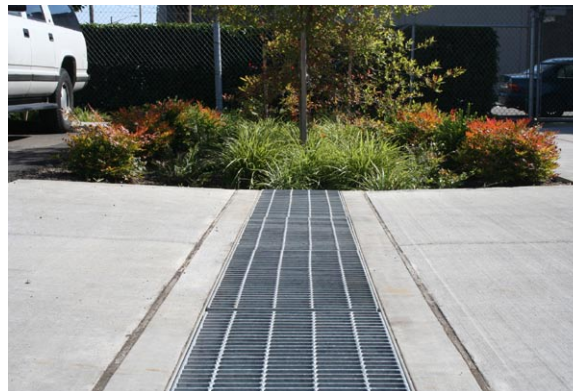


DESIGN DETAILS: Conveying Water With Trench Drains and Speed Bumps

Conveying stormwater runoff on or near the surface can be accomplished with a number of techniques. Using trench drains and small-scale speed bumps are good ways to efficiently direct runoff to landscape areas without using underground pipes.

Trench drain systems are designed to convey stormwater runoff within a shallow channel while maintaining unimpeded pedestrian or vehicular access. Trench drain grates can vary considerably in size and shape, as well as material choice and patterns. Trench drain channels, to which a grate is affixed or mounted to, can be designed with a variety of profiles and depths.

Using speed bumps to direct water into landscape areas is a simple and inexpensive design strategy. Speed bumps can be used to direct surface runoff near the beginning of a stormwater facility to increase treatment time. Also, small speed bumps can be installed as a “backstop” near curb cut entries to direct water into the stormwater facility. Speed bumps do not have to be very high. A 2 inch high speed bump is typically adequate for directing stormwater flow.



SOURCE: NEVUE NGAN ASSOCIATES

Figure 5-37: This trench drain example connects two stormwater facilities within an industrial parking lot site.



SOURCE: NEVUE NGAN ASSOCIATES

Figure 5-38: A concrete unit paver is placed at the exit point of this trench drain. The pad helps prevent erosion by dissipating water velocity as water drops from the trench drain to the finish grade of the stormwater facility.



SOURCE: NEVUE NGAN ASSOCIATES

Figure 5-39: This asphalt speed bump redirects stormwater into a vegetated swale. Without the speed bump in place, stormwater runoff would enter the vegetated swale much lower within the system, bypassing some of the area available for treatment.