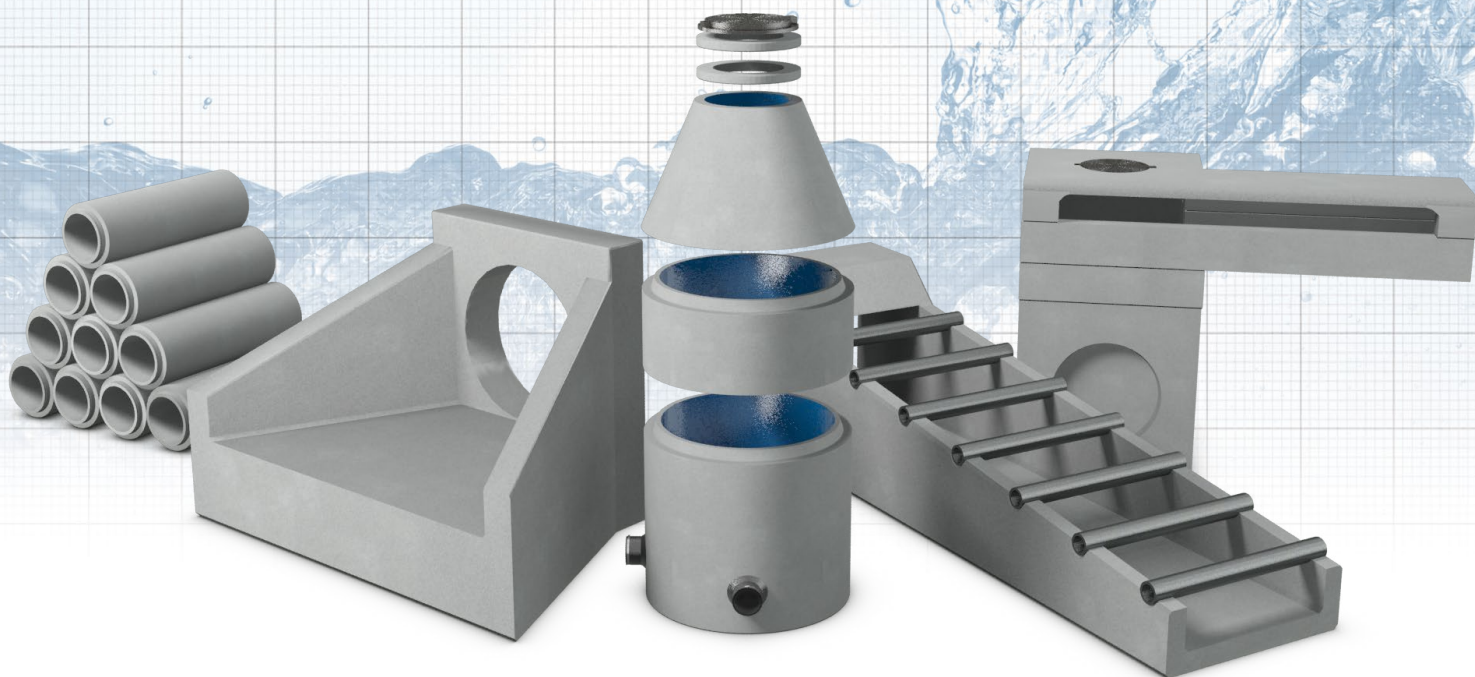


SITE UTILITY PRODUCTS



► General Information

When engineers and planners are designing or improving aging underground infrastructure, they look to ParkUSA for trusted products and specifications. ParkUSA offers utility products for wastewater, stormwater, electrical, communications and HVAC applications. Precast concrete structures offer superior strength and long lasting durability, at costs to fit the projects budget.

Catch Basins

Rainwater surface drainage is typically performed by the use of Catch Basins, sometimes referred to as Inlets. The Catch Basin is a belowground box structure with a horizontal opening at the ground level. At the ground level, a perforated grate is placed to allow rainwater to enter into the Catch Basin box. The grate is made of a material that best fits the intended use of the surface level. Generally, a parking lot would utilize a cast iron grate that is rated for vehicular rating. For pedestrian areas, a light duty grate can be used.

During a rain event, stormwater drains from the surface area into the grate openings of the Catch Basin. This water then drains into a sewer pipe that is connected to the Catch Basin box structure. The stormwater sewer piping is placed at a downward sloping gradient to encourage water to flow through the piping; this is also known as "gravity-flow". Catch Basins can be linked up with pipe to create a network of drainage points.

Utility Pipe

Reinforced Concrete Pipe (known as "RCP") is the strongest and the most reliable pipe used for underground stormwater sewers. Sizes range from 12" to 96" in diameter, and lengths up to 8'-0". The RCP pipe sections contain a male and female ends for interconnecting the pipe segments. These connections are sealed watertight with a butyl gasket material or rubber o-ring.

Junction Boxes

The Junction Box is a belowground round or square structure made of precast concrete. The purpose of these structures is to interconnect stormsewer or other piping together at to provide for change-in-direction, joining piping of different sizes, or for sewer access and inspection. Sizes can range up to 120" diameter or square.

Electrical Pull Boxes

The Electrical Pull Box is a belowground square structure made of precast concrete. The purpose of these structures is to interconnect underground communications or electrical cabling and provide for underground placement of electrical switchgear equipment. The design engineer customizes pull box sizes and configurations. Available accessories include, ladders, hatchways, cable terminators, shelving, pulling irons, and sump pumps.

Curb Inlets

When designing and building new streets and parking areas, a Curb Inlet is used to assist in the stormwater drainage of the street surface area. The Curb Inlet is typically a below ground box structure with a vertical throat opening at the street level. As the name implies, the opening is placed in the curb perimeter of the paved surface area. Also at the street level, is an iron access cover (often referred to as a manhole cover). During a rain event, stormwater drains from the street paved area into the throat opening of the Curb Inlet. This water then drains into a sewer pipe that is connected to the Curb Inlet box structure. The stormwater sewer piping is placed at a downward sloping gradient to encourage water to flow through the piping; this is also known as "gravity-flow". The stormwater eventually flows into a stream, river, ocean or type of public estuary.

SET's & Headwalls

Many rural areas that do not have underground storm sewers, have ditches that run parallel to the roadway to convey rainwater. And wherever there are drainage ditches, there are roads or driveway that eventually cross them. Stormwater piping is placed below the roadway or driveway to create a continuous waterway. At the inlet and the exit of this piping, a Safety-End-Treatment is used. The SET provides for erosion control (similar to a headwall), but also another important task; The SET can be equipped with galvanized steel rails (called "hardware"). Since the SET's are placed along roads, there always remains a potential for vehicles to accidentally leave the roadway and strike this embankment. The SET's hardware enhances the safety of the embankment by deflecting vehicles away from the abrupt concrete structure. Typically the county or the state will determine the specifications for these types of structures.

Underground storm sewer piping will sometimes penetrate aboveground in the form of a drainage ditch or pond inlet or discharge. There is a potential for soil erosion to occur around the pipe due to the unbridled nature of stormwater. To help prevent this erosion, a Headwall is used to terminate the pipe. The Headwall is a precast concrete structure with wings and a bottom to deflect the water away from the soil.

Covers & Grates

ParkUSA is a leading supplier of construction castings to many cities, counties, and states. Cast iron and ductile iron grates, covers, and frames from top manufacturers are kept in stock and available through special order. Contact ParkUSA for your project requirements.

Manholes

Below ground wastewater and stormwater sewer piping require access openings at certain intervals to allow for access, connection points, and change-in-direction points. A Manhole is used for these activities. The Manhole is a belowground round or square structure made of precast concrete. Sewer piping connects near the bottom of the manhole structure. At the street level, an iron access cover (often referred to as a "manhole cover") is placed to permit access.

Sanitary Sewer Manholes

This manhole is used on sanitary sewer lines for the conveyance of sanitary sewer. The Sanitary Sewer Manhole is typically 48" diameter and varies in depth according to the depth of the sanitary sewer. At the bottom of the manhole and at the pipe connections of the sewer, a channel (also called an "invert") is formed so that the sewer flow is smooth and unimpeded. Since sanitary sewer can be corrosive, interior liners can be specified to the manhole interior.

Stormwater Manholes

This manhole is used on stormwater sewer lines for the conveyance of rainwater. The Storm Sewer Manhole is generally characterized by a larger size, which is dictated by the sewer pipe connection sizes and orientation. Sizes of Storm Sewer Manholes can range from 48" to 120" diameter and will vary in depth according to the depth of the storm sewer.