



Montana Department of Transportation
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Memorandum

To: Distribution

From: Mark A. Goodman, PE, Hydraulics Engineer (signed 2/6/14)

Date: February 6, 2014

Subject: Storm Drain Standard Drawing and Detail Drawings

Over the last several months, we have been working with the D&L Foundry to revise the dimensions of grates for the Type I, III, V and VI drop inlets. As a result, the foundry has agreed to casting a frame and grate that is square for both the Type I (straight bar grate) and the Type V (vaned grate) drop inlets.

Previously the grates were rectangular and had to be installed with a different orientation based on the grate type. This was a significant source of frustration for both construction and design to get the inlets installed properly. Having square frames will resolve this issue.

Two new standard drawings have been developed to reflect the new frame and grate dimensions. One drawing is for the Type I and V drop inlets which are on a standard 48 inch RCP barrel with a roof slab. The other drawing is for the Type III and VI drop inlets which are on a cast in place box with no roof slab. The Type II double drop inlet will no longer be specified.

These drawings will replace Detail Drawings 604-14 and 604-16; therefore, it is important to note that, the standard drawings must be inserted into the plans until the new Detail Drawings come out. We anticipate that the new detail drawing will be published sometime later in 2014.

The details for the new frame and grates are not manufacturer specific. Any foundry can cast these grates; however, the requirement is that they must be square to the general dimensions shown on the detail. Additionally, the grates must be available in either a straight bar or vaned inlet type configuration.

The foundry has indicated that the new frame and grates will be available by the end of January 2014. **Therefore, we would like to have the new square inlet details inserted into all applicable plan sets for projects with letting dates after March 31, 2014.**

The new standard drawings can be found at the following links:

ftp://ftp.mdt.mt.gov/caddstd/WORKGROUP/HYSTD/detailed_drawings/TypeI%26V_DI.pdf

ftp://ftp.mdt.mt.gov/caddstd/WORKGROUP/HYSTD/detailed_drawings/TypeIII%26VI_DI.pdf

Additionally, over the past year or so we have developed Standard Drawings for the:

- Type B curb inlet,
- Inlet aprons for Type I, III, IV, V, and VI drop inlets,
- And for trench bedding using granular fill.

These drawings also have been submitted for inclusion in the Detail Drawings but again until they come out, Standard Drawings for these items must be inserted into the plans.

The latest versions of these standard drawings can be found at the following links:

ftp://ftp.mdt.mt.gov/caddstd/WORKGROUP/HYSTD/detailed_drawings/TYPEB_CURB_INLET.pdf

ftp://ftp.mdt.mt.gov/caddstd/WORKGROUP/HYSTD/detailed_drawings/DropInlet_Apron.pdf

ftp://ftp.mdt.mt.gov/caddstd/WORKGROUP/HYSTD/detailed_drawings/TRENCH_BEDDING_DETAIL.pdf

Electronic Micro Station versions these drawings are also available in the Hydraulic Cadd Standards directory at the following link.

ftp://ftp.mdt.mt.gov/caddstd/WORKGROUP/HYSTD/detailed_drawings/

If you have you have questions or need additional information please contact Dave Hedstrom in the Hydraulics Section.

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