

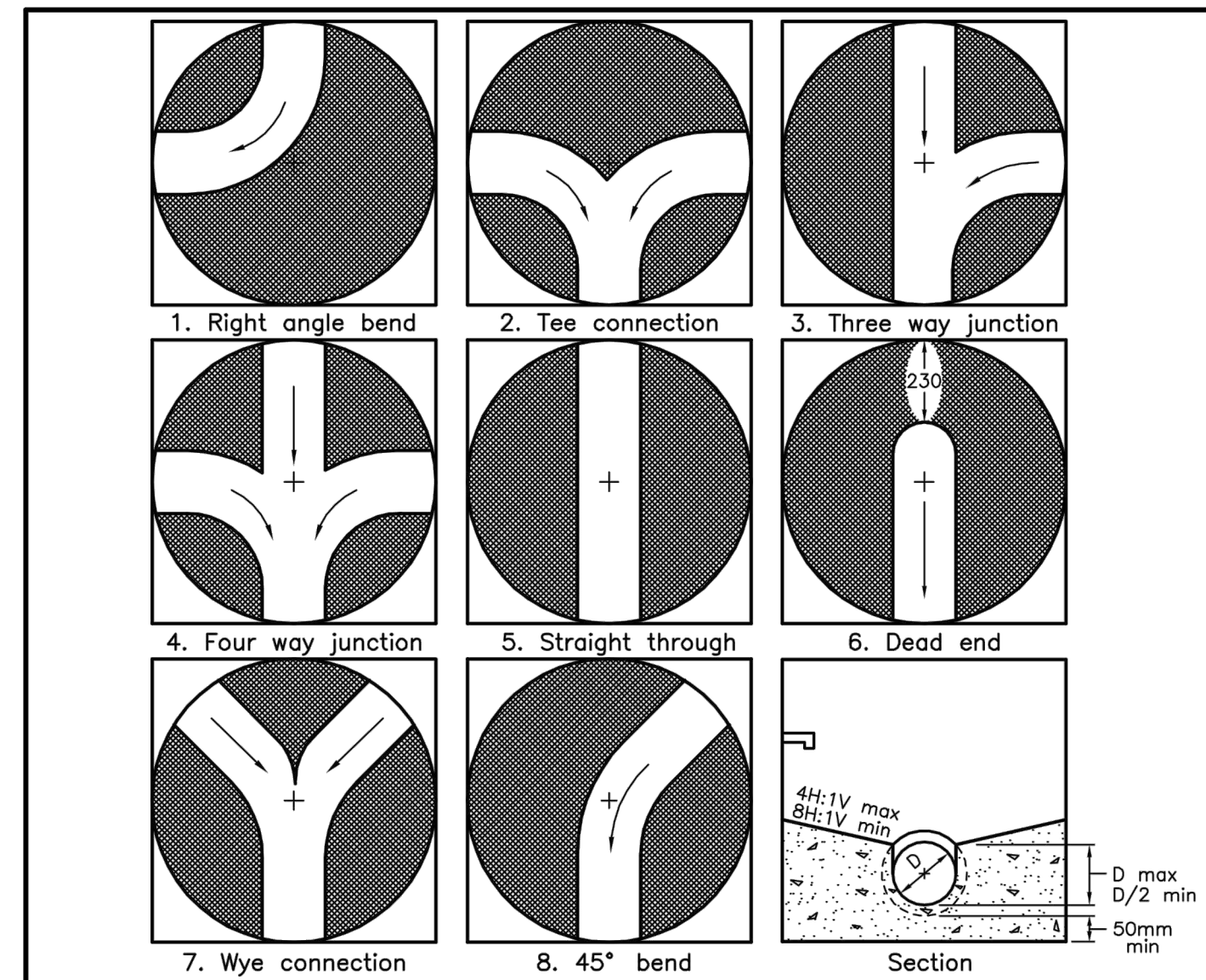
**APPROVED**  
By Adam Brown at 9:41 am, Feb 07, 2023

*AB*

**ADAM BROWN**  
MANAGER, DEVELOPMENT REVIEW - RURAL  
PLANNING, REAL ESTATE & ECONOMIC DEVELOPMENT  
DEPARTMENT, CITY OF OTTAWA

RECORD OF REVISIONS

NO.	REVISION	DATE (MM/DD/YYYY)
1	ISSUED FOR 60% REVIEW	SEPTEMBER 29, 2022
2	ISSUED FOR 66% REVIEW	JULY 15, 2022
3	ISSUED FOR 66% REVIEW	JUNE 7, 2022
4	ISSUED FOR SITE PLAN CONTROL REV. 2	DECEMBER 16, 2021
5	ISSUED FOR SITE PLAN CONTROL REV. 3	SEPTEMBER 29, 2022



**MAXIMUM SIZE HOLE IN THE WALL IN PRECAST RISER SECTIONS**

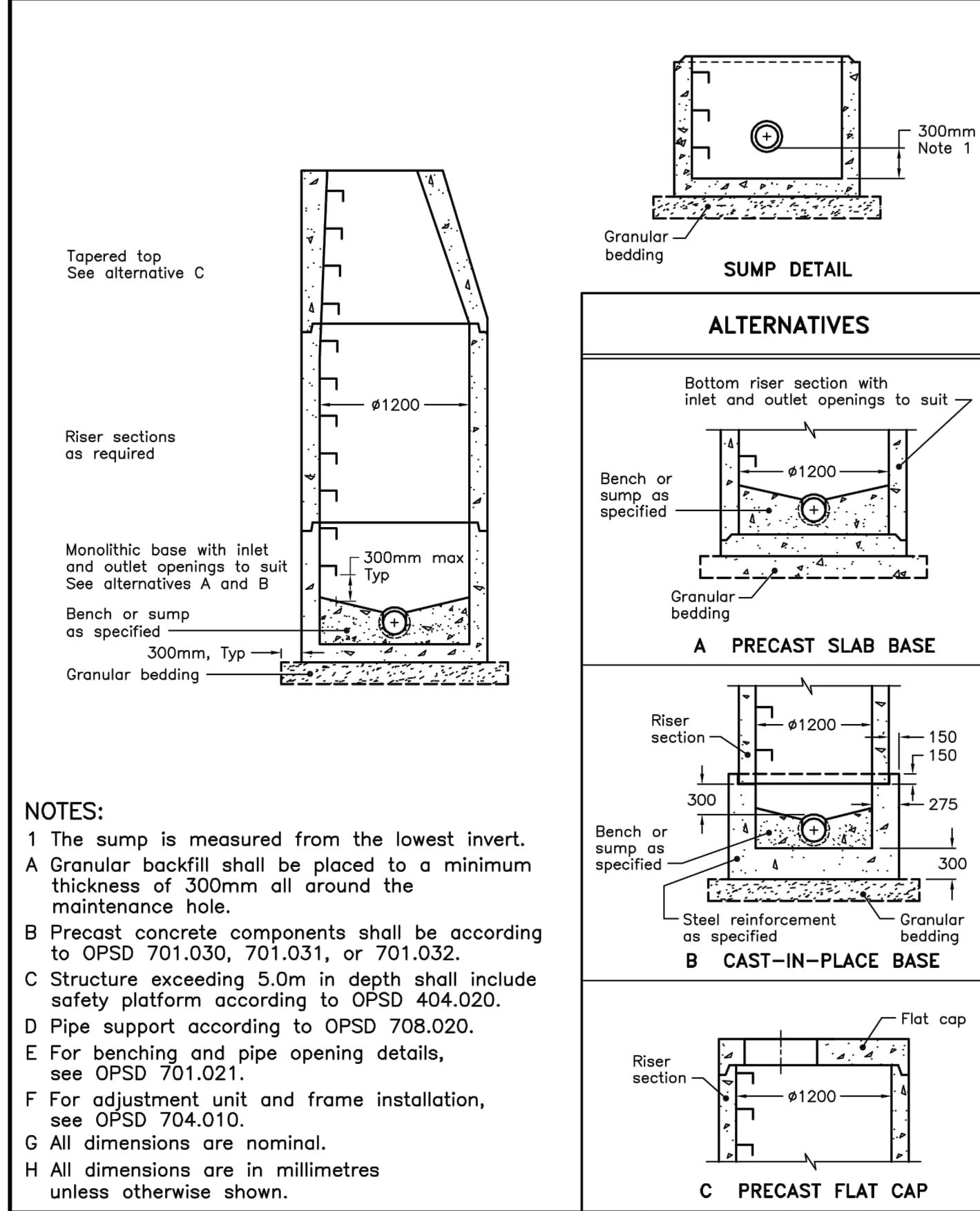
Maintenance Hole Diameter	No. 1-4	No. 5 and 6	No. 8	No. 7	
				Inlet Hole	Outlet Hole
1200	700	860	780	700	860
1500	860	1220	960	860	1170
1800	1220	1485	1220	1220	1485
2400	1485	2020	1760	1485	2020
3000	1930	2450	2300	1930	2450
3600	2470	3085	2730	2470	3085

**NOTES:**  
1 Slopes shall be maintained from the outlet hole opening for top of benching.  
A Concrete for benching shall be 30MPa.  
B When benching is hand-finished, it shall be given wood float finish, channel shall be given steel trowel finish.  
C Benchings slope and height shall be as specified.  
D When specified, maintenance holes that are 1200mm in diameter with a uniform channel for 200 or 250mm pipe may be prebenched at the manufacturer with standardized benching slope and channel orientation.  
E All dimensions are nominal.  
F All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 4

**MAINTENANCE HOLE BENCHING AND PIPE OPENING ALTERNATIVES**

OPSD 701.021

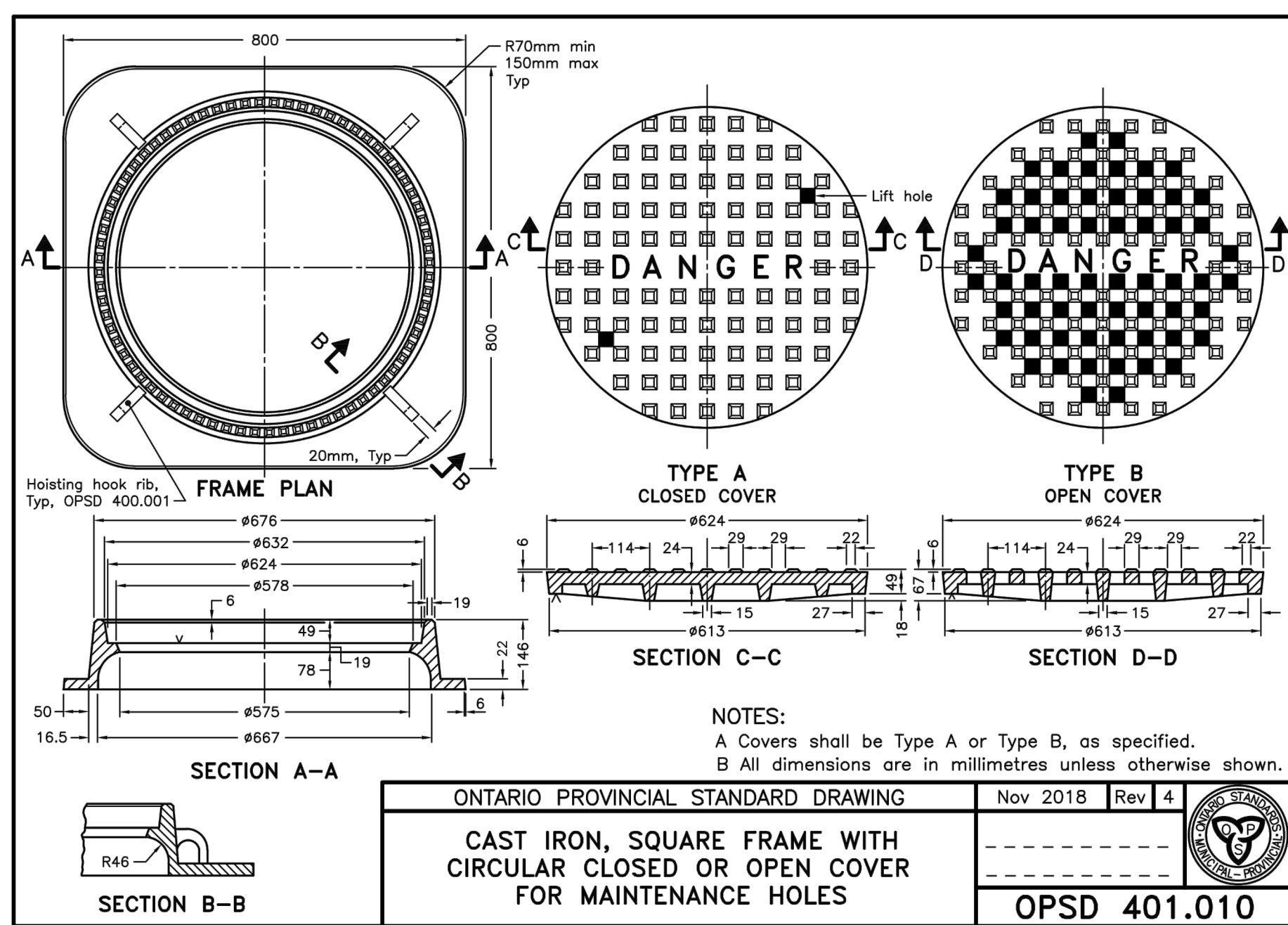


**NOTES:**  
1 The sump is measured from the lowest invert.  
A Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.  
B Precast concrete components shall be according to OPSD 701.030, 701.031, or 701.032.  
C Structure exceeding 5.0m in depth shall include safety platform according to OPSD 404.020.  
D Pipe support according to OPSD 708.020.  
E For benching and pipe opening details, see OPSD 701.021.  
F For adjustment unit and frame installation, see OPSD 704.010.  
G All dimensions are nominal.  
H All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 5

**PRECAST CONCRETE MAINTENANCE HOLE 1200mm DIAMETER**

OPSD 701.010

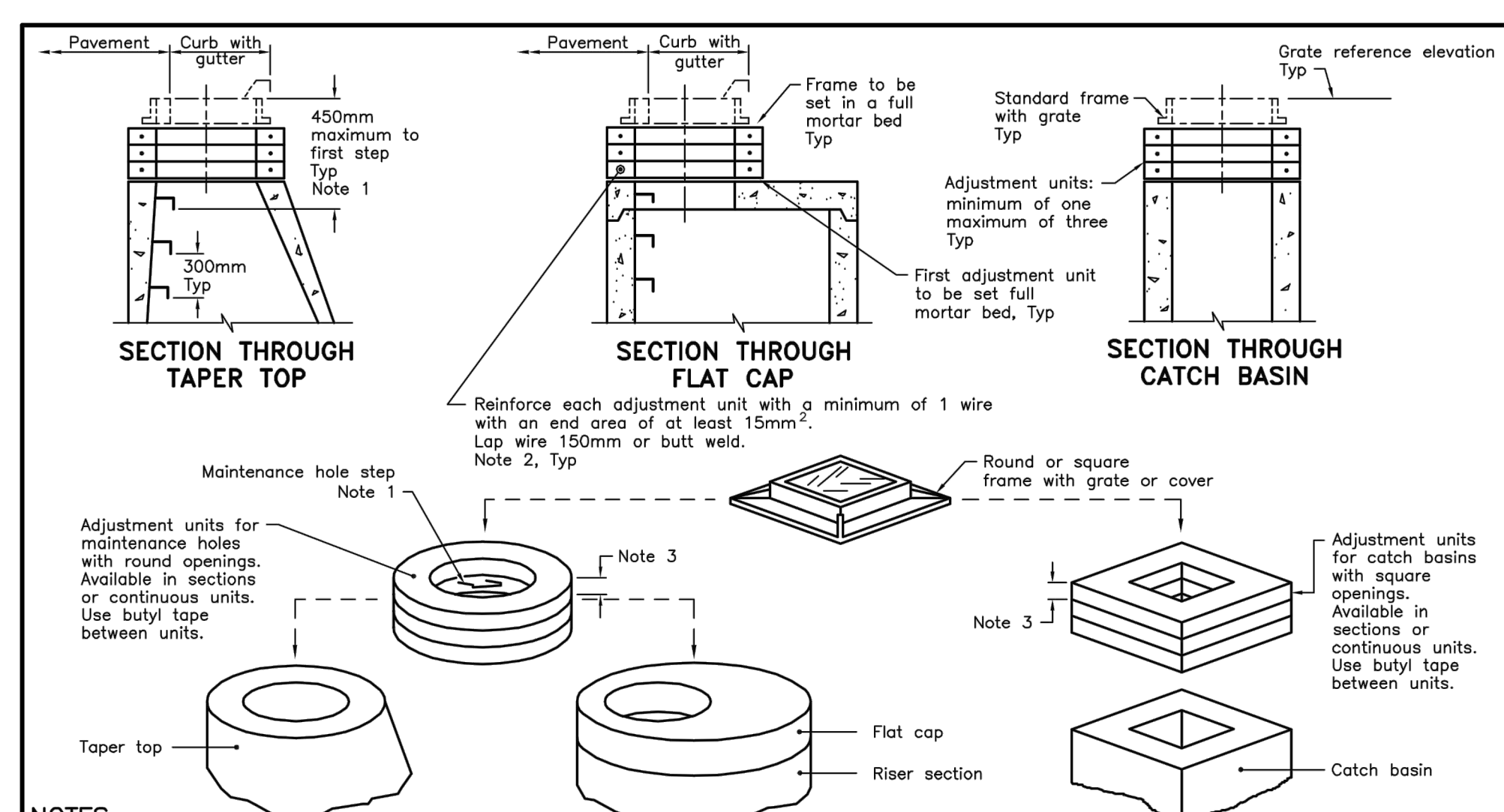


**NOTES:**  
A Covers shall be Type A or Type B, as specified.  
B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2018 Rev 4

**CAST IRON, SQUARE FRAME WITH CIRCULAR CLOSED OR OPEN COVER FOR MAINTENANCE HOLES**

OPSD 401.010



**NOTES:**  
1 If first step is in an adjustment unit, the adjustment unit shall be of the type manufactured with a step in place.  
2 Centre reinforcing in adjustment unit ±10mm.  
3 Round and square adjustment units are available in sizes of 50, 75, 100, 150, and 300mm.  
A Adjustment units shall not extend beyond the outside edge of the structure.  
B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 3

**PRECAST CONCRETE ADJUSTMENT UNITS FOR MAINTENANCE HOLES, CATCH BASINS, AND VALVE CHAMBERS**

OPSD 704.010

PROFESSIONAL STAMP

**J.A. SAUVE**  
100200100  
PROVINCE OF ONTARIO

**CIVITAS GROUP**  
ARCHITECTS & LANDSCAPE ARCHITECTS

CIVITAS ARCHITECTURE INC. OTTAWA, ON 1-613-742-7492  
14 CHAMBERLAIN AVENUE, SUITE 101, CANADA K1S 1Y9 WWW.CIVITAS-INC.CA

**CIMA+**

PROJECT TITLE:  
**FASTFRATE OTTAWA WAREHOUSE AND DISTRIBUTION FACILITY**

SCALE: NONE

SOMME ST. OTTAWA, ON

**DETAILS**

DRAWING NUMBER: **C016**

DATE: \_\_\_\_\_  
REVIEWED BY: J.SAUVE  
APPROVED BY: \_\_\_\_\_  
FIRST DATE: \_\_\_\_\_  
ISSUED DATE: NOVEMBER 26, 2021  
CLIENT PROJECT #: \_\_\_\_\_ PROJECT #:

**A001083**

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