

PURPOSE: Guidance on selection and use of Median Drop Inlet (MDI), *Standard Drawing 623-01 thru 623-07*, versus selection and use of Interstate Traffic Lane Shoulder Drop Inlet (SDI), *Standard Drawings 623-17 for Stressed Grate* and *623-17A for Welded Grate*. See *GD-P-04 MDI Nomenclature* for more information on the three MDI Types.

While MDIs and SDIs have similar inlet configurations they both have different inlet grates to choose and they are used in different situations/locations. This document provides guidance on the selection of which inlet type and grate for appropriate and consistent use. In general, selection of one type of drop inlet or grate is determined by the anticipated vehicle traffic load and frequency of being driven over. Grate selection should also consider pedestrian traffic or trash accumulation.

As these drop inlets have been confused in plan sets, plan set callouts should be clear and reference the appropriate Standard Drawing.

SELECTION:

MDI

Median Drop Inlets are designed for locations where no vehicle traffic (except during an accident or other rare occurrence) is expected. Similarly, little or no pedestrian use is expected.

Examples:

- highway medians, often rural settings
- roadside ditches
- behind curbs, outside the traffic lanes

MDI GRATE

Selection of an Urban or Rural Grate depends on anticipated pedestrian traffic, trash considerations, or other safety concerns. Rarely would the grate selection affect the hydraulics of the structure. Selection of the grate type should be coordinated with the District. Per Standard Drawing 623-01-1/1 the Urban Grating Detail shall be used in all cases unless noted on the Plans as alternate.

SDI

Interstate Traffic Lane Shoulder Drop Inlets (SDIs) should be used when the drop inlet will be located in areas that are likely to receive vehicle traffic.

Examples:

- Between a Concrete Wall Barrier (CWB) or guardrail and the white edge-of-driving-lane stripe
- In shoulders that are paved

Interiors of traffic circles if location is transversible

SDI GRATE

SDIs can be installed with either a Stressed Grate (623-17) or a Welded Grate (623-17A). The Stressed Grate is a high strength, reinforced drainage cover designed to withstand immense load impacts and the vibration of high-speed interstate traffic. Welded Grates are highly durable and easy to produce; however the continuous stress of highway traffic can occasionally cause fatigue at the weld points over time compared to Stressed Grates.

Both designs are engineered for the severe loads experienced in traffic lanes and paved shoulders, though the Stressed Grates are frequently specified for high-speed, heavy-truck interstate lanes.

Selection of Stressed Grate versus Welded Grate is not a Drainage issue and should be coordinated with the District, Bridge Bureau, and Traffic Bureau.