

Chapter 3 Design Standards

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Chapter 3.0 Design Standards Administration

Sections

3.0.1 Applicability

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3.0.1 Applicability.

All developments within the city must comply with the provisions of Chapters 3.0 through 3.8. Some developments, such as major projects requiring land division and/or site design review approval, may require detailed findings demonstrating compliance with each chapter of the Code. For small, less complex projects, fewer Code provisions may apply. Though some projects will not require land use or development permit approval (e.g., building of single family houses on platted lots, that are not subject to Chapter 3.7: Sensitive Lands), they are still required to comply with the provisions of this Chapter.

3.0.2 Types of Design Standards.

The City's development design standards are contained in both Chapter 2 and Chapter 3. It is important to review both chapters, and all relevant code sections within the chapters, to determine which standards apply. The city may prepare checklists to assist property owners and applicants in determine which sections apply.

- A. Chapter 2. Each land use zone provides design standards that are specifically tailored to the zone. For example, the two Residential Zones contain building design guidelines that are different than those provided in the Commercial Zone, due to differences in land use, building types, and compatibility issues. In addition, each district provides special standards that are meant to address the impacts or characteristics of certain land uses.
- B. Chapter 3. The design standards contained within the following chapters apply throughout the City, for all land use types:

- 3.1 - Access and Circulation

- 3.2 - Vehicle and Bicycle Parking

- 3.3 - Landscaping, Street Trees, Fences and Walls

- 3.4 - Accessory Structures

- 3.5 - Other Development Standards

- 3.6 - Surface Water Management

- 3.7 - Sensitive Lands

- 3.8 - Public Facilities Standards

- 3.9 – Grading and Erosion Control

Chapter 3.1 Access and Circulation Design Standards

Sections

3.1.1 Purpose

3.1.2 Vehicular Access and Circulation

3.1.3 Pedestrian Access and Circulation

3.1.1 Purpose.

The purpose of this chapter is to ensure that developments provide safe and efficient access and circulation for pedestrians and vehicles. Chapter 3.1 Section 2 provides standards for vehicular access and circulation. Chapter 3.1 Section 3 provides standards for pedestrian access and circulation. Standards for transportation improvements are provided in Chapter 3.8 Section 2.

3.1.2 Vehicular Access and Circulation.

- A. **Intent and Purpose.** The intent of this Section is to manage vehicle access to development through a connected street system, while preserving the flow of traffic in terms of safety, roadway capacity, and efficiency. Access shall be managed to maintain an adequate “level of service” and to maintain the “functional classification” of roadways. Major roadways, including highways and collectors, serve as the primary system for moving people and goods. “Access management” is a primary concern on these roads. Local streets and alleys provide access to individual properties. If vehicular access and circulation are not properly designed, these roadways will be unable to accommodate the needs of development and serve their transportation function. This Section attempts to balance the right of reasonable access to private property with the right of the citizens of the city and the State of Oregon to safe and efficient travel. It also requires all developments to construct planned streets (arterials and collectors) and to extend local streets. The roadway system will be designed in a manner that limits impervious surfaces to the greatest extent possible.
- B. **Applicability.** This ordinance shall apply to all public streets within the city and to all properties that abut these streets.
- C. **Access Permit Required.** Access to a public street requires an Access Permit in accordance with the following procedures:
 - 1. Permits for access to city streets shall be subject to review and approval by the city based on the standards contained in this Chapter, and the provisions of Chapter 3.8 Section 2: Transportation Standards. An access permit may be in the form of a letter to the applicant, or it may be attached to a land use decision notice as a condition of approval.
 - 2. Permits for access to County roads shall be subject to review and approval by Marion County, except where the County has delegated this responsibility to the city, in which case the city shall determine whether access is granted based on adopted County standards.
- D. **Traffic Study Requirements.** The city or other agency with access jurisdiction may require a traffic study prepared by a qualified professional to determine access, circulation and other transportation requirements. (See also, Chapter 3.8 Section 2: Transportation Standards.)
- E. **Conditions of Approval.** The city or other agency with access permit jurisdiction may require the closing or consolidation of existing curb cuts or other vehicle access points, recording of reciprocal access easements (i.e., for shared driveways), development of a frontage street, installation of traffic control devices, and/or other mitigation as a condition of granting an access permit, to ensure the safe and efficient operation of the street and highway system.
- F. **Access Options.** When vehicle access is required for development (i.e., for off-street parking, delivery, service, drive-through facilities, etc.), access shall be provided by one of the following

methods (a minimum of ten (10) feet per lane is required). These methods are “options” to the developer/subdivider, unless one method is specifically required by Chapter 2 (i.e., under Chapter 2.1 Section 7 “Special Standards for Certain Uses”).

1. Option 1. Access is from an existing or proposed alley or mid-block lane. If a property has access to an alley or lane, direct access to a public street is not permitted.
2. Option 2. Access is from a private street or driveway connected to an adjoining property that has direct access to a public street (i.e., “shared driveway”). A public access easement covering the driveway shall be recorded in this case to assure access to the closest public street for all users of the private street/drive.
3. Option 3. Access is from a public street adjacent to the development parcel. If practicable, the owner/developer may be required to close or consolidate an existing access point as a condition of approving a new access. Street accesses shall comply with the access spacing standards in Section G, below.
4. Subdivision Fronting onto a Highway. New residential land divisions fronting onto a highway shall be required to provide alleys or secondary (local or collector) streets for access to individual lots. When alleys or secondary streets cannot be constructed due to topographic or other physical constraints, access may be provided by consolidating driveways for clusters of two (2) or more lots (e.g., includes flag lots and mid-block lanes).
5. Double-Frontage Lots. When a lot has frontage onto two (2) or more streets, access shall be provided first from the street with the lowest classification. For example, access shall be provided from a local street before a collector or arterial street. Except for corner lots, the creation of new double-frontage lots shall be prohibited in the two Residential Zones, unless topographic or physical constraints require the formation of such lots. When double-frontage lots are permitted in the Residential Zones, a landscape buffer with trees and/or shrubs and ground cover not less than ten (10) feet wide shall be provided between the back yard fence/wall and the sidewalk or street; maintenance shall be assured by the owner.

G. **Driveway Spacing.** Driveway accesses shall be separated from other driveways and street intersections in accordance with the following standards and procedures:

1. No more than one (1) driveway per property shall be permitted in residential zones except for duplexes.
2. Where possible, driveways for corner properties shall be located on the lowest classification street.
3. Residential driveways of adjoining properties shall have a minimum of 15 feet clear between the edges of the driveways.
4. Location of all driveways serving commercial, industrial or multifamily facilities shall be approved by the City of Detroit.
5. Driveways shall be separated from an intersection by a minimum of 30 feet or one-half the lot frontage, whichever is greater.

- H. **Number of Access Points.** For single family, two-family, and three-family housing types, one (1) street access point is permitted per lot when alley access cannot otherwise be provided; except that two (2) access points may be permitted for two-family and three-family housing on corner lots (i.e., no more than one (1) access per street), subject to the access spacing standards in Section ‘G’, above. The number of street access points for multiple family, commercial, industrial, and public/institutional developments shall be minimized to protect the function, safety and operation of the street(s) and sidewalk(s) for all users. Shared access may be required, in conformance with Section I, below, in order to maintain the required access spacing, and minimize the number of access points.
- I. **Shared Driveways.** The number of driveway and private street intersections with public streets maybe minimized by the use of shared driveways with adjoining lots where feasible. The city shall require shared driveways as a condition of land division or site design review, as applicable, for traffic safety and access management purposes in accordance with the following standards:
1. Shared driveways and frontage streets may be required to consolidate access onto a collector or arterial street. When shared driveways or frontage streets are required, they shall be stubbed to adjacent developable parcels to indicate future extension. “Stub” means that a driveway or street temporarily ends at the property line, but may be extended in the future as the adjacent parcel develops. “Developable” means that a parcel is either vacant or it is likely to receive additional development (i.e., due to infill or redevelopment potential).
 2. Access easements (i.e., for the benefit of affected properties) shall be recorded for all shared driveways, including pathways, at the time of final plat approval (Chapter 4.3) or as a condition of site development approval (Chapter 4.2).
 3. Exception. Shared driveways are not required when existing development patterns or physical constraints (e.g., topography, parcel configuration, and similar conditions) prevent extending the street/driveway in the future.
- J. **Street Connectivity and Formation of Blocks Required.** In order to promote efficient vehicular and pedestrian circulation throughout the city, land divisions and large site developments shall produce complete blocks bounded by a connecting network of public and/or private streets, in accordance with the following standards:
1. Block Length and Perimeter. The maximum block length and perimeter shall not exceed:
 - a. 600 feet length and 1,600 feet perimeter in the Residential Zones;
 - b. 400 feet length and 1,200 feet perimeter in the General Commercial Zone and Public Zone.
 2. Street Standards. Public and private streets shall also conform to Chapter 3.8 Section 2: Transportation Standards, Section 3.1 Section 3 - Pedestrian Access and Circulation, and applicable Americans with Disabilities Act (ADA) design standards.
 3. Exception. Exceptions to the above standards may be granted when blocks are divided by one (1) or more pathway(s), in conformance with the provisions of Chapter 3.1 Section 3(A). Pathways shall be located to minimize out-of-direction travel by pedestrians and may be designed to accommodate bicycles.

- K. **Driveway Openings.** Driveway openings, or curb cuts, shall be the minimum width necessary to provide the required number of vehicle travel lanes (ten (10) feet for each travel lane). The following standards (i.e., as measured where the front property line meets the sidewalk or right-of-way) are required to provide adequate site access, minimize surface water runoff, and avoid conflicts between vehicles and pedestrians:
1. Single family, two-family, and three-family uses shall have a minimum driveway width of ten (10) feet, and a maximum width of 24 feet, except that one (1) recreational vehicle pad may be provided in addition to the standard driveway for lots containing more than 12,000 square feet of area.
 2. Multiple family uses with between four (4) and seven (7) dwelling units shall have a minimum driveway width of 20 feet, and a maximum width of 24 feet.
 3. Multiple family uses with more than eight (8) dwelling units, and off-street parking areas with 16 or more parking spaces, shall have a minimum driveway width of 24 feet, and a maximum width of 30 feet. These dimensions may be increased if the city determines that more than two (2) lanes are required based on the number of trips generated or the need for turning lanes.
 4. Access widths for all other uses shall be based on ten (10) feet of width for every travel lane, except that driveways providing direct access to parking spaces shall conform to the parking area standards in Chapter 3.2.
 5. Driveway Aprons. Driveway aprons (when required) shall be constructed of surface materials approved by the city and shall be installed between the street right-of-way and the private drive. Driveway aprons shall conform to ADA standards for sidewalks and pathways, which require a continuous route of travel that is a minimum of five (5) feet in width, with a cross slope not exceeding two (2) percent.
 6. Culverts. A culvert approved by the city of at least 12 inches in diameter shall be installed at the ditch or property line directly beneath the driveway to provide continuous drainage of surface water. Larger culverts of 16 or 24 inches may be required in certain areas to conform to existing drain culverts.
 7. Ditch Line. If a ditch line in, from, or alongside a property is to be covered, a full-length culvert of adequate size must be installed with catch basins and grates; or storm drains must be installed to capture all surface water so that it is diverted into the culvert. Back fill must slope away from the street and toward catch basins and the property line. The catch basin or storm drain must be of standard design and installed in-line with the drainage culvert so as to prevent interference with the culvert flow.
 8. Exceptions. An exception to either requirement 6 or 7, above, is allowed where no defined ditch line or drainage flow is provided by the city and where surface drainage, if any, is confined to a given area and does not impact the street right-of-way.
- L. **Fire Access and Parking Area Turn-Arounds.** A fire equipment access drive shall be provided for any portion of an exterior wall of the first story of a building that is located more than 150 feet from an existing public street or approved fire equipment access drive. The access drive and potential turn-around shall be according to the approval of the Fire District or its designee.

- M. **Vertical Clearances.** Driveways, private streets, aisles, turn-around areas and ramps shall have a minimum vertical clearance of 13 feet 6 inches for their entire length and width.
- N. **Vision Clearance.** No signs, structures or vegetation in excess of three (3) feet in height shall be placed in “vision clearance areas.” The minimum vision clearance area may be increased by the city upon finding that more sight distance is required (i.e., due to traffic speeds, roadway alignment, etc.).
- O. **Construction.** The following development and maintenance standards shall apply to all driveways and private streets, except that the standards do not apply to driveways serving one (1) single family detached dwelling:
1. Surface Options. Driveways, parking areas, aisles, and turn-arounds may be paved with asphalt, concrete or comparable surfacing, or a durable non-paving material may be used to reduce surface water runoff and protect water quality. Paving surfaces shall be subject to review and approval by the city.
 2. Surface Water Management. When a paved surface is used, all driveways, parking areas, aisles and turn-arounds shall have on-site collection or infiltration of surface waters to eliminate sheet flow of such waters onto public rights-of-way and abutting property. Surface water facilities shall be constructed in conformance with City standards.
 3. Driveway Aprons. When driveway approaches or “aprons” are required to connect driveways to the public right-of-way, they shall be paved with surface materials approved by the city. (See also, Section K.)

3.1.3 Pedestrian Access and Circulation.

- A. **Pedestrian Access and Circulation.** To ensure safe, direct and convenient pedestrian circulation, all developments, except single-family detached housing (i.e., on individual lots), shall provide a continuous pedestrian and/or multi-use pathway system. (Pathways only provide for pedestrian circulation. Multi-use pathways accommodate pedestrians and bicycles.) The system of pathways shall be designed based on the standards in Subsection 1-3, below:
1. Continuous Pathways. The pathway system shall extend throughout the development site, and connect to all future phases of development, adjacent trails, public parks and open space areas, and planned trails and paths as identified in the Transportation System Plan whenever possible. The developer may also be required to connect or stub pathway(s) to adjacent streets and private property, in accordance with provisions of Chapter 3.1 Section 2: Vehicular Access and Circulation, and Chapter 3.8 Section 2: Transportation Standards.
 2. Safe, Direct, and Convenient Pathways. Pathways within developments shall provide safe, reasonably direct, and convenient connections between primary building entrances and all adjacent streets, based on the following definitions:
 - a. Reasonably direct. A route that does not deviate unnecessarily from a straight line or a route that does not involve a significant amount of out-of-direction travel for likely users.
 - b. Safe and convenient. Bicycle and pedestrian routes that are reasonably free from hazards and provide a reasonably direct route of travel between destinations.

- c. For commercial, industrial, mixed use, public, and institutional buildings, the “primary entrance” is the main public entrance to the building. In the case where no public entrance exists, street connections shall be provided to the main employee entrance.
 - d. For residential buildings the “primary entrance” is the front door (i.e., facing the street). For multifamily buildings in which each unit does not have its own exterior entrance, the “primary entrance” may be a lobby, courtyard or breezeway which serves as a common entrance for more than one dwelling.
3. Connections within Development. For all developments subject to Site Design Review, pathways shall connect all building entrances to one another. In addition, pathways shall connect all parking areas, storage areas, recreational facilities and common areas (as applicable), and adjacent developments to the site, as applicable.
4. Street Connectivity. Pathways (for pedestrians and bicycles) shall be provided at or near mid-block where the block length exceeds the length required by Chapter 3.1 Section 2. The length and perimeter of the blocks formed by the pathway connection shall not exceed the requirements in Chapter 3.1 Section 2. Pathways shall also be provided where cul-de-sacs or dead-end streets are planned to connect the ends of the streets together, to other streets, and/or to other developments, as applicable. Pathways used to comply with these standards shall conform to all of the following criteria:
- a. Multi-use pathways (i.e., for pedestrians and bicyclists) are no less than ten (10) feet wide;
 - b. If the streets within the subdivision or neighborhood are lighted, the pathways shall also be lighted.
 - c. Stairs or switchback paths using a narrower right-of-way/easement may be required in lieu of a multi-use pathway where grades are steep;
 - d. The city may require landscaping within the pathway easement/right-of-way for screening and the privacy of adjoining properties;
 - e. The City Council may determine based upon facts in the record, that a pathway is impracticable due to: physical or topographic conditions (e.g., extremely steep slopes, sensitive lands, and similar physical constraints); buildings or other existing development on adjacent properties that physically prevent a connection now or in the future considering the potential for redevelopment; and sites where the provisions of recorded leases, easements, covenants, restrictions, or other agreements recorded as of the effective date of this Code prohibit the pathway connection.

B. Design and Construction. Pathways shall conform to all of the standards in 1-5:

- 1. Vehicle/Pathway Separation. Where pathways are parallel and adjacent to a driveway or street (public or private), they shall be raised six (6) inches and curbed, or separated from the driveway/street by a five (5)-foot minimum strip with bollards, a landscape berm, or other physical barrier. If a raised path is used, the ends of the raised portions must be equipped with curb ramps.

2. Housing /Pathway Separation. Pedestrian pathways shall be separated a minimum of five (5) feet from all residential living areas on the ground floor, except at building entrances. Separation is measured from the pathway edge to the closes dwelling unit. The separation area shall be landscaped in conformance with the provisions of Chapter 3.3. No pathway/building separation is required for commercial, industrial, public, or institutional uses.
3. Crosswalks. Where pathways cross a parking area, driveway, or street (“crosswalk”), they shall be clearly marked with contrasting paving materials, humps/raised crossings, or painted striping. An example of contrasting paving material is the use of a concrete crosswalk through an asphalt driveway. If painted striping is used, it shall consist of thermo-plastic striping or similar type of durable application.
4. Pathway Surface. Pathway surfaces shall be concrete, asphalt, brick/masonry pavers, or other durable surface, at least six (6) feet wide, and shall conform to ADA requirements. Multi-use paths shall be the same materials, at least ten (10) feet wide. (See also, Chapter 3.8 Section 2: Transportation Standards for public, multi-use pathway standard.)
5. Accessible Routes. Pathways shall comply with the Americans with Disabilities Act, which requires accessible routes of travel.

Chapter 3.2 Vehicle and Bicycle Parking

Sections

3.2.1 Purpose

3.2.2 Applicability

3.2.3 Vehicle Parking Standards

3.2.4 Bicycle Parking Standards

3.2.1 Purpose.

The purpose of this chapter is to provide basic and flexible standards for development of vehicle and bicycle parking. The design of parking areas is critically important to the viability of some commercial areas, pedestrian and driver safety, the efficient and safe operation of adjoining streets, and community image and livability. Historically, some communities have required more parking than is necessary for some land uses, paving extensive areas of land that could be put to better use. Because vehicle-parking facilities can occupy large amounts of land, they must be planned and designed carefully to use the land efficiently while maintaining the visual character of the community. This chapter recognizes that each development has unique parking needs by providing a flexible approach for determining parking space requirements (i.e., “minimum” and “performance-based” standards). This chapter also provides standards for bicycle parking because many people use bicycles for recreation, commuting, and general transportation. Children as well as adults need safe and adequate spaces to park their bicycles throughout the community.

3.2.2 Applicability.

All developments subject to site design review (Chapter 4.2), including development of parking facilities, shall comply with the provisions of this Chapter. Developments in the Detroit Avenue Corridor Overlay Zone subject to Chapter 2.3 Section 7 are exempt from the minimum vehicle parking spaces standards in Table 3.2.3.A and bicycle parking spaces standards in Table 3.2.4.A, but any off-street parking proposed shall meet all other standards of Chapter 3.2 Section 3.

3.2.3 Vehicle Parking Standards.

- A. The minimum number of required off-street vehicle parking spaces (i.e., parking that is located in parking lots and garages and not in the street right-of-way) shall be determined based on the standards in Table 3.2.3.A.

Table 3.2.3.A – Vehicle Parking Spaces by Use	
Use Categories	Minimum parking spaces per land use (fractions are rounded down to the closest whole number)
Residential Categories	
Single family dwelling, including manufactured homes on lots	Two (2) spaces per dwelling
Two- and three-family housing	1.5 spaces per dwelling unit
Accessory Dwelling (second dwelling on a single family lot)	Two (2) spaces total for primary dwelling and accessory dwelling
Multifamily or single family attached housing	Studio units or one-bedroom units less than 500 sq. ft.: one (1) space/unit One-bedroom units 500 sq. ft. or larger: 1.5 spaces/unit Two-bedroom units: 1.75 spaces/unit Three-bedroom or greater units: two (2) spaces/unit
Senior housing, retirement complexes, or assisted living	One (1) space per apartment unit or one (1) space per two (2) patient beds
Rooming and boarding houses, dormitories	Two (2) spaces for each three (3) guest rooms, or one (1) per three (3) beds, whichever is more
Manufactured home parks	Same as for single family detached housing

Nursing and convalescent homes	One (1) space per three (3) patient beds
Commercial Categories	
Commercial outdoor recreation	Per Conditional Use Permit review (see Chapter 4.4)
Educational Services, not a school (e.g., tutoring or similar services)	One (1) space per 300 sq. ft. floor area
Entertainment, Major Event	Per Conditional Use Permit review (Chapter 4.4)
Hotels, Motels, and similar uses	0.75 space per guest room. See also, parking requirements for associated uses, such as restaurants, entertainment uses, drinking establishments, assembly facilities.
Mortuary or Funeral Home	One (1) space per 300 sq. ft. floor area
Offices	One (1) space per 500 sq. ft. floor area
Surface parking lot, when not accessory to a permitted use	Per Conditional Use Permit review (Chapter 4.4)
Quick Vehicle Servicing or Vehicle Repair	Two (2) spaces, excluding vehicle service or queuing area, or per Conditional Use Permit review (Chapter 4.4)
Retail Sales and Commercial Service	Bank: one (1) space per 300 sq. ft. floor area
	Retail: one (1) space per 400 sq. ft. floor area, except one space per 1,000 sq. ft. for bulk retail (e.g., auto sales, nurseries, lumber and construction materials, furniture, appliances, and similar sales)
	Restaurants and Bars: one (1) space per 200 sq. ft. floor area
	Health Clubs, Gyms, Continuous Entertainment (e.g., bowling alleys): one (1) space per 300 sq. ft.
	Theaters and Cinemas: one (1) space per six (6) seats
Self-Service Storage	Two (2) spaces, plus adequate space for loading and unloading
Industrial Categories	
Industrial service	One (1) space per 1,000 sq. ft. of floor area
Manufacturing and production	One (1) space per 1,000 sq. ft. of floor area; or as required by Conditional Use Permit review (Chapter 4.4)
Warehouse and freight movement	0.5 space per 1,000 sq. ft. of floor area; or as required by Conditional Use Permit review (Chapter 4.4)
Waste-related	Per Conditional Use Permit review (Chapter 4.4)
Wholesale sales, e.g., building materials, heavy equipment, agricultural supplies, etc.	One (1) space per 1,000 sq. ft.

Institutional Categories	
Basic utilities	Parking based on applicant's projected parking demand, subject to City approval
Community service, including government offices and services	Parking based on applicant's projected parking demand, subject to City approval, except as specifically required elsewhere in this table for individual uses (See public assembly, office, retail, housing, etc.)
Childcare centers having 13 or more children	One (1) space per two (2) employees; a minimum of two (2) spaces is required
Golf courses	Eight (8) spaces per hole, plus additional spaces for auxiliary uses set forth in this section. Miniature golf courses: four (4) spaces per hole
Medical centers or hospitals	Two (2) spaces per patient bed
Parks and open space	Parking based on projected parking demand for planned uses
Public assemblies	one space per 75 sq. ft. of public assembly area; or as required by Conditional Use Permit (Chapter 4.4)
Religious institutions or houses of worship	One (1) space per four (4) seats
Schools	Elementary through junior high: 1.5 spaces per classroom or the requirements for public assembly set forth herein, whichever is greater
	High Schools: 1.5 spaces per classroom, plus one (1) space per 10 students the school is designed to accommodate, or the requirements for public assembly set forth herein, whichever is greater
	Colleges, universities, and trade schools: 1.5 spaces per classroom, plus one (1) space per five (5) students the school is designed to accommodate, plus requirements for on-campus student housing
Other Categories	
Accessory Uses	Parking standards for accessory uses are the same as for primary uses, but are pro rated based on the percentage of estimated overall parking demand, subject to City review and approval.
Agriculture	None, except as required for accessory uses
Radio Frequency Transmission Facilities	None, except as required by Conditional Use Permit (Chapter 4.4)
Temporary Uses	Parking standards for temporary uses are the same as for primary uses, except that the Planning Commission may reduce or waive certain development and designs standards for

	temporary uses.
Transportation Facilities (operation, maintenance, preservation, and construction)	None, except for park-and-ride facilities; and where temporary parking is required for construction staging areas

B. Credit for On-Street Parking. The amount of off-street parking required shall be reduced by one (1) off-street parking space for every on-street parking space adjacent to the development. On-street parking shall follow the established configuration of existing on-street parking, except that angled parking may be allowed for some streets, where permitted by city and/or County standards. The following constitutes an on-street parking space:

1. Parallel parking, each 24 feet of uninterrupted curb;
2. 45 degree diagonal, each with ten (10) feet of curb;
3. 90 degree (perpendicular parking), each with ten (10) feet of curb;
4. Curb space must be connected to the lot which contains the use;
5. Parking spaces that would not obstruct a required clear vision area, nor any other parking that violates any law or street standard; and
6. On-street parking spaces credited for a specific use may not be used exclusively by that use, but shall be available for general public use at all times. No signs or actions limiting general public use of on-street spaces are permitted.

C. Parking Location and Shared Parking.

1. Location. Vehicle parking is allowed only on approved parking shoulders (streets); within garages, carports, and other structures, or on driveways or parking lots that have been developed in conformance with this Code. Specific locations for parking are indicated in Chapter 2 for some land uses (e.g., the requirement that parking be located to side or rear of buildings, with access from alleys, for some uses). See also, Section 3.1: Access and Circulation.
2. Off-site parking. Except for single family dwellings, the vehicle parking spaces required by this Chapter may be located on another parcel of land, provided the parcel is within a reasonable walking distance of the use it serves. The distance from the parking area to the use shall be measured from the nearest parking space to a building entrance, following a sidewalk or other pedestrian route. The right to use the off-site parking must be evidenced by a recorded deed, lease, easement, or similar written instrument.
3. Mixed uses. If more than one type of land use occupies a single structure or parcel of land, the total requirements for off-street automobile parking shall be the sum of the requirements for all uses, unless it can be shown that the peak parking demands are actually less (i.e., the uses operate on different days or at different times of the day). In that case, the total requirements shall be reduced accordingly.
4. Shared Parking. Required parking facilities for two (2) or more uses, structures, or parcels of land may be satisfied by the same parking facilities used jointly, to the extent that the owners or operators show that the need for parking facilities does not materially overlay (e.g., uses primarily of a daytime versus nighttime nature), and provided that the right of joint use is evidenced by a recorded deed, lease, contract, or similar written instrument establishing the joint use.

5. Availability of Facilities. Owners of off-street parking facilities may post a sign indicating that all parking on the site is available only for residents, customers and/or employees, as applicable. Signs shall conform to the standards of Chapter 3.5.2.

- D. **Parking Stall Standard Dimensions and Compact Car Parking.** All off-street parking stalls shall be improved to conform to City standards for surfacing, storm water management and striping. Standard parking spaces shall conform to the dimensions in Table 3.2.3.D. Disabled person parking spaces shall conform to the standards (and dimensions) in Section 3.2.3.E.

Table 3.2.3.C - Minimum Parking Space and Aisle Dimensions.

Angle	Type	Width	Curb Length	1-Way Aisle Width	2-Way Aisle Width	Stall Depth
0° (Parallel)	Standard Compact	8 feet 7 ft. 6 in.	22 ft. 6 in. 19 ft. 6 in.	12 feet 12 feet	24 feet 24 feet	8 feet 7 ft. 6 in.
30°	Standard Compact	9 feet 7 ft. 6 in.	18 feet 15 feet	12 feet 12 feet	24 feet 24 feet	17 feet 14 feet
45°	Standard Compact	9 feet 7 ft. 6 in.	12 ft. 6 in. 10 ft. 6 in.	12 feet 12 feet	24 feet 24 feet	19 feet 16 feet
60°	Standard Compact	9 feet 7 ft. 6 in.	10 ft. 6 in. 8 ft. 6 in.	18 feet 15 feet	24 feet 24 feet	20 feet 16 ft. 6 in.
90°	Standard Compact	9 feet 7 ft. 6 in.	9 feet 7 ft. 6 in.	24 feet 22 feet	24 feet 24 feet	19 feet 15 feet

Important cross-references:

See also, Chapter 2 - Land Use District standards; Chapter 3.1: Access and Circulation; Chapter 3.3: Landscaping; Chapter 3.6: Surface Water Management.

- E. **Disabled Person Parking Spaces.** The following parking shall be provided for disabled persons, in conformance with the Americans with Disabilities Act. Disabled parking is included in the minimum number of required parking spaces in Table 3.2.3.A.

Table 3.2.3.E - Disabled Person Parking Requirements			
Minimum Number of Accessible Parking Spaces ADA Standards for Accessible Design 4.1.2(5)			
Total Number of Parking spaces Provided (per lot)	Total Minimum Number of Accessible Parking Spaces (60" and 96" aisles)	Van Accessible Parking Spaces with min. 96" wide access aisle	Accessible Parking Spaces with min. 60" wide access aisle
1 to 25	1	1	0
26 to 50	2	1	1
51 to 75	3	1	2
76 to 100	4	1	3
101 to 150	5	1	4

3.2.4 Bicycle Parking Standards.

All uses that are subject to Site Design Review are encouraged to provide bicycle parking, in conformance with the following guidelines:

- A. **Number of Bicycle Parking Spaces.** A minimum of two (2) bicycle parking spaces per use is recommended for all uses with greater than ten (10) vehicle parking spaces. Table 3.2.4.A shows additional standards recommended for specific types of development:

Table 3.2.4.A – Bicycle Parking Spaces by Use	
Use	Minimum number of bicycle parking spaces
Multifamily Residential (not required for parcels with fewer than 4 dwelling units)	One (1) sheltered bike space per dwelling unit. Sheltered bicycle parking spaces may be located within a garage, storage shed, basement, utility room or similar area. In those instances in which the residential complex has no garage or other easily accessible storage unit, the bicycle parking spaces may be sheltered from sun and precipitation under an eave, overhang, an independent structure, or similar cover.
Commercial	Two (2) bike spaces per primary use or one (1) per five (5) vehicle spaces, whichever is greater
Industrial	Two (2) bike spaces per primary use or one (1) per ten (10) vehicle spaces, whichever is greater
Community Service	Two (2) bike spaces
Parks (active recreation areas only)	Four (4) bike spaces
Schools	<u>Elementary and middle schools:</u> one (1) space for every ten (10) students and employees <u>High schools:</u> one (1) space for every five (5) students and employees. All spaces should be sheltered under an eave, overhang, independent structure, or

	something similar. <u>Colleges and trade schools:</u> one (1) space for every ten (10) motor vehicle spaces plus one (1) space for every dormitory unit. 50% of the spaces should be sheltered under an eave, overhang, independent structure, or similar cover.
Institutional Uses and Places of Worship	Two (2) bike spaces per primary use or one (1) per ten (10) vehicle spaces, whichever is greater
Other Uses	Two (2) bike spaces per primary use or one (1) per ten (10) vehicle spaces, whichever is greater

- B. **Exemptions.** This Section does not apply to single family, two-family, and three-family housing (attached, detached or manufactured housing), home occupations, or other developments with fewer than ten (10) vehicle parking spaces.
- C. **Location and Design.** Bicycle parking should be conveniently located with respect to both the street right-of-way and at least one (1) building entrance (e.g., no farther away than the closest parking space). It should be incorporated whenever possible into building design and coordinated with the design of street furniture when it is provided. Street furniture includes benches, streetlights, planters and other pedestrian amenities.

Chapter 3.3 Landscaping, Street Trees, Fences and Walls

Sections

- 3.3.1** Purpose
- 3.3.2** Landscape Conservation
- 3.3.3** New Landscaping
- 3.3.4** Street Trees
- 3.3.5** Fences and Walls

3.3.1 Purpose.

The purpose of this chapter is to promote community health, safety and welfare by protection natural vegetation, and setting development standards for landscaping, street trees, fences and walls. Together, these elements of the natural and built environment contribute to the visual quality, environmental health and character of the community. Trees provide climate control through shading during summer months and wind screening during winter. Trees and other plants can also buffer pedestrians from traffic. Walls, fences, trees and other landscape materials also provide vital screening and buffering between land uses. Landscaped areas help to control surface water drainage and can improve water quality, as compared to paved or built surfaces.

3.3.2 Landscape Conservation prevents the indiscriminate removal of significant trees and other vegetation, including vegetation associated with streams, wetlands and other protect natural resource areas. This section cross-references Chapter 3.7, which regulates development of sensitive lands.

A. **Applicability.** All development sites containing Significant Vegetation, as defined below, shall comply with the standards of this Section. The purpose of this Section is to incorporate significant native vegetation into the landscapes of development and protect vegetation. The use of mature, native vegetation within developments is a preferred alternative to removal of vegetation and re-planting. Mature landscaping provides summer shade and wind breaks, and allows for water conservation due to larger plants having established root systems.

B. **Significant Vegetation.** “Significant vegetation” means:

1. Significant Trees and Shrubs. Individual trees and shrubs with a trunk diameter of eight (8) inches or more or 25 inches in circumference, as measured four (4) feet above the ground (DBH), and all plants within the drip line of such trees and shrubs, shall be protected. Other trees may be deemed significant, when nominated by the property owner and designated by the City as “Heritage Trees” (i.e., by virtue of site, rarity, historical significance, etc.)
2. Sensitive Lands. Trees and shrubs on sites that have been designated “Sensitive Lands”, in accordance with Chapter 3.7 (e.g., due to slope, natural resource areas, wildlife habitat, etc.) shall be protected.
3. Exception. Protection shall not be required for plants listed as non-native, invasive plants by the Oregon State University Extension Service in the applicable OSU bulletins for Marion County.

C. **Mapping and Protection Required.** Significant vegetation shall be mapped as required by Chapter 4.2 - Site Design Review and Chapter 3.7 - Sensitive Lands. Significant trees shall be mapped individually and identified by species and size (diameter of eight (8) inches or greater more or 25 inches in circumference, as measured four (4) feet above grade, or “DBH”). A “protection” area shall be defined around the edge of all branches (drip-line) of each tree (drip lines may overlap between trees). The City also may require an inventory, survey, or assessment prepared by a qualified professional when necessary to determine vegetation boundaries, building setbacks, and other protection or mitigation requirements.

D. **Protection Standards.** All of the following protection standards shall apply to significant vegetation areas:

1. Protection of Significant Trees (Section B.1) Significant trees identified as meeting the criteria in Section B.1 shall be retained whenever practicable. Preservation may become impracticable when it would prevent reasonable development of public streets, utilities, or land uses permitted by the applicable land use district.
 2. Sensitive Lands (Section B.2). Sensitive lands shall be protected in conformance with the provisions of Chapter 3.7.
 3. Conservation Easements and Dedications. When necessary to implement the Comprehensive Plan, the City may require dedication of land or recordation of a conservation easement to protect sensitive lands, including groves of significant trees.
- E. **Construction.** All areas of significant vegetation shall be protected before, during, and after construction. Grading and operation of vehicles and heavy equipment is prohibited within significant vegetation areas, except as approved by the City for installation of utilities or streets. Such approval shall only be granted after finding that there is no other reasonable alternative to avoid the protected area, and any required mitigation is provided in conformance with Chapter 3.7: Sensitive Lands.
- F. **Exemptions.** The protection standards in Section D shall not apply in the following situations:
1. Dead, Diseased, and/or Hazardous Vegetation. Vegetation that is dead or diseased, or poses a hazard to personal safety, property or the health of other trees, may be removed. Prior to tree removal, the applicant shall provide a report from a certified arborist or other qualified professional to determine whether the subject tree is diseased or poses a hazard, and any possible treatment to avoid removal, except as provided by Subsection 2, below.
 2. Emergencies. Significant vegetation may be removed in the event of an emergency without land use approval pursuant to Chapter 4, when the vegetation poses an immediate threat of life or safety, as determined by the city. The City Recorder shall prepare a notice or letter of decision within ten (10) days of the tree(s) being removed. The decision letter or notice shall explain the nature of the emergency and be on file and available for public review at City Hall.

3.3.3 New Landscaping sets standards for and requires landscaping of all development sites that require Site Design Review. This section also requires buffering for parking and maneuvering areas, and between different land use districts. Note that other landscaping standards are provided in Chapter 2: Land Use Zones, for specific types of development.

- A. **Applicability.** This Section shall apply to all developments requiring Site Design Review, and other developments with required landscaping.
- B. **Landscaping Plan Required.** A landscape plan is required. All landscape plans shall conform to the requirements in Chapter 4.2 Section 3(B)(5) (Landscape Plans).
- C. **Landscape Area Standards.** The minimum percentage of required landscaping equals:
1. Residential Zones. 20 percent of the site.
 2. Commercial Zone. Five (5) percent of the site.

D. **Landscape Materials.** Landscape materials include trees, shrubs, ground cover plants, non-plant ground covers, and outdoor hardscape features, as described below:

1. Natural Vegetation. Natural vegetation shall be preserved or planted where practicable.
2. Plant Selection. A combination of deciduous and evergreen trees, shrubs and ground covers shall be used for all planted areas, the selection of which shall be based on local climate, exposure, water availability, and drainage conditions. As necessary, soils shall be amended to allow for healthy plant growth.
3. “Non-native, invasive” plants, as per Chapter 3.3 Section.2(B), shall be prohibited.
4. Hardscape features (i.e., patios, decks, plazas, etc.) may cover up to 50 percent of the required landscape area. Swimming pools, sports courts and similar active recreation facilities may not be counted toward fulfilling the landscape requirement.
5. Non-plant Ground Covers. Bark dust, chips, aggregate or other non-plant ground covers may be used, but shall cover no more than 65 percent of the area to be landscaped. “Coverage” is measured based on the size of plants at maturity or after five (5) years of growth, whichever comes sooner.
6. Ground Cover Size. Ground cover plants shall be sized and spaced so that they grow together to cover a minimum of 65 percent of the underlying soil within three (3) years.
7. Significant Vegetation. Significant vegetation preserved in accordance with Chapter 3.3 Section 2 may be credited toward meeting the minimum landscape area standards. Credit shall be granted on a per square foot basis. The Street Tree standards of Chapter 3.3 Section 4 may be waived when trees preserved within the front yard provide the same or better shading and visual quality as would otherwise be provided by street trees.
8. Storm Water Facilities. Storm water facilities (e.g., detention/retention ponds and swales) shall be landscaped with water tolerant, native plants.

E. **Landscape Design Standards.** All yards, parking lots and required street tree planter strips shall be landscaped in accordance with the provisions of this Chapter (Chapter 3.3. Sections 1 through 5). Landscaping shall be installed with development to provide erosion control, visual interest, buffering, privacy, open space and pathway identification, shading and wind buffering, based on the following standards:

1. Yard Setback Landscaping. Landscaping shall satisfy the following criteria:
 - a. Provide visual screening and privacy within side and rear yards; while leaving front yards and building entrances mostly visible for security purposes;
 - b. Use shrubs and trees as wind breaks, as appropriate;
 - c. Retain natural vegetation, as practicable;
 - d. Define pedestrian pathways and open space areas with landscape materials;

- e. Provide focal points within a development, such as signature trees (i.e., large or unique trees), hedges and flowering plants;
 - f. Use trees to provide summer shading within common open space areas, and within front yards when street trees cannot be provided.
 - g. Use a combination of plants for year-long color and interest;
 - h. Use landscaping to screen outdoor storage and mechanical equipment areas, and to enhance graded areas such as berms, swales and detention/retention ponds;
 - i. Use the appropriate native landscaping and the appropriate design to increase infiltration and reduce the amount of surface water runoff from the site. Treatments might include swales, filter strips, ponds and wetlands. Landscaping for water quality will count towards percentage of landscaping required on site.
2. Parking Areas. A minimum of five (5) percent of the combined area of all parking areas, as measured around the perimeter of all parking spaces and maneuvering areas, shall be landscaped. Such landscaping shall consist of an evenly distributed mix of shade trees with shrubs and/or ground cover plants. “Evenly distributed” means that the trees and other plants are distributed around the parking lot perimeter and between parking bays to provide a partial canopy. At a minimum, one (1) tree per five (5) parking spaces total shall be planted to create a partial tree canopy over and around the parking area. All parking areas with more than 20 spaces shall include landscape islands with trees to break up the parking area into rows of not more than 12 contiguous parking spaces. All landscaped areas shall have minimum dimensions of four (4) feet by four (4) feet to ensure adequate soil, water, and space for healthy plant growth.
3. Buffering and Screening Required. Buffering and screening are required under the following conditions:
- a. Parking/Maneuvering Area Adjacent to Building. Where a parking or maneuvering area, or driveway, is adjacent to a building, the area shall be separated from the building by a raised pathway, plaza, or landscaped buffer no less than three (3) feet in width. Raised curbs, bollards, wheel stops, or other design features shall be used to protect buildings from being damaged by vehicles. When parking areas are located adjacent to residential ground-floor living space, a landscape buffer is required to fulfill this requirement.
 - b. Screening of Mechanical Equipment, Outdoor Storage, Service and Delivery Areas, and Automobile-Oriented Uses. All mechanical equipment and outdoor storage and manufacturing shall be screened from view from all public streets and Residential districts. One (1) or more of the following shall provide screening: decorative wall (i.e., masonry or similar quality material), evergreen hedge, non-see through fence, or a similar feature that provides a non-see through barrier. Walls, fences, and hedges shall comply with the vision clearance requirements and provide for pedestrian circulation, in accordance with Chapter 3.1 - Access and Circulation. (See Section 3.3.5 for standards related to fences and walls.)

- F. **Maintenance and Irrigation.** The use of drought-tolerant plant species is encouraged, and may be required when irrigation is not available. Irrigation shall be provided for plants that are not drought-tolerant. If the plantings fail to survive, the property owner shall replace them with an equivalent specimen (i.e., evergreen shrub replaces evergreen shrub, deciduous tree replaces deciduous tree, etc.). All other landscape features required by this Code shall be maintained in good condition, or otherwise replaced by the owner.
- G. **Additional Requirements.** Additional buffering and screening may be required for specific land uses, as identified by Chapter 2, and the city may require additional landscaping through the Conditional Use Permit process (Chapter 4.4).

3.3.4 Street Trees sets standards for and requires planting of trees along all streets for shading, comfort and aesthetic purposes. Street trees shall be planted for all developments that are subject to Land Division or Site Design Review. Requirements for street tree planting strips are provided in Chapter 3.8 Section 2: Transportation Standards. Planting of unimproved streets shall be deferred until the construction of curbs and sidewalks. Street trees shall conform to the following standards and guidelines:

- A. **Growth Characteristics.** Trees shall be selected based on growth characteristics and site conditions, including available space, overhead clearance, soil conditions, exposure, and desired color and appearance. The following should guide tree selection:
1. Provide a broad canopy where shade is desired.
 2. Use low-growing trees for spaces under utility wires.
 3. Select trees that can be “limbed-up” where vision clearance is a concern.
 4. Use narrow or “columnar” trees where awnings or other building features limit growth, or where greater visibility is desired between buildings and the street.
 5. Use species with similar growth characteristics on the same block for design continuity.
 6. Avoid using trees that are susceptible to insect damage, and avoid using trees that produce excessive seed or fruit.
 7. Select trees that are well adapted to the environment, including soil, wind, sun exposure, and exhaust. Drought-resistant trees should be used in areas with sandy or rocky soil.
 8. Select trees for their seasonal color, as desired.
 9. Use deciduous trees for summer shade and winter sun.
- B. **Caliper Size.** The minimum caliper size at planting shall be one and one half (1 ½) inches, based on the American Association of Nurseryman Standards.
- C. **Spacing and Location.** Street trees shall be planted within existing and proposed planting strips and in sidewalk tree wells on streets without planting strips. Street tree spacing shall be based upon the type of tree(s) selected and the canopy size at maturity. In general, trees shall be spaced no more than 30 feet apart, except where planting a tree would conflict with existing trees, retaining walls, utilities and similar physical barriers.

- D. **Soil Preparation, Planting and Care.** The developer shall be responsible for planting street trees, including soil preparation, ground cover material, and staking and temporary irrigation for two (2) years after planting. The developer shall also be responsible for tree care (pruning, watering, fertilization, and replacement as necessary) during the first two (2) years after planting.
- E. **Assurances.** The city shall require the developer to provide a performance and maintenance bond in an amount determined by the City Engineer, to ensure the planting of the tree(s) and care during the first two (2) years after planting.

3.3.5 Fences and Walls, sets standard for new fences and walls, including maximum allowable height and materials, to promote security, personal safety, privacy, and aesthetics. The following standards shall apply to all fences and walls:

- A. **General Requirements.** All fences and walls shall comply with the standards of this Section. The City may require installation of walls and/or fences as a condition of development approval, in accordance with Chapter 4.2: Site Design Review or Chapter 4.4: Conditional Use Permits. Walls built for required landscape buffers shall comply with Section Chapter 3.3 Section3.
- B. **Dimensions.**
 - 1. A building permit is required for walls exceeding six (6) feet in height.
 - 2. The height of fences and walls within a front yard setback shall not exceed four (4) feet (except decorative arbors, gates, etc.), as measured from the grade closest to the street right-of-way.
 - 3. Walls and fences to be built for required buffers shall comply with Chapter 3.3 Section 3.
 - 4. Fences and walls shall comply with the vision clearance standards of Chapter 3.1 Section 2.
- C. **Materials.**
 - 1. Fences and walls shall not be constructed of or contain any material that could cause bodily harm, such as barbed wire, broken glass, spikes, or any other hazardous or dangerous materials. Electric fences are not permitted.
 - 2. Electric or barbed wire fences intended to contain or restrict cattle, sheep, horses or other livestock, and existing before annexation to the city, may remain.
- D. **Maintenance.** For safety and for compliance with the purpose of this Chapter, walls and fences required as a condition of development approval shall be maintained in good condition, or otherwise replaced by the owner.

Chapter 3.4 Accessory Structures

Sections

- 3.4.1** Accessory Structures in Residential Zones
- 3.4.2** Accessory Structures in Commercial and Industrial Zones
- 3.4.3** Accessory Structures Design Standards

3.4.1 Accessory Structures in Residential Zones.

- A. **Primary structure required.** An accessory structure shall not be allowed without another permitted structure or if the only permitted structure on a lot is a personal storage structure.
- B. **Height.** The maximum height of any accessory structure shall be 25 feet. If the primary structure is less than 600 square feet, the height of the accessory structure cannot be taller than 80 percent the height of the primary structure. Roof Drainage shall be accommodated within the confines of the subject property.
- C. **Yards**
 - 1. Front Yards and Yards Adjacent to Streets. Accessory structures, except fences, which have any portion extending above grade, shall observe the front yard requirements of the main building.
 - 2. Side Yards (Interior) and Rear Yards. Accessory structures, including accessory dwelling units and excluding fences, not attached to the main building shall observe the side and rear yard requirements of the main building. Fences may be placed on the property line.
- D. **Accessory Structures Attached to the Main Building.** Covered or enclosed accessory structures that are attached to the main building shall be considered as a portion of the main building and shall observe the same requirements as the main building.

3.4.2 Accessory Structures in Commercial and Industrial Zones.

- A. **Height.** Accessory structures shall comply with the height provisions in the underlying zone for the primary structure.
- B. **Setbacks.** Accessory structures shall comply with the setback provisions in the underlying zone for the primary structure.
 - 1. Front Façade Setback. Accessory structures in the Commercial General (CG) Zone shall be located a minimum of ten (10) feet behind the front façade of the main building.
- C. **Building Size.** There is no limitation, provided the building complies with the setback and height limitations of the underlying zone.

3.4.3 Accessory Structures Design Standards

- A. **Prohibited Materials.** Shipping containers are prohibited as permanent accessory structures.
 - 1. Temporary Exemption: Shipping containers which do not require a structural permit may be placed on a lot or parcel subject to the regulations of Section 3.5.7 of this code. Such shipping containers are not considered accessory structures.

Chapter 3.5 Other Standards

Sections

- 3.5.1** Density Transfer
- 3.5.2** Signs
- 3.5.3** Recreational Vehicles
- 3.5.4** Open Camping
- 3.5.5** Mobile Food Units
- 3.5.6** Personal Storage Structures
- 3.5.7** Shipping Containers

3.5.1 Density Transfers.

- A. **Purpose.** The purpose of this chapter is to implement the comprehensive plan and encourage the protection of open spaces through the allowance of housing density transfers. “Density transfers” are the authorized transfer of allowed housing units (per Chapter 2) from one portion of a property to another portion of the same property, or from one property to another property.
- B. **Determination of Allowable Housing Units.** The number of allowed housing units on a property is based on the surface area of the property (acres) times the maximum allowed housing density in Chapter 2.
- C. **Density Transfer Authorized.** Allowed housing units may be transferred from one portion of a property to another portion of the same property, or from one property to another property. A density transfer shall not be approved unless it meets one or more of the criteria in 1-3 below, and it conforms to Subsections D-E:
 - 1. Protection of sensitive land areas as defined in Chapter 3.7 (and listed below) either by dedication to the public or a land trust, or by a non-revocable conservation easement. Sensitive land areas include:
 - a. Land within the 100-year floodplain;
 - b. Land or slopes exceeding 25 percent;
 - c. Drainageways;
 - d. Wetlands
 - 2. Dedication of land to the public for park or recreational purposes; or
 - 3. The density transfer is used to develop a mix of single family and multiple family housing on the same property or development site.
- D. **Prohibited Density Transfers.** Density shall not be transferred from: land proposed for street right-of-way, stormwater detention facilities, private streets, and similar areas that do not provide open space or recreational values to the public.
- E. **Density Transfer Rules.** All density transfers shall conform to all of the following rules:
 - 1. Allowed housing units shall be transferable only to buildable lands (“receiving areas”). The number of allowed housing units shall be reduced on properties from which density is transferred (“sending areas”) based on the number of housing units transferred. The new number of housing units allowed on the sending area shall be recorded on a deed for the property that runs with the land. The deed shall state that the number of allowed housing units is subject to review and approval by the City, in accordance with the current provisions of this Development Code;
 - 2. The number of units which can be transferred is limited to the number of units that would have been allowed on 75 percent of the unbuildable area if not for these regulations;

3. The total number of housing units per property or development site shall not exceed 100 percent of the maximum number of units per gross acre permitted under the applicable comprehensive plan designation;
4. All density-transfer development proposals shall comply with the development standards of the applicable land use zone.

3.5.2 Signs.

- A. **Purpose.** The purpose of these sign regulations is to provide equitable signage rights, reduce signage conflicts, promote traffic and pedestrian safety, increase the aesthetic value and economic viability of the city, all by classifying and regulating the location, size, type and number of signs and related matters, in a content-neutral manner.
- B. **Definitions.** See Definitions, Chapter 1.3.
- C. **Design, Construction and Maintenance.** All signs shall be designed, constructed and maintained according to the following standards
 1. All signs shall comply with the applicable provisions of the Uniform Building Code in effect at the time of the sign permit application and all other applicable structural, electrical and other regulations.
 2. Except for banners, flags, temporary signs, and window signs conforming in all respects with the requirements of these regulations, all signs shall be constructed of permanent materials and shall be permanently attached to the ground, a building, or other structure by direct attachment to a rigid wall, frame, or structure.
 3. All signs shall be maintained in a good structural condition and readable at all times.
 4. The owner shall be responsible for its erection and maintenance and its compliance with the provisions of these regulations or other laws or Ordinances regulating signs.
- D. **Signs Generally Permitted.** The following signs and sign work are permitted in all zones. These signs shall not be included when determining compliance with total allowed area:
 1. Painting, change of sign face or copy and maintenance of signs legally existing on the effective date of this Code. If structural changes are made, or there is a change of use, the sign shall conform in all respects with these regulations.
 2. Temporary signs that do not exceed 16 square feet in area. No lot may display temporary signs for more than 90 days in any 365-day period. Only one (1) temporary sign per lot may be displayed at a time.
 3. Signs posted by or under governmental authority including legal notices, traffic, danger, no trespassing, emergency and signs related to public services or safety.
 4. One (1) sign not over 32 square feet for a residential development or subdivision, and located at each street entrance to the development.
 5. Incidental signs that do not exceed six (6) square feet.

6. Flags on permanent flagpoles which are designed to allow raising and lowering of the flags.
7. Signs within a building.
8. In the CG zone, signs painted or hung on the inside of windows.

E. **Prohibited Signs.** The following signs are prohibited:

1. Billboards
2. Roof signs that exceed the roof's maximum height.
3. Signs that emit odor, visible matter, or sound; however an intercom system for customers remaining in their vehicles, such as used in banks and "drive thru" restaurants, shall be allowed.
4. Signs that obstruct any fire escape, required exit, window or door opening used as a means of egress.
5. Signs closer than ten (10) feet horizontally or vertically from all overhead power line or public utility guy wire.
6. No vehicle or trailer shall be parked on a public right-of-way or public property, or on private property so as to be visible from a public right-of-way which has attached thereto or located thereon any sign or advertising device for the basic purpose of providing advertisement of products or directing people to a business or activity located on the same or nearby premises. This provision applies where the primary purpose of a vehicle is for advertising purposes and is not intended to prohibit any form of vehicular sign, such as a sign attached to a motor vehicle which is primarily used for business purposes, other than advertising.
7. Rotating/revolving signs except by conditional use permit and except as allowed in Section D.
8. Flashing signs, except by conditional use permit, and except as allowed in Section D.
9. Private signs that project into or over driveways and public right-of-ways, except signs under a canopy that project over a public sidewalk and the sign is not less than eight (8) feet above the sidewalk.
10. Signs that obstruct required vision clearance area or obstruct a vehicle driver's view of official traffic control signs and approaching or merging traffic, or which present a traffic hazard.
11. Signs that interfere with, imitate, or resemble any official traffic control sign, signal or device, emergency lights, or appears to direct traffic, such as a beacon light.
12. Signs attached to any pole, post, and utility pole or placed on its own stake and placed into the ground in the public right-of-way.
13. Message Signs, except by conditional use permit.

14. Projecting Signs.

15. Any sign on unimproved property, unless allowed as a temporary sign.

F. Signs in Non-Commercial Zones. The following regulations apply to signs in the Residential Single Family, Residential Multi Family, and Public Zones.

1. Sign Types: The following sign types are allowed:

- a. Wall, canopy and window signs subject to the limitations in Section 3.5.2.F.3 of this code.
- b. Free-standing signs subject to the limitations in Section 3.5.2.F.3 of this code.

2. Maximum number. Any combination of wall, canopy or free-standing signs not exceeding the sign area and height limitations of this Section; plus signs allowed in Chapter 3.5.

3. Maximum total sign area for property on which the building or buildings are located:

- a. Single family and two-family (duplex) dwelling – six (6) square feet provided total sign area on a free-standing sign shall be limited to a maximum of four (4) square feet.
- b. Multiple family dwelling - 32 square feet provided total sign area on a free-standing sign shall be limited to a maximum of 24 square feet.
- c. Public and semi-public – 64 square feet provided total sign area on a free-standing sign shall be limited to a maximum of 48 square feet.
- d. The sign area for a free-standing sign may be increased up to the maximum total sign area permitted in Section 3.5.2.F.3.a-c above, with a conditional use permit consistent with the decision criteria found in Section 3.5.2.I of this code.

4. Maximum sign height:

- a. Wall, canopy or window sign – eight (8) feet.
- b. Free-standing sign – six (6) feet.

5. Location:

- a. Wall, canopy or window signs shall be set back from the property lines of the lot on which it is located, the same distance as the building containing the permitted use; provided that wall signs may project into the required setback space up to 1.5 feet.
- b. Free-standing signs are permitted where fences are allowed.

6. Illumination. Signs may only be indirectly illuminated by a concealed light source, shall not remain illuminated between the hours of 11:00 p.m. and 6:00 a.m., and shall not flash, blink, fluctuate or produce glare.

G. Signs in Commercial and Industrial Zones.

1. Total allowed area. One and one-half (1½) square feet of total allowed sign area for each lineal foot of building frontage.
2. Type, maximum number and size of signs. Within the total allowed area, one (1) free-standing sign per street frontage. Regardless of total allowed area, each freestanding sign shall be limited to a maximum of 100 square feet in area.
3. Maximum sign height:
 - a. Wall and canopy signs shall not project above the parapet or roof eaves.
 - b. Freestanding signs - maximum total height of 35 feet.
4. Location:
 - a. Wall signs may project horizontally up to one (1) foot from the building.
 - b. Free-standing sign - no limitation except it shall not project over the street right-of-way and shall comply with requirements for vision clearance areas and special street setbacks.
5. Appearance and Construction:
 - a. Signs must be built of such materials as to be consistent with the age, appearance and purpose of the building(s) adjacent to it.
 - b. The design and appearance of all signs must reflect and be consistent with the appearance, design, architecture and historical character of adjacent buildings and uses.
6. Additional Signs. Within the limitations of this subsection, the signs below do not require a permit and are not included in calculating allowed area and number of signs:
 - a. When a business has two (2) public entrances, each on a separate building wall, there is a permitted one (1) additional wall sign not to exceed ten (10) square feet in area for the wall where the entrance is not the primary entrance.
 - b. Directional signs, such as “Exit” or “Entrance”, are allowed either as wall or free-standing signs. Such signs shall be limited to three (3) square feet in area and two (2) per driveway. Free-standing directional signs shall be limited to a height of six (6) feet.
 - c. Order signs describing products and/or order instructions to a customer, such as menu boards on the exterior of a drive-thru restaurant are allowed as follows: One (1) per business limited to 40 square feet in area and a maximum height of eight (8) feet. Any order sign greater than ten (10) square feet in area and/or six (6) feet in height must be screened from adjacent streets by a sight obscuring fence, wall or hedge.
7. Signs for temporary businesses. Temporary businesses may display temporary or portable signs, other than trailer mounted reader boards or any sign that includes flashing or rotating lights or moving parts. The cumulative size of all such signs may not exceed 32 square feet.

All temporary signs must be placed within ten (10) feet of the structure or vehicle used for the temporary business and may not be placed within any public right-of-way.

8. Signs for the Detroit Avenue Corridor overlay zone. Within the limitations of this subsection, additional standards below apply to the Detroit Avenue Corridor overlay zone subject to Chapter 2.3 Section 7.
 - a. Free-standing signs are not permitted.
 - b. Projecting signs are permitted to provide pedestrian-oriented signage. One (1) projecting sign with a maximum of 12 square feet or six (6) square feet of sign area per sign face is permitted per building entrance. Projecting signs shall be a minimum of eight (8) feet above the sidewalk, and a maximum of 12 feet above the sidewalk, projecting a maximum of four (4) feet from the building. Projecting signs are not included in calculating allowed area and number of signs.
 - c. As a form of portable signs, one (1) A-frame sign per business is permitted with a maximum display area of 12 square feet or six (6) square feet per sign face and a maximum height of three (3) feet. A-frame signs are not included in calculating allowed area and number of signs.
 - d. Murals are permitted, and are not included in calculating allowed area and number of signs.

H. Non-conforming signs.

1. Alteration of Non-conforming Sign Faces. Alteration or replacement of non-conforming signs are subject to the provisions of Chapter 5.1 of the Detroit Development Code.
2. Abandoned Signs. All signs for a business shall be removed within 30 days after that business ceases to operate on a regular basis, and the entire sign structure or structures shall be removed within 12 months of such cessation of operation.

I. Permits – Signs.

1. Signs permits shall be reviewed according to a Type I process, subject to Chapter 4.1. Section 3, unless a conditional use permit or variance is required.
2. Conditional use permits shall be required for residential free-standing signs, flashing signs, rotating/revolving signs, or message signs and shall be processed according to the procedure set forth in this Code.
 - a. The following criteria shall be used to review and decide conditional use permit applications for flashing signs, rotating/revolving signs, or message signs:
 - i. The proposed sign is located in the CG zone.
 - ii. The proposed sign, when conditioned, will not significantly increase or lead to street level sign clutter, or to signs adversely dominating the visual image of the area.

- iii. The proposed sign, as conditioned, will not adversely impact the surrounding area to a significant degree.
 - iv. The proposed sign will not present a traffic or safety hazard.
 - v. If the application is for a flashing and/or message sign, no rotary beacon lights, zip lights, strobe lights, or similar devices shall be allowed. No chaser effect or other flashing effect consisting of external lights, lamps, bulbs or neon tubes is allowed. Only flashing effects by way of internal illuminations are allowed.
 - vi. If the application is for a rotating/revolving sign, such sign cannot flash or be illuminated by intermittent light. Rotating/revolving signs shall revolve at a speed no greater than five (5) revolutions per minute.
 - vii. The total allowed sign area for a business shall be reduced by 25 percent if the business has a flashing, rotating/revolving, or message sign.
 - viii. The proposed sign will comply with all other regulations, including, but not limited to height and placement restrictions.
- b. The following criteria shall be used to review and decide conditional use permit applications for residential freestanding signs:
 - i. The proposed sign, as conditioned, will not adversely impact the surrounding area to a significant degree.
 - ii. The proposed sign will not present a traffic or safety hazard.
 - iii. The proposed sign will comply with all other regulations, including, but not limited to height and placement restrictions.
 - iv. The proposed sign is incidental to the permitted or valid non-conforming use of the property.
- A. **Variance - Signs** Any allowance for signs not complying with the standards set forth in these regulations shall be by variance. Variances to Section I will be processed according to the procedures in Chapter 5.1 of the Detroit Development Code. However, the criteria in Chapter 5.1 of the Detroit Development Code shall not be used; instead the following criteria shall be used to review and decide sign variance applications:
 - 1. There are unique circumstances of conditions of the lot, building or traffic pattern such that the existing sign regulations create an undue hardship.
 - 2. The requested variance is consistent with the purpose of the chapter as stated in Section J.
 - 3. The granting of the variance compensates for those circumstances in a manner equitable with other property owners and is thus not a special privilege to any other business. The variance requested shall be the minimum necessary to compensate for those conditions and achieve the purpose of this Code.

4. The granting of the variance shall not decrease traffic safety nor detrimentally affect any other identified items or public welfare.
5. The variance shall not result in a special advertising advantage in relation to neighboring businesses or businesses of a similar nature. The desire to match standard sign sizes (for example, chain store signs) shall not be listed or considered as a reason for a variance.
6. The variance shall not be the result of a self-imposed condition or hardship.

3.5.3 Recreational Vehicles.

A. Recreational Vehicles (RV) on Developed Single Family Zoned Land - RV may be parked for human occupancy on the property under the following conditions:

1. One (1) RVs may be parked on the property.
 - a. RV must be the property of the owner or full-time lessee of the property or have permission of the owner or full-time lessee.
 - b. Renting or leasing an RV or RV space, separate of a full time lease of the property, is prohibited
 - i. RV must be parked at least fifteen (15) from the front, and (5) feet side, and rear property lines and ten (10) feet from a structure when unit is fully extended.
 - ii. RV may be connected to the owner or lessee power with a Marion County Public Works Department, Building Inspection Program approved RV connection box ONLY. Connections using extension cords are NOT allowed.
 - iii. RV may be self-contained. Black and grey water holding tanks shall be emptied only at an authorized RV dump station, or pumped by an accredited septic service.
 - iv. RV shall not be connected to the septic/sewer without proof of a Septic Authorization Notice from Marion County Public Works Department. Discharge of “grey water” and/or toilet facilities directly onto the ground is prohibited.
2. One (1) additional RV may be permitted. An additional RV may be permitted for Season Use (From April 1st through October 31st and 30 days from November 1-March 31). An additional RV requires a permit issued by the City Recorder, following a Type II Administrative Procedure, provided:
 - a. Permit application, including a site plan, is submitted.
 - b. Permit is subject to a fee established by Resolution of the Detroit City Council.
 - c. A maximum of one (1) additional RVs may be permitted.

- d. All of the following criteria must be met:
 - i. The proposal must meet all requirements of the zone in which it is located, including: minimum lot size, setbacks, coverage, etc.;
 - ii. The distance between RVs or between the RV and any structure must be a minimum of ten (10) feet when fully extended; and
 - iii. The RV must not be placed over a septic drain field.
 - iv. Conditions may be imposed to mitigate the impacts caused by an additional RV to adjacent properties.
 - e. Permit applies to property owner/lessee requesting the permit and is not transferable with the property.
3. A third RVs may be permitted on lots that are greater than 10,000 square. This is a seasonal approval (From April 1st through October 31st and 30 days from November 1-March 31) , following a Type III Conditional Use Application in 4.1.5, provided:
- a. Permit application, including a site plan, is submitted.
 - b. Permit is subject to a fee established by Resolution of the Detroit City Council for a Conditional Use Application.
 - c. A maximum of one (1) additional RVs may be permitted.
 - d. All of the following criteria must be met:
 - i. The proposal must meet all requirements of the zone in which it is located, including: minimum lot size, setbacks, coverage, etc.;
 - ii. The distance between RVs or between the RV and any structure must be a minimum of ten (10) feet when fully extended; and
 - iii. The RV must not be placed over a septic drain field.
 - e. Conditions may be imposed to mitigate the impacts caused by additional RVs on neighboring properties.
- B. Recreational Vehicle on Developed Multi-family (RM) Zoned Land** – An RV may be parked for human occupancy on developed multi-family zoned unit of land under the following conditions:
- 1. If there is only one single-family dwelling on the multifamily zoned property, Section A (Numbers 1 through 3), Developed Single Family Zoned Land, regulations shall apply.
 - 2. If there is more than one single-family residence on the property, property owner may allow one (1) RV per dwelling unit for the resident’s personal use. More than one (1) RV

on the property requires City approval as outlined above in Chapter 3.5. Section 3(B)(2), and is subject to the following conditions:

- a. RV must be parked at least fifteen (15) feet from the front yard and five (5) feet from the side, and rear property lines. Each RV must be located a minimum of 10 feet from any other structure when unit is fully extended.
 - b. RV may be connected to the owner or lessee power with a Marion County Public Works Department, Building Inspection Program approved RV connection box ONLY. Connections using extension cords are NOT allowed,
 - c. RV may be self-contained; Black and grey water holding tanks shall be emptied only at an authorized RV dump station, or pumped by an accredited septic service.
 - d. In addition to the parking requirements outlined in Section 3.3, adequate on-site parking (one (1) parking space per RV) shall be provided for additional vehicles, allowing for setback from side and rear property lines and between vehicles a minimum of three (3) feet in width. No parking is permitted within a front yard setback unless located within an approved driveway.
- C. **Recreational Vehicle on Developed Commercial General (CG)** zoned land that contains one single family dwelling shall conform to the conditions in Section A (1 through 3), Developed Residential Single Family Zoned Land.
- D. **Recreational Vehicle on Developed Commercial General (CG)** zoned land that contains multi-family dwellings shall conform to the conditions in Section B, Developed Multi-family Zoned Land.
- E. **Recreational Vehicle on Developed Commercial General (CG) Zoned Land** that contains an active business within a building structure is allowed if RV is parked for human occupancy on the property upon meeting all of the following conditions.
1. One (1) RV may be parked for human occupancy on the property.
 - a. RV must be the property of the owner or full-time lessee of the property.
 - b. RV must be parked at least five (5) feet from the front, side, and rear property lines and ten (10) feet from a structure when unit is fully extended.
 - c. RV may be connected to the owner or lessee power with a Marion County Public Works Department, Building Inspection Program approved RV connection box ONLY. Connections using extension cords are NOT allowed.
 - d. RV may be self-contained. Black and grey water holding tanks shall be emptied only at an authorized RV dump station, or pumped by an accredited septic service.
 - e. In addition to the parking requirements outlined in Chapter 3.3 Section 3, adequate on-site parking (one (1) parking space per RV) shall be provided

for additional vehicles allowing for setback from side and rear property lines and between vehicles a minimum of three (3) feet in width. No parking is permitted within a front yard setback unless located within a driveway.

F. Recreational Vehicles on Undeveloped Residential (RS) & Multi-family (RM) Zoned Land – One (1) RV may be parked for human occupancy on undeveloped Single Family or Multi-family zoned unit of land upon meeting all of the following conditions:

1. The property shall have City-approved access driveway. In addition to the parking requirements outlined in Chapter 3.3 Section 3, adequate on-site parking (one (1) parking space per RV) shall be provided for additional vehicles allowing for setback from side and rear property lines and between vehicles a minimum of three (3) feet in width. No parking is permitted within a front yard setback unless located within a driveway.
2. The property shall have a City-approved and installed water meter and a water line, going from the meter to a hose bib on the property. During use of the property, the water must be turned on and a hose must be available for fire dousing in the fire pits and for fire protection.
3. The RV may be hooked up to electrical power with a Marion County Public Works Department, Building Inspection Program approved RV connection box only. Connections using extension cords are not allowed.
4. The RV shall either be self-contained or toilet facilities shall be provided. Property owner must obtain approval for a porta-potty from the City, or provide proof of an acceptable sanitation system approved by the City. For self-contained units, black and grey water holding tanks shall be emptied only at an authorized RV dump station, or pumped by an accredited septic service.
5. If residency in RV exceeds two (2) weeks, the owner of the RV/property must subscribe with the municipality's contract sanitary disposal company for garbage collection.
6. In addition to the parking requirements outlined in Section 3.3, adequate on-site parking (one parking space per RV) shall be provided for additional vehicles. The RV shall be parked at least fifteen (15) feet from the front, and five (5) side, and rear property lines and at least ten (10) feet from a structure when unit is fully extended
7. One (1) additional RV may be permitted. An additional RV may be permitted for Season Use (From April 1st through October 31st and 30 days from November 1-March 31). An additional RV requires a permit issued by the City Recorder, following a Type II Administrative Procedure, provided:
 - a. Permit application, including a site plan, is submitted.
 - b. Permit is subject to a fee established by Resolution of the Detroit City Council.
 - c. A maximum of one (1) additional RVs may be permitted.

- d. All of the following criteria must be met:
 - i. The proposal must meet all requirements of the zone in which it is located, including: minimum lot size, setbacks, coverage, etc.;
 - ii. The distance between RVs or between the RV and any structure must be a minimum of ten (10) feet when fully extended; and
 - iii. The RV must not be placed over a septic drain field.
 - e. Conditions may be imposed to mitigate the impacts caused by additional RVs on neighboring properties.
 - f. Permit applies to property owner requesting the permit and is not transferable with the property.
8. A third RVs may be permitted on lots that are greater than 10,000 square. This is a seasonal permit , following a Type III Conditional Use Application, DDC Chapter 4.1 Section 5, provided:
- a. Permit application, including a site plan, is submitted.
 - b. Permit is subject to a fee established by Resolution of the Detroit City Council.
 - c. A maximum of one (1) additional RVs may be permitted.
 - d. All of the following criteria must be met:
 - i. The proposal must meet all requirements of the zone in which it is located, including: minimum lot size, setbacks, coverage, etc.;
 - ii. The distance between RVs or between the RV and any structure must be a minimum of ten (10) feet when fully extended; and
 - iii. The RV must not be placed over a septic drain field.
 - e. Conditions may be imposed to mitigate the impacts caused by additional RVs on neighboring properties.
9. Permit applies to property owner/lessee requesting the permit and is not transferable with the property.

G. Recreational Vehicles on Undeveloped Commercial Zoned Land.

- 1. An RV on undeveloped commercially zoned land for human occupancy is prohibited.

H. Recreational Vehicles in Detroit Avenue Corridor

1. An RV for human occupancy is prohibited on all lots within the Detroit Avenue Corridor (DAC) Overlay District. Where this standard conflicts with other standards for the use of RVs on a lot within the DAC District, this prohibition shall be the applicable standard.

I. Recreational Vehicles (RV) Storage.

1. Storage of Recreational Vehicles (RVs), boats, or other trailers, on Developed Single Family, Multi-Family or Commercial General zoned land that contains a single-family dwelling is permitted based upon the RVs being parked a minimum of fifteen (15) feet from the front and five (5) feet from the, side, and rear property lines and ten (10) feet from a structure.
 - a. RV, boat, or trailer storage on Developed Single Family, Multi-Family or Commercial General zoned land that contains a single-family dwelling is limited to a maximum of one (1) RV or trailer and one (1) boat.
 - b. An RV, trailer, or boat which is stored within a permitted accessory structure or garage, and is completely screened from the right-of-way abutting the front property line by a fence, wall, hedge, gate, or other structural element, shall not count against the maximum number of RV, trailers, or boats which can be stored on a lot as established by Section 3.5.3.I.1.a of this code. For the purposes of this screening requirement a sight obscuring structure wall is considered a wall.
2. Storage of RVs, boats, or other trailers, on Developed Multi-Family or Commercial General zoned land that contains a multi-family dwelling or manufactured home park is prohibited outside of the storage of an RV, trailer, or boat within an accessory structure or garage.
 - a. An RV, trailer, or boat which is stored within a permitted accessory structure or garage shall be completely screened from the right-of-way abutting the front property line by a fence, wall, hedge, gate, or other structural element. For the purposes of this screening requirement a sight obscuring structure wall is considered a wall.
3. RV/boat/trailer storage on Undeveloped Single Family and Multi-Family zoned land is prohibited unless the RV/boat/trailer is the personal property of the property owner, up to a maximum of one (1) RV and one (1) boat.
4. RV storage may be allowed on Developed Commercial zoned land with an existing commercial use as an accessory use if:
 - a. City Council approves the RV storage,
 - b. The property owner of the storage area has a business license from the City to operate the existing (principal use) business,
 - c. The storage is accessory to the primary use on the property and the storage is only for RVs, boats, and boat/watercraft trailers, and

- d. The property is not located in the Detroit Avenue Business Corridor (properties abutting Detroit Avenue and zoned Commercial General (CG)).
- 5. RV/boat/trailer storage on Undeveloped Commercially zoned land is prohibited unless:
 - a. Property owner completes and receives approval of a land-use application based upon the required application type, procedure, and process applicable to RV/boat storage pursuant to Detroit Development Code, Chapter 2.3: Commercial General Zone Requirements, and
 - b. Property owner applies for and is granted a business license from the City to operate a designated RV storage facility on the property.
- 1. RV/boat/trailer storage or overnight use of RV on City streets and City right-of-ways is prohibited.
- 2. Owners of Vacation Rental properties are responsible for compliance by their renters/tenants of these regulations. (Vacation rentals are as defined within the Transient Tax Ordinance and may include the following as examples: tourist home or house, bed & breakfast, lodging house, rooming house, and apartment house, public or private dormitory, and space in mobile home or trailer parks.)
- 3. Any RV parking condition not specifically addressed requires a permit issued by the City Recorder, following a Type II Administrative Procedure, provided:
 - a. Permit application, including a site plan, is submitted.
 - b. Permit is subject to a fee established by Resolution of the Detroit City Council.
 - c. A maximum of one (1) additional RVs may be permitted.
 - d. All of the following criteria must be met:
 - i. The proposal must meet all requirements of the zone in which it is located, including: minimum lot size, setbacks, coverage, etc.;
 - ii. The distance between RVs and any structures must be a minimum of ten (10) feet when fully extended; and
 - iii. The RV must not be placed over a septic drain field.
 - e. Conditions may be imposed to mitigate the impacts caused by additional RVs on neighboring properties.
 - f. Permit applies to property owner/lessee requesting the permit and it is not transferable with the property.

J. Other.

4. RV/boat storage or overnight use of RV on City streets and City rights-of-way is prohibited.
5. Owners of Vacation Rental properties are responsible for compliance by their renters/tenants of these regulations. (Vacation rentals are as defined within the Transient Tax Ordinance and may include the following as examples: tourist home or house, bed & breakfast, lodging house, rooming house, and apartment house, public or private dormitory, and space in mobile home or trailer parks.)
6. Any RV parking conditions not specifically addressed requires a permit issued by the City Recorder with approval.
 - a. Permit is subject to a fee established by Resolution of the Detroit City Council.
 - b. Permit applies to property owner/lessee requesting the permit and it is not transferable with the property.

3.5.4 Open Camping/Tents.

A. Developed Single family (RS) Zoned Property, Multiple family (RM) Zoned Property with Single family Residence, Commercial (CG) Zoned Property with Single family Residence

1. A maximum of four (4) tents may be placed on single family, multiple family and commercial zoned property with single family residences, and a maximum of four (4) tents per unit may be placed on multiple family and commercial zoned unit of property with multiple dwellings and allowed:
 - a. from April 1st through October 31st,
 - b. from November 1st through March 31st up to the maximum of 14 consecutive days in a 30 day period, and
 - c. meeting the following conditions.
 - (1) Tents must be placed at least five (5) feet from the side and rear property lines and at least ten (10) feet from the front property line. Each tent must be located a minimum of five (5) feet from any other camping space or structure when the unit is fully extended.
2. Additional tents require a permit issued by the City Recorder and approval of two (2) Councilors when meeting the following.
 - a. Permit is subject to an applicable fee established by Resolution of the Detroit City Council.
 - b. Permit applies to property owner requesting the permit and is not transferable with the property.

3. Adequate on-site parking shall be made available for vehicles of all guests and family members allowing for a setback from the side and rear property lines and between vehicles a minimum of three (3) feet in width. No parking is permitted within a front yard setback unless located within a City-approved driveway.

B. Residential Undeveloped property - Tent camping on residential undeveloped property must comply with the following regulations:

1. Property must have an installed water meter and a water line going from the meter to a hose bib on the property. During use of the property the water must be turned on and a hose available for fire dousing in fire pits and fire protection.
2. The property must have a City approved access driveway.
3. Adequate on-site parking shall be provided for additional vehicles allowing for setback from side and rear property lines and between vehicles a minimum of three (3) feet in width. No parking is permitted within a front yard setback unless located within a driveway.
4. A maximum of four (4) tents are allowed.
5. Camping is allowed from April 1st through October 30th.
6. Tents may be placed on the property up to the maximum of 14 consecutive days within a 30-day period.
7. Tents must be placed at least five (5) feet from the side and rear property lines and at least ten (10) feet from the front property line. Each tent must be located a minimum of five (5) feet from any other camping space when the unit is fully extended.
8. Toilet facilities must be provided. Property owner must obtain approval for a porta-potty from the City, or provide proof of an acceptable sanitation system approved by the City.
9. All trash shall be removed from the site.
10. Additional tents require a permit issued by the City Recorder and approval of two (2) Councilors when meeting the following.
 - a. Permit is subject to an applicable fee established by Resolution of the Detroit City Council.
 - b. Permit applies to property owner requesting the permit and is not transferable with the property.

C. Commercial Undeveloped property - Camping is prohibited on undeveloped commercial property.

D. Commercial Developed Property – Camping is prohibited on commercial developed property except for Motels as defined in Ordinance No. 215, Transient Occupancy Tax Ordinance, but excluding motels located in the Detroit Avenue Business Corridor (properties abutting Detroit Avenue and zoned Commercial General CG):

1. Motel (Definition): Any structure, or any portion of any structure, which is occupied or intended or designed for occupancy for 30 consecutive days or less for dwelling, lodging, or sleeping purposes, and includes, by way of illustration and not limitation, any motel, inn, tourist home or house, hotel, bed & breakfast, studio hotel, bachelor hotel, lodging house, rooming house, apartment house, public or private dormitory, fraternity, sorority, public or private club, space in mobile home or trailer parks, or similar structure or portions thereof so occupied.
2. The following conditions apply:
 - a. A maximum of four (4) guest tents are allowed.
 - b. Tents must be placed at least five (5) feet from the side and rear property lines and at least ten (10) feet from the front property line. Each tent must be located a minimum of five (5) feet from any other camping space or structure when the unit is fully extended.
 - c. Guest tent camping is allowed:
 - from April 1st through October 31st, and
 - from November 1st through March 31st up to the maximum of 14 consecutive days in a 30 day period.
 - d. Additional tents requires a permit issued by the City Recorder and approval of two (2) Councilors when meeting the following.
 - Permit is subject to an applicable fee established by Resolution of the Detroit City Council.
 - Permit applies to property owner requesting the permit and is not transferable with the property.
 - Adequate on-site parking must be available for vehicles allowing for setback from side and rear property lines and between vehicles a minimum of three (3) feet in width. No parking is permitted within a front yard setback unless located within a driveway.

E. Other.

1. Any Open Camping/Tent conditions not specifically addressed requires a permit issued by the City Recorder
 - a. Permit is subject to an applicable fee established by Resolution of the Detroit City Council
 - b. Permit applies to property owner requesting the permit and is not transferable with the property.

3.5.5 Mobile Food Units.

A. **Purpose.** The purpose of these mobile food unit regulations is to allow flexibility to site food and beverage carts individually and in groups on commercial properties to create flexible dining opportunities while addressing any potential nuisances.

B. **Uses Permitted.**

1. Individual mobile food units are permitted on commercial properties.
2. Groups of two or more mobile food units are permitted as mobile food unit pods on commercial properties.

C. **Development Standards.**

1. All units shall be placed within required setbacks for the zone where located.
2. A minimum of ten (10) feet of clearance shall be maintained between each unit and between such units and existing buildings.
3. Units shall maintain a minimum five (5)-foot separation from the right-of way.
4. Drive-throughs shall be prohibited with mobile food units.
5. Electrical connections shall be placed on the ground and covered with a cable protection ramp or equivalent.
6. Generators shall be prohibited.

D. **Site Improvements.**

1. Trash and recycling receptacles shall be provided on site, and must be emptied and maintained.
2. Access to restrooms with handwashing facilities must be provided on site or within 500 feet, such as at a neighboring business. If located off-site, the restroom must be available during the proposed hours of operation and the applicant shall submit written permission from the business owner where the facility is located.
3. Mobile food unit pods shall provide site improvements totaling a minimum of 100 square feet per unit or a minimum of 500 square feet total, whichever is less. Site improvements may consist of any combination of the following:
 - a. Planters or landscaping areas.
 - b. Seating areas.
 - c. Covered areas, not including awnings attached to individual units.
 - d. Other site amenities such as play areas, fire pits, water fountains, and similar.
4. Accessory items not used by customers, including but not limited to, tanks, barrels, supplies, etc. by screening with a site-obscuring fence or landscaping, or containing them within a small storage shed.

5. Areas where mobile food units are placed and areas for vehicle travel must be surfaced with gravel or crushed rock, or paved. Surface Water Management standards of Chapter 3.6 and/or Grading and Erosion Control standards of Chapter 3.9 may apply.
6. Off-street parking is not required for mobile food units, but if proposed, shall meet the standards of Chapter 3.1. Off-street parking areas shall be located to the side or rear of the lot, and shall not exceed 50 percent of the lot width or 50 percent of the lot area.

E. Maintenance. Mobile food units shall be maintained and any code violations will be subject to the standards of Chapter 1.4, Enforcement.

1. The exterior surfaces of all mobile food units shall be clean and free from dents, rust, peeling paint and deterioration, and windows shall not be cracked or broken.
2. Tents, canopies or others shelters shall not have tears, mold, or broken or non-functioning supports and shall be securely anchored.
3. Landscaping shall be maintained in good condition. If plantings fail to survive, they shall be replaced with equivalent plants.
4. Seating and other furnishings shall be maintained in good condition.
5. The property and all things placed there shall at all times be maintained in a clean and orderly condition. Only those things authorized by the permit and shown in the site plan may be stored on the property.

F. Permit Required.

1. Individual mobile food units are permitted outright with no land use review.
2. Mobile food unit pods are permitted subject to Chapter 4.2, Site Design Review. The application shall include the materials required for a Site Design Review, and the following materials:
 - a. Site plan drawn to scale including:
 - i. Site dimensions
 - ii. Relationship of the site to adjoining properties, streets, alleys, structures, public utilities and drainage ways.
 - iii. Number, location and size of temporary units on the site.
 - iv. Accessible pedestrian route clearances.
 - v. Size location and clearances of customer seating areas.
 - vi. Any proposed parking, maneuvering and loading areas.
 - vii. Location and design elevation of all structures.
 - viii. Location and specifications of landscaping, seating, covered areas and other site amenities.

- ix. Location and design of any fences and walls.
- x. Number and location of trash and recycling areas.
- xi. Location and type of auxiliary storage.
- b. Location of bathroom and handwashing facilities and written permission, if applicable.
- c. Disposal plan for wastewater and grey water.
- d. Exterior lighting plan, if proposed.
- e. Any additional information that may be required by the Director to properly evaluate the proposed site plan.
- 3. Mobile food units shall obtain and maintain current all other applicable licenses, including a City of Detroit Business License and Marion County Mobile Food Unit Permit if required.

3.5.6 Personal Storage Structures

- A. **Purpose.** The purpose of these standards is to provide an objective and equitable pathway to evaluate proposed personal storage structures which may be used to supplement the use of Recreational Vehicles (RVs) on developed residential lands. These standards will ensure that personal storage structures are compatible with adjacent and nearby developed residential uses.
- B. **Primary structure only.** Where a personal storage structure is constructed on a lot additional accessory structures shall not be permitted.
 - 1. Conversion to accessory structure. When a new primary use is constructed on a lot where a personal storage structure has been permitted, the personal storage structure may be preserved and converted into an accessory structure for the new primary use if it conforms to the standards of Section 3.4.1 of this code.
- C. **Height.** The maximum building height for a personal storage structure is fifteen (15) feet.
- D. **Yards.** Personal storage structures shall comply with the setback requirements of the underlying zone.
- E. **Design standards.**
 - 1. Building materials. Building materials should be durable to withstand harsh weather and prevent structural degradation while also complementing the residential character of the use.
 - a. Vinyl siding, plywood paneling, and sheet or corrugated metal shall be prohibited as exterior building materials.
 - b. Stucco, plaster, untreated concrete blocks, or concrete shall be limited to accent uses and shall not exceed more than 20% of the total façade area.

- c. Shipping containers are prohibited as personal storage structures.
 - 2. Roof pitch. The roof of a personal storage structure shall be suitably pitched to prevent excess accumulation of snow and ice. The roof of a personal storage structure shall be pitched at 4/12 or greater.
 - 3. Enclosed area. An area of not more than one hundred and sixty (160) square feet shall be enclosed by a personal storage structure. This enclosed area includes covered porch areas or areas covered by roof projections, excepting areas covered by up to eighteen (18) inches of projecting eaves.
 - 4. Architectural elements. To ensure compatibility with abutting residential uses, each personal storage structure must include at least two of the following design features:
 - a. Decorative roof gables on at least one elevation which extend at least twelve (12) inches from the nearest wall
 - b. A covered porch entry not less than two (2) feet deep, the entry must be covered by roofing material used elsewhere in the structure
 - c. Eaves which project a minimum of twelve (12) inches from the nearest wall
 - d. Windows with shutters as a matched pair, either decorative, fixed, or movable. Shutters must be on the same elevation as a primary entrance to the structure.
 - e. 10% of the exterior wall which contains the main entrance is composed of brick, stone, composite, or other similar masonry materials.
 - f. Roof pitch greater than or equal to 6/12.
 - g. Horizontal wooden lap, or wooden “log cabin” siding.
 - h. Architectural grade laminated shingles (not including standard three-tab asphalt shingles).
 - 5. Utility Connections: Connections from personal storage structure to public or private utility services are not encouraged. All utility connections must conform to the standards in Chapter 3.8 of this code as well as the standards established in the adopted plumbing code.
- F. **Habitation prohibited.** Personal storage structures are not intended for short or long term human habitation. These structures may not be used as dwelling units.
- 1. Mechanical equipment prohibited. Mechanical equipment, including but not limited to wood and pellet stoves, HVAC or ductless “mini split” systems, and any system which requires gas piping are prohibited from being installed within a personal storage structure.
- G. **Development Review Required.** Prior to the construction or installation of a personal storage structure an applicant is required to receive site development review approval.

3.5.7 Shipping Containers

- A. **Shipping Containers.** No person shall place, cause to be placed, allow to be placed or allow to remain in place, a shipping container on any property within the City of Detroit without complying with the regulations set forth in this chapter.
- B. Shipping containers are not permitted as dwelling units, personal storage structures, or permanent accessory structures.
- C. Shipping containers may be placed for the purpose of temporarily storing belongings while a property owner or tenant is taking occupancy in or vacating a structure subject to the following standards:
 - 1. Shipping containers shall be placed on concrete, asphalt, or other level, compact, hard surface. A shipping container shall not be placed in the required landscaped area of any use.
 - 2. Shipping containers shall be no larger than eight (8) feet high, eight and one half (8.5) feet wide, and twenty (20) feet long.
 - 3. Placement of shipping containers shall abide by all setback requirements applicable to accessory structures in the zone in which they are located unless the shipping container is placed in an established and private vehicle maneuvering or off-street parking area.
 - 4. Shipping containers may not be placed within the public right-of-way and may not be placed in such a manner as to obstruct or impair the free and full use of the sidewalk or street by the public and may not be placed in such a manner as to obstruct the view of pedestrians or users of vehicles within the right-of-way, or otherwise interfere with the wires, poles, or fixtures lawfully maintained thereon.
 - 5. Shipping containers shall not be stacked and no more than one shipping container is permitted to be placed on a lot or parcel.
 - 6. A shipping container for the purpose of temporarily storing belongings while a person is taking occupancy in or vacating a structure may only be in place for a period of sixty (60) calendar days.
- D. Shipping containers may be placed for the purpose of securely storing building materials or equipment on a lot or parcel with an issued structural permit subject to the following standards:
 - 1. Placement of shipping containers shall abide by all setback requirements applicable to accessory structures in the zone in which they are located unless the shipping container is placed in an established and private vehicle maneuvering or off-street parking area.
 - 2. Shipping containers may not be placed within the public right-of-way and may not be placed in such a manner as to obstruct or impair the free and full use of the sidewalk or street by the public and may not be placed in such a manner as to obstruct the view of pedestrians or users of vehicles within the right-of-way, or otherwise interfere with the wires, poles, or fixtures lawfully maintained thereon.

3. Shipping containers shall not be stacked and no more than one shipping container is permitted to be placed on a lot or parcel.
4. Shipping containers for the purpose of securely storing building materials or equipment on a lot or parcel with an issued structural permit must be removed from the property prior to issuance of final occupancy of any structures on the lot or parcel subject to the structural permit approval.

Chapter 3.6 Surface Water Management

Sections

- 3.6.1 Purpose**
- 3.6.2 Applicability**
- 3.6.3 Stormwater Plan Submittal**
- 3.6.4 General Requirements**
- 3.6.5 Surface Water Conveyance Standards**
- 3.6.6 Pollution Reduction and Flow Control Standards**

3.6.1 Purpose.

This section includes standards for conveyance of surface water in streams, creeks and channels that exist on a site at the time of development. It also addresses pollution reduction and flow control for stormwater generated from new and redevelopment. For the purpose of this code, “new” and “redevelopment” refers to any man-made change to improved or unimproved real estate including, but not limited to the placement of buildings or other structures, dredging, filling, grading, or paving.

This section provides standards for addressing infiltration, treatment and detention of stormwater separately as well as an option for a combined approach to mitigating the water quality impacts of developments that fall below a certain size threshold.

3.6.2 Applicability.

No permit for construction of new development or tenant improvements greater than 120 square feet within the city shall be issued until a stormwater management plan is approved. Separate applicability thresholds for Pollution Reduction and Flow Control Standards are listed in Section 3.6.4. Development projects shall not be phased or segmented in such a manner to avoid the requirement of these Rules and Regulations.

3.6.3 Stormwater Management Submittal Plan.

A. Preconstruction plans shall include the following analyses and descriptions.

1. An analysis of stormwater mitigation strategies to increase infiltration and evapotranspiration (use of water by plants) and reduce the amount of stormwater runoff generated from the site. (Note: rainwater can soak into the ground where it falls or it can accumulate on a non-pervious surface, flow to a pervious area and then infiltrate into the ground. The former scenario is stormwater mitigation, while the latter scenario requires stormwater management.)
2. Calculations of the amount of impervious surface before development and the amount of impervious surface after development. Impervious surface refers only to strictly impervious surfaces including roofs of buildings, impervious asphalt and concrete pavements, and other specifically impervious pavement materials such as mortared masonry and gravel.
3. An analysis of vegetative and other treatment methods used to reduce pollutants.
4. An analysis of flow reduction methods including, but not limited to, infiltration and detention techniques.
5. Statement of consistency with city stormwater management objectives stated in section 3.1 and, if applicable, the watershed management plan for the basin and/or requirements of a pollutant load reduction plan for a water quality limited stream.

B. Post construction plans shall include the following information.

1. As-built plans, stamped by a qualified professional indicating all storm water mitigation and management strategies are installed per approved plans and approved changes.

2. Maintenance plans for all stormwater facilities installed to comply with this ordinance. The city must approve the maintenance program. Proof of maintenance shall be submitted annually.

3.6.4 General Requirements.

A. All development shall be planned, designed, constructed and maintained to:

1. Provide a system by which storm/surface water within the development will be managed without causing damage or harm to the natural environment, or to property or persons.
2. Protect property from flood hazards.

B. Plan Review Standards.

Plans shall be submitted to the jurisdiction for review. All plans and calculations must be stamped and signed by a qualified professional. Plan approval will be based on the following criteria:

1. Design, construction and maintenance of proposed stormwater management plan will result in post construction stormwater volumes flowing off site which are substantially the same as preconstruction volumes for all storms less than or equal to the 10-year design storm. (Although water quality and aquatic habitat benefit from preservation of the natural hydrology, small jurisdictions that anticipate the cumulative impacts of development to be small over time might consider a less stringent criteria, which allows post development runoff volumes to be somewhat greater than predevelopment volumes.)
2. All culvert installations must allow fish passage in accordance with Division of State Lands (DSL) and the US Army Corps of Engineering (COE) and any other authorized federal, state, or local agency.
3. Installation of culverts, spans or stormwater outfalls along natural water features shall be designed to emphasize preservation of natural flow conditions, allow for natural obstructions and pursue stream enhancement opportunities.
4. Stormwater mitigation strategies, such as retention of existing trees, and use of porous paving surfaces, as well as stormwater treatment and flow control facilities used to meet the requirements of this code must be included in the plans.
5. Stormwater management plan shall be consistent with the USDA Forest Service Detroit Tributaries Watershed Assessment or Breitenbush Watershed Assessment whichever is applicable.
6. In areas of high pollutant load, stormwater infiltration shall incorporated, or be preceded by treatment as necessary to prevent siltation of the infiltration facility, protect ground water, and prevent toxic accumulations of pollutants in the soil. (Note: it is preferable to eliminate pollutant contact with stormwater where possible.)
7. All vegetation used for the installation and landscaping of storm water facilities shall be selected from plants listed in Appendix 4B – Landscape Requirements and Plant Lists for Stormwater Facilities available from the City of Salem Division 004 – Stormwater

System Administrative Rules. Trees that are preserved or planted on site need not meet these criteria. The City Council or their designee shall approve planting schedule and maintenance of vegetation.

8. All storm conveyance pipes, vaults and stormwater infiltration, treatment and detention facilities shall be built to specification of the city.
- C. The city reserves the right to restrict the use of infiltration facilities in high risk areas including those with steep slopes, unstable soils, high water tables, or sites known to be contaminated by hazardous substances.
- D. **Infiltration facilities** which fall under the jurisdiction of DEQ's Underground Injection Control (UIC) Program must be registered with the state and meet the requirements of the UIC Program.
- E. **Bonds.**

Applicants shall provide a performance bond or similar surety acceptable to the city, in accordance with Chapter 4.2 Section 5, to assure successful installation and initial maintenance of surface pollution reduction and flow control facilities. During construction and for a period of one year thereafter, the bond shall be in favor of the city and in an amount of the anticipated construction cost.

F. **Contingency for system failure.**

If the storm drainage system fails due to lack of maintenance or breakage, and there are impacts to downstream water quality or quantity as a result of the failure, the city may perform the maintenance or repair and charge the owner of the facility.

3.6.5 Surface Water Conveyance Standards.

- A. Culverts in and spans of streams, creeks, gulches and other natural drainage channels shall maintain a single channel conveyance system.
- B. Culverts and/or spans are to be sized for the 24-hour post-developed tributary conditions of the 25-year storm.
- C. In-stream and in-line detention is not allowed.
- D. It shall be the responsibility of the owner that the new drainage system shall not negatively impact any natural waters on or downstream from the site. The owner is responsible for providing a drainage system for all surface water, springs, and groundwater on site and for water entering the property as well as management of springs and groundwater that surface during construction.

3.6.6 Pollution Reduction and Flow Control Standards.

A. **Applicability.**

1. These standards shall be applied to all development.

2. Stormwater treatment and detention facilities receiving stormwater from impervious surface areas less than 4,000 square feet may be designed in accordance with sizing and construction standards for combined facilities. More than one such facility can be installed on site as long as each facility receives stormwater from an area less than the stated threshold.

B. Infiltration, Treatment and Detention.

1. Infiltration

- a. Infiltration systems are to infiltrate a minimum of [one-half inch of rainfall in 24 hours].
- b. Stormwater treatment, in accordance with Subsection B2 of this section, shall occur prior to or concurrent with infiltration.
- c. Infiltration systems shall be designed to overflow to conveyance systems in accordance with Subsection D of this section.
- d. Infiltration may be waived, or reduced, if it can be demonstrated by a registered professional engineer that infiltration will destabilize the soil, cause structural problems, or provide negative impacts to the environment, or due to site constraints such as high groundwater or soil contamination.

2. Treatment

- a. Water quality facilities shall be designed to capture and treat runoff for all flows up to two-thirds (2/3) of a two-year, post-developed, 24-hour storm.
- b. The water quality system shall use vegetation for treatment. Accepted types of vegetated treatment facilities are shown in Figures 3.6.1-3.6.5. Alternative systems may be used with approval of the city or their designee and shall be designed to provide equivalent treatment as is provided with a vegetated system.
- c. Systems treating stormwater from over 10,000 square feet of impervious area and all systems that deviate from the design criteria recommended in this Code must be designed by a registered engineer and be approved by the city or its designee

3. Detention

Onsite, storm-quantity detention facilities shall be designed to capture and detain runoff as follows:

- a. Sites with infiltration systems designed to handle storms in excess of that specified by subsection (1) of this section will be permitted to reduce on-site detention requirements by a volume equal to [100%] of the excess infiltration capacity.

C. Combined stormwater infiltration, treatment and detention.

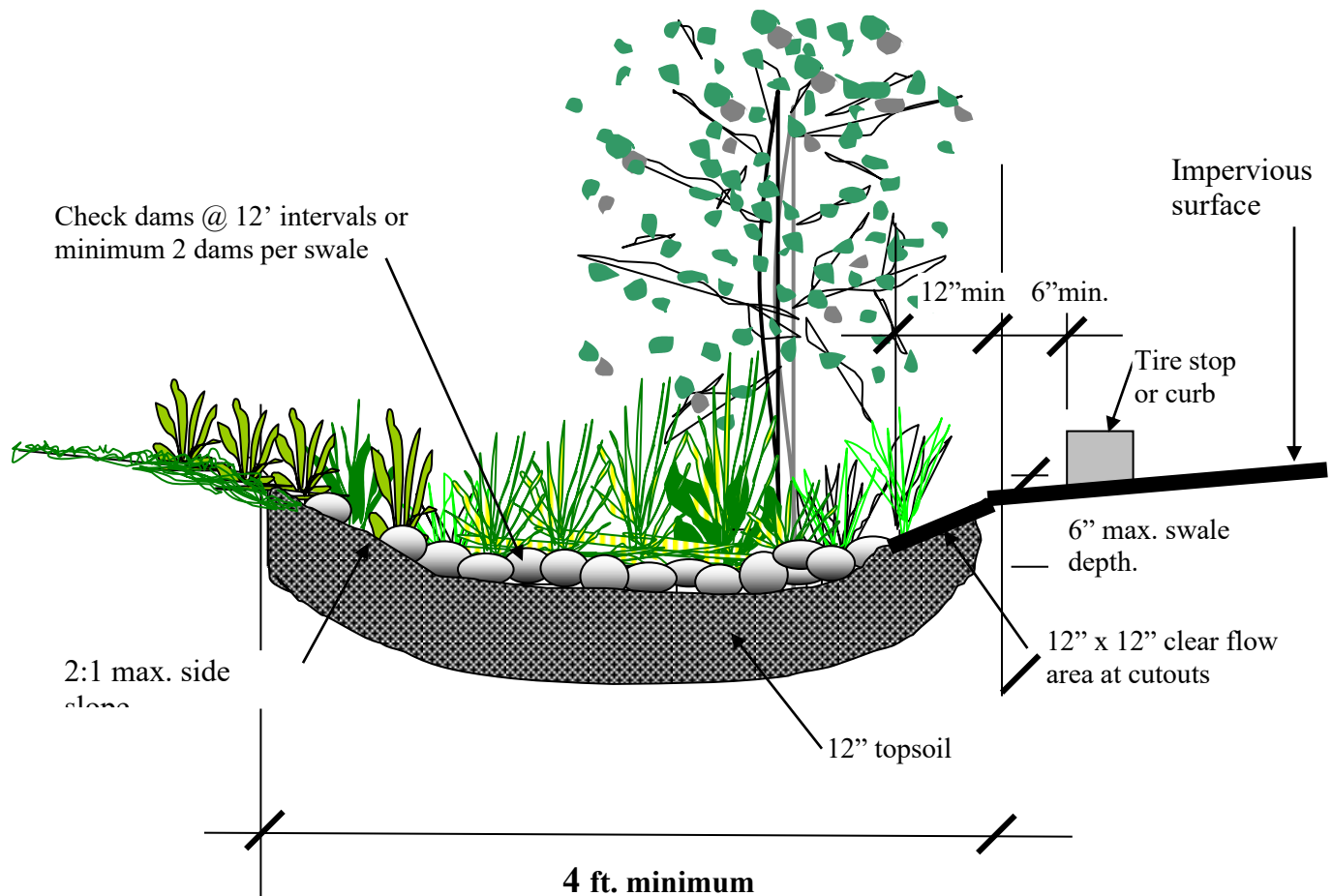
Facilities receiving stormwater from impervious areas less than 4,000 square feet in size and designed in accordance with the sizing and construction standards contained in this Code are

presumed to comply with the city's infiltration, treatment and detention requirements of this code. (See Appendix B of this document for example of sizing and construction standards from City of Portland.)

D. Conveyance.

Infiltration, treatment and detention facilities shall be constructed to convey stormwater that exceeds their design capacity.

Simplified Approach Design Criteria - Figure 3.6.1 Landscape Swale



Section Not to Scale

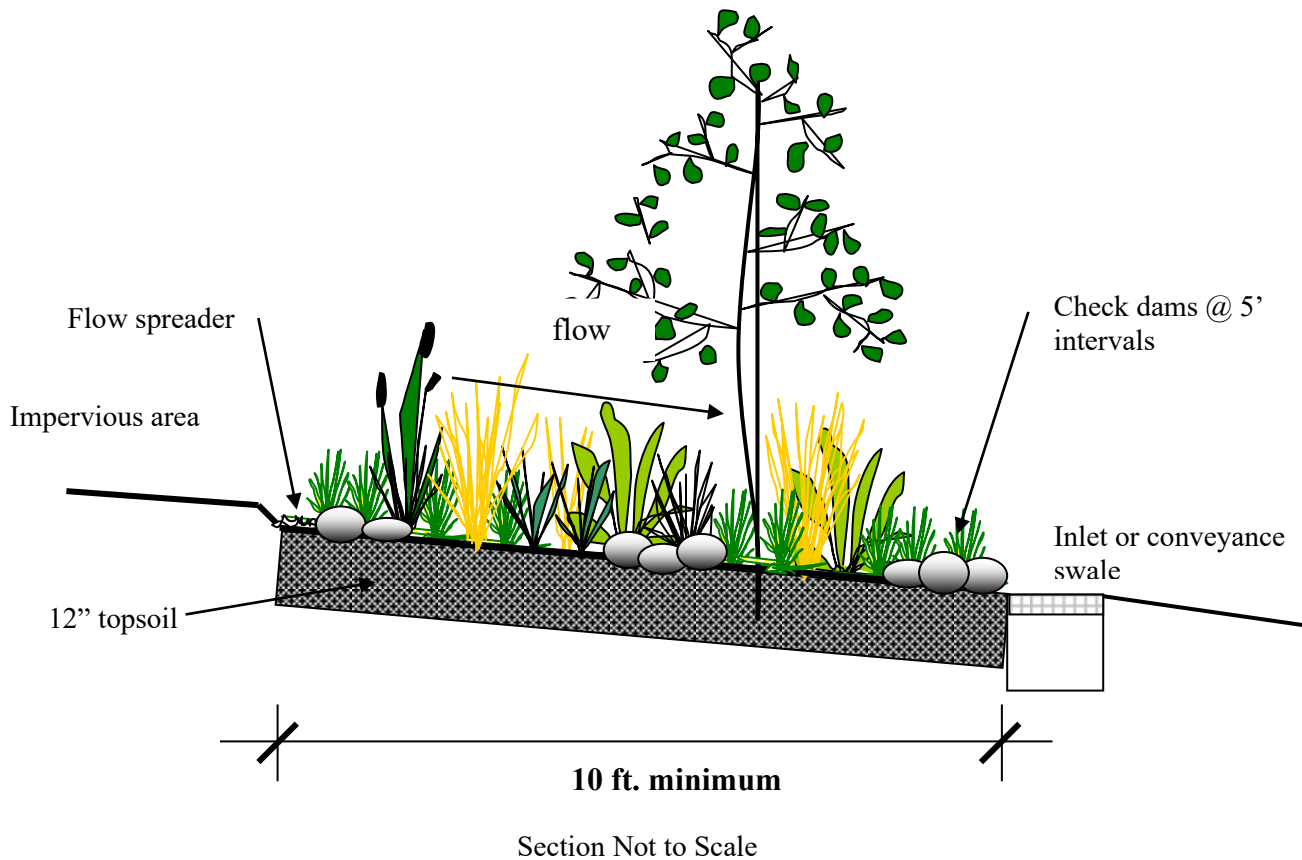
Description

Landscape swales are long narrow facilities easily integrated with the site design. Swales may be used to treat all stormwater runoff from a site. The swales are sized to achieve pollution reduction and flow control. Swales are planted with a variety of trees, shrubs, grasses, and ground cover. The swale is designed with numerous check dams to detain flows and facilitate sedimentation. Pollution reduction is also achieved as flows are filtered through the plantings.

General Specifications Acceptable for all soil types. Soil types C and D may require additional means for disposal.

Minimum swale length is 20 ft. Maximum slope is 6 %. Plantings shall be in accordance with Chapter 3.3. Clay soils shall be amended with 50 % sandy loam in the top 12" of the swale. Check dams shall be of durable, non-toxic materials- i.e., rock, brick, and old concrete. Check dams shall be 12" length x (width of swale) x 3-5" height. Swales using these design criteria will not need to include a bypass of larger storms. Liners are not needed unless required for groundwater protection.

Simplified Approach Design Criteria - Figure 3.6.2 Vegetative Filter



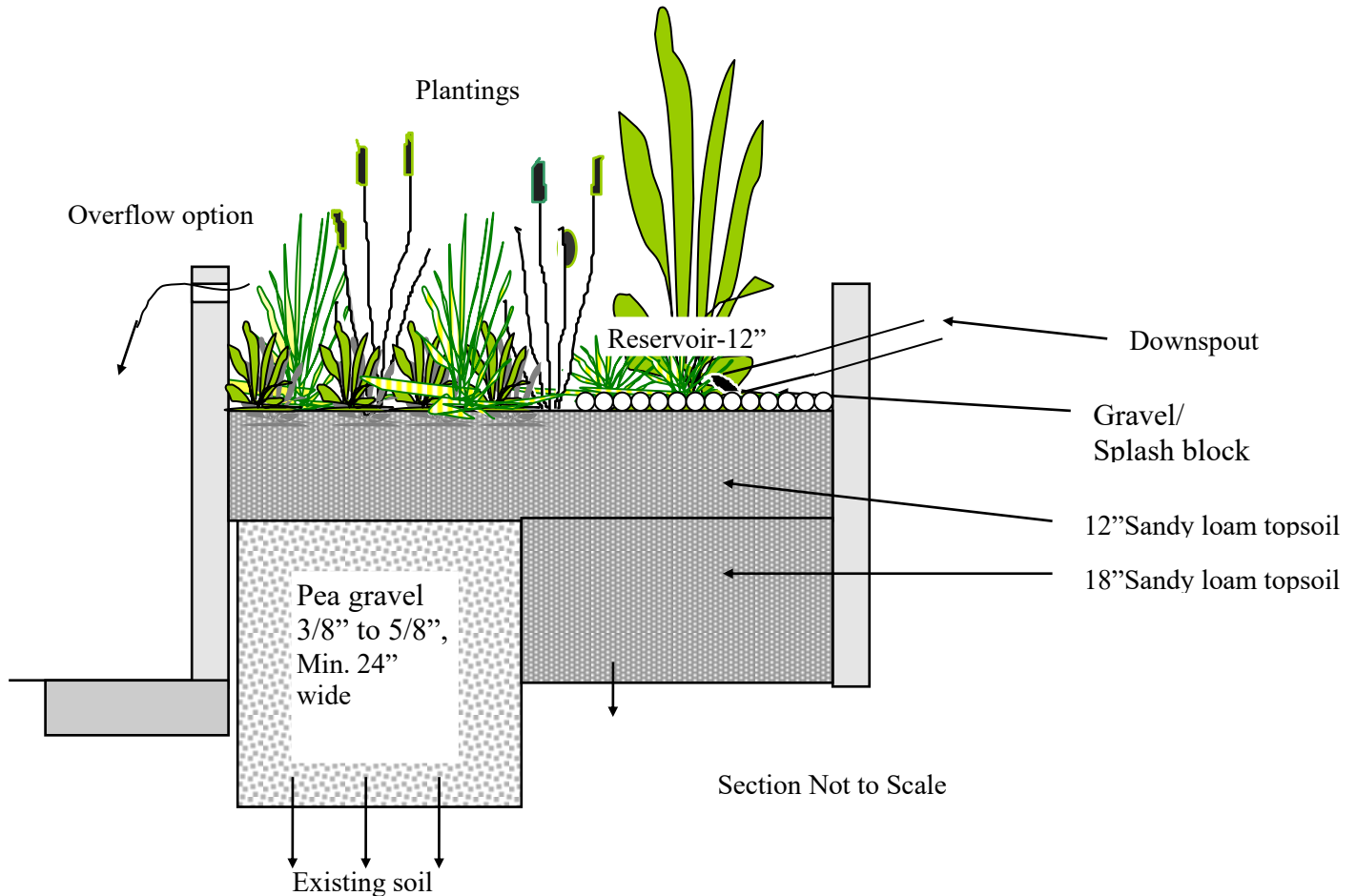
Description

Vegetative filters are gently sloped areas, with direction of stormwater flow conforming to the slope. Stormwater enters the filter as sheet flow from an impervious surface or is converted to sheet flow using a flow spreader. Flow control is achieved using the relatively large surface area and a generous proportion of check dams. Pollutants are removed through filtration and sedimentation. Filters can be planted with a variety of trees, shrubs, and ground covers, including grasses.

General specifications (Acceptable soil types A, B, C, & D)

Filters shall be a minimum of 20 ft. x 10 ft. Maximum slope is 10%. Plantings shall be in accordance with Chapter 3.3. Check dams shall be of durable, non-toxic materials- i.e., rock, brick, and old concrete. Check dams shall be 12" length x (width of filter) x 3-5" height. Filters designed using these criteria will not need to include a bypass of larger storms. Runoff shall enter the buffer as predominately sheet flow. Check dams and flow spreaders are required.

Simplified Approach Design Criteria - Figure 3.6.3 Stormwater Planter AB



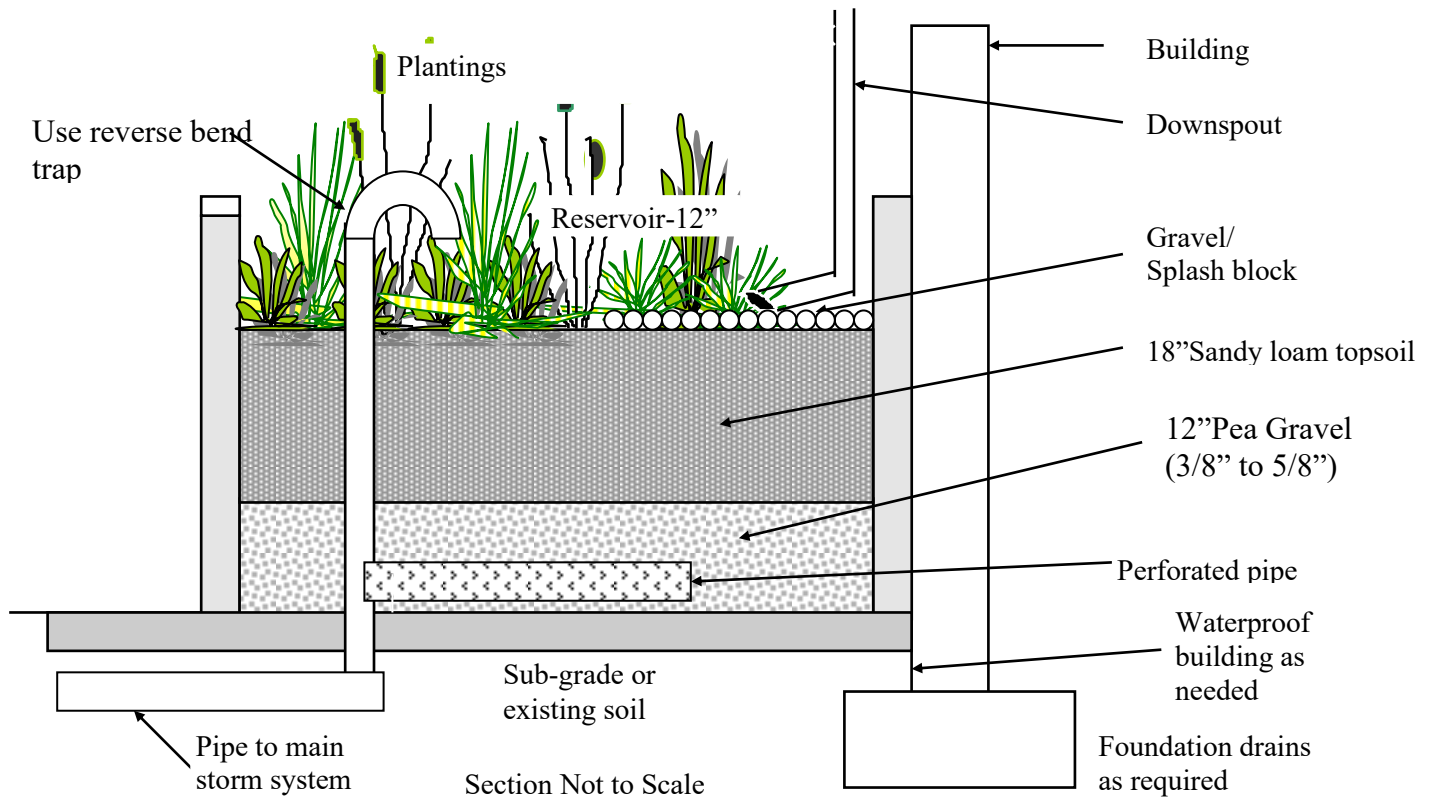
Description

Planter AB is designed to allow runoff to filter through the planter soils (thus capturing pollutants) and then infiltrate into the native soils (flow control). The planter is sized to accept runoff and temporarily store the water in a reservoir on top of the soil.

General specifications (Acceptable soil types A & B)

There are numerous design variations. The planters shall be designed to allow captured runoff to drain out in 3-4 hours after a storm event. Plantings shall be in accordance with Chapter 3.3 and be appropriate for moist and seasonally dry conditions, and can include rushes, reeds, sedges, iris, dogwood, currants, and numerous other shrubs, trees, and herbs/grasses. Topsoil shall have infiltration rate of 2"/hr. Sand/gravel area may not be required if existing soil has at least 5"/hr. infiltration rate. The sand/gravel area width, depth and length are to be determined by a qualified professional. Minimum planter width is 30"; there is no minimum length or required shape. The structural elements of the planters shall be stone, concrete, brick, wood, or other durable material. Treated wood shall not leach out any toxic chemicals. Planters within 10 ft of structure must use Design Criteria for Stormwater Planter CD or request an exception through OPDR to the Building Code requirement that stormwater facilities must be less than 10 ft from the structure.

Simplified Approach Design Criteria - **Figure 3.6.4 Stormwater Planter CD**



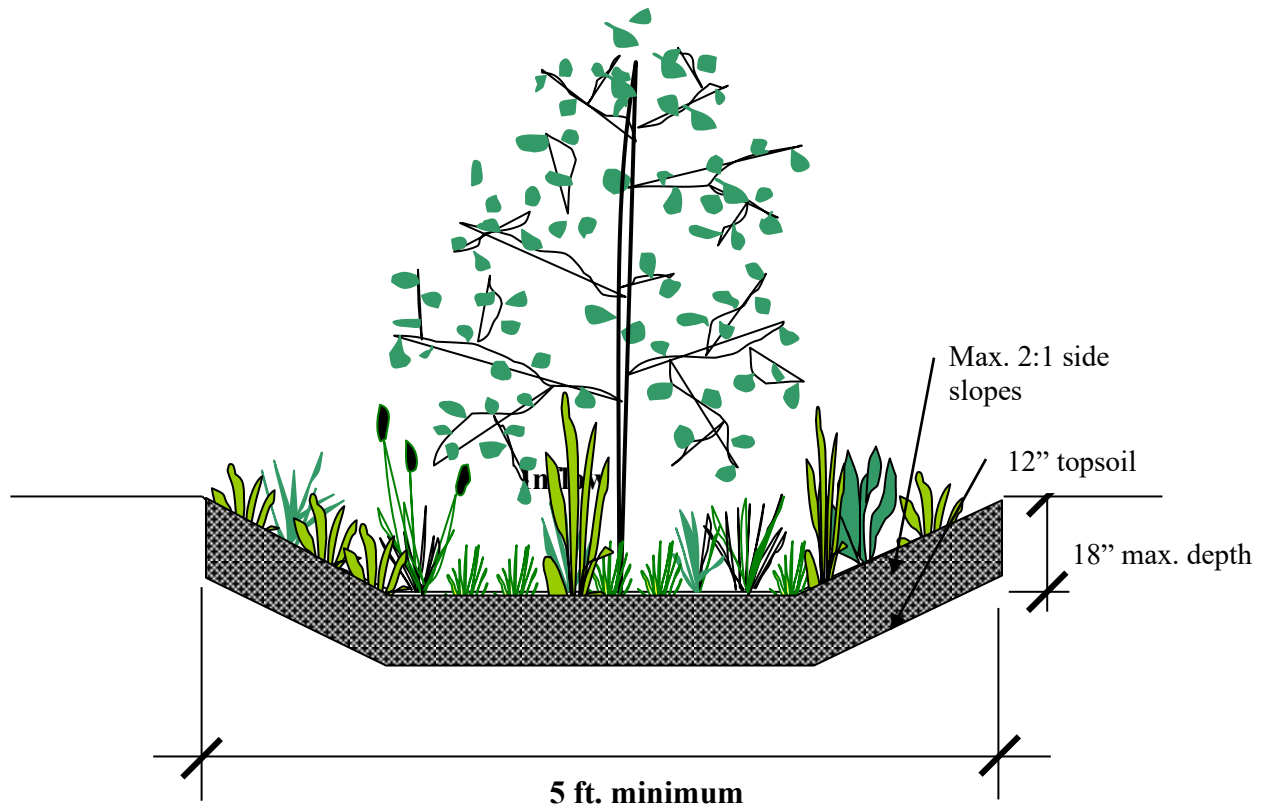
Description

Planter CD is designed with an impervious bottom or is placed on an impervious surface. Pollutant reduction is achieved as the water filters through the soil; flow control is obtained by storing the water in a reservoir above the soil. (Nominal infiltration can be allowed if soils and other geotechnical issues are addressed by a qualified professional.) This planter can be used adjacent to a building with OPDR approval. This planter could be included in setback if less than 30 inches in height (above finished grade)

General specifications (Acceptable soil types C & D)

There are numerous design variations allowed for these planters. The planters shall be designed to hold water for no more than 3-4 hours after an average storm event. Plantings shall be in accordance with Chapter 3.6 and be appropriate for moist and seasonally dry conditions, and can include rushes, reeds, sedges, iris, dogwood, currants, and numerous other shrubs, trees, and herbs/grasses. Minimum planter width is 18"; there is no minimum length or required shape. Topsoil shall have infiltration rate of 2"/hr. Sand/gravel shall have a minimum infiltration rate of 5"/hr. The structural elements of the planters shall be stone, concrete, brick, wood, or other durable material. Treated wood shall not leach out any toxic chemicals. Planter CD is contained and thus is not designed to drain into the ground near a building. Irrigation is optional, although plant viability shall be maintained.

Simplified Approach Design Criteria - Figure 3.6.5 Landscape Infiltration



Section Not to Scale

Description

Landscape infiltration areas can be integrated into the site design and required landscaping. The design can be formal or informal in character. The system works by holding runoff and allowing pollutants to settle as the water infiltrates. Flow and volume are also managed with these facilities.

General specifications (Acceptable soil types A & B)

These facilities are appropriate for soils with a minimum infiltration rate of 2 inches per hour. Facility storage depth may vary from 6- 18" maximum. Maximum side slopes are 2H: 1V. Minimum bottom width is 3 ft. Landscape may include a variety of trees, shrubs, grasses, and groundcover appropriate for periodic inundation. Plantings shall be in accordance with Chapter 3.3 requirements. Depending on Soil type & condition this facility may provide disposal as well as treatment. OPDR approval required for disposal method

Chapter 3.7 - Sensitive Lands

Sections

- 3.7.1** Flood Hazard
- 3.7.2** Requirements for Riparian Corridors
- 3.7.3** Requirements for Wetlands
- 3.7.4** Requirements for Slope Hazard Areas

3.7.1 Flood Hazard.

A. Statutory Authorization.

The State of Oregon has in ORS 197.175 delegated the responsibility to local governmental units to adopt floodplain management regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the City of Detroit does ordain as follows:

B. Findings Of Fact.

1. The flood hazard areas of City of Detroit are subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.
2. These flood losses may be caused by the cumulative effect of obstructions in special flood hazard areas which increase flood heights and velocities, and when inadequately anchored, cause damage in other areas. Uses that are inadequately floodproofed, elevated, or otherwise protected from flood damage also contribute to flood loss.

C. Statement Of Purpose.

It is the purpose of this ordinance to promote public health, safety, and general welfare, and to minimize public and private losses due to flooding in flood hazard areas by provisions designed to:

1. Protect human life and health,
2. Minimize expenditure of public money for costly flood control projects,
3. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public,
4. Minimize prolonged business interruptions,
5. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone lines, sewer lines, streets, and bridges located in special flood hazard areas;
6. Help maintain a stable tax base by providing for the sound use and development of flood hazard areas so as to minimize blight areas caused by flooding,
7. Notify potential buyers that the property is in a special flood hazard area,
8. Notify those who occupy special flood hazard areas that they assume responsibility for their actions, and
9. Participate in and maintain eligibility for flood insurance and disaster relief.

D. Methods Of Reducing Flood Losses.

In order to accomplish its purposes, this ordinance includes methods and provisions for:

1. Restricting or prohibiting development which is dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities,
2. Requiring that development vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction,
3. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters,
4. Controlling filling, grading, dredging, and other development which may increase

- flood damage, and
5. Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or may increase flood hazards in other areas.

E. Definitions.

Unless specifically defined below, words or phrases used in this ordinance shall be interpreted with the meaning they have in common usage.

Appeal: A request for a review of the interpretation of any provision of this ordinance or a request for a variance.

Area of special flood hazard: The land in the floodplain within a community subject to a 1 percent or greater chance of flooding in any given year. It is shown on the Flood Insurance Rate Map (FIRM) as Zone A, AO, AH, A1-30, AE, A99, AR. "Special flood hazard area" is synonymous in meaning and definition with the phrase "area of special flood hazard".

Base flood: The flood having a one percent chance of being equaled or exceeded in any given year.

Base flood elevation (BFE): The elevation to which floodwater is anticipated to rise during the base flood.

Basement: Any area of the building having its floor subgrade (below ground level) on all sides.

Development: Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

Flood or Flooding:

- (a) A general and temporary condition of partial or complete inundation of normally dry land areas from:
 - a. The overflow of inland or tidal waters.
 - b. The unusual and rapid accumulation or runoff of surface waters from any source.
 - c. Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in paragraph (1)(b) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.
- (b) The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (1)(a) of this definition.

Flood elevation study: See "Flood Insurance Study".

Flood Insurance Rate Map (FIRM): The official map of a community, on which the Federal Insurance Administrator has delineated both the special hazard areas and the risk

premium zones applicable to the community. A FIRM that has been made available digitally is called a Digital Flood Insurance Rate Map (DFIRM).

Flood Insurance Study (FIS): An examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards.

Flood proofing: Any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate risk of flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents.

Floodway: The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. Also referred to as "Regulatory Floodway."

Functionally dependent use: A use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, and does not include long term storage or related manufacturing facilities.

Highest adjacent grade: The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

Historic structure: Any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
2. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
3. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or
4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 - a. By an approved state program as determined by the Secretary of the Interior or
 - b. Directly by the Secretary of the Interior in states without approved programs.

Lowest floor: The lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance.

Manufactured dwelling: A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured dwelling" does not include a "recreational vehicle" and is synonymous with "manufactured home".

Manufactured dwelling park or subdivision: A parcel (or contiguous parcels) of land divided into two or more manufactured dwelling lots for rent or sale.

Mean sea level: For purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which Base Flood Elevations shown on a community's Flood Insurance Rate Map are referenced.

New construction: For floodplain management purposes, "new construction" means structures for which the "start of construction" commenced on or after the effective date of a floodplain management regulation adopted by City of Detroit and includes any subsequent improvements to such structures.

Recreational vehicle: A vehicle which is:

1. Built on a single chassis;
2. 400 square feet or less when measured at the largest horizontal projection;
3. Designed to be self-propelled or permanently towable by a light duty truck; and
4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Special flood hazard area: See "Area of special flood hazard" for this definition.

Start of construction: Includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days from the date of the permit. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured dwelling on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Structure: For floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured dwelling.

Substantial damage: Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial improvement: Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the

- local code enforcement official and which are the minimum necessary to assure safe living conditions; or
2. Any alteration of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure."

Variance: A grant of relief by City of Detroit from the terms of a flood plain management regulation.

Violation: The failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this ordinance is presumed to be in violation until such time as that documentation is provided.

F. Lands To Which This Ordinance Applies and Basis for Establishing the Special Flood Hazard Areas.

This ordinance shall apply to all special flood hazard areas within the jurisdiction of the City of Detroit. The special flood hazard areas identified by the Federal Insurance Administrator in a scientific and engineering report entitled "The Flood Insurance Study (FIS) for "Marion County, Oregon and Incorporated Areas", dated 10/18/2019, with accompanying Flood Insurance Rate Maps (FIRMs) 41047CIND1B, 41047CIND2B, and 41047C1060G are hereby adopted by reference and declared to be a part of this ordinance. The FIS and FIRM panels are on file at the City of Detroit City Hall PO BOX 589 Detroit OR 97342.

G. Coordination With State Of Oregon Specialty Codes.

Pursuant to the requirement established in ORS 455 that the City of Detroit administers and enforces the State of Oregon Specialty Codes, the City of Detroit does hereby acknowledge that the Oregon Specialty Codes contain certain provisions that apply to the design and construction of buildings and structures located in special flood hazard areas. Therefore, this ordinance is intended to be administered and enforced in conjunction with the Oregon Specialty Codes.

H. Compliance And Penalties for Noncompliance.

All development within special flood hazard areas is subject to the terms of this ordinance and required to comply with its provisions and all other applicable regulations.

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this ordinance and other applicable regulations. Violations of the provisions of this ordinance by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a Class 1 Penalty within Chapter DDC 1.4.4. Nothing contained herein shall prevent the City of Detroit from taking such other lawful action as is necessary to prevent or remedy any violation.

I. Abrogation and Severability.

This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

This ordinance and the various parts thereof are hereby declared to be severable. If any section clause, sentence, or phrase of the Ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, then said holding shall in no way effect the validity of the remaining portions of this Ordinance.

J. Interpretation.

In the interpretation and application of this ordinance, all provisions shall be:

1. Considered as minimum requirements;
2. Liberally construed in favor of the governing body; and
3. Deemed neither to limit nor repeal any other powers granted under state statutes.

K. Warning and Disclaimer of Liability.

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages.

This ordinance shall not create liability on the part of the City of Detroit, any officer or employee thereof, or the Federal Insurance Administrator for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

L. Designation of The Floodplain Administrator and Their Duties.

The City of Detroit Floodplain Administrator is hereby appointed to administer, implement, and enforce this ordinance by granting or denying development permits in accordance with its provisions. The Floodplain Administrator may delegate authority to implement these provisions.

Duties of the floodplain administrator, or their designee, shall include, but not be limited to review of all development permits to determine that:

1. The permit requirements of this ordinance have been satisfied;
2. All other required local, state, and federal permits have been obtained and approved;
3. Provide to building officials the elevation requirement (Base Flood Elevation (BFE) plus 1 foot of freeboard) applicable to any building requiring a development permit when BFEs are provided by FEMA or available from another source;
4. Review all development permit applications to determine if the proposed development qualifies as a substantial improvement as defined in Chapter 3.7 Section 1(E).
5. Review all development permits to determine if the proposed development activity is a watercourse alteration. If a watercourse alteration is proposed, ensure compliance with the provisions in Chapter 3.7 Section 1(R)(1); and

6. Review all development permits to determine if the proposed development activity includes the placement of fill or excavation.

M. Information to Be Obtained and Maintained.

The following information shall be obtained and maintained and shall be made available for public inspection as needed:

1. Obtain, record, and maintain the actual elevation (in relation to mean sea level) of the lowest floor (including basements) and all attendant utilities of all new or substantially improved structures where Base Flood Elevation (BFE) data is provided through the Flood Insurance Study (FIS), Flood Insurance Rate Map (FIRM), or obtained in accordance with section Chapter 3.7 Section 1(R)(8).
2. Obtain and record the elevation (in relation to mean sea level) of the natural grade of the building site for a structure prior to the start of construction and the placement of any fill and ensure that the requirements of section Chapter 3.7 Section 1(L)(2) are adhered to.
3. Upon placement of the lowest floor of a structure (including basement) but prior to further vertical construction, obtain documentation, prepared and sealed by a professional licensed surveyor or engineer, certifying the elevation (in relation to mean sea level) of the lowest floor (including basement).
4. Where base flood elevation data are utilized, obtain As-built certification of the elevation (in relation to mean sea level) of the lowest floor (including basement) prepared and sealed by a professional licensed surveyor or engineer, prior to the final inspection.
5. Maintain all Elevation Certificates (EC) submitted to the community;
6. Obtain, record, and maintain the elevation (in relation to mean sea level) to which the structure and all attendant utilities were floodproofed for all new or substantially improved floodproofed structures where allowed under this ordinance and where Base Flood Elevation (BFE) data is provided through the FIS, FIRM, or obtained in accordance with Chapter 3.7 Section 1(R)(8).
7. Maintain all floodproofing certificates required under this ordinance;
8. Record and maintain all variance actions, including justification for their issuance;
9. Record and maintain all Substantial Improvement and Substantial Damage calculations and determinations as required under Chapter 3.7 Section 1(O).
10. Maintain for public inspection all records pertaining to the provisions of this ordinance.

N. Requirement to Notify Other Entities and Submit New Technical Data.

1. Community Boundary Alterations.

The Floodplain Administrator shall notify the Federal Insurance Administrator in writing whenever the boundaries of the community have been modified by annexation or the community has otherwise assumed authority or no longer has authority to adopt and enforce floodplain management regulations for a particular area, to ensure that all Flood Hazard Boundary Maps (FHBM) and Flood Insurance Rate Maps (FIRM) accurately represent the community's boundaries. Include within such notification a copy of a map of the community suitable for reproduction, clearly delineating the new corporate limits or new area for which the community has assumed or relinquished floodplain management regulatory authority.

2. Watercourse Alterations.

Notify adjacent communities, the Department of Land Conservation and Development, and other appropriate state and federal agencies, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration. This notification shall be provided by the applicant to the Federal Insurance Administration as a Letter of Map Revision (LOMR) along with either:

- a. A proposed maintenance plan to assure the flood carrying capacity within the altered or relocated portion of the watercourse is maintained; or
- b. Certification by a registered professional engineer that the project has been designed to retain its flood carrying capacity without periodic maintenance.

The applicant shall be required to submit a Conditional Letter of Map Revision (CLOMR) when required under Chapter 3.7 Section 1(N)(3). Ensure compliance with all applicable requirements in Chapter 3.7 Section 1(N)(3) and Chapter 3.7 Section 1(R)(1).

3. Requirement to Submit New Technical Data.

A community's base flood elevations may increase or decrease resulting from physical changes affecting flooding conditions. As soon as practicable, but not later than six months after the date such information becomes available, a community shall notify the Federal Insurance Administrator of the changes by submitting technical or scientific data in accordance with Title 44 of the Code of Federal Regulations (CFR), Section 65.3. The community may require the applicant to submit such data and review fees required for compliance with this section through the applicable FEMA Letter of Map Change (LOMC) process.

The Floodplain Administrator shall require a Conditional Letter of Map Revision prior to the issuance of a floodplain development permit for proposed development which increases the base flood elevation by more than one foot in areas where base flood elevation data is available but there is no mapped regulatory floodway.

An applicant shall notify FEMA within six (6) months of project completion when an applicant has obtained a Conditional Letter of Map Revision (CLOMR) from FEMA. This notification to FEMA shall be provided as a Letter of Map Revision (LOMR).

O. Substantial Improvement and Substantial Damage Assessments and Determinations.

The Floodplain Administrator or their designee shall conduct Substantial Improvement (SI) (as defined in Chapter 3.7 Section 1(E)) reviews for all structural development proposal applications and maintain a record of SI calculations within permit files in accordance with Chapter 3.7 Section 1(M). Conduct Substantial Damage (SD) (as defined in Chapter 3.7 Section 1(E)) assessments when structures are damaged due to a natural hazard event or other causes. The Floodplain Administrator or their designee shall also make SD determinations whenever structures within the special flood hazard area (as established in Chapter 3.7 Section 1(F)) are damaged to the extent that the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

P. Establishment of Development Permit.

1. Floodplain Development Permit Required.

A development permit shall be obtained before construction or development begins within any area horizontally within the special flood hazard area established in Chapter 3.7 Section 1(F). The development permit shall be required for all structures, including manufactured dwellings, and for all other development, as defined in section Chapter 3.7 Section 1(E), including fill and other development activities.

2. Application For Development Permit.

Application for a development permit may be made on forms furnished by the Floodplain Administrator and may include, but not be limited to, plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically the following information is required:

- a. In riverine flood zones, the proposed elevation (in relation to mean sea level), of the lowest floor (including basement) and all attendant utilities of all new and substantially improved structures; in accordance with the requirements of Chapter 3.7 Section 1(M).
- b. Proposed elevation in relation to mean sea level to which any non-residential structure will be floodproofed.
- c. Certification by a registered professional engineer or architect licensed in the State of Oregon that the floodproofing methods proposed for any non-residential structure meet the floodproofing criteria for non-residential structures in Chapter 3.7 Section 1(T)(3).
- d. Description of the extent to which any watercourse will be altered or relocated.
- e. Base Flood Elevation data for subdivision proposals or other development when required per Chapter 3.7 Section 1(L and R(7)).
- f. Substantial improvement calculation for any improvement, addition, reconstruction, renovation, or rehabilitation of an existing structure.
- g. The amount and location of any fill or excavation activities proposed.

Q. Variance Procedure.

The issuance of a variance is for floodplain management purposes only. Flood insurance premium rates are determined by federal statute according to actuarial risk and will not be modified by the granting of a variance.

1. Conditions For Variances.

- a. Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, in conformance with the provisions of Chapter 3.7 Section 1 (Q)(1)(d), and .(2)). As the lot size increases beyond one-half acre, the technical justification required for issuing a variance increases.
- b. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- c. Variances shall only be issued upon:

- i. A showing of good and sufficient cause;
 - ii. A determination that failure to grant the variance would result in exceptional hardship to the applicant;
 - iii. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing laws or ordinances.
- d. Variances may be issued by a community for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that the criteria of Chapter 3.7 Section 1(Q)(1)(b) and(c)) are met, and the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

2. Variance Notification.

Any applicant to whom a variance is granted shall be given written notice that the issuance of a variance to construct a structure below the Base Flood Elevation will result in increased premium rates for flood insurance and that such construction below the base flood elevation increases risks to life and property. Such notification and a record of all variance actions, including justification for their issuance shall be maintained in accordance with Chapter 3.7 Section 1(M).

R. General Standards for Flood Hazard Reduction.

In all special flood hazard areas, the following standards shall be adhered to:

1. Alteration of Watercourses.

Require that the flood carrying capacity within the altered or relocated portion of said watercourse is maintained. Require that maintenance is provided within the altered or relocated portion of said watercourse to ensure that the flood carrying capacity is not diminished. Require compliance with Chapter 3.7 Section 1(N(2) and N(3)).

2. Anchoring.

- a. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
- b. All manufactured dwellings shall be anchored per Chapter 3.7 Section 1(T)(4).

3. Construction Materials and Methods.

- a. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- b. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

4. Water Supply, Sanitary Sewer, and On-Site Waste Disposal Systems.

- a. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
- b. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the

systems into flood waters.

- c. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding consistent with the Oregon Department of Environmental Quality.

5. Electrical, Mechanical, Plumbing, and Other Equipment.

Electrical, heating, ventilating, air-conditioning, plumbing, duct systems, and other equipment and service facilities shall be elevated at or above the base flood level plus 1 foot or shall be designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during conditions of flooding. In addition, electrical, heating, ventilating, air-conditioning, plumbing, duct systems, and other equipment and service facilities replaced as part of a substantial improvement shall meet all the requirements of this section.

6. Tanks.

- a. Underground tanks shall be anchored to prevent flotation, collapse and lateral movement under conditions of the base flood.
- b. Above-ground tanks shall be installed at or above the base flood level plus 1 foot or shall be anchored to prevent flotation, collapse, and lateral movement under conditions of the base flood.

7. Subdivision Proposals and Other Proposed Developments.

- a. All new subdivision proposals and other proposed new developments (including proposals for manufactured dwelling parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, shall include within such proposals, Base Flood Elevation data.
- b. All new subdivision proposals and other proposed new developments (including proposals for manufactured dwelling parks and subdivisions) shall:
 - i. Be consistent with the need to minimize flood damage.
 - ii. Have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage.
 - iii. Have adequate drainage provided to reduce exposure to flood hazards.

8. Use of Other Base Flood Elevation Data.

When Base Flood Elevation data has not been provided in accordance with Chapter 3.7 Section 1(F) the local floodplain administrator shall obtain, review, and reasonably utilize any Base Flood Elevation data available from a federal, state, or other source, in order to administer Chapter 3.7 Section 1(R-T). All new subdivision proposals and other proposed new developments (including proposals for manufactured dwelling parks and subdivisions) must meet the requirements of Chapter 3.7 Section 1(R)(7).

Base Flood Elevations shall be determined for development proposals that are 5 acres or more in size or are 50 lots or more, whichever is lesser in any A zone that does not have an established base flood elevation. Development proposals located within a

riverine unnumbered A Zone shall be reasonably safe from flooding; the test of reasonableness includes use of historical data, high water marks, FEMA provided Base Level Engineering data, and photographs of past flooding, etc... where available. To ensure the development is reasonably safe from flooding the elevation requirement and dry floodproofing requirement must be a minimum of two (2) feet above the highest adjacent grade. Failure to elevate at least two feet above grade in these zones may result in higher flood insurance rates.

9. Structures Located in Multiple or Partial Flood Zones.

In coordination with the State of Oregon Specialty Codes:

- a. When a structure is located in multiple flood zones on the community's Flood Insurance Rate Maps (FIRM) the provisions for the more restrictive flood zone shall apply.
- b. When a structure is partially located in a special flood hazard area, the entire structure shall meet the requirements for new construction and substantial improvements.

S. Specific Standards for Flood Hazard Reduction in Riverine (Including All Non-Coastal) Flood Zones.

These specific standards shall apply to all new construction, substantial improvements, and changes in use, in addition to the General Standards contained in Chapter 3.7 Section 1(R) of this ordinance.

1. Flood Openings.

All new construction and substantial improvements with fully enclosed areas below the lowest floor (excluding basements) are subject to the following requirements.

Enclosed areas below the Base Flood Elevation, including crawl spaces shall:

- a. Be designed to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters;
- b. Be used solely for parking, storage, or building access;
- c. Be certified by a registered professional engineer or architect or meet or exceed all of the following minimum criteria:
 - i. A minimum of two openings,
 - ii. The total net area of non-engineered openings shall be not less than one (1) square inch for each square foot of enclosed area, where the enclosed area is measured on the exterior of the enclosure walls,
 - iii. The bottom of all openings shall be no higher than one foot above grade.
 - iv. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they shall allow the automatic flow of floodwater into and out of the enclosed areas and shall be accounted for in the determination of the net open area.
 - v. All additional higher standards for flood openings in the State of Oregon Residential Specialty Codes Section R322.2.2 shall be complied with when applicable.

2. Garages.

- a. Attached garages may be constructed with the garage floor slab below the Base

Flood Elevation (BFE) in riverine flood zones, if the following requirements are met:

- i. The floors are at or above grade on not less than one side;
 - ii. The garage is used solely for parking, building access, and/or storage;
 - iii. The garage is constructed with flood openings in compliance with section **S.1** to equalize hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwater.
 - iv. The portions of the garage constructed below the BFE are constructed with materials resistant to flood damage;
 - v. The garage is constructed in compliance with the standards in Chapter 3.7 Section 1(R); and
 - vi. The garage is constructed with electrical, and other service facilities located and installed so as to prevent water from entering or accumulating within the components during conditions of the base flood.
- b. Detached garages must be constructed in compliance with the standards for appurtenant structures in Chapter 3.7 Section 1(T)(6) or non-residential structures in Chapter 3.7 Section 1(T)(3) depending on the square footage of the garage.

T. Standards For Flood Hazard Reduction in Riverine (Non-Coastal) Special Flood Hazard Areas with Base Flood Elevations.

In addition to the general standards listed in Chapter 3.7 Section 1(R) the following specific standards shall apply in Riverine (non-coastal) special flood hazard areas with Base Flood Elevations (BFE): AE Zones or when other BFE data is available per Chapter 3.7 Section 1(Q)(8).

1. Before Regulatory Floodway.

In areas mapped as Zone AE, where a regulatory floodway has not been designated, no new construction, substantial improvement, or other development (including fill) shall be permitted within Zone AE on the community's Flood Insurance Rate Map (FIRM), unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

2. Residential Construction.

- a. New construction, conversion to, and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated at or above the Base Flood Elevation (BFE) plus one (1) foot.
- b. Enclosed areas below the lowest floor shall comply with the flood opening requirements in Chapter 3.7 Section 1(S)(1).

3. Non-Residential Construction.

- a. New construction, conversion to, and substantial improvement of any commercial, industrial, or other non-residential structure shall:
 - i. Have the lowest floor, including basement elevated at or above the Base Flood Elevation (BFE) plus one (1) foot;
 - ii. Or, together with attendant utility and sanitary facilities:

- a) Be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;
 - b) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
 - c) Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this section based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the Floodplain Administrator as set forth Chapter 3.7 Section 1 (M).
 - b. Non-residential structures that are elevated, not floodproofed, shall comply with the standards for enclosed areas below the lowest floor in Chapter 3.7 Section 1(S)(1).
 - c. Applicants floodproofing non-residential buildings shall be notified that flood insurance premiums will be based on rates that are one (1) foot below the floodproofed level (e.g. a building floodproofed to the base flood level will be rated as one (1) foot below).
4. **Manufactured Dwellings.**
- a. Manufactured dwellings to be placed (new or replacement) or substantially improved that are supported on solid foundation walls shall be constructed with flood openings that comply with Chapter 3.7 Section 1(S)(1);
 - b. The bottom of the longitudinal chassis frame beam shall be at or above Base Flood Elevation;
 - c. Manufactured dwellings to be placed (new or replacement) or substantially improved shall be anchored to prevent flotation, collapse, and lateral movement during the base flood. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques), and;
 - d. Electrical crossover connections shall be a minimum of twelve (12) inches above Base Flood Elevation (BFE).
5. **Recreational Vehicles.**
- Recreational vehicles placed on sites are required to:
- a. Be on the site for fewer than 180 consecutive days, and
 - b. Be fully licensed and ready for highway use, on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or
 - c. Meet the requirements of Chapter 3.7 Section 1(T)(4), including the anchoring and elevation requirements for manufactured dwellings.
6. **Appurtenant (Accessory) Structures.**
- Relief from elevation or floodproofing requirements for residential and non-residential structures in Riverine (Non-Coastal) flood zones may be granted for appurtenant structures that meet the following requirements:

- a. Appurtenant structures must only be used for parking, access, and/or storage and shall not be used for human habitation;
- b. In compliance with State of Oregon Specialty Codes, appurtenant structures on properties that are zoned residential are limited to one-story structures less than 200 square feet, or 400 square feet if the property is greater than two (2) acres in area and the proposed appurtenant structure will be located a minimum of 20 feet from all property lines.
Appurtenant structures on properties that are zoned as non-residential are limited in size to 120 square feet.
- c. The portions of the appurtenant structure located below the Base Flood Elevation must be built using flood resistant materials;
- d. The appurtenant structure must be adequately anchored to prevent flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the base flood.
- e. The appurtenant structure must be designed and constructed to equalize hydrostatic flood forces on exterior walls and comply with the requirements for flood openings in Chapter 3.7 Section 1(S)(1);
- f. Appurtenant structures shall be located and constructed to have low damage potential;
- g. Appurtenant structures shall not be used to store toxic material, oil, or gasoline, or any priority persistent pollutant identified by the Oregon Department of Environmental Quality unless confined in a tank installed in compliance with Chapter 3.7 Section 1(R)(6).
- h. Appurtenant structures shall be constructed with electrical, mechanical, and other service facilities located and installed so as to prevent water from entering or accumulating within the components during conditions of the base flood.

3.7.2 Requirements for Riparian Corridors.

A. **Purpose and Intent.** The purpose of this ordinance is to protect and restore water bodies and their associated riparian areas, in order to protect and restore the multiple social and environmental functions and benefits these areas provide individual property owners, communities, and the watershed. The ordinance is based on the “safe harbor” approach as defined in Oregon Administrative Rules 660-23-0090(5) and (8). Specifically, this ordinance is intended to:

- 1. Protect habitat for fish and other aquatic life,
- 2. Protect habitat for wildlife,
- 3. Protect water quality for human uses and aquatic life,
- 4. Protect any associated wetlands,
- 5. Control erosion and limit sedimentation,
- 6. Promote recharge of shallow aquifers,

7. Provide a stream “right of way” to accommodate lateral migration of the channel and protect the stream and adjacent properties,
8. Reduce the effects of flooding,
9. Reserve space for storm water management facilities, other utilities, and linear parks, and
10. Minimize the economic impact to affected property owners.

The intent of the ordinance is to meet these goals by modifying the location, but not the intensity of development, where possible. 3.7 Section2 excludes new structures from buffer areas established around fish-bearing streams, Detroit Lake and any adjacent wetland in Detroit. Chapter 3.7 Section 2 does not prohibit the replacement of preexisting structures from buffer areas. The ordinance establishes a preference for native vegetation in the buffers. For cases where buffer establishment creates a hardship for individual property owners, Chapter 3.7 Section 2 provides a procedure to apply for a variance or generate density credits. Changes to the buffer width shall be offset by appropriate restoration or mitigation, as stipulated in this section.

B. Definitions.

Conservation easement: an option available to the local landowner that conditions the use of the buffer and provides perpetual protection for the resource. The landowner has the option of donating the easement to a land trust as a charitable contribution to reduce the owner’s income tax burden or donating it to a local government for reduction or elimination of property tax on the parcel.

Density Compensation: a process to grant a developer of a subdivision or planned unit development compensation for developable land that has been lost due to the buffer requirement.

Density Credit: Means granting a developer proposing a subdivision or planned unit development a credit when more than 5 percent of the developable land is consumed by the buffer. Credits are calculated using Table 1. The density credit is accommodated at the development site by allowing greater flexibility in the setbacks, frontage distances or minimum lot sizes.

**Table 1
Density Credit Calculations**

Percent of site lost to buffers	Density credit*
5.1 to 50 percent	1.0 unit
51 to 70**	1.0 unit
71 to 100**	2.0 units

*Additional dwelling units allowed over base density

**Credit may be transferred to a different parcel

Fish Use: streams or lakes inhabited at any time of the year by anadromous or game fish species or fish that are listed as threatened or endangered species under the federal or state endangered species acts. Fish use is determined from the natural resources inventory in the comprehensive plan.

Impervious Surface: any material that reduces and prevents absorption of storm water into previously undeveloped land.

Lawn: grass or similar materials maintained as a ground cover of less than six (6) inches in height. For purposes of this ordinance, lawn is not considered native vegetation regardless of the species used. Annual or biannual mowing of native grasses, as a part of a vegetation management plan to prevent the incursion of undesirable non-native weed species is allowed.

Mitigation: includes taking one or more of the following actions listed in order of priority:

1. Avoiding the impact altogether by not taking a certain development action or part of that action;
2. Minimizing impacts by limiting the degree or magnitude of the development action and its implementation;
3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
4. Reducing or eliminating the impact over time by preservation and maintenance operation during the life of the development action by monitoring and taking appropriate corrective measures;
5. Compensating for the impact by replacing or providing comparable substitute resources or environments.

Net Loss: a permanent loss of habitat units or habitat value resulting from a development action despite mitigation measures taken.

Nonconforming: a structure or use that does not conform to the standards of this section but has been in continuous existence from before the date of adoption of this ordinance up to the present. Nonconforming uses are not considered violations and are generally allowed to continue, though expansion, re-construction, or substantial improvement may be regulated.

Off-Site Mitigation: habitat mitigation measures undertaken in areas distant from a development action that are intended to benefit fish and wildlife populations other than those directly affected by that action.

On-Site Mitigation: habitat measures undertaken within or in proximity to areas affected by a development action that are intended to benefit fish and wildlife populations directly affected by that action.

Riparian Area: the area adjacent to a river, lake, stream, or wetland, consisting of the area of transition from an aquatic ecosystem to a terrestrial ecosystem.

Riparian Buffer: a zone within the riparian area where placement of new structures, surficial alteration and disturbance, and vegetation removal, is limited or prohibited in order to preserve the environmental and social benefits of the riparian area.

Riparian Corridor: includes the water areas, fish habitat, adjacent riparian areas, and wetlands within the riparian area boundary. The riparian corridor for the City of Detroit shall extend from Detroit Lake's maximum conservation pool elevation of 1,563.5 feet NGVD landward, to the edge of the U.S. Corps of Engineers land or a maximum of 50 feet from the 1,563.5 feet pool elevation, whichever is less.

Stream: a channel such as a river or creek that carries flowing surface water including perennial and intermittent streams with defined channels, and excluding fabricated irrigation and drainage

channels. A stream subsequently channelized or altered by other fabricated impacts, or used for irrigation or drainage purposes is still considered a stream.

Structure: a building or other major improvement that is built, constructed or installed, not including minor improvements, such as utility poles, flagpoles, or irrigation system components, that are not customarily regulated through zoning ordinances.

Substantial Improvement: any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure:

1. Before the improvement or repair is started, or
2. If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition, “substantial improvement” is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

The term, however, does not include either:

1. Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specification which are solely necessary to assure safe living conditions, or
2. Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

Top of Bank: Means the stage or elevation at which water overflows the natural banks of streams or other water of the state, and begins to inundate the upland areas. In absence of physical evidence, the two-year, recurrence interval flood elevation may be used to approximate the bankfull stage or delineate the top of bank. For land along Detroit Lake, top of bank is maximum conservation pool elevation, 1563.5 feet NGVD.

C. Identifying Riparian Areas and Establishing the Location of the Riparian Buffer.

1. The natural resources inventory contained in the Comprehensive Plan specifies which streams are fish-bearing and the stream-size category. Based on the classification contained in this inventory, the following protected riparian corridors shall be established:
 - a. Detroit Lake shall have a buffer of 50 feet from the top of bank (maximum conservation pool elevation) and on either side of bank, except as identified below.
 - b. Where the riparian buffer includes all or portion of a significant wetland as identified in the Natural Resources Element of the Comprehensive Plan or by on-site investigation, the standard distance to establish the riparian buffer shall be measured from, and include, the upland edge of the wetland.
 - c. Except as provided for in Chapter 3.7 Section 2(C)(1c), the measurement of the distance to the protected riparian corridor boundary shall be from the top of the bank (maximum conservation pool elevation). The measurement shall be slope distance. In areas where the maximum conservation pool elevation is not clearly defined, the riparian buffer shall be measured from the line of non-aquatic vegetation.

- d. The requirement to establish a riparian buffer applies to land inside city limits and to land outside the city limits and inside the UGB upon annexation of such land.
- e. Water areas and wetlands identified in the Comprehensive Plan are shown on maps that may not have site-specific accuracy. Property owners who believe their properties lie outside the depicted riparian buffer can correct the map by submitting a survey, performed by a qualified surveyor (Professional Land Surveyor), to the local governing body. The survey must show the maximum conservation pool elevation of Detroit Lake on a parcel-based map; or where riparian corridors contain significant wetlands, the survey must show the upland edge of the wetland. Wetland delineations, if required, shall be prepared by a qualified environmental consultant and submitted to the Oregon Division of State Lands for review and approval before submittal to the city.

D. Protecting Riparian Resource by Managing Activities in the Riparian Buffer.

- 1. The permanent alteration of the riparian buffer by grading or by the placement of structures or impervious surfaces is prohibited except for the following uses, provided they are designed to avoid and minimize intrusion into the riparian area, and no other options or locations are feasible, and any applicable state and/or federal permits are obtained as required in Chapter 3.7 Section 2, (F).
 - a. Streets, roads, and paths;
 - b. Drainage facilities, utilities, and irrigation pumps;
 - c. Stormwater treatment facilities when they are located in severely degraded parts of the protected riparian corridor and designed to enhance overall function of the riparian resource (for example a grassy swale or constructed wetland with a buffer of native vegetation and that is located within previously farmed or cleared area).
 - d. Water-related and water-dependent uses (for example boat launch, fishing dock);
 - e. Replacement of existing structures with structures in the same location that do not disturb additional riparian surface area;
 - f. Structures or other nonconforming alterations existing fully or partially within the protected riparian corridor may be expanded provided the expansion does not occur within the riparian buffer. Substantial improvement of a nonconforming structure in the riparian buffer shall require compliance with the standards of this ordinance;
 - g. Existing lawn and non-native plantings within the riparian buffer may be maintained, but not expanded within the protected area. Development activities on the property shall not justify replacement of the riparian buffer area with lawn; and
 - h. Existing shoreline stabilization and flood control structures may be maintained.
- 2. Any expansion of existing structures or development of new structures shall be evaluated by the local government and appropriate natural resources agency staff e.g., Oregon Department of Fish and Wildlife, Division of State Lands, Department of Environmental Quality, Water Resources Department. Such alteration of the riparian buffer shall be approved only if less-invasive or nonstructural methods will not adequately meet the stabilization or flood control needs.

3. Removal of riparian vegetation in the buffer is prohibited, except for:
 - a. Removal of non-native vegetation and subsequent replacement with native plant species. The City of Detroit will provide a list of native and non-native plant species. The replacement vegetation shall cover, at a minimum, the area from which vegetation was removed, and shall maintain or exceed the density of the removed vegetation;
 - b. Removal of vegetation necessary for the development of approved water-related or water dependent uses. Vegetation removal shall be kept to the minimum necessary to allow the water-dependent or water-related use;
 - c. Trees in danger of falling and thereby posing a hazard to life or property may be removed, following consultation and approval from the City of Detroit and replanting with native species. If no hazard will be created, the city may require these trees, once felled, to be left in place in the protected riparian corridor; and
 - d. Incidental removal of vegetation associated with recreational, educational, scientific research and land survey activities.

E. Adjusting Riparian Buffers.

1. Permanent alteration of the riparian buffer by placement of structures or impervious surfaces within the riparian buffer, or placement of structures overhanging the riparian buffer on existing lots, or proposals to partition a lot, is allowed subject to approval of a variance granted under Chapter 3.7. Section 2(E)(5) and subject to the mitigation requirement of Chapter 3.7 Section 2 (E)(3):
2. Subdivisions and planned unit developments proposed after the adoption of this ordinance must conform to the buffer requirements but may apply for density credits to compensate for developable land that may be lost due to the buffer requirement.
 - a. A developer proposing a subdivision or planned unit development can get density credits when the buffer consumes more than 5 percent of the developable land by the buffer. Credits are calculated using Table 1 in Chapter 3.7 Section 2 (B)(3). The density credit is accommodated at the development site by allowing greater flexibility in the setbacks, frontage distances or minimum lot sizes but can be used off-site if on-site accommodation is not practical.
3. Proposals for development activities within the riparian buffer allowed in subsection E.1 will include proposed mitigation for unavoidable impacts and shall be reviewed by the Oregon Department of Fish and Wildlife (ODFW). The review and/or mitigation recommendation from ODFW shall be submitted with the application. For purposes of implementing Goal 5, the goal is no net loss of protected resources and no net loss of habitat values.
4. Variance. In cases where the application of the buffer is demonstrated to render an existing lot or parcel unbuildable, a property owner may request a variance to the riparian buffer. Granting of a variance requires findings that satisfy all three of the following criteria:
 - a. The proposed development requires deviation from the riparian buffer standards; and

- b. Strict adherence to the riparian buffer standard and other applicable standards would effectively preclude a use of the parcel that could be reasonably expected to occur in the zone, and
 - c. The property owner would be precluded a substantial property right enjoyed by the majority of landowners in the vicinity.
- 5. **Variance Applications.** The applicant shall provide sufficient information regarding the proposed development and potential impact to riparian resources. This information includes, but is not necessarily limited to:
 - a. A plot plan showing the top of the stream or waterbody bank, the riparian buffer, any wetlands, and any applicable setbacks;
 - b. The extent of development within the protected riparian corridor;
 - c. Uses that will occur within the protected riparian corridor and potential impacts (for example: chemical runoff, noise, etc.);
 - d. The extent of vegetation removal proposed;
 - e. Characteristics of existing vegetation (types, density);
 - f. Any proposed alterations of topography or drainage patterns,
 - g. Existing uses on the property and any potential impacts they could have on riparian resources, and
 - h. Proposed mitigation plan. The proposed mitigation plan should allow the ODFW to determine whether the proposal has minimized impacts to the riparian buffer and whether the proposed mitigation will provide equal or better protection of riparian resources.
- F. **Compliance with State and Federal Regulations.** All activities wholly or partially within riparian corridors are subject to applicable Division of State Lands permit requirements under the Removal-Fill Law and U.S. Army Corps of Engineers permit requirements under Section 404 of the Clean Water Act. Where there is a difference between local, state or federal regulations, the more restrictive regulations shall apply.
- G. **Violations.** Any activities within a riparian buffer not authorized under this ordinance are a violation. Violators shall be subject to the enforcement procedures pursuant to Chapter 1.4 of the Detroit Development Code. A violation of this ordinance shall be considered a separate offense for each day the violation continues.
- H. **Conflicts.** To best protect important functions and values of riparian buffers in the event that the requirements of this section conflict with other ordinance requirements, the city shall apply the requirements that best provide for the protection of the resource.
- G. **Severability.** The sections and subsections of this ordinance are severable. The invalidity of one section or subsection shall not affect the validity of the remaining sections, or permit approvals and prosecutions brought pursuant to this section.

3.7.3 Requirements for Wetlands.

A. **Purpose and Intent.** The purpose of this ordinance is to protect and restore wetlands and the multiple social and environmental functions and benefits these areas provide individual property owners, the community, and the watershed. The ordinance is based on the “safe harbor” approach as defined in Oregon Administrative Rules 660-23-00100(4)(b). Specifically, this ordinance is intended to:

1. Protect habitat for fish and other aquatic life,
2. Protect habitat for wildlife,
3. Protect water quality for human uses and aquatic life,
4. Control erosion and limit sedimentation,
5. Provide a stream “right of way” to accommodate lateral migration of the channel and protect the stream and adjacent properties,
6. Reduce the effects of flooding,
7. Promote recharge of shallow aquifers,
8. Provide opportunities for recreation and education,
9. Protect open space, and
10. Minimize the economic impact to affected property owners.

The intent of Chapter 3.7 Section 3 is to meet these goals by modifying the location, but not the intensity of development, where possible. The ordinance restricts filling, grading, excavation and vegetation removal in wetlands for their protection. The ordinance excludes new structures from wetlands in Detroit. The ordinance provides procedures for correcting map errors, for hardship variances, and for granting a variance for parcels that have no buildable site through application of this ordinance.

B. **Definitions.** As used in this ordinance the following words and phrases, unless the context otherwise requires, shall mean:

Functions and Values: Functions refer to the environmental roles served by wetlands and buffer areas including but not limited to water quality protection and enhancement, fish and wildlife habitat, flood storage, nutrient attenuation, and sediment trapping. Values refer to the qualities ascribed to a wetland such as educational and recreational opportunities, open space, and visual aesthetic qualities.

Mitigation: Includes taking one or more of the following actions listed in order of priority:

1. Avoiding the impact altogether by not taking a certain development action or part of that action;
2. Minimizing impacts by limiting the degree or magnitude of the development action and its implementation;
3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

4. Reducing or eliminating the impact over time by preservation and maintenance operation during the life of the development action by monitoring and taking appropriate corrective measures;
5. Compensating for the impact by replacing or providing comparable substitute resources or environments.

Restoration: To rehabilitate a previously drained or degraded wetland area by providing wetland hydrology, removing fill material, restoring native vegetation or other means of reestablishing wetland features.

Wetland: An area that is inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands identified in the City of Detroit Local Wetland Inventory include:

Locally Significant Wetlands: Wetlands that meet the state or local criteria for significance as described in Chapter 3.7 Section 3.

Other Regulated Wetlands: Wetlands identified in the local wetland inventory as not meeting the significance criteria described in Chapter 3.7 Section 3.

Possible Wetlands: Wetlands that are less than one half acre in size.

Wetland Delineation: A determination of wetland presence by a qualified professional that includes marking the wetland boundaries on the ground and/or on a detailed map prepared by a professional land survey or similar accurate methods.

C. Procedures for Identifying Significant Wetlands.

1. The wetland regulations contained in this ordinance apply to those wetlands identified and mapped as significant in the *City of Detroit Local Wetlands Inventory, Wetland Functional Assessment and Wetland Significance Determination*. Significance determination is based on criteria contained in OAR 141-86-300 through 350 as adopted by the Division of State Lands. The ordinance applies to wetlands inside city limits and to wetlands outside the city limits and inside the city's UGB upon annexation of such land.
2. Wetlands identified in the Comprehensive Plan are shown on maps that may not have site-specific accuracy.
 - a. Precise wetland boundaries may vary from those shown on the map. For any proposed development impacting a significant wetland or within 25 feet of an identified significant wetland, the applicant shall conduct a wetland delineation via a qualified professional and submit it to the Division of State Lands for review and approval. The more precise boundary obtained through a wetland delineation can be identified, mapped, and used for review and development without a change in the wetland inventory mapping.
 - b. Property owners who believe wetlands have been incorrectly mapped on their properties can correct the map by submitting written verification from the Division of State Lands that confirms that there are no wetlands on the property or determines the correct location of the wetlands.

D. Land Use and Permit Requirements.

1. **Permitted Uses.** The following uses are permitted within wetlands in the City of Detroit identified as locally significant. Applicable state and/or federal permits shall be obtained as required in Chapter 3.7 Section 3(D)(3).
 - a. Passive recreation activities that require no structures, such as bird watching, canoeing or nature walks.
 - b. Fishing or hunting consistent with state, local and federal law;
 - c. Educational uses or research.
 - d. Nature interpretive centers and wetland research facilities, when specified in or consistent with adopted plans or policies.
 - e. Construction of trails, boardwalks, viewing platforms, information kiosks, and trail signs.
 - f. Construction of bikeways and other paved pathways.
 - g. Wetland and waterway restoration.
 - h. Removal of vegetation using non-motorized hand tools.
 - i. Removal of non-native vegetation.
 - j. Removal of trees that are a hazard to life or structures.
 - k. Mowing grass to comply with local or state fire prevention requirements.
 - l. Planting or replanting with native plant species.
 - m. Channel maintenance to maintain stormwater conveyance and flood control capacity, as required by local policies, state and federal regulations, or intergovernmental agreements.
 - n. Emergency repairs by the city or other public agencies to protect life and property.
 - o. Compensatory mitigation required by state or federal permit.
 - p. Removal of fill material or any refuse that is in violation of local, state or federal regulations.
 - q. Maintenance of existing structures within the existing footprint of the structure.
 - r. Construction of access roads for maintenance of channels, wetlands and other natural resource areas.
 - s. Construction of discharge outlets for treated stormwater or wastewater.
2. **Prohibited Uses.** Within locally significant wetlands the following practices are prohibited unless specifically authorized under Chapter 3.7 Section 3 (D)(1):

- a. New development or expansion of existing development.
 - b. Placement of fill material, grading, or excavation.
 - c. Road construction.
 - d. Construction of stormwater or wastewater management or treatment facilities.
 - e. Construction of new septic drainfields.
 - f. Channelizing or straightening natural drainageways.
 - g. Storage or use of chemical pesticides, fertilizers, or other hazardous or toxic materials.
 - h. Clearing of trees and brush with motorized equipment including, but not limited to, chain saws and bulldozers.
3. **Compliance with State and Federal Regulations.** All activities wholly or partially within wetlands are subject to Division of State Lands permit requirements under the Removal-Fill Law and U.S. Army Corps of Engineers permit requirements under Section 404 of the Clean Water Act. Where there is a difference between local, state or federal regulations, the more restrictive regulations shall apply.
4. **Division of State Lands Notification Required.** The city shall provide notice to the Division of State Lands, the applicant and the owner of record, within five working days of the acceptance of any complete application for the following activities that are wholly or partially within areas identified as wetlands on the Local Wetlands Inventory or within 25 feet of such areas:
- (a) Subdivisions;
 - (b) Building permits for new structures;
 - (c) Other development permits and approvals that allow physical alteration of the land involving excavation and grading including permits for removal or fill, or both, or development in floodplains and floodways;
 - (d) Conditional use permits and variances that involve physical alterations to the land or construction of new structures; and
 - (e) Planned unit development approvals.
- a. This section does not apply if a permit from the Division of State Lands has been issued for the proposed activity.
 - b. City approval of any activity described in this section shall include one of the following notice statements:
 - i. Issuance of a permit under ORS 196.600 to 196.905 by the Division of State Lands required for the project before any physical alteration takes place within the wetlands;
 - ii. Notice from the Division of State Lands that no permit is required; or
 - iii. Notice from the Division of State Lands that no permit is required until specific proposals to remove, fill or alter the wetlands are submitted.

- c. If the Division of State Lands fails to respond to any notice provided under this section within 30 days of notice, the city approval may be issued with written notice to the applicant and the owner of record that the proposed action may require state or federal permits.
 - d. The city may issue local approval for parcels identified as or including wetlands on the Local Wetlands Inventory upon providing to the applicant and the owner of record of the affected parcel a written notice of the possible presence of wetlands and the potential need for state and federal permits and providing the Division of State Lands with a copy of the notification of comprehensive plan map or zoning map amendments for specific properties.
- E. **Appeals.** Any decision by the city on a land use application concerning the wetland protection requirements herein may be appealed to the City Council pursuant to Detroit's Development Code.
- F. **Variances.** In cases where the application of Chapter 3.7 Section 3 is demonstrated to render an existing lot or parcel unbuildable, a property owner may request a variance from the wetland protection requirements. Granting of a variance requires findings that satisfy all three of the following criteria:
 - 1. The proposed development requires deviation from the wetland protection requirements; and
 - 2. Strict adherence to the wetland protection requirements and other applicable standards would effectively preclude a use of the parcel that could be reasonably expected to occur in the zone, and
 - 3. The property owner would be precluded a substantial property right enjoyed by the majority of landowners in the vicinity.
- G. **Violations.** Any activities within a wetland not authorized under this ordinance are a violation. Violators shall be subject to the enforcement procedures pursuant to the Detroit Development Code. A violation of this ordinance shall be considered a separate offense for each day the violation continues.
- H. **Conflicts.** To best protect important functions and values of wetlands in the event that the requirements of this section conflict with other ordinance requirements, the city shall apply the requirements that best provide for the protection of the resource.
- I. **Severability.** The sections and subsections of Chapter 3.7 Section 3 are severable. The invalidity of one section or subsection shall not affect the validity of the remaining sections, or permit approvals and prosecutions brought pursuant to this section.

3.7.4 Requirements for Slope Hazard Areas.

- A. **Purpose.** It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to development within potential slope hazard areas by provisions designed:
 - 1. To protect human life and health;
 - 2. To minimize expenditure of public money and costly landslide control projects;

3. To minimize the need for rescue efforts associated with landslides and generally undertaken at the expense of the general public;
4. To minimize prolonged business interruptions;
5. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in slope hazard areas;
6. To help maintain a stable tax base by providing for the sound use and development within slope hazard areas;
7. To ensure that those who develop properties assume responsibility for their actions in areas with slope instability, erosion potential, and public safety concerns of steep slopes.

- B. Land to Which This Section Applies.** This ordinance shall apply to all slope areas as indicated on the Slope Map, Levels 2 (slopes of 10 percent to under 20 percent) and 3 (slopes of 20 percent or greater) or any locations on slopes or potentially affecting any slopes 10 percent or greater, for properties under the jurisdiction of the City of Detroit. Excavation locations potentially affecting existing steep slopes include but are not limited to: within 10 feet of the top of slope, within 30 feet of the toe of slope, and within formerly excavated portions of any existing steep slope.

The applicability of this subsection shall be reviewed by the City at the time of land use applications for land divisions (subdivisions and partitions), site developments, and any grading/excavating within a Level 2 or 3 slope area or any locations on slopes or potentially affecting any slopes in excess of 10 percent. The City shall make the final determination of this section's applicability to any potential grading being performed on properties under the jurisdiction of the City of Detroit. In all cases, the actual site conditions shall govern how this section applies to any potential grading being performed, not the Slope Map.

- C. Basis for Establishing the Areas of Special Slope Hazard Areas.** Levels 2 and 3 as indicated on the City's Slope Map (or as determined by actual site conditions) are determined potential slope hazard areas and the two higher levels are designated and standards provided to protect sloped areas that help define the character of the City. Areas within the slope hazard areas may be hazardous for development due to slope instability, erosion potential, and public safety concerns of steep slopes.
- D. Permit Required.** Approval of a grading permit shall be obtained before construction or development begins within any slope hazard areas established in Section B. The permit shall apply to land division (subdivision and partition), site development, and any grading/excavating within a Level 2 or 3 slope area or any locations on slopes or potentially affecting any slopes 10 percent or greater.

City staff or a City contracted and designated registered engineer shall review the application and required submittals for all application requiring approval under a land use application.

- E. Designation of the City of Detroit.** The City Council is hereby appointed to administer and implement this ordinance by granting or denying development permit applications in accordance with its provisions, unless the Planning Commission is deemed the review authority according to the land use application process.

F. Duties and Responsibilities of the City of Detroit. Duties of the City Council or the Planning Commission as its designee shall include, but not be limited to:

1. Land use applications

- a. Review of land use applications for land divisions (subdivisions and partitions), development, and any grading/excavating within areas to which this subsection applies to determine that the applicable regulations and standards of this ordinance (Development Code) have been satisfied.
- b. Review land use applications for land divisions (subdivisions and partitions), site development, and any grading/excavating within areas to which this subsection applies to determine that all necessary permits have been obtained from those Federal, State, or local governmental agencies from which prior approval is required.
- c. Review land use applications for land divisions (subdivisions and partitions), site development, and any grading/excavating within areas to which this subsection applies to determine if the proposed development is located into a slope hazard area, and which slope designation (Level 2 or 3) is appropriate for the development site. If located in a slope hazard area, verify that the owner/applicant complies with the applicable requirements of Development Code, Chapter 3.7 Section 4.

G. Submittal Requirements for Plans and Reports. The following reports and plans shall be submitted and approved prior to the approval of a land use application for a land division (subdivision or partition), site development, and any grading/excavating within a Level 2 or 3 slope area or any locations on slopes or potentially affecting any slopes 10 percent or greater. Reports for property within Level 2 slope areas shall be submitted and signed by a certified engineering geologist licensed by the State of Oregon or a geotechnical engineer licensed by the State of Oregon. Reports for property located within a Level 3 slope area shall be submitted and signed by a geotechnical engineer licensed by the State of Oregon. Plans shall be prepared and sealed by an engineering geologist or civil engineer licensed by the State of Oregon.

1. Steep Slope Development Report: A written and illustrated report prepared and sealed by a certified engineering geologist licensed to practice by the State of Oregon on Level 2 slopes or by a geotechnical engineer for Level 3 slopes detailing the following information for the planned land division, development, or excavation within steep slope areas:
 - a. Soils Analysis: The analysis shall include data regarding the nature, distribution and properties of existing soils, conclusions and recommendations for grading and erosion control procedures, design criteria for corrective measures, and opinions and recommendations covering the capacity of the sites to be developed in a manner imposing the minimum variance from the natural condition. Recommendations from the Soil Survey of Marion County, Oregon may be included in the analysis.
 - b. Data and Geology Analysis. The analysis shall include description of the geology of the site, conclusions and recommendations regarding the effect of the geologic conditions on the proposed development, and opinions and recommendations on how to best develop the sites being reviewed and stabilize any affected slopes. Data and

recommendations from the Soil Survey of Marion County, Oregon may be included in the analysis.

- c. **Hydrology Analysis.** The analysis shall include a description of the hydrology of the site and surrounding area, including movement of soil moisture, local groundwater (subsurface), surface flow and the drainage network of the site before and after construction and recommendations and opinions on how to properly handle existing and new surface/underground water if the development proceeds. Analysis of surface runoff shall be consistent with the requirements of the City of Detroit Storm Drainage Engineering Standards.
 - d. **Calculations and Data.** Calculations shall be provided for any analyses performed and data sources utilized provided. Data sources shall include at a minimum the agency/provider of the data and where the data can be obtained. Calculations shall include any prepared by the geologist/engineer or outputs of a modeling program. Modeling outputs shall include at a minimum the model inputs, outputs, calculation methods, and modeling program (program name and version).
2. **Grading Plan.** A plan prepared and sealed by either an engineering geologist or civil engineer licensed by the State of Oregon, which shall include all of the following as they apply to the proposed development:
- a. Existing and proposed contours of the property,
 - b. Details of site and area drainage for proposed lots including elevations of proposed house pads, adjacent lots and streets,
 - c. Direction of surface drainage flow and the approximate grade of drainageways.
 - d. Limiting dimensions, elevations, or finish contours to be achieved by the grading, including percent of grades for all cut and fill slopes, proposed drainageways and related construction,
 - e. Quantities of cut and fill to be performed on site, as well as the net amount of cut or fill in cubic yards,
 - f. Clearly demarcated proposed disturbance extents and the quantity of area to be disturbed by excavation activities in acres or square feet,
 - g. Detailed plans and locations of all temporary and permanent surface and subsurface drainage devices, walls, dams, sediment basins, detention reservoirs and protective devices to be constructed with, or as a part of, the proposed work together with a map showing the drainage area, the drainage network, including outfall lines and drainageways that may be affected by the property development and the estimated runoff of the area served by the drains for a 25 year frequency storm,
 - h. Construction schedule which includes:
 - i. Total area and location of soil surface which is to be disturbed during each stage,

- ii. Size and type of machinery and vehicles to be used at the site as identified and reviewed by a certified engineering geologist licensed to practice by the State of Oregon, or a geotechnical engineer licensed by the State of Oregon on Level 2 slopes, or by a geotechnical engineer licensed by the State of Oregon for Level 3 slopes, for effects of overburden, compaction and soil disturbance, dust control and erosion control and the location of all temporary gravel or crushed rock access points, and
 - iii. Construction schedule for all steps and phases of the construction of public facilities, slope excavation and fill, lot grading, erosion control measures, and revegetation of the site.
 - i. Name and address of a certified engineering geologist licensed to practice by the State of Oregon on Level 2 slopes or by a geotechnical engineer for Level 3 slopes referred to as the Responsible Engineer and who shall be responsible to oversee implementation of those elements of construction analyses, grading and erosion control plan. (Note: If the Responsible Engineer either leaves or is terminated, the City shall be notified and the preliminary recommendations from the Engineer shall be provided to the City.)
 - j. Identification of the significant trees which are to remain during and after construction and of fencing to protect significant trees identification of significant trees proposed to be removed during the construction of the subdivision for road, utilities or any other reason.
3. Erosion Control Plan. The erosion control plan describes where natural vegetation will be removed and how it shall be replaced. This plan shall use the recommendations of the soils/geology/hydrology analyses to determine the measures to be taken to stabilize slopes, minimize soil erosion, and revegetate areas where natural vegetation will be removed during construction and shall describe the maintenance and monitoring measures during and after construction. A revegetation plan shall be part of the erosion control plan. Preparation of these plans does not exempt the developer from applying for a 1200C permit issued by the Oregon Department of Environmental Quality (DEQ). The Developer must follow the established DEQ rules and regulations to determine whether or not a 1200C permit is required.

The plan shall consider each of the following options:

- a. Use of filter fabric and swales,
- b. Retaining water with retention and detention areas,
- c. Establishing and maintaining interim water detention and siltation ponds during the construction period,
- d. Leaving natural vegetation in place during and after construction,
- e. Any other Oregon Department of Environmental Quality approved erosion control best management practices.

H. **Criteria for Approval of Plans and Reports.** To protect hillsides, significant trees, and the safety of the community and to protect or mitigates possible hazards to life, property or the natural environment, the following standards shall apply to the Steep Slope Development Reports and Grading and Erosion Control Plans.

1. Steep Slope Development Reports. The natural slope shall be maintained in as natural a state as possible. Steep slope development reports shall be developed in accordance with the requirements of this subsection and approved by the City Engineer.
2. Drainage and Land Forms. The natural drainage system and other natural lands forms shall be undisturbed wherever practical.
3. Alternatives Considered. Developments on Levels 2 and 3 are required to show other development alternatives which the owner/applicant considered, and to show the proposal represents the least possible impact to public safety, slope stability and erosion.
4. Grading Plan. The grading plan shall minimize excavation and disturbance and shall demonstrate all of the following:
 - a. All excavation and grading of the site for buildings and driveways is done in accordance with the most recently adopted and applicable section, Marion County Engineering Standards, Oregon DEQ erosion control standards, the appendix of the Uniform Building Code, and/or all other applicable standards, and minimizes disturbance of the natural condition of the site. Where there is discrepancy among standards, the more restrictive shall always apply.
 - b. All the finished cut and fill slopes are designed and contoured to replicate conditions prior to grading to the maximum extent possible. The areas of excavation, fill, and scarification shall be shown on the grading plan and limited to the area of the roadways. No cuts may include engineered retaining walls greater than 15 feet in height from the finish grade to create any slopes which are greater than 50 percent without approval by the City Engineer. No filling may result in a retaining wall within the required setback greater than six (6) feet in height from the finish grade or create any slopes which are greater than 50 percent, though a steeper slope may be considered by the City Engineer.
 - c. All significant trees shall be retained and protected during construction. In lieu of 100 percent retention of significant trees, at the time of application the applicant may opt for the following procedure:
 - i. Sixty (60) percent of the trees defined as significant are retained, and are protected during construction. The protection shall include the use of fencing to protect the trees out to the drip line with no removal or addition of soil within the drip line areas.
 - ii. If the actual or proposed percentage of significant size trees to be retained and protected is less than 60 percent, a Revegetation Fee shall be paid to the City at the time of tentative plat/plan/land use application approval,

- iii. The Revegetation Fee shall be \$350 per significant tree to a maximum aggregate of \$2,000 per lot,
- iv. The City shall place the Revegetation Fee into a special fund to be used for the purchase and improvement of public open spaces,
- v. In expending monies from the Revegetation Fund, among other factors, the City shall consider the needs and availability of open spaces in or near the applicant's project.
- vi. All trees within the foundation footprint of any building or within the defensible space of any dwelling or place of business, as determined by the Idanha-Detroit Rural Fire Protection District Fire Marshal following a site evaluation, shall be removed to promote public safety. Any significant trees to be removed shall be counted towards the total of significant trees within the disturbed area but shall not be counted towards the total of significant trees to be removed.
- d. All construction work is planned to minimize the amount of time the soil is exposed and unprotected. All access points shall be protected with gravel or crushed rock.
- e. All construction disturbing the soil or affecting the natural drainage and runoff shall be scheduled to begin not earlier than April 15 and shall terminate not later than October 15.

The City Engineer may extend starting and completion dates by no more than 30 days based on the weather conditions prevailing at the time of extension.

5. Erosion Control Plan. The erosion control plan shall minimize erosion with preventive measures maintained throughout the development of the site and protect adjacent properties from any harm due to the construction activities. It shall meet all of the following standards:
 - a. Revegetation and the use of other temporary erosion control measures shall protect the site, surrounding properties, streams, and storm drain systems from erosion through the winter months. Revegetation and all other temporary erosion control measures shall be fully in place and established by October 15 and shall be maintained after storms and at other regular intervals according to the approved plan. The City Engineer may mandate, based on adverse weather conditions, any reseeded installed after September 15 be installed in the form of a mat and may require erosion control be installed during any other period they determine has an elevated risk of erosion. The erosion control placement requirements stated previously are in addition to any measures mandated by the 1200C permit and accompanying Erosion Control Plans, if required by State Law. Where there is discrepancy among standards, the more restrictive shall always apply.
 - b. Native plants shall be used when possible. Any other plants must be approved the City prior to planting.

- c. Revegetation of plants, trees, shrubs, and grasses shall be installed in accordance with the approved erosion control plan.
- d. Security for the implementation of the erosion control plan shall be provided prior to the issuance of any grading permit.

I. Criteria for Approval of Final Plat.

In addition to the criteria in Land Divisions, Chapter 4.3 Section 8, the submittal of the Final Plat shall include:

- 1. A letter submitted by the Responsible Engineer stating the Engineer supervised the grading and construction for the entire parcel and individual lots and the grading and construction was completed to approved plans.

J. Procedures for Approval of Grading and Construction on an Existing Lot.

- 1. Approved Steep Slope Development Report. Based upon an approved Steep Slope Development Report, Grading Plan, and Erosion Control Plan filed for the existing lots, development of the lot may only proceed in accordance with those documents. If the City Engineer determines the Grading Plan is modified substantially at the time of home construction, a Type I Action is required to change the grading plans.

K. Reduction in Property Line Setbacks. The front yard setback for the new home may be reduced to ten (10) feet. The entrance for the new garage/carport shall remain at the required setback. The setback for the rear yard shall be increased by at least any reduction in the front yard setback.

L. Preservation of Trees. All significant trees shall be retained and protected during construction. The need to remove additional trees not within the construction areas of right-of-way, the structure foundation footprint, within the defensible space of any dwelling or place of business, or accessory structures shall be documented with supporting evidence from an arborist that the trees is either damaged or diseased beyond the point of survival.

M. Appeals. Appeals to the interpretation of these provisions shall be as applicable in Chapter 4.1.

Chapter 3.8 Public Facilities Standards

Sections

- 3.8.1** Purpose and Applicability
- 3.8.2** Transportation Standards
- 3.8.3** Public Use Areas
- 3.8.4** Sewer and Water Service Improvements
- 3.8.5** Storm Drainage Improvements
- 3.8.6** Utilities
- 3.8.7** Easements
- 3.8.8** Construction Plan Approval and Assurances
- 3.8.9** Installation

3.8.1 Purpose and Applicability.

- A. **Purpose.** The purpose of this Chapter is to provide planning and design standards for public and private transportation facilities and utilities. Streets are the most common public spaces, touching virtually every parcel of land. Therefore, one of the primary purposes of this Chapter is to provide standards for attractive and safe streets that can accommodate vehicle traffic from planned growth, and provide a range of transportation options, including options for driving, walking and bicycling.

Important cross-reference to other standards: The city requires that streets provide direct and convenient access, including regular intersections. Chapter 3.1: Access and Circulation, provides standards for intersections and blocks, and requires pedestrian access ways to break up long blocks.

- B. **When Standards Apply.** Unless otherwise provided, the standard specifications for construction, reconstruction or repair of transportation facilities, utilities and other public improvements within the City shall occur in accordance with the standards of this Chapter. No development may occur unless the public facilities related to development comply with the public facility requirements established in this Chapter.
- C. **Standard Specifications.** The city shall establish standard construction specifications consistent with the design standards of this Chapter and application of engineering principles. They are incorporated in this Code by reference.
- D. **Conditions of Development Approval.** No development may occur unless required public facilities are in place or guaranteed, in conformance with the provisions of this Code. Improvements required as a condition of development approval, when not voluntarily accepted by the applicant, shall be roughly proportional to the impact of development. Findings in the development approval shall indicate how the required improvements are roughly proportional to the impact.

3.8.2 Transportation Standards.

- A. **Development Standards.** No development shall occur unless the development has frontage or approved access to a public street, in conformance with the provisions of Chapter 3.1: Access and Circulation, and the following standards are met:
1. Streets within or adjacent to a development shall be improved in accordance with the Comprehensive Plan, the Transportation System Plan, and the provisions of this Chapter.
 2. Development of new streets, and additional street width or improvements planned as a portion of an existing street, shall be improved in accordance with this Section, and public streets shall be dedicated to the applicable city, county or state jurisdiction;
 3. New streets and drives connected to a collector street shall be paved; and
 4. The City may accept a future improvement guarantee (e.g., owner agrees not to remonstrate (object) against the formation of a local improvement district in the future) in lieu of street improvements if one or more of the following conditions exist:

- a. A partial improvement may create a potential safety hazard to motorists or pedestrians;
 - b. Due to the developed condition of adjacent properties it is unlikely that street improvements would be extended in the foreseeable future and the improvement associated with the project under review does not, by itself, provide increased street safety or capacity, or improved pedestrian circulation;
 - c. The improvement would be in conflict with an adopted capital improvement plan; or
 - d. The improvement is associated with an approved land partition on property zoned residential and the proposed land partition does not create any new streets.
- B. **Variances.** Variances to the transportation design standards in this Section may be granted by means of a Class B Variance, as governed by Chapter 5.1: Variances. A variance may be granted under this provision only if a required improvement is not feasible due to topographic constraints or constraints posed by sensitive lands (Chapter 3.7).
- C. **Creation of Rights-of-Way for Streets and Related Purposes.** Streets shall be created through the approval and recording of a final subdivision or partition plat; except the city may approve the creation of a street by acceptance of a deed, provided that the street is deemed essential by the City Council for the purpose of implementing the Comprehensive Plan, the Transportation System Plan, and the deeded right-of-way conforms to the standards of this Code. All deeds of dedication shall be in a form prescribed by the city and shall name “the public,” as grantee.
- D. **Creation of Access Easements.** The city may approve an access easement established by deed when the easement is necessary to provide for access and circulation in conformance with Chapter 3.1: Access and Circulation. Access easements shall be created and maintained in accordance with the Uniform Fire Code Section 10.207 and as approved by the Fire District or its designee.
- E. **Street Location, Width and Grade.** Except as noted below, the location, width and grade of all streets shall conform to an approved street plan or subdivision plat. Street location, width and grade shall be determined in relation to existing and planned streets, topographic conditions, public convenience and safety, and in appropriate relation to the proposed use of the land to be served by such streets:
- 1. Street grades shall be approved by the City in accordance with the design standards in Chapter 3.8 Section 2 (N), below; and
 - 2. Where the location of a street is not shown in an existing street plan (See Section ‘H’), the location of streets in a development shall either:
 - a. Provide for the continuation and connection of existing streets in the surrounding areas, conforming to the street standards of this Chapter, or
 - b. Conform to a street plan adopted by the City Council, if it is impractical to connect with existing street patterns because of particular topographical or other existing conditions of the land. Such a plan shall be based on the type of land use to be served, the volume of traffic, the capacity of adjoining streets and the need for public convenience and safety.

F. **Minimum Rights-of-Way and Street Sections.** Street rights-of-way and improvements shall be the widths in Table 3.8.1. A variance shall be required in conformance with Section Chapter 3.4 Section 1 (B) to vary the standards in Table 3.8.1. Where a range of width is indicated, the width shall be determined by the Planning Commission based upon the following factors:

1. Street classification in the Comprehensive Plan;
2. Anticipated traffic generation;
3. On-street parking needs;
4. Sidewalk and bikeway requirements based on anticipated level of use;
5. Requirements for placement of utilities;
6. Street lighting;
7. Minimize drainage, slope, and sensitive lands impacts, as identified by Chapter 3.7 and/or the Comprehensive Plan;
8. Street tree location, as provided for in Chapter 3.3;
9. Protection of significant vegetation, as provided for in Chapter 3.3;
10. Safety and comfort for motorists, bicyclists, and pedestrians;
11. Street furnishings (e.g., benches, lighting, bus shelters, etc.), when provided;
12. Access needs for emergency vehicles; and
13. Transition between different street widths (i.e., existing streets and new streets), as applicable.

Table 3.8.1 - City of Detroit Right-of-Way and Street Design Standards

Street Classification	Right-of-way	Min. Surface Width (travel lanes)	Pedestrian Facility Width	Bikeway Facility Width
Urban Collector	50 - 60 feet	22 – 24 feet parking 8 to 12 each side	6 - 8 feet	shared roadway
Neighborhood Collector	36 to 40 feet	24 feet Shoulders 6 feet each side	5 feet (if installed)	shared roadway
Local streets (with walkway or shoulder)	with walkway	35.5 - 47 feet	5 foot walkway	shared roadway
	with shoulder	30 to 36 feet	4 - 6 foot shoulder	
Cul-de-sac	50 feet	30 - 34 feet	5 feet	shared roadway
Cul-de-sac bulb:	45 foot radius maximum	30 foot radius*	5 feet	not required
Alley	20 feet	20 feet	Not required	not required

**Requires approval from City Engineer and Fire District*

G. Traffic Signals and Traffic Calming Features.

1. Traffic-calming features, such as traffic circles, curb extensions, narrow residential streets, and special paving may be used to slow traffic in neighborhoods and areas with high pedestrian traffic.
2. Traffic signals shall be required with development when traffic signal warrants are met, in conformance with the Highway Capacity Manual, and Manual of Uniform Traffic Control Devices. The location of traffic signals shall be noted on approved street plans. Where a proposed street intersection will result in an immediate need for a traffic signal, a signal meeting approved specifications shall be installed. The developer's cost and the timing of improvements shall be included as a condition of development approval.

H. Future Street Plan and Extension of Streets.

1. For phased development, a future street plan shall be filed by the applicant in conjunction with an application for a subdivision in order to facilitate orderly development of the street system. The plan shall show the pattern of existing and proposed future streets from the boundaries of the proposed land division, shall include other parcels within 400 feet surrounding and adjacent to the proposed land division, and shall comply with the Transportation System Plan. Although the proposed street plan is not binding, it shall not restrict street extensions with future development.
2. Streets shall be extended to the boundary lines of the parcel or tract to be developed, when the City Council determines that the extension is necessary to give street access to, or permit a satisfactory future division of, adjoining land. The point where the streets temporarily end shall conform to a-c, below:
 - a. These extended streets or street stubs to adjoining properties are not considered to be cul-de-sacs since they are intended to continue as through streets when the adjoining property is developed.
 - b. A barricade (e.g., fence, bollards, boulders or similar vehicle barrier) shall be constructed at the end of the street by the subdivider and shall not be removed until authorized by the City or other applicable agency with jurisdiction over the street. The cost of the barricade shall be included in the street construction cost.
 - c. Temporary turnarounds (e.g., hammerhead or bulb-shaped configuration) shall be constructed for stub streets over 150 feet in length and as approved by the Fire District or its designee.

I. Street Alignment and Connections.

1. Staggering of streets making "T" intersections at collectors and arterials shall not be designed so that jogs of less than 300 feet on such streets are created, as measured from the centerline of the street.
2. Spacing between local street intersections shall have a minimum separation of 125 feet, except where more closely spaced intersections are designed to provide an open space, pocket park, common area or similar neighborhood amenity. This standard applies to four-way and three-way (off-set) intersections.

3. All local and collector streets that abut a development site shall be extended within the site to provide through circulation unless prevented by environmental or topographical constraints, existing development patterns or compliance with other standards in this code. This exception applies when it is not possible to redesign or reconfigure the street pattern to provide required extensions. Land is considered topographically constrained if the slope is greater than 15 percent for a distance of 250 feet or more. In the case of environmental or topographical constraints, the mere presence of a constraint is not sufficient to show that a street connection is not possible. The applicant must show why the environmental or topographic constraint precludes some reasonable street connection.
4. Proposed streets or street extensions shall be located to provide direct access to existing or planned commercial services and other neighborhood facilities, such as schools, shopping areas and parks.
5. In order to promote efficient vehicular and pedestrian circulation throughout the city, the design of subdivisions and alignment of new streets shall conform to the following standards in Chapter 3.1: Access and Circulation: The maximum block length shall not exceed:
 - a. 600 feet in the Residential Zones;
 - b. 400 feet in the Commercial Zone;
 - c. 600 feet in the Industrial Commercial Zone;

Exceptions to the above standards may be granted when an access way is provided at or near mid-block, in conformance with the provisions of Chapter 3.1 Section 3.(A).

- J. **Sidewalks, Planter Strips, Bicycle Lanes.** Sidewalks, planter strips, and bicycle lanes shall be installed in conformance with the standards in Table 3.8.1, applicable provisions of the Comprehensive Plan, and adopted street plans. Maintenance of sidewalks, curbs, and planter strips is the continuing obligation of the adjacent property owner.
- K. **Intersection Angles.** Streets shall be laid out so as to intersection at an angle as near to a right angle as practicable, except where topography requires a lesser angle or where a reduced angle is necessary to provide an open space, pocket park, common area or similar neighborhood amenity. In addition, the following standards shall apply:
 1. Streets shall have at least 25 feet of tangent adjacent to the right-of-way intersection unless topography requires a lesser distance;
 2. Intersections which are not at right angles shall have a minimum corner radius of 20 feet along the right-of-way lines of the acute angle; and
 3. Right-of-way lines at intersection with arterial streets shall have a corner radius of not less than 20 feet
- L. **Existing Rights-of-Way.** Whenever existing rights-of-way adjacent to or within a tract are of less than standard width, additional rights-of-way shall be provided at the time of subdivision or development, subject to the provision of Section Chapter 3.8 Section 1(D).

- M. **Cul-de-sacs.** A dead-end street shall be no more than 200 feet long, shall not provide access to greater than eight (8) dwelling units, and shall only be used when environmental or topographical constraints, existing development patterns, or compliance with other standards in this code preclude street extension and through circulation:
1. All cul-de-sacs shall terminate with a circular or hammerhead turnaround. Circular turnarounds shall have a radius of no less than 30 feet, and not more than a radius of 40 feet (i.e., from center to edge of pavement); except that turnarounds may be larger when they contain a landscaped island or parking bay in their center. When an island or parking bay is provided, there shall be a fire apparatus lane of 20 feet in width approved by the Fire District or its designee; and
 2. The length of the cul-de-sac shall be measured along the centerline of the roadway from the near side of the intersecting street to the farthest point of the cul-de-sac.
- N. **Grades and Curves.** Grades shall not exceed ten (10) percent on arterials, 12 percent on collector streets, or 12 percent on any other street (except that local or residential access streets may have segments with grades up to 15 percent for distances of no greater than 250 feet), and:
1. Centerline curve radii shall not be less than 700 feet on arterials, 500 feet on major collectors, 350 feet on minor collectors, or 100 feet on other streets; and
 2. Streets intersecting with a minor collector or greater functional classification street, or streets intended to be posted with a stop sign or signal, shall provide a landing averaging five (5) percent or less. Landings are the portion of the street within 20 feet of the edge of the intersecting street at full improvement.
- O. **Curbs, Curb Cuts, Ramps, and Driveway Approaches.** Concrete curbs, curb cuts, wheelchair and bicycle ramps and driveway approaches shall be constructed in accordance with standards specified in Chapter 3.1: Access and Circulation.
- P. **Development Adjoining Arterial Streets.** Where a development adjoins or is crossed by an existing or proposed highway, the development design shall separate residential access and through traffic, and shall minimize traffic conflicts. The design shall include one (1) or more of the following:
1. A parallel access street along the arterial with a landscape buffer separating the two streets;
 2. Deep lots abutting the arterial or major collector to provide adequate buffering with frontage along another street. Double-frontage lots shall conform to the buffering standards in Chapter 3.1 Section2(F);
 3. Screen planting at the rear or side property line to be contained in a non-access reservation (e.g., public easement or tract) along the arterial; or
 4. Other treatment suitable to meet the objectives of this subsection;
 5. If a lot has access to two (2) streets with different classifications, primary access shall be from the lower classification street, in conformance with Chapter 3.1 Section2.

- Q. **Alleys, Public or Private.** Alleys shall conform to the standards in Table 3.8.1. While alley intersections and sharp changes in alignment shall be avoided, the corners of necessary alley intersections shall have a radius of not less than 12 feet.
- R. **Private Streets.** Private streets shall not be used to avoid connections with public streets. Gated communities (i.e., where a gate limits access to a development from a public street) are prohibited. Design standards for private streets shall conform to the provisions of Table 3.8.1; and
- S. **Street Names.** No street name shall be used which will duplicate or be confused with the names of existing streets in the City or in Marion County, except for extensions of existing streets. Street names, signs and numbers shall conform to the established pattern in the surrounding area, except as requested by emergency service providers.
- T. **Survey Monuments.** Upon completion of a street improvement and before acceptance by the City, it shall be the responsibility of the developer's registered professional land surveyor to provide certifications to the City that all boundary and interior monuments shall be reestablished and protected.
- U. **Street Signs.** The city or County with jurisdiction shall install all signs for traffic control and street names. The cost of signs required for new development shall be the responsibility of the developer. Street name signs shall be installed at all street intersections. Stop signs and other signs may be required.
- V. **Mail Boxes.** Plans for mailboxes to be used shall be approved by the United States Postal Service.
- W. **Street Light Standards.** Street lights shall be installed in accordance with City standards.
- X. **Street Cross-Sections.** Streets shall be installed in accordance with City standards. The final lift of asphalt or concrete pavement shall be placed on all new constructed public roadways prior to final city acceptance of the roadway and within one year of the conditional acceptance of the roadway unless otherwise approved by the city. The final lift shall also be placed no later than when 50 percent of the structures in the new development are completed or two (2) years from the commencement of initial construction of the development, whichever is less and is approved by the City Engineer or his/her designee.
1. Sub-base and leveling course shall be of select crushed rock.
 2. Surface material shall be of Class C or B asphaltic concrete;
 3. The final lift shall be Class C asphaltic concrete as defined by A.P.W.A. standard specifications; and
 4. No lift shall be less than one and one half (1½) inches in thickness.

3.8.3 Public Use Areas.

A. Dedication Requirements.

1. Where a proposed park, playground or other public use shown in a plan adopted by the city is located in whole or in part in a subdivision, the city may require the dedication or reservation of this area on the final plat for the subdivision.
 2. If determined by the City Council to be in the public interest in accordance with adopted comprehensive plan policies, and where an adopted plan of the city does not indicate proposed public use areas, the city may require the dedication or reservation of areas within the subdivision of a character, extent and location suitable for the development of parks and other public uses.
 3. All required dedications of public use areas shall conform to Chapter 3.8. Section 1(D) (Conditions of Approval).
- B. **Acquisition by Public Agency.** If the developer is required to reserve land area for a park, playground, or other public use, the land shall be acquired by the appropriate public agency within 18 months following final plat approval, at a price agreed upon before approval of the plat, or the reservation shall be released to the property owner.
- C. **System Development Charge Credit.** Dedication of land to the city for public use areas shall be eligible as a credit toward any required system development charge for parks.

3.8.4 Sewer and Water Service Improvements.

- D. **Water Mains Required.** Water mains shall be installed to serve each new development and to connect developments to existing mains in accordance with the City's construction specifications and the applicable Comprehensive Plan policies.
- E. **Water Plan Approval.** Development permits for water improvements shall not be issued until the City has approved all water plans in conformance with City standards.
- F. **Over-sizing.** Proposed water systems shall be sized to accommodate additional development within the areas as projected by the Comprehensive Plan. The developer may be entitled to system development charge credits for the over-sizing.
- G. **Permits Denied.** Development permits may be restricted by the city where a deficiency exists in the existing water system which cannot be rectified by the development and which if not rectified will result in a threat to public health or safety, surcharging of existing mains, or violations of state or federal standards pertaining to operation of domestic water systems. Building moratoriums shall conform to the criteria and procedures contained in ORS 197.505.

3.8.5 Storm Drainage Improvements.

- H. **General Provisions.** The city shall issue a development permit only where adequate provisions for storm water and flood water runoff have been made in conformance with Chapter 3.6 - Surface Water Management.
- I. **Accommodation of Upstream Drainage.** Culverts and other drainage facilities shall be large enough to accommodate potential runoff from the entire upstream drainage area, whether inside or outside the development. Such facilities shall be subject to review and approval by the city.

- J. **Effect on Downstream Drainage.** Where it is anticipated by the city that the additional runoff resulting from the development will overload an existing drainage facility, the city shall withhold approval of the development until provisions have been made for improvement of the potential condition or until provisions have been made for storage of additional runoff caused by the development in accordance with city standards.

K. **Storm Drainage Plan Required for New Development and Redevelopment.**

1. Purpose: To minimize the amount of stormwater runoff resulting from development utilizing nonstructural controls where possible to protect and enhance water quality, to prevent and/or reduce soil erosion, and to prevent structural and environmental damage.
2. Plan for Storm Drainage
 - a. A storm drainage and erosion control plan shall be required for all residential development over 25,000 square feet; and for all commercial, industrial, and recreational development. This requirement includes all proposals in or immediately adjacent to open areas identified in the Comprehensive Plan, in or adjacent to an identified Major Hazard area and in areas with a hydrological connection (or up gradient from) to an area having an historic localized flooding problem resulting from storm drainage. The plan shall contain at a minimum:
 - i. The methods to be used to minimize the amount of runoff siltation, and pollution created from the development both during and after construction. Site specific considerations may be incorporated. The plan shall be consistent with the specific drainage basin or subbasin plan (i.e., a Water Quality Management Plan or Salmon recovery plan).
 - ii. An analysis of the methods to increase infiltration on site and reduce the amount of stormwater runoff generated from the site.
 - iii. Calculations of the amount of impervious surface before development and the amount of impervious surface after development.
 - iv. An analysis of source controls as an alternative method to control stormwater runoff and volume such as infiltration, detention and storage techniques.
 - v. An analysis of methods used to control (reduce) pollutants such as vegetated swales and compost filters.
 - vi. Statement of consistency with the city and Marion County's stormwater improvement standards and Comprehensive Plans. If located within a DEQ 303(d) listed watershed, consistency with the required urban or rural residential Water Quality Management Plan (WQMP) and implementation measures.
 - b. The city or Marion County may require that the applicant design and construct a drainage system which will insure that off-site impacts caused by that development can be mitigated. This system may need to be located off-site.
 - c. Facilities developed on site may be used to implement a basin-wide or sub-basin drainage management plan, if necessary.

3. General Standards.

- a. All development shall be planned, designed, constructed and maintained to:
 - i. Assure that the amount of surface water drainage from the site is not greater after full site development than before development.
 - ii. Protect and preserve existing natural drainage channels to the maximum extent practicable;
 - iii. Protect development from flood hazards;
 - iv. Provide a system by which water within the development will be controlled without causing damage or harm to the natural environment, or to property or persons within the drainage basin;
 - v. Assure that waters drained from the development are substantially free of pollutants;
 - vi. Assure that waters are drained from the development in such a manner that will not cause erosion to any greater extent than would occur in the absence of development.
- b. In the event a development or any part thereof is traversed by any water course, channel, stream or creek, gulch or other natural drainage channel, adequate easements for storm drainage purposes shall be provided to the city, Marion County, or utility district. This does not imply maintenance by the city.
- c. Channel obstructions are not allowed, except as approved for the creation of detention or retention facilities approved under the provisions of this Ordinance, or water diversions permitted by the Oregon Water Resources Department. Fences with swing gates may be utilized.

4. Specific Standards.

- a. Siting, sizing, and development of drainage control facilities shall be consistent with accepted engineering practices. Basin or sub-basin plans previously adopted by Marion County shall guide the development of drainage control facilities except when such plans are superseded by new basin or sub-basin plans, such as an urban or rural residential Water Quality Management Plan, or when such plans are in conflict with the following provisions, or other provisions of this Section:
 - i. Detention ponds outside the channel shall be planned for at least a 25-year frequency storm at full site development. The city when site conditions, such as terrain or geologic hazard, limit development of detention ponds, and when other drainage control methods appropriate to the site are provided may reduce this requirement.
 - ii. The rate of release or outflow from a detention facility shall not exceed the rate of runoff from the undeveloped site during a ten (10)-year frequency storm. This may be accomplished with an adjustable flow valve or a system of orifices or other appropriate mechanism accommodating a five (5)-year outflow. Each facility

constructed outside the channel shall provide an overflow that will allow volume exceeding a 25-year frequency storm to spill.

- iii. In all residential development, the slope of the edges of a retention or detention pond shall not exceed one to three (1:3). Maximum depth should not exceed three (3) feet. Adequate security measures that do not result in the fencing of the facility must be provided to prevent a safety hazard. Drainage must be designed to prevent frequent water ponding unless a year-round pond is incorporated in the site design.
 - iv. For commercial, industrial and multiple family residential development, maximum side slope of drainage facilities shall not exceed one to one (1:1). Shallower slopes may be required as appropriate to maintain slope stability. Access for maintenance equipment shall be provided. Depth should not exceed 12 feet. The burden of justification increases with depth of the facility. Detention or retention facilities must be integrated with the site design. Adequate security measures that do not result in fencing of the facility must be provided to prevent a safety hazard. Drainage facilities must be designed to prevent water ponding unless a year-round pond is incorporated in the site design.
 - v. Detention facilities may be allowed in conjunction with parking lots or commercial or industrial rooftops. Underground detention pipes are discouraged in areas of high water tables.
 - vi. Rooftop detention is acceptable on residential structures with appropriate engineering considerations. Rooftop detention must not exceed bearing characteristics of the structure or soils. An emergency overflow shall be provided.
 - vii. Parking lot detention is acceptable if water depth does not exceed 12 inches at the deepest point. Asphalt surfaces to be inundated shall be minimized. A minimum slope of one (1) percent must be provided.
 - viii. All outflow shall be conveyed to the nearest natural drainageway. The developer or property owner (including maintenance association, if appropriate) shall be responsible for construction and maintenance of the facility. An adequate surety bond for construction may be required.
- b. Flow Alteration.
- i. Natural drainage pattern shall not be substantially altered on the site.
 - ii. Accelerated release of stored water is prohibited. Flow shall not be diverted to lands that have not previously encountered overland flow from the same upland source unless adjacent downstream owners agree.

3.8.6 Utilities.

- A. **Underground Utilities.** All utility lines including, but not limited to, those required for electric, communication, lighting and cable television services and related facilities shall be placed underground, except for surface mounted transformers, surface mounted connection boxes and meter cabinets which may be placed above ground, temporary utility service facilities during construction, and high capacity electric lines operating at 50,000 volts or above. The following

additional standards apply to all new subdivisions, in order to facilitate underground placement of utilities:

1. The developer shall make all necessary arrangements with the serving utility to provide the underground services. Care shall be taken to ensure that all above ground equipment does not obstruct vision clearance areas for vehicular traffic (Chapter 3.1);
2. The city reserves the right to approve the location of all surface mounted utilities;
3. All underground utilities, including sanitary sewers and storm drains installed in streets by the developer, shall be constructed prior to the surfacing of the streets; and
4. Stubs for service connections shall be long enough to avoid disturbing the street improvements when service connections are made.

B. **Easements.** Easements shall be provided for all underground utility facilities.

C. **Exception to Under-Grounding Requirement.** The standard applies only to proposed subdivisions. An exception to the under-grounding requirement may be granted due to physical constraints, such as steep topography, sensitive lands (Chapter 3.7), or existing development conditions.

3.8.7 Easements.

Easements for sewers, storm drainage and water quality facilities, water mains, electric lines or other public utilities shall be dedicated on a final plat, or provided for in the deed restrictions. See also, Chapter 4.2: Site Design Review, and Chapter 4.3: Land Divisions. The developer or applicant shall make arrangements with the city, the applicable district and each utility franchise for the provision and dedication of utility easements necessary to provide full services to the development. The city's standard width for public main line utility easements shall be six (6) feet unless otherwise specified by the utility company, applicable district, or the City.

3.8.8 Construction Plan Approval and Assurances.

No public improvements, including sanitary sewers, storm sewers, streets, sidewalks, curbs, lighting, parks, or other requirements shall be undertaken except after the plans have been approved by the city, permit fee paid, and permit issued. The permit fee is required to defray the cost and expenses incurred by the city for construction and other services in connection with the improvement. The permit fee shall be set by the City Council. The city may require the developer or subdivider to provide bonding or other performance guarantees to ensure completion of required public improvements. See also, Chapter 4.2 Section 6: Site Design Review, and Chapter 4.3 Section 9: Land Divisions.

3.8.9 Installation.

- A. **Conformance Required.** Improvements installed by the developer either as a requirement of these regulations or at their own option, shall conform to the requirements of this chapter, approved construction plans, and to improvement standards and specifications adopted by the city.

- B. **Adopted Installation Standards.** The Standard Specifications for Public Works Construction, Oregon Chapter A.P.W.A. shall be a part of the city's adopted installation standard(s); other standards may also be required upon recommendation of the city.
- C. **Commencement.** Work shall not begin until the city has been notified in advance.
- D. **Resumption.** If work is discontinued for more than one month, it shall not be resumed until the City is notified.
- E. **City Inspection.** Improvements shall be constructed under the inspection and to the satisfaction of the city. The city may require minor changes in typical sections and details if unusual conditions arising during construction warrant such changes in the public interest. Modifications requested by the developer shall be subject to land use review under Chapter 4.6 - Modifications to Approved Plans and Conditions of Approval. Any monuments that are disturbed before all improvements are completed by the subdivider shall be replaced prior to final acceptance of the improvements.
- F. **Engineer's Certification and As-Built Plans.** A registered engineer shall provide written certification in a form required by the City that all improvements, workmanship and materials are in accord with current and standard engineering and construction practices, conform to approved plans and conditions of approval, and are of high grade, prior to City acceptances of the public improvements, or any portion thereof, for operation and maintenance. The developer's engineer shall also provide 3 sets of "as-built" plans, in conformance with the City Engineer's specifications, for permanent filing with the City.

Chapter 3.9 Grading and Erosion Control

Sections

- 3.9.1 Purpose**
- 3.9.2 Grading Permit**
- 3.9.3 Excavations**
- 3.9.4 Fills**
- 3.9.5 Setbacks**
- 3.9.6 Conflicts and Greater Restrictions**
- 3.9.7 Submittal Requirements**

3.9.1 Purpose.

The purpose of this chapter is to mitigate, minimize or eliminate the adverse impacts caused by grading, fill and excavation activities on public or private property. It establishes policies, procedures and minimum requirements for grading and earthwork construction. It is intended to promote the general health, safety and welfare of the public and requires the applicant to follow sound land development practices. Chapter 3.7 provides additional requirements for Sensitive Lands.

3.9.2 Grading Permit.

A. Permit Required. A city-issued grading permit shall be required before the commencement of any of the following filling or grading activities:

1. Grading activities in excess of fifty (50) cubic yards of earth;
2. Grading activities which may result in the diversion of existing drainage courses, both natural and man-made, from their natural point of entry or exit from the grading site;
3. Grading and paving activities resulting in the creation of impervious surfaces greater than two thousand square feet or more in area;
4. Any excavation beyond the limits of a basement or footing excavation, having an unsupported soil height greater than five feet after the completion of such a structure; or
5. Grading activities involving the clearing or disturbance of one-half acres (twenty-one thousand seven hundred eighty square feet) or more of land.

Applicability. Those fill and grading activities proposed to be undertaken in conjunction with a land use application, including but not limited to subdivisions, planned unit developments, partitions and site plan reviews, are subject to the standards of this chapter. However, a separate grading permit is not required. Approval of the construction plans submitted through the land use application process shall constitute the grading plan.

Grading permit exemptions. The following filling and grading activities shall not require the issuance of a grading permit:

1. Excavation for utilities, or for wells or tunnels allowed under separate permit by other governmental agencies;
2. An excavation below finished grade for basements and footings of a building, retaining wall or other structure authorized by a valid building permit. The placement of any fill material removed from such an excavation requires a grading permit if:
 - a. It exceeds fifty cubic yards,
 - b. More than fifty cubic yards are removed from the site, or

- c. The fill is placed on the site to a depth greater than one foot;
- 3. Farming practices as defined in ORS 30.930 and farm uses as defined in ORS 215.203, except that buildings associated with farm practices and farm uses are subject to the requirements of this chapter;
- 4. Excavation for cemetery graves;
- 5. Sandbagging, diking, ditching, filling or similar work when done to protect life or property during an emergency;
- 6. Repaving of existing paved surfaces that does not alter existing drainage patterns;
- 7. Maintenance work on public roads performed under the direction of the city, Marion County or Oregon State Department of Transportation personnel.

3.9.3 Excavations.

- A. **Maximum Slope.** The slope of cut surfaces shall not be steeper than is safe for the intended use, and shall not be more than one unit vertical in two units horizontal unless the owner or owner's authorized agent furnishes a geotechnical report justifying a steeper slope, with the following exceptions:
 - 1. A cut surface shall be permitted to be at a slope of 1.5 units horizontal to one unit vertical provided that all of following are met:
 - a. It is not intended to support structure of surcharges.
 - b. It is adequately protected against erosion.
 - c. It is not more than 8 feet in height.
 - d. It is approved by the building code official.
 - e. Ground water is not encountered.
 - 2. A cut surface in bedrock shall be permitted to be at a slope of one horizontal unit to one vertical unit.
 - 3. Grading activities which may result in the diversion of existing drainage courses, both natural and man-made, from their natural point of entry or exit from the grading site;

3.9.4 Fills.

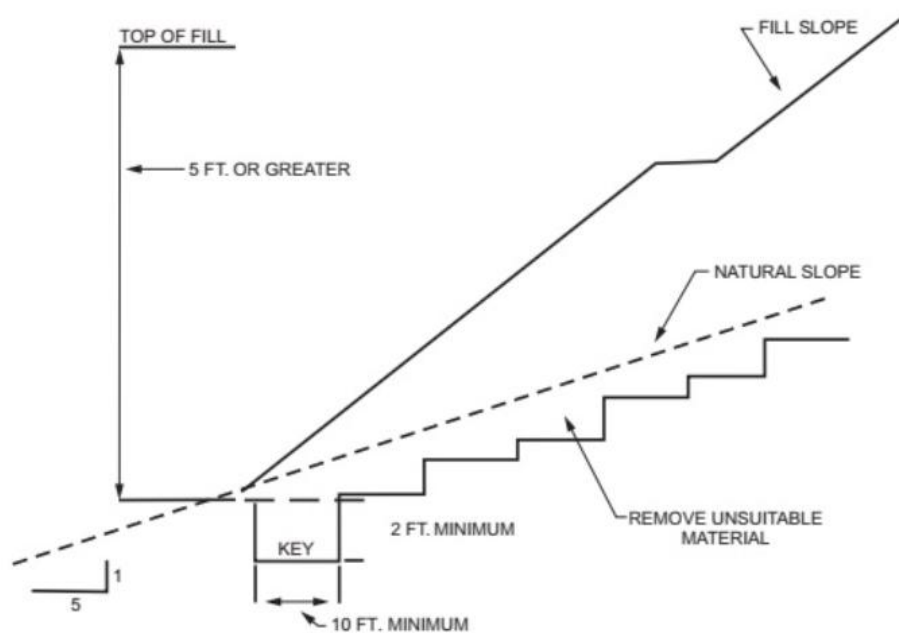
Unless otherwise recommended in a geotechnical report, fills shall comply with the provisions of this section. purpose of this chapter is to mitigate, minimize or eliminate the adverse impacts caused by grading

- A. **Surface Preparation.** The ground surface shall be prepared to receive fill by removing vegetation, topsoil and other unsuitable materials, and scarifying the ground to provide a

bond with the fill material.

- B. **Benching.** Where existing grade is at a slope steeper than one unit vertical in five units horizontal, and the depth of the fill exceeds 5 feet, benching shall be provided in accordance with Figure 3.9.1. A key shall be provided that is not less than 10 feet in width and 2 feet in depth.

Grading - Figure 3.9.1 Benching Details

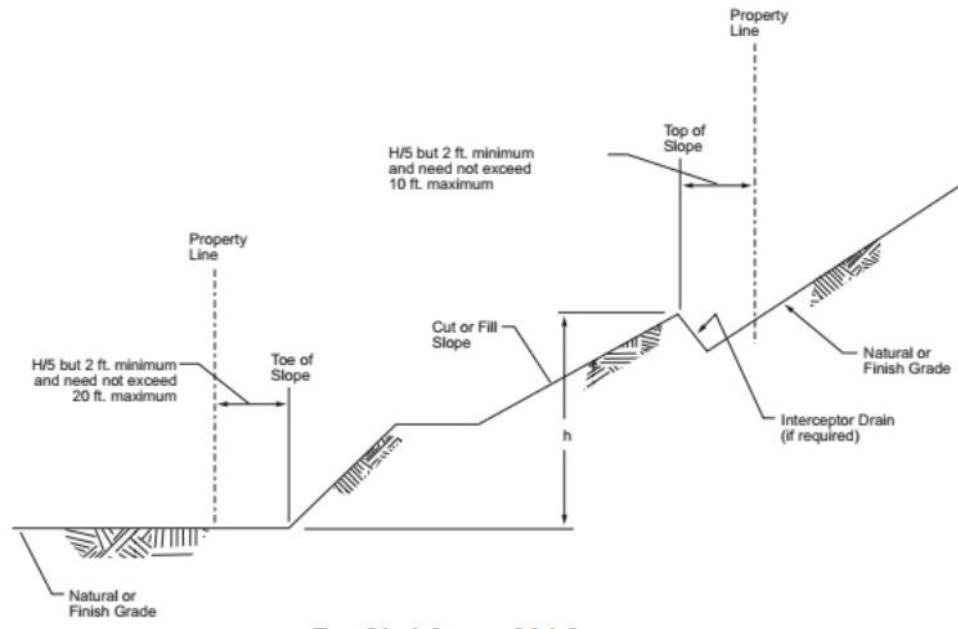


- C. **Fill Material.** Fill material shall not include organic, frozen, or other deleterious materials. Rock of similar irreducible material greater than 12 inches in any dimension shall not be included in fills.
- D. **Compaction.** All fill material shall be compacted to 90 percent of maximum density as determined by ASTM D1557, Modified Proctor, in lifts not exceeding 12 inches in depth.
- E. **Maximum Slope.** The slope of fill surfaces shall not be steeper than is safe for the intended use. Fill slopes steeper than one unit vertical in two units horizontal shall be justified by a geotechnical report or engineering data.

3.9.5 Setbacks.

Cut and fill slopes shall be set back from the property lines in accordance with this section. Setback dimensions shall be measured perpendicular to the property line and shall be as shown in Figure 3.9.2, unless substantiating data is submitted justifying reduced setbacks.

Grading - Figure 3.9.2 Setbacks



- A. **Top of Slope.** The setback at the top of a cut slope shall not be less than shown in Figure 3.9.2, or that is required to accommodate any required interceptor drains, whichever is greater.
- B. **Slope Protection.** Where required to protect adjacent properties at the toe of a slope from adverse effects of the grading, additional protection, approved by the building official and/or City Engineer, shall be included. Examples of such protection include, but are not limited to:
 - 1. Setbacks greater than those required by Figure 3.9.2
 - 2. Provisions for retaining walls of similar construction
 - 3. Erosion protection of the fill slopes
 - 4. Provision for the control of surface waters

3.9.6 Conflicts and Greater Restrictions.

Where the provisions of this chapter are less restrictive or conflict with comparable provisions of this code, regional, state or federal law, the provisions that are more restrictive shall govern. Where this chapter imposes restrictions that are more stringent than regional, state and federal law, the provisions of this chapter shall govern. However, nothing in this chapter shall relieve any party from the obligation to comply with any applicable federal, state or local regulations or permit requirements.

Compliance with this chapter and the minimum requirements, minimum standards, and design procedures as set forth in the city's adopted Public Works Design Standards does not relieve the designer, owner, or developer of the responsibility to apply conservative and sound professional judgement to protect the health, safety, and welfare of the public. It is not the intent of this chapter to make the city a guarantor or protector of public or private property in regard to land development activity.

3.9.7 Submittal Requirements.

An engineered grading plan or an abbreviated grading plan shall be prepared in compliance with the submittal requirements of the Public Works Design Standards and the Grading Permit whenever a city approved grading permit is required. In addition, a geotechnical engineering report and/or residential lot grading plan may be required pursuant to the criteria listed below.

- A. **Abbreviated Grading Plan.** The city shall allow the applicant to submit an abbreviated grading plan in compliance with the submittal requirements of the Public Works Stormwater and Grading Design Standards if the following criteria are met:
 - 1. No portion of the proposed site is within Sensitive Lands as defined in Chapter 3.7.
 - 2. The proposed filling or grading activity does not involve more than 50 cubic yards of earth.
- B. **Engineered Grading Plan.** The city shall require an engineered grading plan in compliance with the submittal requirements of the Public Works Design Standards to be prepared by a professional engineer if the proposed activities do not qualify for abbreviated grading plan.
- C. **Geotechnical Engineering Report.** The city shall require a geotechnical engineering report in compliance with the minimum report requirements of the Public Works Stormwater and Grading Design Standards to be prepared by a professional engineer who specializes in geotechnical work when any of the following site conditions may exist in the development area:
 - 1. When any publicly maintained facility (structure, street, pond, utility, park, etc.) will be supported by any engineered fill;
 - 2. When an embankment for a stormwater pond is created by the placement of fill;
 - 3. When, by excavation, the soils remaining in place are greater than three feet high and less than twenty feet wide.
- D. **Residential Lot Grading Plan.** The city shall require a residential lot grading plan in

compliance with the minimum report requirements of the Public Works Stormwater and Grading Design Standards to be prepared by a professional engineer for all land divisions creating new residential building lots or where a public improvement project is required to provide access to an existing residential lot.