

# Anatomy of a Sanitary Sewer



- 1 Residences** are homes and housing units.
- 2 Commercial Properties** house retail shops, offices and other businesses.
- 3 Industrial Facilities** serve purposes like manufacturing and production.
- 4 Lateral Clean-outs** give access to lateral lines and can be found in yards, basements, and crawl spaces.
- 5 Sewer Laterals** connect properties to the public sewer system and are typically the property owner's responsibility.
- 6 Manholes** grant access for cleaning and inspecting sewer lines. They can also join pipelines that would otherwise not connect due to elevation differences.
- 7 Sewer Mains** receive sewage from lateral lines and use gravity to channel sewage toward the treatment plant. They are sometimes referred to as gravity mains.
- 8 Interceptor Mains** receive the contents of sewer mains, carrying the effluent to the treatment plant. These are generally the largest lines within a collection system.
- 9 Pump Stations** move wastewater when gravity conveyance is not an option.
- 10 Force Mains** connect a pump station to an interceptor sewer.
- 11 Basins** collect wastewater for treatment.
- 12 Wastewater Treatment Plants** process municipal sewage so it can be reintroduced into the environment with minimal impact.
- 13 Outfalls** discharge treated water back into the environment.

## Sanitary Sewers

protect public health and the environment. They carry effluent from sinks, dishwashers, showers, washing machines, toilets and industrial sources via underground pipes to a wastewater treatment plant. At the treatment plant, contaminants are extracted and the wastewater is purified before being discharged back into the environment.

Though each system is unique, sanitary wastewater typically flows from a lateral connection into a main, then to an interceptor, and finally to a basin, where it awaits processing at the treatment plant. Most sewer pipes are gravity-propelled; pump stations are used when effluent must move uphill.

To learn more, check out EnviroSight's *Sewer Maintenance 101* handbook, which explains the wastewater industry to newcomers and industry pros alike. Request yours at [www.envirosight.com/101](http://www.envirosight.com/101)

- A CCTV Inspection Crawlers** travel through sewer mains and interceptors, performing detailed inspections with a camera head that pans, tilts and zooms.
- B Zoom Assessment Cameras** rapidly assess manhole and main condition using powerful illumination and zoom optics.
- C Push Cameras** inspect small-diameter lines like laterals, and are deployed manually via clean-outs.
- D Video Inspection Nozzles**, propelled by jetted water, allow a sewer cleaning crew to assess pipes pre- and post-cleaning to determine whether they need additional maintenance or repair.



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