

CITY UTILITIES DESIGN STANDARDS MANUAL

**Book 3
Sanitary (SA)
SA1 Acronyms and Definitions**

June 2015

SA1.01 Purpose

The purpose of this Chapter is to define acronyms and terms used throughout the Sanitary Sewer Book of the Design Standards Manual. This Chapter covers the intent and meaning of the referenced acronyms and terms.

SA1.02 Acronyms

<u>AASHTO</u>	American Association of State Highway and Transportation Officials
<u>ADF</u>	Average Daily Flow
<u>ANSI</u>	American National Standards Institute
<u>ASTM</u>	ASTM International (formerly American Society of Testing and Materials)
<u>AWG</u>	American Wire Gauge
<u>AWWA</u>	American Water Works Association
<u>CIPP</u>	Cured-In-Place Pipe
<u>CUE</u>	City Utilities Engineering
<u>DIP</u>	Ductile Iron Pipe
<u>DVS</u>	Development Services
<u>GPD</u>	Gallons Per Day
<u>HDPE</u>	High Density Polyethylene
<u>HP</u>	Horsepower
<u>I/I</u>	Infiltration and Inflow
<u>IAC</u>	Indiana Administrative Code
<u>IAPMO</u>	International Association of Plumbing and Mechanical Officials
<u>IBC</u>	International Building Code
<u>IDEM</u>	Indiana Department of Environmental Management
<u>IDNR</u>	Indiana Department of Natural Resources
<u>IESNA</u>	Illuminating Engineering Society of North America
<u>IMUTCD</u>	Indiana Manual on Uniform Traffic Control Devices
<u>INDOT</u>	Indiana Department of Transportation
<u>IPC</u>	Indiana Plumbing Code
<u>NEC</u>	National Electric Code (NFPA 70)
<u>NECA</u>	National Electrical Contractors Association
<u>NEMA</u>	National Electrical Manufacturers Association
<u>NFPA</u>	National Fire Protection Association

<u>NPSH</u>	Net Positive Suction Head
<u>NTS</u>	Not To Scale
<u>PE</u>	Professional Engineer
<u>PVC</u>	Polyvinyl Chloride
<u>PSI</u>	Pounds Per Square Inch
<u>RCP</u>	Reinforced Concrete Pipe
<u>ROW</u>	Right-Of-Way
<u>RPR</u>	Resident Project Representative
<u>SDR</u>	Standard Dimension Ratio
<u>SWMM</u>	EPA Storm Water Management Model
<u>TDH</u>	Total Dynamic Head
<u>UL</u>	Underwriters Laboratories, Inc.
<u>VCP</u>	Vitrified Clay Pipe
<u>VFD</u>	Variable Frequency Drive
<u>WPCP</u>	Water Pollution Control Plant

SA1.03 Definitions

Adjusting Ring A cylindrical ring, usually comprised of concrete, secured on top of a manhole upon which the frame will rest.

Average Daily Flow Average 24-hour dry weather flow, including a nominal amount of infiltration, within a sewer.

Backfill Earth and/or other material used to replace material removed from trenches or other excavations during construction activities. The backfill lies above the pipe bedding.

Bedding The fractured face stone which encases the sewer pipe to a minimum depth above and below the barrel of the pipe. The bedding serves as the pipe support.

Book Organizational grouping of utility design standards by topic. These Books consist of General Requirements, Stormwater, Sanitary Sewer, Potable Water Distribution Systems and Materials.

Building Sewer Private sewers which connect building plumbing to public sewers. Building sewers normally begin outside the building foundation.

Buoyancy The act of supporting a floating body, including the tendency to float an empty pipe or structure by exterior hydraulic pressure.

City The City of Fort Wayne, Indiana.

City Utilities The department of the City of Fort Wayne that manages the stormwater, wastewater and water utilities.

City Utilities Engineering The division within City Utilities that develops City Utility Engineering Standards, manages City Utilities Projects, and performs planning and system analysis for the stormwater, wastewater and water utilities.

City Utilities Projects Publicly funded projects that improve the stormwater, wastewater, and water utilities and are under direction of City Utilities Engineering.

City Utilities Design Standards Manual A document that provides guidance and requirements for the planning, design, and construction of stormwater, wastewater, and water utility infrastructure.

Cleanout A pipe or some other opening through which a device may be run to unplug a sewer.

Collar A monolithic concrete encasement of sanitary cleanout casting in pavement.

Collector Sewer Sewer that is primarily installed to receive wastewater directly from building sewer connections and convey the wastewater to an interceptor line.

Combination Air Valve A valve on sewage forcemains that automatically releases air and gas from a filling system, admits air into a draining system, and releases air and gas in a pressurized flowing system.

Combined or Combination Sewer A sewer which carries storm, surface and groundwater runoff as well as wastewater.

Concrete Pipe Includes reinforced concrete pipe, horizontal and vertical elliptical concrete pipe, concrete arch pipe and concrete box sections.

Crown The top or highest point of the internal surface of a conduit or sewer pipe.

Development Any man-made change to improved or unimproved real estate, including but not limited to, buildings, or other structures, filling, grading, paving, excavation, substantial improvements, placement of mobile homes, subdivision of land.

Development Services The division within the department of the City Utilities that oversees Non-capital projects.

Easement A right to occupy, access or otherwise utilize the real property of another for a specifically defined use.

Encasement The enclosing or surrounding of a conduit with concrete or other suitable material.

Flexible Pipe Comprises all pipe materials other than concrete pipe, including but not limited to ductile iron pipe, polyvinylchloride pipe, high

density polyethylene pipe, fiberglass reinforced pipe, and polypropylene pipe.

Force Main A pressurized pipe that conveys flow from the discharge side of a pump.

Grease Interceptor Device which collects organic substances including fats, vegetable and mineral oils, waxes, fatty acids from soaps, and other long-chain hydrocarbons before they enter the sewer system, thus reducing the risk of blockages in sewers.

Hydraulic Grade Line Measure of pressure head available at specific points within a sewer system. The hydraulic grade line is a line connecting the points to which the liquid would rise at various places along any pipe if piezometer tubes were inserted in the liquid.

Infiltration Groundwater that enters the sewer system via such means as pipe cracks, joints, connections, or defects in manhole structures.

Inflow Surface water which enters the sanitary sewer system via an improper drain connection (foundation drain, roof drain, yard drain, inlet structure, storm sewer cross connection, or sump pump) or from sources such as leaks through manhole cover.

Interceptor Sewer Principal sewer to which collector sewers are tributary. Interceptor sewers convey the wastewater to treatment or other disposal facilities.

Invert The bottom or lowest elevation of the internal cross-section of a conduit or sewer pipe.

Inverted Siphon A gravity sewer which is designed to drop below the hydraulic grade line.

Lift Station Any arrangement of pumps, piping, valves, and controls that conveys wastewater to or over a higher elevation.

Low Pressure Sewer System A system of small diameter (2"-4") pressurized sewer mains that collect and convey sewage from small pump stations built to serve individual buildings that grind up sewage and deliver it to the main via a 1 ¼" pressurized service.

Manhole Sanitary sewer confined space through which a person may enter to gain access to an underground sanitary sewer.

Monolithic Concrete structure cast as a single piece and formed without joints or seams.

Peak Hourly Flow The largest volume of flow to be received during a one hour period expressed as a volume per unit time.

Permit Written permission from agency with authority to control operation.

Population, Equivalent A hypothetical number of persons for which flow contributions are calculated.

Population Build-Out The actual (equivalent) population that exists or would exist when an area is fully developed.

Precast A concrete item which is formed or molded.

Private Sewer Pipe owned and maintained by a private person or company which conveys wastewater.

Public Sewer Pipe used to convey wastewater which all owners of abutting property have equal rights to and is controlled and maintained by the City of Fort Wayne or other public authority.

Right-of-Way A general term denoting land, property or interest therein, usually in a strip of land acquired for or devoted to the construction of a highway, road or street that will include the travelled way, shoulders, roadsides, auxiliary lanes, medians, border areas, park strips, sidewalks, curbs, gutters, and fronting roads.

Sand/Oil Separators Device designed to remove sand and oil from wastewater prior to discharge to main line sewer.

Sanitary Sewer A sewer which carries domestic and unpolluted industrial sanitary wastewater and to which storm, surface, groundwaters and unpolluted industrial waste waters are not intentionally admitted.

Service Area A geographical area served by a public utility or sewage collection system.

Sewer Pipe used to convey wastewater to a treatment facility.

Springline The horizontal centerline of a conduit or sewer pipe.

Standards Fort Wayne City Utilities Design Standards Manual. The requirements for the design and construction of utilities within Fort Wayne's jurisdiction.

Submersible Pump A pump capable of being fully placed beneath a water surface.

Wastewater The water-carried wastes from residences, business buildings, institutions and industrial establishments, singularly or in any combination, together with such ground, surface and storm waters as may be present.

Wet Well A short-term storage tank containing a pump or pump suction into which wastewater is conveyed.