

# **HALDIMAND COUNTY**

## **DESIGN CRITERIA**

### **SECTION I**

#### **STORM DRAINAGE CONNECTIONS**

Revised 2015

**I 1.00 SINGLE FAMILY AND SEMI-DETACHED LOTS**

The roof water leaders shall be discharged to splash pads in all Single Family, Semi-detached or Townhouse residential developments.

**I 1.01 FOUNDATION DRAINS**

Direct gravity connections of foundation drains to the storm sewers are not permitted. Foundation drains may be discharged to the storm sewer only in accordance with the specifications/drawings shown at the end of this section.

The County preference is that sump pumps be discharged to a splash pad immediately outside of the foundation wall, as detailed at the end of this Section.

The connection of the storm drain to the storm sewer shall be made by means of a manufactured tee on the storm sewer line (for storm sewer sizes up to and including 900mm) or by means of a saddle (for storm sewer sizes in excess of 900mm). Core and seal type products would also be acceptable.

**I 1.02 STORM DRAIN MATERIALS**

Storm drain connections shall be constructed of 125mm diameter (min.) polyvinyl chloride (SDR 28) pipe.

**I 2.00 MULTI-FAMILY, HIGH RISE, INDUSTRIAL, INSTITUTIONAL, COMMERCIAL AND OTHER BLOCKS**

**I 2.01 GENERAL**

All blocks of land within the plan of subdivision, intended for use other than for park purposes, shall have a storm drain installed from the storm sewer to the street limit.

**I 2.02 CONNECTION**

The storm drain connection to all multi-family, high rise, and other blocks shall be sized individually according to the intended use of the lands. The minimum size shall be 250mm. All connections shall have an inspection manhole constructed wholly on the private lands within 1.5m of the street line.

**I 2.03 DEPTH OF CONNECTION**

The depth of the storm drain connection shall be governed by the grading of lands and the extent of the area to be served. The depth of the connection shall be sufficient to provide for drainage of all lands within the block, but in no case shall the depth to the top of the pipe be less than 1.3 metres.

**I 2.04 CONNECTION TO MAIN SEWER**

The connection of a storm service lateral may be made at an existing manhole or directly to the storm sewer if the size of the connection is less than or equal to half of the size of the storm sewer. If the connection size is greater than one half the size of the main sewer, the connection must be made to a manhole, existing or new, on the storm sewer or an approved manufactured tee must be used.

**I 2.05 STORM DRAIN MATERIALS**

Storm drain connections shall be constructed of concrete or polyvinyl chloride (SDR 28) pipe.

**I 2.06 LOCATION AND TIMING OF CONSTRUCTION**

Since the ultimate development of the block may be unknown at the time of the construction of the underground services, it may be desirable to delay the installation of the storm drain connections to the blocks in the plan of subdivision until further information is available.

If the block is developed prior to the placement of the surface course asphalt, then the service connection can be installed to the location required to suit the development. If no development proposals are received for the block at the time of the placement of the surface course asphalt, then the storm drain connections shall be installed to the location shown on the approved engineering drawings prior to the placing of the surface course asphalt.

In either case, all trenches crossing the travelled portion of the roadway shall be backfilled as according to Section G – Roadways; Subsection G10.04.

**I 3.00 BEDDING FOR STORM DRAIN CONNECTIONS**

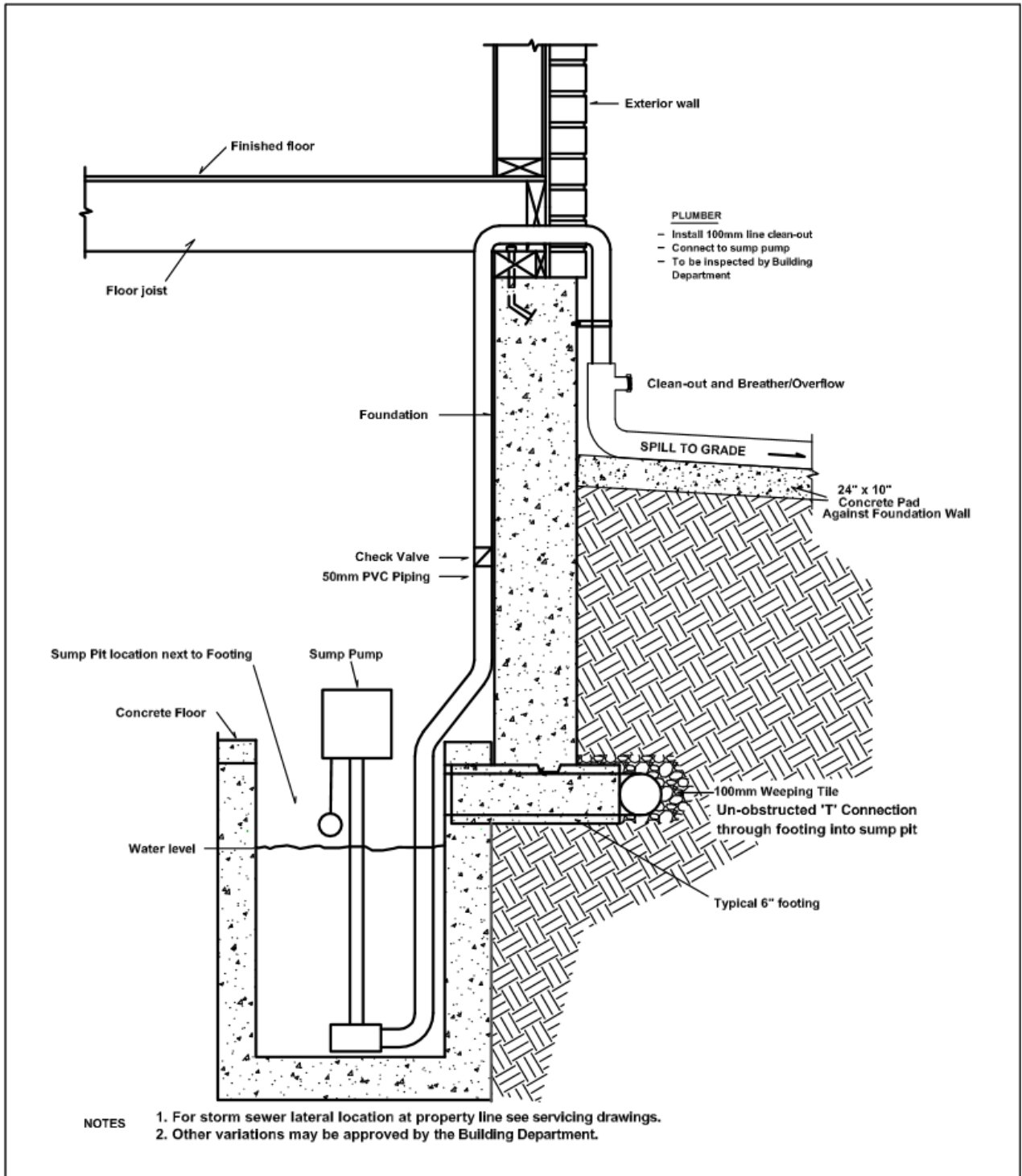
All storm drain connections shall be installed using Type B bedding using Granular A as the granular material with 300mm of sand cover.

**I 4.00 CONSTRUCTION**

All storm drain connections shall be constructed in accordance with the O.P.S. standards and specifications current at the time of approval of the engineering drawings by the Engineering Manager.

Typical service entry locations are detailed (i.e. water at centreline, sanitary 3.0m left of centreline, storm 3.0m right of centreline) on drawing I-2 at the end of this section.

Optional dual storm lateral connection (150mm diameter + 2 x 125mm diameter with 45 degrees Y-shaped branch on R.O.W. 1.5m from property line), may be considered for narrow frontage residential development (large family blocks, townhouses, semi-detached etc.) on site-specific basis. Connection pipes shall be installed at a grade of 2% (minimum).



**SUMP PUMP AND DISCHARGE  
LATERAL - TYPICAL DETAIL  
(PREFERRED)**

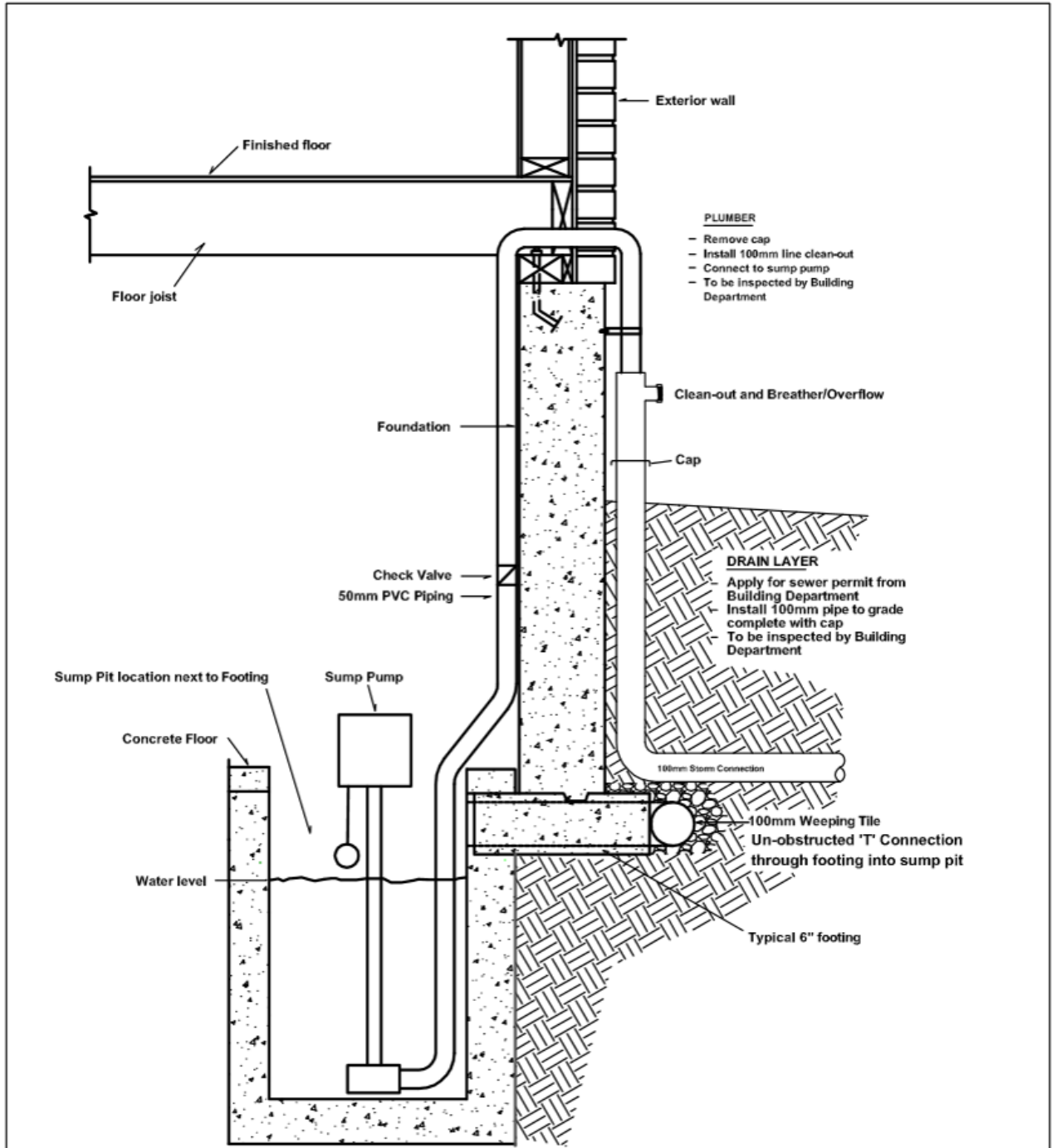
Drawing Number

**I1A**



Scale: N.T.S.

|             |                |                   |
|-------------|----------------|-------------------|
| Revision: 1 | Drawn by: D.R. | Date: Oct. 2002   |
| Revision: 2 | Drawn by: D.R. | Date: April, 2003 |
| Revision: 3 | Drawn by: N.F. | Date: July 2003   |
| Revision: 4 | Drawn by: N.F. | Date: July 2004   |
| Revision: 5 | Drawn by: D.R. | Date: June 2005   |



NOTES  
1. For storm sewer lateral location at property line see servicing drawings.  
2. Other variations may be approved by the Building Department.

**SUMP PUMP AND DISCHARGE  
LATERAL - TYPICAL DETAIL**

Drawing Number

**I1B**



Scale: N.T.S.

|             |                |                   |
|-------------|----------------|-------------------|
| Revision: 1 | Drawn by: D.R. | Date: Oct. 2002   |
| Revision: 2 | Drawn by: D.R. | Date: April, 2003 |
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