a uniformity ratio not exceeding 5:1 shall be provided at both entrances to all accessways, and may also be required at intermediate points along the accessway as determined by a registered engineer. The following conditions shall also apply:
- A. The lamp shall include a high-pressure sodium bulb with an unbreakable lens; and
  - B. Lamps shall be oriented so as not to shine excessive amounts of light upon adjacent residences or into nearby habitat areas.
- 408-9.9 Accessway surfaces shall be constructed of asphaltic concrete according to the County Road Standards or other all-weather surfaces (including pervious paving materials) as approved by the County Engineer.
- 408-9.10 Accessway curb ramps shall be provided where accessways intersect with streets.
- 408-9.11 Accessways shall be signed to prohibit access by unauthorized motor vehicles where accessways intersect with streets.
- 408-9.12 Accessways shall require a physical barrier at all intersections with streets, to prevent use of the facility by unauthorized motor vehicles. Barriers shall:
- A. Be removable, lockable posts permitting access by authorized vehicles;
  - B. Be reflectorized for night visibility and painted a bright color for day visibility; and
  - C. Be spaced five (5) feet apart.
- 408-9.13 When an accessway is provided between two properties, and at least one of the accessways is an internal connection, the accessway shall be 10 feet wide. For example, a shopping center required to provide a connection to an undeveloped office commercial property shall leave at least a ten (10) foot wide gap in any fence or berm built near the property line at the end of the connection.
- 408-9.14 When an accessway is required to connect to an existing accessway, and the existing accessway has a paved width less than ten (10) feet, a transition shall be provided between the two accessways as part of the required accessway.
- 408-9.15 Greenways, intended to partially fulfill the circulation review standards in 408-5, shall include a minimum thirty (30) foot wide right-of-way with a ten (10) foot wide paved surface. Greenways may exceed 300 feet. Greenways shall also meet the standards of 408-9.5 through 408-9.12.
- 408-9.16 The Review Authority may modify the accessway and greenway design standards based on findings that strict compliance with the standards is not practicable, and that the modification is the minimum necessary to address the constraint.

**408-10 Internal Pedestrian Circulation**

## 408-10.1 Number of Pedestrian Connections

- A. All developments that generate fourteen (14) or more additional ADT shall provide a pedestrian connection between the street and the main entrance of the primary structure on the lot. For lots with more than one street frontage, a connection shall be provided to each street. As an alternate for new development on lots with multiple buildings, a pedestrian connection shall be provided between the street and the center of the internal pedestrian network. These requirements do not apply to single-family or duplex residential development.
- B. All developments that generate five hundred (500) or more ADT shall provide:
- (1) A connection from the main entrance of the primary structure to within twenty (20) feet of any transit stop located along the frontage of the subject property;
  - (2) A connection to within twenty (20) feet of any mid-block pedestrian crossing; and
  - (3) A connection for every two hundred (200) feet of street frontage including connections provided per (1) and (2) above. Connections shall be generally spaced to ensure direct access to buildings on the lot for pedestrians accessing the lot from any direction.
- C. As an alternative to 408-10.1 A. and B. (1-3) above, pedestrian connections shall be provided for new development as part of campus development which connect each building within the campus area and directly connect the building complex to the most appropriate street(s) or pedestrian route(s). More than one pedestrian connection may be required to a particular street or pedestrian route in order to decrease out of direction travel.
- D. In addition to pedestrian connections required by 408-10.1 A. and 408-10.1 B., connections shall be provided between the proposed development and all off-site pedestrian connections on adjacent properties or streets as required by Sections 408-5 or 408-6.
- E. The most reasonably direct internal pedestrian connections shall also be provided between different major developments on the lot, such as from one building to another, or between an on-site recreation facility to a building. Connections are not required between buildings or portions of a lot which are not intended for or likely to be used by pedestrians.
- F. For new development that is part of a larger existing use that shares common automobile parking spaces and access and is under common ownership, and the total larger use generates five hundred (500) or more ADT and does not meet the standards of 408-10.1 B. 408-10.1 C., 408-10.1 D. or 408-10.1 E., the following pedestrian connections shall be provided:

- (1) For new development that results in an increase of more than ten (10) percent, but less than fifty (50) percent of the ADT of the larger use, a pedestrian connection shall be provided between the abutting street with the highest functional classification (except freeways) and the internal pedestrian network of the larger use or the main entrance of the primary structure on the site. If one or more abutting streets of the larger use have the same functional classification, a connection shall be provided to all streets with the highest functional classification. Pedestrian connections shall be designed consistent with Section 408-9.3.
- (2) For new development that results in an increase of fifty (50) percent or more of the ADT of the larger use, the larger use shall meet the standards of 408-9.1 B., 408-9.1 C., 408-9.1 D., and 408-9.1 E.

#### 408-10.2 Reduction of Number of Pedestrian Connections

A reduction of the number of pedestrian connections required by 408-9.1 A. through D may be granted by the review authority based on a determination that reducing the number of connections would not result in an increase in out of direction travel from the street to any main building entrance for pedestrians accessing the site from: 1) an off-site accessway, 2) the sidewalk or shoulder along the street where the property has frontage, 3) a transit stop, 4) pedestrian crossings on Arterials and Collectors, and 5) from pedestrian oriented uses across a Collector or local street.

#### 408-10.3 Pedestrian Connection Design

- A. Connections shall be as direct as practicable; circuitous routes shall be avoided.
- B. Where connections cross driveways, parking areas, or loading areas, the connection must be clearly identifiable through the use of striping, elevation changes, speed bumps, a different paving material, or other similar method. If striping is used to identify a connection, the striping must be thermal plastic striping or other heavy-duty material that will have relatively little maintenance. Where connections are parallel and adjacent to an auto travel lane, the connection must be safely separated from the auto travel lane through the use of a raised path, a raised curb, bollards, landscaping or other physical barrier.
- C. Connections shall be at least ten (10) feet in paved unobstructed width when bicycles are intended to share the connection. When bicycle travel is otherwise adequately provided, connections shall be at least five feet in paved unobstructed width. Connections which are likely to be used at night must be lighted. If lighting for other purposes provides adequate light to a pedestrian connection, separate lighting is not required.

### 408-11 Community Plan Pedestrian Connectivity Areas

- 408-11.1 Pedestrian connectivity areas are areas identified on the applicable community plans where pedestrian facilities are needed to improve local pedestrian connectivity. These are areas where the pedestrian facilities will connect neighborhoods and/or provide a more direct route for pedestrians to use. Each pedestrian connectivity area identifies the locations that are to be connected. The appropriate types of pedestrian improvements within these areas are sidewalks along streets,

accessways, off-street trails, off-street pathways, or a combination of these improvements.

- 408-11.2 The pedestrian connectivity areas identify the entirety of each parcel where the pedestrian facility may be provided across is shown. For other pedestrian connectivity areas, a particular type of facility and its location is identified, such as an accessway. Through the development review process, the appropriate type of facilities to be provided in these areas and their location will be identified, except in those areas where a specific facility is shown. The required pedestrian facilities shall be constructed as part of the development of the affected properties.

**409 PRIVATE STREETS**

A private street means any way that provides ingress to, or egress from, property by means of vehicles or other means, or that provides travel between places by means of vehicles, and over which the public has no right of use as a matter of public record.

**409-1 Intent and Purpose**

It is the intent of this Section to regulate the development of certain private streets to ensure that they are constructed to meet minimum safety and structural standards for their intended use, and that maintenance of these facilities is provided for.

**409-2 Applicability**

409-2.1 The requirements of Sections 409-3 and 409-4 shall apply to the development of private streets inside an urban growth boundary for the following:

A. Single-family and duplex residential:

- (1) Private streets over 100 feet in length;
- (2) Private streets which serve three or more lots or units; or
- (3) Private streets for flag lots.

B. Commercial, industrial, institutional, and multi-family residential:

- (1) Which provide access to more than one parcel, development, or multiple uses on a single parcel or development, and;
- (2) Which is not a parking aisle or parking lot driveway.

409-2.2 The requirements of Section 409-5 shall only apply to private streets outside an urban growth boundary.

409-2.3 In transit oriented districts, all private streets shall meet the requirements of Section 431. In the event there is a conflict between the requirements of Section 431 and this Section, the requirements of Section 431 shall control.

**409-3 Urban Private Street Standards**

409-3.1 A private street may be permitted when all of the following criteria are met:

- A. The street is not needed to provide access to other properties in the area in order to facilitate provisions of the applicable Community Plan(s), the Transportation Plan, or Section 431, access spacing, sight distance, and circulation standards and requirements, or emergency access standards or concerns;
- B. The street is not designated as a proposed facility in the Transportation Plan, or is not identified as a public street in the applicable Community Plan or by the requirements of Section 431;

- C. The street is not designated as a public street by a previous land use action, or by a study adopted by the County;
- D. The street does not serve as a collector or arterial street, or as a Special Area Commercial Street; and
- E. In transit oriented districts, the street is permitted as a private street by Section 431.

409-3.2 Notwithstanding the above criteria for access spacing, circulation, emergency access, and collector function, the review authority may approve a private street in conjunction with a proposed development upon adequate findings from the applicant that environmental or topographic constraints make construction of a public street impractical and that no serious adverse impacts will occur to surrounding properties or roads.

409-3.3 All streets proposed to be of private ownership inside the UGB shall conform to the following standards:

A. Local Residential Streets:

			STRUCTURAL STANDARDS		
	*FUNCTION	**MIN. PAVEMENT WIDTH	SECTION	CURBS	SIDEWALKS
	<b>One-way</b>				
(1)	1-2 units	10 ft.	(1)	None	None
(2)	3-8 units	15 ft.	(2)	None	None
(3)	9 or more units	15 ft.	(3)	Yes	Both Sides
	<b>Two-way</b>				
(4)	1-2 units (Less than 150 feet in length)	10 ft.	(1)	None	None
(5)	1-2 units (Over 150 feet in length)	15 ft.	(1)	None	None
(6)	3-4 units (Less than 150 feet in length)	15 ft.	(1)	None	None
(7)	3-4 units (Over 150 feet in length)	20 ft.	(1)	None	None
(8)	5-8 units	22 ft.	(2)	One Side	One Side
(9)	9 or more units	24 ft.	(3)	Yes	Both Sides
	Alleys (One-way or two-way)				
(10)	1-8 units	16 ft.	(1)	***Yes	None
(11)	9 or more units	16 ft.	(2)	***Yes	None

\*Adequate turn around facilities shall be provided pursuant to Section 409-3.7

\*\* MINIMUM PAVEMENT WIDTH DOES NOT INCLUDE PARKING. IF PARKING IS PERMITTED FOR DEVELOPMENT OF A PRIVATE STREET, THE PAVED WIDTH OF THE PRIVATE STREET SHALL BE CONSTRUCTED TO MEET THE APPLICABLE PUBLIC STREET WIDTH STANDARD.

\*\*\*Curbs shall be required only if they are needed for drainage

B. Private Commercial and Industrial Streets:

	*FUNCTION	**MIN. PAVEMENT WIDTH	STRUCTURAL STANDARDS		
			SECTION	CURBS	SIDEWALKS
	<b>One-way</b>				
(10)	300 Max ADT	12 ft.	(2)	Yes	Both Sides
(11)	1,500 Max ADT	15 ft.	(3)	Yes	Both Sides
(12)	3,000 Max ADT	15 ft.	(4)	Yes	Both Sides
(13)	<b>3,000 Plus ADT</b>	22 ft.	(4)	Yes	Both Sides
	<b>Two-way</b>				
(14)	300 Max ADT	22 ft.	(2)	Yes	Both Sides
(15)	1,500 Max ADT	28 ft.	(3)	Yes	Both Sides
(16)	3,000 Max ADT	36 ft.	(4)	Yes	Both Sides
(17)	<b>3,000 Plus ADT</b>	40 ft.	(4)	Yes	Both Sides
	<b>Alleys (One-way or two-way)</b>				
(18)	1,500 Max ADT	16 ft.	(3)	***Yes	None
(19)	1,500 Plus ADT	16 ft.	(4)	***Yes	None

\*Adequate turn around facilities shall be provided pursuant to Section 409-3.7

\*\* MINIMUM PAVEMENT WIDTH DOES NOT INCLUDE PARKING. IF PARKING IS PERMITTED FOR DEVELOPMENT OF A PRIVATE STREET, THE PAVED WIDTH OF THE PRIVATE STREET SHALL BE CONSTRUCTED TO MEET THE APPLICABLE PUBLIC STREET WIDTH STANDARD.

\*\*\*Curbs shall be required only if they are needed for drainage

C. Private Street Length:

For the purpose of this Section, private street length shall be measured as the distance between the near side curb line of the intersecting street and the far edge of pavement of the private road, including any turnaround.

409-3.4 Private Street Design and Construction

A. Construction Plans

- (1) Construction plans for private streets constructed per Sections 409-3.3 A(3), A(8-11), or B(10-19) shall be prepared by a registered civil engineer. Prior to final approval, written certification shall be provided by the engineer that the proposed design complies with the applicable requirements of Sections 409-3.3, 409-3.5 and 409-3.6, any modifications approved pursuant to Section 409-3.8 and in accordance with the preliminary approval.
- (2) Construction plans for private streets constructed per Sections 409-3.3 A. (1, 2, 4, 5, 6 or 7) are not required to be prepared by a civil engineer unless

the applicant chooses to construct the street in accordance with the County road standards as provided by Section 409-3.6 A. (1).

- (3) Final construction plans for all private streets shall be submitted prior to final approval.

#### B. Private Street Construction

- (1) Private streets constructed per Section 409-3.3 A. (3), A (8-11), or B (10 through 19) shall be constructed prior to final plat approval for land divisions; or prior to occupancy or issuance of a certificate of occupancy for commercial, industrial, institutional or multi-family development, whichever occurs first. The applicant's engineer shall provide written certification that the street(s) has been constructed in accordance with the certified final construction plans.
- (2) Private streets constructed per Section 409-3.3 A. (1, 2, 4, 5, 6, or 7) shall be constructed prior to final plat approval unless approved otherwise by the Director. The applicant's engineer or contractor shall provide written certification that the street was constructed in accordance with the final construction plans prior to final approval, or prior to issuance of any building permit within the development when the Director permits the street to be constructed after final approval.

#### 409-3.5 Private Street Tracts

The pavement width, and curbs, if any, of all private streets, except private streets serving one or two single-family residential lots or parcels, shall be located in a tract which meets the provisions of Section 409-4. Sidewalks may be located outside a tract on individual lots or parcels when approved by the Review Authority provided the following standards are met:

- A. The sidewalk shall be located in an easement; and
- B. Except in transit oriented districts, a minimum twenty (20) foot setback to the garage vehicle entrance, measured from the sidewalk or easement for public travel, whichever is closest shall be provided. In transit oriented districts, the minimum setback to the garage vehicle entrance shall be no less than the minimum setback required by Section 375 or Section 431.

#### 409-3.6 Structural Section Key:

All private streets shall be constructed to the following minimum standards as identified in Section 409-3.3:

##### A. Structural Section Type:

- (1) Three (3) inch Type "C" AC over six (6) inches compacted crushed rock or in accordance with the standards of the Washington County Uniform Road Improvement Design Standards.

- (2) Three (3) inch Type "C" AC over two (2) inches of three-quarter ( $\frac{3}{4}$ ) minus and six (6) inches of two (2) inch minus compacted crushed rock or in accordance with the standards of the Washington County Uniform Road Improvement Design Standards.
- (3) Two (2) inch Type "C" AC over two (2) inch Type "B" AC over two (2) inches of three-quarter ( $\frac{3}{4}$ ) minus and six (6) inches of two (2) inch minus compacted crushed rock or in accordance with the standards of the Washington County Uniform Road Improvement Design Standards.
- (4) Two (2) inches Type "C" AC over three (3) inches Type "B" AC over two (2) inches of three-quarter ( $\frac{3}{4}$ ) minus and six (6) inches of two (2) inch minus compacted crushed rock or in accordance with the standards of the Washington County Uniform Road Improvement Design Standards.
- (5) In lieu of being constructed of asphaltic concrete as described in items (1)-(4) above, private streets or driveways may be constructed of pervious paving materials when the applicant's engineer provides written certification with the application that appropriate site conditions exist for the use of pervious materials and that the proposed design and construction will be equal to or superior to the structural standards specified in the table in Subsections 409-3.3 A. and B.

B. Curb Standards Type:

- (1) Standard curb and gutter, six (6) inches exposed (see standard drawings of County Road Standards).
- (2) Mountable curbs.
- (3) When vegetated stormwater management facilities will be used to convey and treat street runoff, curb cuts will be allowed for the purpose of draining runoff from the private street or driveway.

C. Sidewalks:

- (1) Concrete sidewalks, minimum five (5) feet width (see standard drawings of County Road Standards), and sidewalk ramps at street corners.
- (2) In lieu of being constructed of concrete, as described in (1) above, sidewalks may be constructed of pervious paving materials when the applicant's engineer provides written certification with the application that appropriate site conditions exist for the use of pervious materials and that the proposed design and construction will be equal to or superior to the structural standards specified in (1) above.

D. Drainage:

All roadways shall be drained pursuant to the requirements of the Drainage Standards, Section 410.

## E. Additional Street Design Requirements:

Street design characteristics not otherwise addressed in this section such as intersections, sight distance, and vertical and horizontal alignments, shall be designed to meet nationally accepted specifications and standards, and shall be approved by the appropriate fire district.

## 409-3.7 Emergency Service and Solid Waste and Recycling Collection Provider Access:

A dead-end private street (includes alleys) exceeding one hundred-fifty (150) feet in length shall have an adequate turn around facility designed in accordance with approved Fire Marshal standards unless:

A. The Fire Marshal determines that a turn around is not needed to provide emergency service vehicle access; and

B. The solid waste coordinator for the Washington County Health and Human Services Solid Waste and Recycling Program determines that a turn around is not needed to provide solid waste and recyclable collection vehicle access.

## 409-3.8 Modification of Private Road Standards

A variance to the provisions of Section 409-3.3 may be approved by the Review Authority in accordance with Section 435 and the following:

A. The design has been approved by the appropriate Fire Marshal and by the solid waste coordinator;

B. The design has been prepared, submitted and certified by a registered engineer (Oregon); and

C. The design has been documented and references nationally accepted specifications or standards.

**409-4 General Provisions For Urban Private Streets**

409-4.1 A recorded document providing for the ownership, use rights, and allocation for liability for maintenance of all private streets shall be submitted to the Review Authority prior to or in conjunction with final approval.

409-4.2 When streets are proposed to be private, access easements shall be provided to all properties needing access to the private street.

409-4.3 A traffic signing plan shall be provided for proposed private streets. At a minimum, the Review Authority shall require a standard "stop sign" at the intersection of private and public streets, "No Parking" signs as applicable, and a sign stating "private street, not maintained by Washington County" at the entrance to the public street. Dead end streets shall be so signed.

409-4.4 Private streets which access public or County roads shall be located, designed and constructed (within the public right-of-way) in accordance with adopted standards for County roads.

409-4.5 Private street access to a County or public road shall be permitted only upon issuance of an access permit upon demonstration of compliance with the provisions of the County road standards, the standards of this Section and Section 501-8.5. Additional sight distance may be required where a safety hazard exists.

409-4.6 Urban private streets providing access to residential developments in a Regional or Town Center, Light Rail Station Community, Main Street or Transit Corridor shall not be gated except when required by the Director to address an operational or safety issue or as permitted by Section 431-4.2E(2). Urban private streets outside of these areas that provide access to residential land divisions or attached unit residential developments from a County or public street may be gated when approved by the applicable Fire Marshal and the Washington County Traffic Engineering Division.

#### **409-5 Private Streets Outside an Urban Growth Boundary**

409-5.1 Private streets (driveways), or portions thereof, shall demonstrate adequate accessibility for emergency vehicles. The private street (driveway) shall comply with the access road requirements of the Oregon Fire Code. If new parcels are created, Section 409-5.2, below, applies.

Compliance with the Oregon Fire Code shall be assessed upon submittal of a site plan and accompanying narrative illustrating all improvements needed for the existing and proposed private driveways longer than 150-feet to meet the standards in the current Oregon Fire Code, including:

- (1) Turnaround alternative for dead-end streets/driveways;
- (2) Turnouts for access roads longer than 400-feet;
- (3) Road gradient and road width; and
- (4) Surface and load capacities of the road.

The Fire Marshal shall have the first opportunity to review private streets (driveways), per item A., below. If the Fire Marshal fails to review the private street (driveway), or in cases where no Fire Marshal has jurisdiction, approval by the Building Official or his designee is required, as outlined under item B., below. In these cases, the applicant shall provide evidence that the Fire Marshal waives his review.

##### **A. Fire Marshal Review**

To demonstrate compliance, the applicant shall provide a site plan signed by the Fire Marshal or designee illustrating all required improvements to the entire driveway between the development and the public street providing access. The signature serves to acknowledge that the length of the private street (driveway), once improved as shown on the site plan, can meet District standards for access for emergency vehicles.

##### **B. Building Official Review**

- (1) For private streets (driveways) or portions thereof outside of Fire District boundaries, or which have not previously been reviewed by the Fire Marshal, the Building Official shall review the private street (driveway) for compliance with the Oregon Fire Code. The Building

Official's initials on the site plan and narrative serve to acknowledge that the length of the private street (driveway), once improved as shown on the site plan, can meet Fire Code standards for access for emergency vehicles.

- (2) Private streets (driveways) for which existing portions have previously been reviewed and approved by the Fire Marshal, the applicant shall demonstrate prior approval of the existing portion of the private street (driveway) by providing evidence of Fire Marshal approval of the constructed street. If the applicant does not provide adequate evidence of prior Fire Marshal approval, current standards are applicable.
  - (a) If Building Official review determines that a previously approved private street (driveway) still meets the standards under which it was originally approved, no changes shall be required to the previously approved portion of the street.
  - (b) If the Building Official finds that the private street (driveway) no longer meets the specifications previously approved by the Fire Marshal, he may require that the road be brought up to the originally-approved specifications before approving the access.

409-5.2 All private streets providing access from a public roadway to a proposed land division shall meet the following standards:

- A. Have a minimum sight distance in compliance with adopted County Standards at any intersection with a public road. Additional sight distance may be required where safety hazards exist.
- B. For each private street, there shall be a legal recorded document which includes:
  - (1) A legal description of the proposed easement;
  - (2) Ownership of the street;
  - (3) Use rights; and
  - (4) A maintenance agreement which includes Fire Marshal approved street specifications and turn around area (if required) and the allocation and/or method of determining liability for maintenance. For new private streets, this agreement shall be a maintenance and construction agreement which addresses the above elements.
- C. Each private street shall have a sign stating: "private street, not maintained by Washington County." Dead end streets shall be so marked.
- D. Where drainage conditions require it, a private street shall be ditched in conformance with the County Road Standards.

- E. Private streets which access public or County roads shall be located, designed and constructed (within the public right-of-way) in accordance with adopted standards for County roads.
- F. Prior to establishing a private driveway or a private street, the owner shall obtain an access permit for access to the intersecting public road and pay the prescribed fee. As a condition of granting access to a public road, the County may require the applicant to clean the ditch serving the parcel and remove sight obstructing vegetation in the vicinity of the access.
- G. If an existing driveway or privately maintained street is to be used as an access in a proposed land division, the applicant shall submit at preliminary review a letter from the appropriate Fire Marshal stating that the proposed access is satisfactory to serve the proposed parcels, or the letter shall set forth the improvements required to make the access satisfactory.
- H. To establish a new private road, the applicant shall submit at preliminary review the following information:
  - (1) A written statement from the appropriate Fire Marshal setting forth the road standards that are applicable to the proposed development;
  - (2) Preliminary road construction plans, including right-of-way and road surface widths, grading, drainage and surface type (i.e., paving or gravel). Private streets shall comply with the grading and drainage standards of Section 410. Final construction plans shall be submitted prior to final approval; and
  - (3) A statement of the maximum number of dwellings, or lots or parcels the street can serve.
- I. For private streets created through a partition, the applicant shall comply with one of the following:
  - (1) Prior to final approval of the partition, construct the private street in accordance with the plans and specifications approved in the preliminary approval. The appropriate Fire Marshal or, if the Fire Marshal fails to review the private street, approval by the Building Official or his designee shall inspect and approve the private street for conformance to the standards originally approved. A written letter of approval shall be provided to the County prior to final approval of the partition; or
  - (2) For each vacant parcel that is not served by the completed private road execute a restrictive covenant which states:

“This parcel is ineligible for a building permit except for farm or forest structures other than dwellings and shall be limited to farm and forest use until such time as the privately maintained road described in document # \_\_\_\_\_(Date), has been approved by the appropriate Fire Marshal to a point where the parcel can be served. This restrictive covenant shall run with the land.”

The Director shall authorize the removal of the restrictive covenant after the private street has been constructed to serve any parcel subject to the restrictive covenant and the appropriate Fire Marshal or, if the Fire Marshal fails to review the private street, approval by the Building Official or his designee has certified the private street meets the standards specified in the recorded road construction agreement.

Prior to the issuance of a building permit, the appropriate Fire Marshal shall inspect and approve the private street after it has been constructed for conformance to the standards originally approved. A written letter of approval from the Fire Marshal shall be provided to the County prior to issuance of a building permit.