

**CITY OF SALEM
DEPARTMENT OF PUBLIC WORKS
ADMINISTRATIVE RULES
CHAPTER 109
DIVISION 001 APPENDIX A
ACRONYMS AND DEFINITIONS**

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FOR REVIEW

A

AASHTO – American Association of State Highway and Transportation Officials.

AC – Asphalt Concrete.

Access Walkway – Concrete or paved access route across a planting strip, more or less perpendicular to the curb and sidewalk.

ACPA – American Concrete Paving Association.

ADA – Americans with Disabilities Act.

APAO – Asphalt Pavement Association of Oregon.

Approved Point of Discharge – An approved location downstream from a project identified to discharge stormwater flows from all or a portion of the project.

APWA – American Public Works Association.

As-Built Drawings – Drawings signed and dated by the project engineer indicating that the construction plans have been reviewed and revised, if necessary, to accurately show all as-built construction details.

Average Maintained Footcandles – The average level or horizontal luminance on the roadway pavement when the output of the lamp and luminaire is diminished by the maintenance factors; expressed in average footcandles for the pavement area.

AWWA – American Water Works Association.

B

BDDM – Bridge Design and Drafting Manual.

Bike Lanes – A designated travel way for bicyclists established within the roadway directly adjacent to the outside vehicular lane or on the shoulder.

Blended Transition – Raised pedestrian street crossing, depressed corners or connections between a street and sidewalk with a running slope less than or equal to 5 percent.

Best Management Practice (BMP) – Activities, prohibitions of practices, operational and maintenance procedures, structural facilities, or managerial practices or devices that, when used singly or in combination, prevent, reduce, or treat contamination in drainage water, prevent or reduce soil erosion, or prevent or reduce other adverse effects of drainage water on receiving waters. BMPs prescribed by the Director, whether or not adopted by ordinance, shall be the BMPs required for compliance with this Code.

Building Drain – The part of the lowest horizontal piping of the building drainage system which receives the discharge from soil, waste, and other drainage pipes within or adjoining the building or structure and conveys to the public or private sewer, individual sewage disposal system, or other point of disposal. The building drain is considered to end at a point five feet outside the established line of the building or structure.

C

CAD – Computer Aided Design.

California Bearing Ratio (CBR) – The ratio of the bearing strength of a material with that of a well-graded, crushed stone as determined by a CBR test.

Central Business District (CBD) – That portion of downtown Salem as described in SRC Chapter 154.

Channel – A linear topographic depression that contains moving water and has a bottom and sides that serve to confine the water.

Circular Curve – A curve having uniform radius for the entire distance between adjacent tangent sections.

City – Reference to City of Salem, Oregon.

Clustered Mailboxes – Free-standing mailbox units with multiple, locked mailboxes, parcel lockers, and a slot for mail collection (also known as Centralized Mailbox Units (CMU)).

CMU – Centralized Mailbox Unit.

Collection Systems – Facilities that are maintained by the City of Salem and District connected thereto for the collecting, pumping, conveying, and controlling of wastewater.

Control Density Backfill (CDF) – A low strength cementitious material that requires no compactive effort.

Critical Tree Zone (CTZ) – A defined area surrounding the trunk intended to protect the tree's trunk, roots, branches, and soil to ensure tree health and stability. It is the area defined by the tree's dripline or an area measured 1-foot per 1-inch diameter at breast height, whichever is greater (SRC 86.010(d))

Cross Connection – Any connection or arrangement, physical or otherwise, between a potable water supply system and any plumbing fixture, tank, receptacle, equipment or device, through which it may be possible for non-potable, used, unclean, polluted, and/or contaminated water, or other substances, to enter into any part of such potable water system under any condition.

Chlorosulfonated Polyethelene (CSPE) – Hypolan, rubber polymer.

Curb Ramp – A pedestrian access connection between a street and sidewalk with a running slope greater than 5 percent and less than 8.33 percent.

D

Design Standard Exception – A one-time deviation from the Design Standards that responds to a unique project issue, extenuating circumstance, and/or site constraint that does not lend itself to adherence to the Design Standards.

Design Standards or Standards – Public Works Design Standards in their entirety, including supplements, addenda, or revisions thereto.

Design Storm Event – The storm event with specific characteristics, such as recurrence interval, duration, intensity, and volume, that is used to design stormwater facilities.

DHS – Oregon Department of Human Services.

Director – Reference to Public Works Director.

Dissolved Air Flotation (DAF) – A water treatment process that clarifies water by the removal of suspended matter, such as oil or solids.

Distribution System – Distribution main pipelines, pumping stations, valves, and ancillary equipment used to transmit water from the supply source to the service line.

Domestic Sewage – The liquid and water-borne waste derived from the ordinary living processes, free from industrial wastes, and of such character to permit satisfactory disposal without special treatment into the public sewer or by means of private sewage disposal system.

Downstream Analysis Calculation of peak flows, velocities, and hydraulic effects at critical downstream locations to ensure that proposed projects do not increase post-development peak flows at these locations.

Drainage Basin – A geographical area of land where all surface water converges to a single point.

Drainage Water – Stormwater, groundwater, surface drainage, subsurface drainage, spring water, well overflow, roof drainage, or other like drainage other than sewage or industrial waste.

Drywell – A subsurface structure (e.g. cylinder or vault) with perforated sides and/or bottom, used to infiltrate stormwater into the ground. A drywell is a Underground Injection Control structure by the Department of Environmental Quality (DEQ) definition and must conform to DEQ standards.

DSL – Department of State Lands

DWF – Dry Weather Flow.

Dynamic Cone Penetration (DCP) – A test that provides a measure of a material's in-situ resistance to penetration. The test is performed by driving a metal cone into the ground by repeated striking with a 17.6 pound (8 kilogram) weight dropped from a distance of 2.26 feet (575 millimeters).

E

EAL – Equivalent Axle Load.

Earth Material – See SRC 82.

Easement – A right afforded to the City to make limited use of real property not owned by the City. As used in these Design Standards, it may also refer to (1) an area of land within which the limited use right is afforded; or (2) the legal instrument through which the limited use right is conveyed to the City.

Ecology – Washington State Department of Ecology

EOR – Engineer Of Record – The registered professional engineer responsible for design of a project.

EPDM – Ethylene Propylene Diene Monomer – Synthetic Rubber.

EPSC – Erosion Prevention Sediment Control.

EPSCP – Erosion Prevention Sediment Control Plan.

Erosion – See SRC 82.

Evapotranspiration – The sum of evaporation and transpiration of water from the Earth’s surface to the atmosphere. It includes evaporation of liquid or solid water plus the transpiration from plants.

Exception – Reference to Design Standard Exception.

F

FAC – Facultative Wetland Species – Plant species that survive in both wetland and upland environments.

FACU – Facultative Upland Species – Plant species that are best suited in an upland area but can tolerate a wet environment.

FACW – Facultative Wet Wetland Species – Plant species that are best suited in a wet environment but can tolerate occasional dry periods.

FHWA – Federal Highway Administration of the U.S. Department of Transportation.

Filtration Facility – A stormwater facility designed to exclusively treat stormwater runoff by filtration through media. A filtration facility does not promote infiltration and may be lined.

Fire Hydrant Assembly – The fire hydrant.

Flow Control – The practice of limiting the release of peak flow rates and volumes from a site. Flow control is intended to protect downstream properties, infrastructure, and natural resources from the increased stormwater runoff peak flow rates and volumes resulting from development.

Flow Control Exemption Area – The area determined by the Director to have sufficient capacity to receive discharges of drainage water such that a site discharging to the area is not required to meet the flow control performance standards of SRC 71.095(c).

Flow Control Facility – A stormwater facility designed to control the flow rate, flow volume, or flow duration of drainage water.

FWD – Falling Weight Deflectometer.

G

GPM – Gallons Per Minute.

Green Roof – A roof designed to treat storm runoff using filtration. The City of Portland Stormwater Design Manual should be referenced for the design of green roofs.

Green Stormwater Infrastructure – **GSI** – A stormwater facility that uses vegetation, soils, or natural processes to promote natural surface hydrologic functions through infiltration or

evapotranspiration. Stormwater facilities designed for full infiltration (no underdrain) or partial infiltration (with underdrain) of stormwater runoff are considered GSI.

Ground disturbing activity – Any activity that exposes earth material through the use of mechanical equipment.

H

HGL – Hydraulic Grade Line.

Hydrant Lead – The line connecting the fire hydrant assembly to the City main or private fire line with an auxiliary valve.

I

ITE – Institute of Transportation Engineers.

Impervious Area Reduction Facility – A facility used to intercept rainfall that would otherwise be impervious, such as a roof or sidewalk. Such facilities include pervious pavement and eco roofs. These facilities are not designed to manage run-on but can be used to treat or infiltrate a design storm event within the facility footprint.

Impervious Surface – An area or surface that prohibits or delays infiltration of rainfall or otherwise causes drainage water to run off the land surface at an increased rate of flow from that present under predeveloped conditions. By way of illustration but not limitation, impervious surfaces may include but are not limited to building roofs, concrete or asphalt paving on walkways, driveways, parking lots, gravel subject to vehicular traffic, roads, compacted soil, and compacted fill.

Infiltration – The process by which stormwater penetrates into the soil.

Infiltration Facility – A stormwater facility designed without a liner or underdrain to treat and fully infiltrate a design storm event.

Infiltration Rate, Measured – The infiltration rate for the existing soils and subsoils, resulting from infiltration testing by either the Basic Method or Professional Method.

Infiltration Rate, Design – The infiltration rate used for the design of stormwater facilities, equal to the measured infiltration rate divided by a safety factor of two (2).

Inlet – A structure located just below the ground surface used to collect stormwater runoff. Generally located in streets and parking lots, inlets have grated lids, allowing stormwater from the surface to pass through for collection. The term, “Inlet,” is also used in reference to the point at which stormwater from impervious surfaces or conveyance piping enters a stormwater management facility.

J

Junction – A structure (i.e., catch basin or manhole) within a storm system whose purpose is combining multiple pipe inlets, facilitating changes in horizontal or vertical alignment, provide access for operation and maintenance, and/or other related functions.

K

L

Large Project – A project including 5,000 square feet or more of new impervious surface, replaced impervious surface, or new pervious pavement, individually or combined, on private property; or a project including 5,000 square feet or more of new impervious surface, replaced impervious surface, or new pervious pavement, individually or combined, in the public right-of-way.

Local or Residential Street – A facility not designated on one of the higher systems. It serves primarily to provide access to abutting land and offers the lowest level of traffic mobility. Through traffic movement is deliberately discouraged.

Longitudinal Joint – A joint which follows a course approximately parallel to the centerline of the roadway.

LOS – Level Of Service.

Low Impact Development (LID) – A comprehensive land planning and engineering design approach to stormwater management with a goal of mimicking the pre-development hydrologic regime of urban and developing watersheds.

M

Major Partition – A partition which includes the creation of a road or street.

Master Plan – Reference to any of the City’s Infrastructure Master Plans.

Maximum Extent Feasible (MEF) – The extent to which a requirement or performance standard must be complied with as constrained by the physical limitations of the site, while providing reasonable considerations of engineering design, financial costs, and environmental impacts. For compliance with SRC 71.100, MEF means using green stormwater infrastructure to meet performance standards for treatment (SRC 71.100(c)) by infiltrating and treating the water quality design storm.

MR – Resilient Modulus.

Multiple Family Dwelling – A building or portion designed thereof for occupancy by two or more families, living independently of each other.

MUTCD – Manual on Uniform Traffic Control Devices.

N

NDT – Non-Destructive Testing.

NEC – National Electrical Code.

New impervious surface – Any impervious surface resulting from a project that 1) is placed over a previously pervious surface; 2) is placed over a surface that previously was in a predeveloped state; or 3) is placed over an existing impervious surface that does not have a stormwater system.

New Pervious Surface – Any pervious surface resulting from a project and is neither made impervious nor returned to its predevelopment condition through soil amendment, landscaping, or other surface that mimics natural hydrologic functions.

NI – No Indicator Status.

NRCS – Natural Resource Conservation Service.

NSRR – Numeric Stormwater Retention Requirement (see water quality design storm)

NWPL – National Wetland Plant List.

O

OBL – Obligate Wetland Species – Plant species that are typically found in a wetland.

ODFW – Oregon Department of Fish and Wildlife.

ODOT – Oregon Department Of Transportation.

ODSL—Oregon Department of State Lands.

One Lane Rotated – A two lane street including the median or left-turn lanes.

OPSC – Oregon Plumbing Specialty Code.

OTTCH – Oregon Temporary Traffic Control Handbook.

P

PAC – Permit Application Center.

Partial Infiltration Facility – A stormwater facility designed without a liner but with an underdrain to treat and promote infiltration of a design storm event.

PC – Point of Curvature.

PCC – Portland Cement Concrete.

Peak Discharge – The maximum volumetric flow for a given design storm.

Pedestrian Access Route – A continuous and unobstructed path of travel provided for pedestrians with disabilities within or coinciding with a Pedestrian Circular Path.

Pedestrian Circular Path – A prepared exterior or interior surface provided for pedestrian travel in the public right-of-way.

Pervious pavement – Pervious concrete, porous asphalt, or permeable paver blocks that infiltrate drainage water.

Pervious surface A surface that does not meet the definition of impervious surface. By way of illustration but not limitation, pervious surfaces include landscaping, amended soils, uncompacted gravel not subject to vehicular traffic, lawns, sand, and pervious pavement.

PI – Point of Intersection.

Plans – Construction plans, including system plans, sewer plans and profiles, cross sections, detailed drawings, etc., or reproductions thereof, approved or to be approved by the City Engineer, which show the location, character, dimensions, and details for the work to be done, in which constitute a supplement to these Standards.

Pollutant – Any substance that affects, or has the potential to affect, water quality in a manner that is detrimental to human health or safety or to the environment. Pollutant includes but is not limited to: dredged spoil; solid waste; incinerator residue; sewage; garbage; sewerage sludge; munitions; chemical wastes; biological materials; radioactive materials; heat; wrecked or discarded equipment; rock; sand; cellar dirt; and industrial, municipal, and agricultural waste discharged into water.

Post-development – The conditions that reasonably may be expected or anticipated to exist after completion of development activity on a site.

Potable Water – Water satisfactory for drinking, culinary, and domestic purposes and meets the requirements of the health authority having jurisdiction.

PRC – Point of Reverse Curve.

Predeveloped – The conditions on a site in its natural, or undeveloped state, generally characterized by a mixture of trees, brush, forbs, and grass, and which is used to determine the allowable post-development discharge peak rates and flow volumes. The runoff characteristics for calculating allowable predeveloped outflow are based on the combination of woods and grasslands (see calculated curve numbers in Division 004, Appendix 4D).

Pretreatment – means a sedimentation manhole or other structure or device used to remove sediment and debris from stormwater prior to entering a stormwater facility. These structures do not meet the requirements for a stormwater treatment only and must be used as part of a treatment train. Division 004, Appendix 4F includes a list of acceptable manufactured facilities for stormwater pretreatment.

Private Distribution System – A privately owned and maintained water distribution system serving an industrial or commercial subdivision or a multi-building development on a single lot served through a master meter installed at the approved location.

Private Stormwater Facility – Any stormwater facility that is not owned or operated by the City that has been installed or constructed for the purpose of removing pollutants from stormwater, or for controlling the discharge flow rate, flow duration, or flow quantity of stormwater.

Private Stormwater System – Owned and operated by a private property owner(s), a stormwater system located outside the building envelope which serves one or multiple properties and includes

catch basins, area drains, or other stormwater facilities. Generally synonymous with private storm sewer and private storm drain.

Project – Ground disturbing activity; the addition of new impervious surface; the addition of new pervious pavement; or the replacement of impervious surface.

Project Engineer – The engineer, in responsible charge, licensed by the State of Oregon as a Civil Engineer under whose direction the Plans and details for the work are prepared and submitted to the City for review and approval.

PROWAG – Public Right-Of-Way Accessibility Guidelines.

PSF – Pounds per Square Foot.

PT – Point of Tangency.

Public Stormwater System – Any portion of the storm collection and conveyance system operated and maintained by the City. Generally synonymous with public storm sewer and public storm drain.

PUD – Planned Unit Development.

PUE – Public Utility Easement.

PVI – Point of Vertical Intersection.

Pipe Types:

ABS – Acrylonitrile-Butadiene-Styrene.

CHDPE – Corrugated High Density Polyethylene.

CONC – Concrete.

DI – Ductile Iron.

HDPE – High Density Polyethylene.

PVC – Polyvinyl Chloride.

Q

Qualified Professional – A Professional Engineer (PE), Registered Geologist (RG), or Certified Engineering Geologist (CEG) licensed in the State of Oregon.

R

RDII – Rainfall Derived Inflow and Infiltration.

Receiving Water – the surface water, groundwater, or wetland receiving any discharge of drainage water or pollutants.

Replaced Impervious Surface – The removal of an existing impervious surface and replacement with new impervious surface. Replaced impervious surface does not include repair or maintenance activities on structures, paved surfaces, or stormwater facilities taken to prevent decline, lapse, or

cessation in the use of the existing impervious surfaces as long as no additional hydrologic impact results from the repair or maintenance activity. By way of illustration but not limitation, hydrologic impacts can include changes in the routing of drainage water flows, changes in drainage water flow rates, changes in the duration of drainage water flows, or changes in drainage water volumes.

Residential Project – Any residential development, to include single family dwellings; townhouses; two-family uses, three- and four- family uses, and/or accessory dwelling units, in which the total new pervious pavement, new impervious surface, and replaced impervious surface is 1,300 square feet or more, but less than 5,000 square feet.

Retention – The process of collecting, holding, and infiltrating stormwater runoff.

Retention Facility – A facility designed to receive and hold and provide water quality treatment to drainage water. Rather than storing and releasing the entire runoff volume, retention facilities store a portion of the water on site, where it infiltrates or evaporates. In this way, the full volume of stormwater that enters the facility is not released off site.

Retrofit – The creation or modification of an urban runoff management system in a previously developed area. This may include wet ponds, infiltration systems, wetland plantings, stream bank stabilization, and other BMP techniques for improving water quality and creating aquatic habitat. A retrofit can consist of the construction of a new BMP in a developed area, the enhancement of an older urban runoff management structure, or a combination of improvement and new construction.

Right(s)-Of-Way (ROW) – All land or interest therein which by deed, conveyance, agreement, easement, dedication, usage, or process of law is reserved for or dedicated to the use of the general public for roadway purposes, which the City has sole responsibility to maintain.

Roadway – That entire portion of the right-of-way used, or to be used, for vehicle movement, which exists between the curbs or proposed curb lines.

Rules – Reference to Administrative Rules of City of Salem.

S

Salem – Reference to City of Salem, Oregon.

SBUH – Santa Barbara Urban Hydrograph.

Sector Plan – A plan developed by the City detailing how service to a specific area is to be provided.

Seasonal High Groundwater – The highest level that the permanent groundwater table or perched groundwater may reach on a seasonal basis.

SESWD – Suburban East Salem Water District.

Sewer – Reference to the sanitary sewer collection system.

SFR – Single Family Residential.

Shared Use Path – A multi-use path designed primarily for use by bicyclists and pedestrians, including pedestrians with disabilities, for transportation and recreation purposes. Shared use paths are not physically separated from motor vehicle traffic by an open space or barrier, and are either within the street right-of-way or within an independent right-of-way.

Single Family Residential Project – see Residential Project.

Source Control – Stormwater facilities and/or actions that address site activities and characteristics with the potential to generate pollutants that may not be addressed solely through the pollution reduction facilities.

SRC – Salem Revised Code.

Standard Construction Specifications (SCS) – The Standard Construction Specifications and Plans for Public Works construction in the City of Salem.

Standard Drawings – The drawings of structures or devices commonly used in the construction of the City’s infrastructure and referred to on the Plans.

Stormwater – The portion of precipitation and snowmelt that does not naturally percolate into the ground or evaporate, but flows into receiving water by overland flow, interflow, pipes, and other features of a stormwater system.

Stormwater Facility – A facility designed to control the flow rate, flow volume, or flow duration of drainage water, or a facility designed to remove pollutants from drainage water.

Stormwater System – All stormwater facilities and improvements such as catch basins, curbs, culverts, gutters, ditches, manmade channels, and storm drains that collect, convey, or control the flow of stormwater or remove pollutants from drainage water.

Streets or Roads – Any public highway, road, street, avenue, alley, way, easement, or right-of-way used or to be used for vehicle movement.

Sub-basin – Significant differences in land use within a given drainage basin must be addressed by dividing the basin area into sub-basins with similar land use and/or runoff characteristics.

Superelevation – The vertical distance between the heights of the inner and outer edges of highway pavement.

Superelevation Runoff – The length of roadway needed to transition the outside lane cross slope from zero (flat) to full superelevation, or vice versa.

Swale – A vegetated strip of land designed to attenuate stormwater runoff and clean it with natural soil and vegetation filters through filtration.

SWMM – Stormwater Management Model.

T

Tangent Runout – The length of roadway needed to transition the outside lane cross slope from the normal cross slope to zero (flat), or vice versa.

Transition and Taper – Taper for acceleration or deceleration of turning vehicles is provided on high speed roads in order to improve traffic flow conditions. Tapers are so designed that an entering vehicle can accelerate to the speed of through traffic before it begins the actual merging maneuver, and that a diverging vehicle need not begin to decelerate until it has completely left the through lane.

Transverse Joint – A joint which follows a course approximately perpendicular to the centerline of the roadway.

Treatment Facility – A stormwater facility designed to remove pollutants from drainage water.

Tree Protection Area (TPA) – The portion of the CTZ that will be protected by tree protection fencing and/or other methods as determined by the City’s Urban Forester.

Trunk Sewer – A public sewer ten inches or larger which has been or is being constructed to accommodate more than one main sewer or lateral sewer. It may, in some cases, serve as a lateral sewer.

TSP – Transportation System Plan.

Two Lanes Rotated – A four lane street, including median or left-turn lanes.

U

UFAS – Uniform Federal Accessibility Standards.

UGB – Urban Growth Boundary.

UIC – Underground Injection Control.

Uniform Plumbing Code – The Uniform Plumbing Code adopted by the International Association of Plumbing and Mechanical Officials, current edition. Adopted by SRC 61.001.

Uniformity Ratio – The ratio of average footcandles of luminance on the pavement area to the footcandles at the point of minimum luminance on the pavement.

UPL – Obligate Upland Species.

Urban Intermediate – That portion of the City which is outside of a downtown area, but generally within the zone of influence of a business or industrial development often characterized by moderately heavy nighttime pedestrian traffic and somewhat lower parking turnover than is found in a commercial area. This includes densely developed apartment areas, hospitals, public libraries, and neighborhood recreational centers.

Urgent Exception Request – A deviation to the Design Standards occurring during construction of a critical path task resulting in the need to change the design as reflected on approved construction plans to mitigate an unanticipated existing site condition encountered during construction.

USACE – United States Army Corps of Engineers.

USPS – United States Postal Service.

V

W

Waterway – any watercourse within the City as designated by the Director.

Water Quality Design Storm Event – a design storm event representative of 80 percent of the average annual runoff and is used to size stormwater facilities for water quality treatment.

Wetland – Any area that is inundated or saturated by surface water or groundwater 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.

X

Y

Z

For Review