

### **11.3 Concept Definitions**

Following are discussions of concepts which will be important in the conduct of a storm drainage analysis and design. These concepts will be used throughout the remainder of this chapter in dealing with different aspects related to storm drainage analysis.

Bypass	Flow which bypasses an inlet on grade and is carried in the street or channel to the next inlet downgrade. Inlets can be designed to allow a certain amount of bypass. Also, inlets may be designed to allow a certain amount of bypass for one design storm and larger or smaller amounts for other design storms.
Combination Inlet	A drainage inlet composed of a grate inlet with a curb opening, a Type "C" catch basin.
Equivalent Cross Slope	An imaginary straight cross slope having conveyance capacity equal to that of the given compound cross slope.
Flanking Inlets	Inlets placed upgradient and on either side of the low point inlet in a sag vertical curve. The purpose of these inlets is to intercept debris as the slope decreases and to act in relief of the inlet at the low point.
Frontal Flow	The portion of the flow which passes over the upgradient side of a grate.
Grate Inlet	A Type C-L catch basin composed of a grate at the roadside in a low point, swale or channel.
Grate Perimeter	The sum of the lengths of all sides of a grate, except that any side adjacent to a curb is not considered a part of the perimeter in weir flow computations.
Gutter	That portion of the roadway section adjacent to the curb which is utilized to convey stormwater runoff. It may include a portion, or all, of a traveled lane, shoulder or parking lane, and a limited width, adjacent to the curb, may be of different materials and have a different cross slope.
Hydraulic Grade Line	The hydraulic grade line is the locus of elevations to which the water would rise in successive piezometer tubes if the tubes were installed along a pipe run (pressure head plus elevation head).
Pressure Head	Pressure head is the height of a column of water that would exert a unit pressure equal to the pressure of the water.
Scupper	A grated inlet or vertical hole through a bridge deck for the purpose of deck drainage. Sometimes, a horizontal opening in the curb or barrier is called a scupper.
Side-Flow Interception	Flow which is intercepted along the side of a grate inlet, as opposed to frontal interception. The Department disregards this minimal amount of flow entering the inlet.

Slotted Drain Inlet	A drainage inlet composed of a continuous slot built into the top of a pipe which serves to intercept, collect and transport the flow.
Storm Drain	A storm drain is that portion of the storm drainage facilities that receives runoff from the inlets and conveys the runoff to an adequate outfall. Culverts discharging to the storm drainage system are considered part of the system.
Splash-Over	Portion of frontal flow at a grate which skips or splashes over the grate and is not intercepted.
Spread	The width of flow in the gutter measured laterally from the roadway curb.
Velocity Head	Velocity head is a quantity proportional to the kinetic energy of flowing water expressed as a height or head of water.