

# **CITY UTILITIES DESIGN STANDARDS MANUAL**

**Book 5  
Materials (MA)  
MA1 Acronyms and Definitions**

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### MA1.01 Purpose

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

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### MA1.02 Acronyms

<b><u>AASHTO</u></b>	American Association of State Highway and Transportation Officials
<b><u>ACI</u></b>	The American Concrete Institute
<b><u>AC</u></b>	Alternating Current
<b><u>ANSI</u></b>	American National Standards Institute
<b><u>ASTM</u></b>	ASTM International (formerly American Society of Testing and Materials)
<b><u>AWWA</u></b>	American Water Works Association
<b><u>CIPP</u></b>	Cured-In-Place Pipe
<b><u>CUE</u></b>	City Utilities Engineering
<b><u>CMP</u></b>	Corrugated Metal Pipe
<b><u>DIP</u></b>	Ductile Iron Pipe
<b><u>DVD</u></b>	Digital Video Disk
<b><u>NASSCO</u></b>	National Association of Sewer Service Companies
<b><u>PACP</u></b>	Pipeline Assessment and Certification Program
<b><u>DR</u></b>	Dimension Ratio
<b><u>GFI</u></b>	Ground Fault Interrupter
<b><u>FRP</u></b>	Fiberglass Reinforced Plastic
<b><u>HDPE</u></b>	High Density Polyethylene
<b><u>HEP</u></b>	Horizontal Elliptical Pipe
<b><u>IDEM</u></b>	Indiana Department of Environmental Management
<b><u>IDNR</u></b>	Indiana Department of Natural Resources
<b><u>INDOT</u></b>	Indiana Department of Transportation
<b><u>PP</u></b>	Polypropylene
<b><u>PVC</u></b>	Polyvinyl Chloride
<b><u>RCP</u></b>	Reinforced Concrete Pipe
<b><u>SCADA</u></b>	Supervisory Control and Data Acquisition
<b><u>VCP</u></b>	Vitrified Clay Pipe
<b><u>VEP</u></b>	Vertical Elliptical Pipe

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**MA1.03 Definitions**

<b><u>Admixtures</u></b>	A chemical added to concrete mixtures to accelerate the speed of concrete hardening.
<b><u>Aggregate</u></b>	A component, material, or particle used in a construction mixture such as concrete, soil mixtures, or grout.
<b><u>Appurtenances</u></b>	An item attached to or belonging to a water main to control flow, identify, or ease assembly.
<b><u>Backfill</u></b>	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.
<b><u>Bedding</u></b>	The fractured face stone which encases the pipe to a minimum depth above and below the barrel of the pipe. The bedding serves as the pipe support.
<b><u>Book</u></b>	Organizational grouping of utility design standards by topic. These Books consist of General Requirements, CADD Standards, Stormwater, Sanitary, Water, and Materials.
<b><u>Cast in Place</u></b>	Method of building concrete structures on site by using forms and placing concrete.
<b><u>Castings</u></b>	The base and cover of a manhole designed to bear the weight of traffic and open for routine inspection; often made of cast iron.
<b><u>Check Dams</u></b>	Structures built with graded rock, which slows water velocity, but is permeable enough for water to flow through.
<b><u>Chimney Seal</u></b>	Sealant material used to bridge gaps between manhole components during construction to prevent infiltration.
<b><u>City Utilities</u></b>	The department of the City of Fort Wayne that manages the stormwater, wastewater and water utilities.
<b><u>City Utilities Engineering</u></b>	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.
<b><u>City Utilities Design Standards Manual</u></b>	A document that provides guidance and requirements for the planning, design, and construction of stormwater, wastewater, and water utility infrastructure.
<b><u>Concrete Pipe</u></b>	Includes reinforced concrete pipe, horizontal and vertical elliptical concrete pipe, concrete arch pipe, and concrete box sections.
<b><u>Corrugated</u></b>	Refers to a pipe profile that contains interior molding or ribbing for additional support and reduction of diametrical deformation.

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<b><u>Culvert</u></b>	An open ended stormwater pipe or structure that is dependent upon hydraulic head for performance. Typically, a culvert conveys runoff under a road, berm or railway.
<b><u>Corrugated Dual Wall</u></b>	Pipe with a smooth interior wall and a corrugated exterior to provide protection against deformations.
<b><u>Dowel</u></b>	A reinforcing adhesive material or bar used to strengthen the connection between set concrete and masonry wall.
<b><u>Easement</u></b>	A right to occupy, access or otherwise utilize the real property of another for a specifically defined use.
<b><u>Filter Sock for Underdrain</u></b>	A woven or mesh material wrapped around the circumference of a perforated pipe or drain to prevent the intrusion of fine sediment.
<b><u>Fittings</u></b>	A connection or joint to connect pieces of pipe of the same or different shape/size.
<b><u>Flexible Pipe</u></b>	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.
<b><u>Flowable Fill</u></b>	A controlled low strength, high slump material typically used as an alternative to compacted granular fill.
<b><u>Gaskets</u></b>	An annular seal that fills the void space between two connecting pipes to prevent leakage.
<b><u>Geotextiles/Geosynthetics</u></b>	Permeable fabrics in woven, nonwoven, gridded, or meshed composition which have the ability to separate, filter, reinforce, protect, or drain; often used to stabilize soils and embankments.
<b><u>Grout</u></b>	A construction material often comprised of water, sand, and cement used to fill gaps in concrete structures.
<b><u>Inlet</u></b>	A structure designed to allow runoff to enter the stormwater system.
<b><u>Manhole</u></b>	Confined space that provides access to an underground sewer.
<b><u>Non-Pressure</u></b>	Describes a pipe which is designed to convey flow by the force of gravity.
<b><u>Precast</u></b>	Concrete structures that are placed and set into a form or mold at the manufactures facility.
<b><u>Pressure</u></b>	Describes a pipe that conveys flow by the force of pressure head, not gravity.
<b><u>Private Stormwater Facilities</u></b>	Various stormwater and drainage works not under the control or ownership of the city, county, state, and/or federal government, which may include inlets, conduits, pipes,

pumping stations, manholes, structures, channels, outlets, retention or detention basins, other structural components and equipment designed to transport, move or regulate stormwater.

<b><u>Public Stormwater Facilities</u></b>	Various stormwater and drainage works under the control and/or ownership of the city, county, state, or federal government which may include inlets, conduits, pipes, culverts, pumping stations, manholes, structures, channels, outlets, retention or detention basins, other structural components and equipment designed to transport, move or regulate stormwater.
<b><u>Revetment</u></b>	A facing added to a structure or slope that provides additional support, typically used to describe a type of stone or riprap.
<b><u>Right-of-Way</u></b>	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.
<b><u>Riprap</u></b>	Large stones typically used for permanent or semi-permanent soil erosion protection of embankment slope, channels, and shorelines.
<b><u>Riser Ring</u></b>	A cylindrical ring, usually comprised of concrete, secured on top of a manhole and used to adjust the casting frame to finished grade.
<b><u>Sanitary Sewer</u></b>	A sewer which carries domestic and unpolluted industrial sanitary wastewater and to which stormwater, surface runoff, groundwater and unpolluted industrial waste waters are not intentionally admitted.
<b><u>Seating Ring</u></b>	A rubber ring located in the body of a butterfly valve to provide protection and a water tight seal.
<b><u>Standards</u></b>	Fort Wayne City Utilities Design Standards Manual. The requirements for the design and construction of utilities within Fort Wayne's jurisdiction.
<b><u>Storm Sewer</u></b>	A sewer designed or intended to convey only stormwater, surface runoff, street wash waters, and drainage, and not intended for sanitary sewage and industrial wastes other than unpolluted cooling water. The portion of a sewer intended to carry stormwater only, which begins at the grating or opening where water enters said sewer, through the sewer and any other conduits to the outlet structure where water enters a channel, natural watercourse or combined sewer.
<b><u>Tackifier</u></b>	A mulch additive used as a bonding agent to prevent wind and water erosion in hydroseeded areas.

<b><u>Tapping Saddles</u></b>	A device used to puncture water main for corporation stops <u>where water will be delivered to the customer.</u>
<b><u>Telemetry</u></b>	Automated controls and meters placed within the pipe network used to assess system performance remotely.
<b><u>Tracing Wire</u></b>	A metallic wire placed in the trench with pressure non-metallic and large diameter pipes for future identification of the buried pipe.
<b><u>Underdrains</u></b>	Small diameter perforated plastic pipe installed in bioretention areas, footings, detention walls etc., to drain excess water and reduce the hydrostatic pressure.
<b><u>Valve Vaults</u></b>	Valve housing, usually made of concrete, to protect and surround the valve outlet point of wet well flow.
<b><u>Watermain</u></b>	Pipe that is owned by City Utilities, located in a street, easement, road, right-of-way and/or alley and used to distribute finished water.
<b><u>Wet Well</u></b>	A short-term storage tank containing a pump or pump suction into which wastewater is conveyed.