



# UNDERGROUND PRODUCTS CATALOG

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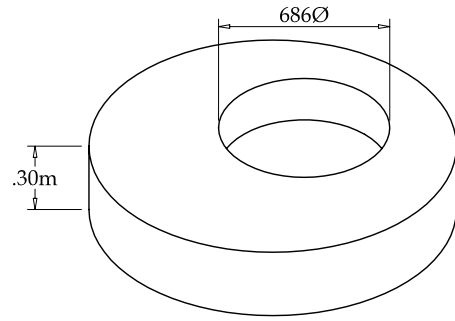
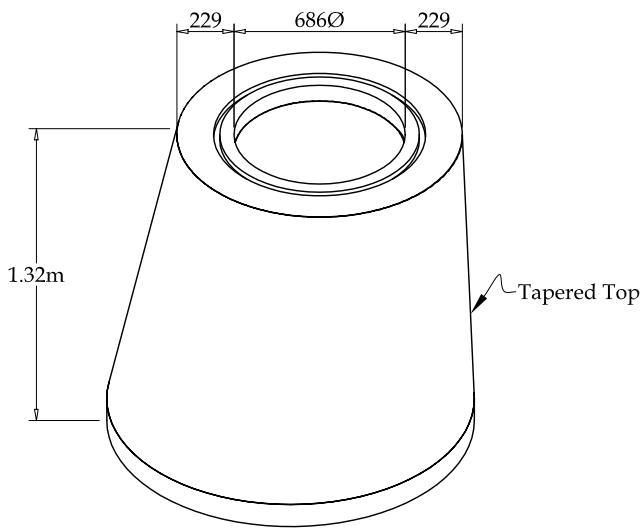
Concrete Pipe Dimensions – 300mm dia. to 750mm dia.	D - 1
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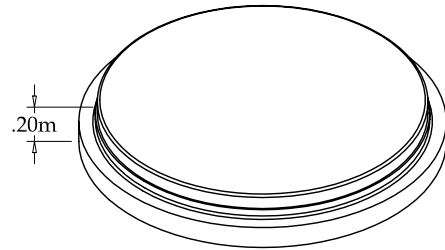
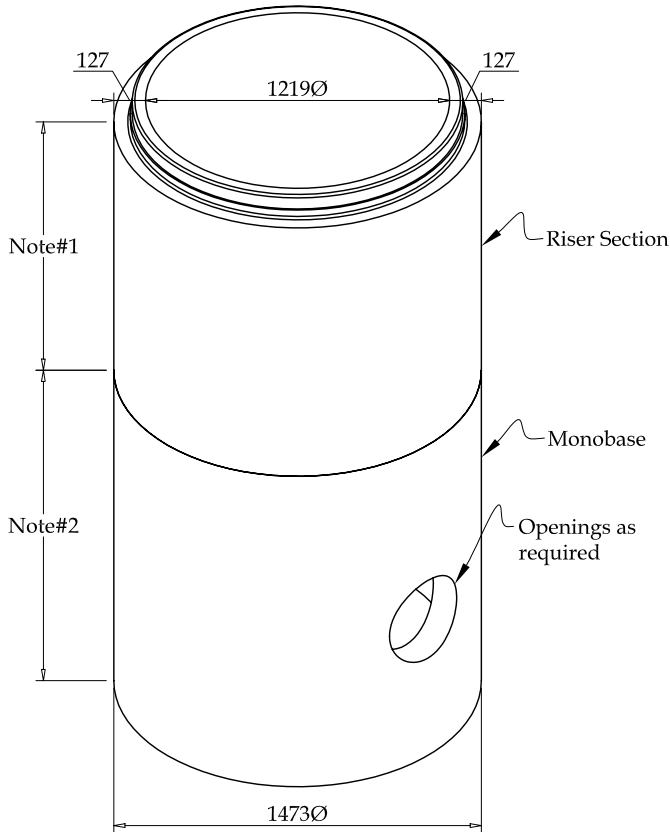
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**FLAT CAP c/w  
686Ø Opening\***  
 \*To be used when a  
Tapered Top will not fit



**PRECAST BASE SLAB\***  
 \*Available upon request

**PROFILE**

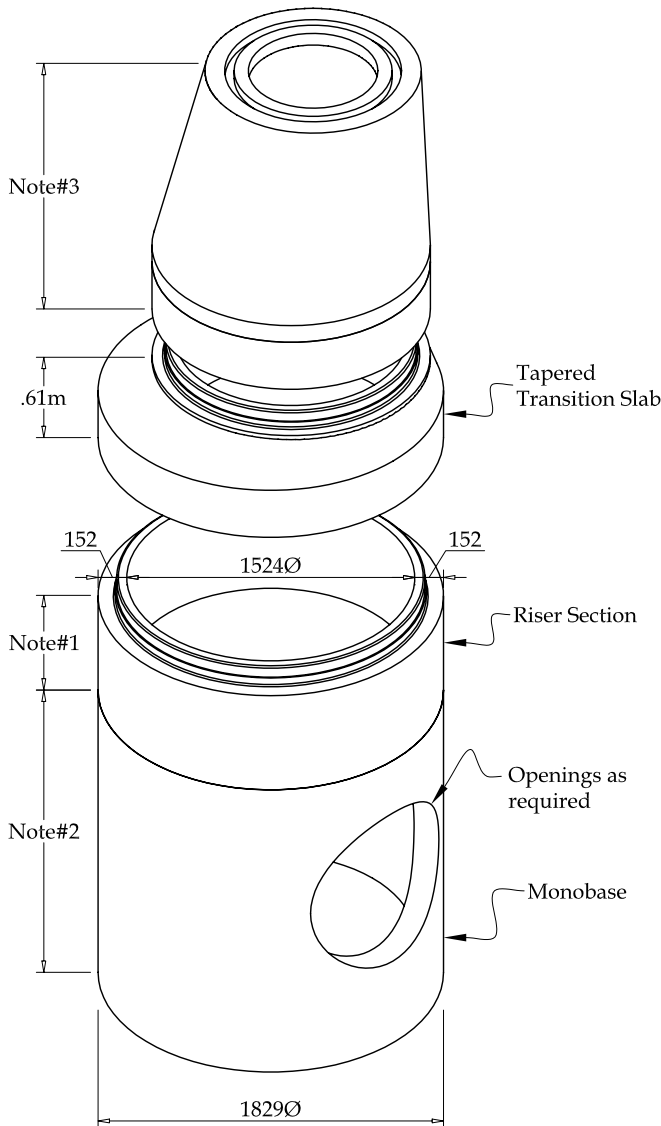
**NOTES:**

- 1 - Riser section heights as follows:  
.30m, .61m, .91m, 1.22m, 1.53m & 1.83m
- 2 - Monolithic Base heights as follows:  
.61m, .76m, .91m, 1.22m & 1.53m

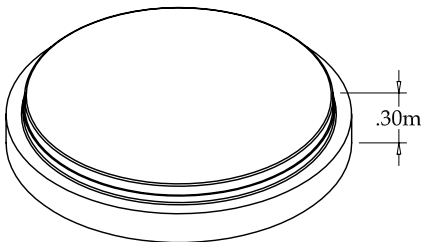
**General Notes:**

- Manufactured in accordance with OPSD 701.010
- All Maintenance Holes c/w Hollow Aluminum Steps as per OPSD 405.010
- All joints c/w pre-lubricated gaskets
- Pre-benching available as per OPSD 701.021
- Sump available as per OPSD 701.010 - "SUMP DETAIL"
- All pieces c/w lifting anchors
- Variable openings available in flat cap upon request
- Pipe gaskets available upon request
- For adjusters refer to Drawing# F-1
- For maximum pipe sizes see Maintenance Hole sizing tables

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	1200mmØ Maintenance Hole	A-1

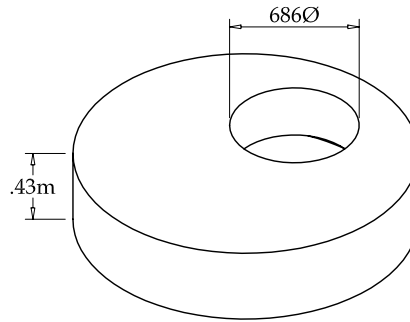


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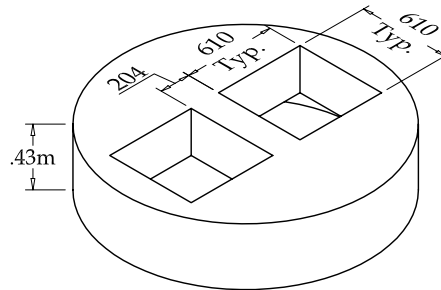


PRECAST BASE SLAB\*

\*Available upon request



FLAT CAP c/w  
686Ø Openings



FLAT CAP c/w  
2 - 610 x 610 Openings

### NOTES:

- 1 - Riser Section heights as follows:  
.30m ⇒ 1.83m @ .30m increments
- 2 - Monolithic Base heights as follows:  
.91m ⇒ 1.83m @ .15m increments
- 3 - See Drawing# A-1 for 1200Ø Chimney details

### General Notes:

- Manufactured in accordance with OPSD 701.011
- All Maintenance Holes c/w Hollow Aluminum Steps as per OPSD 405.010
- All joints c/w pre-lubricated gaskets
- Pre-benching not available, contractor to bench on site
- Sump available as per OPSD 701.010 - "SUMP DETAIL"
- All pieces c/w lifting anchors
- See Drawing# A-7 for alternative Flat Cap designs
- Pipe gaskets available upon request
- For adjusters refer to Drawing# F-1
- For maximum pipe sizes see Maintenance Hole sizing tables

ISSUE DATE

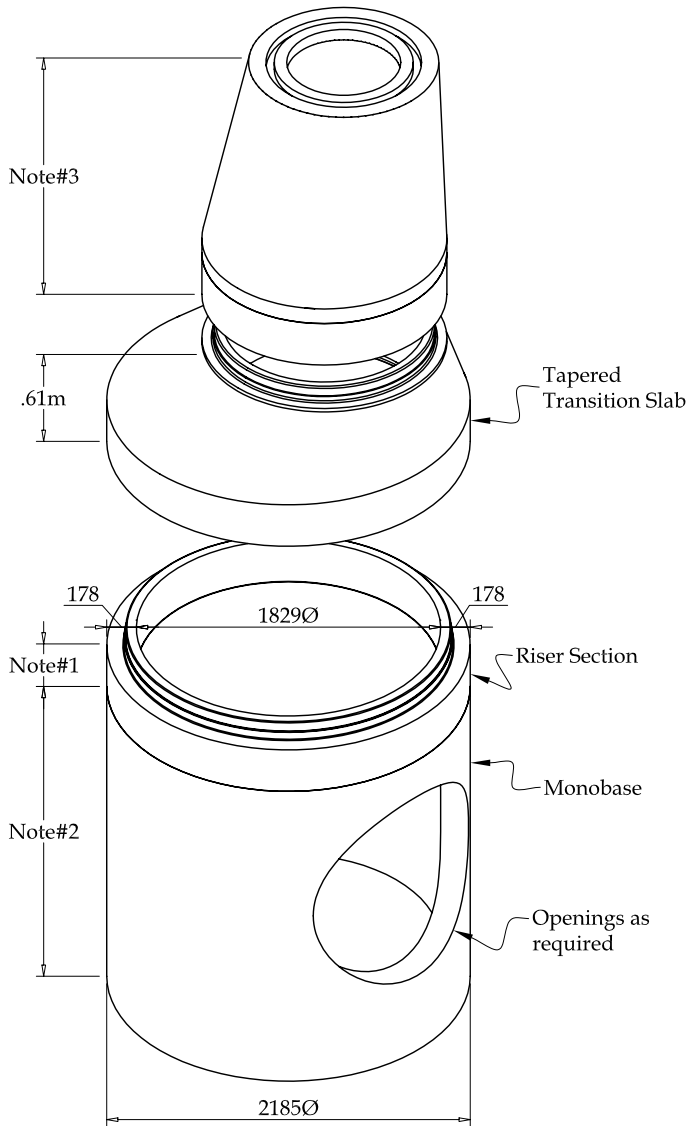
PRODUCT

DRAWING #

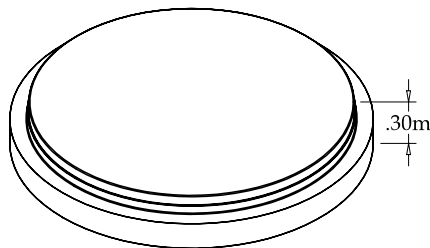
MARCH 2005

1500mmØ Maintenance Hole

A-2

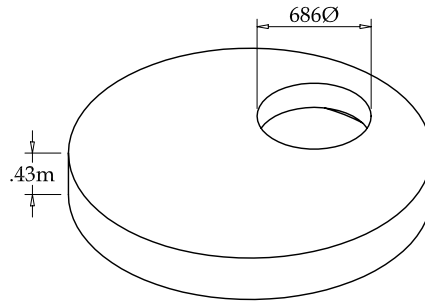


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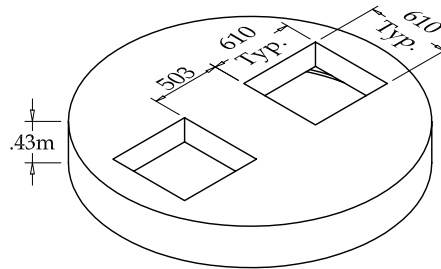


PRECAST BASE SLAB\*

\*Available upon request



FLAT CAP c/w  
686Ø Openings



FLAT CAP c/w  
2 - 610 x 610 Openings

### NOTES:

- 1 - Riser section heights as follows:  
.30m ⇒ 2.13m @ .30m increments
- 2 - Monolithic Base heights as follows:  
.91m ⇒ 2.13m @ .15m increments
- 3 - See Drawing# A-1 for 1200Ø Chimney details

### General Notes:

- Manufactured in accordance with OPSD 701.012
- All Maintenance Holes c/w Hollow Aluminum Steps as per OPSD 405.010
- All joints c/w pre-lubricated gaskets
- Pre-benching not available, contractor to bench on site
- Sump available as per OPSD 701.010 - "SUMP DETAIL"
- All pieces c/w lifting anchors
- See Drawing# A-7 for alternative Flat Cap designs
- Pipe gaskets available upon request
- For adjusters refer to Drawing# F-1
- For maximum pipe sizes see Maintenance Hole sizing tables

ISSUE DATE

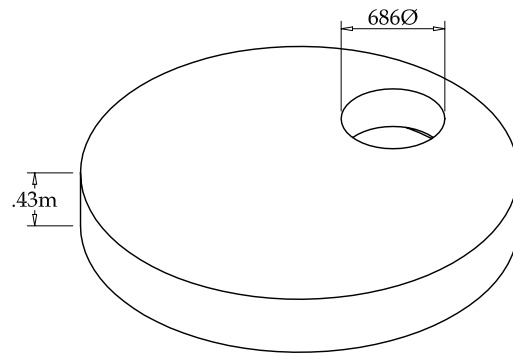
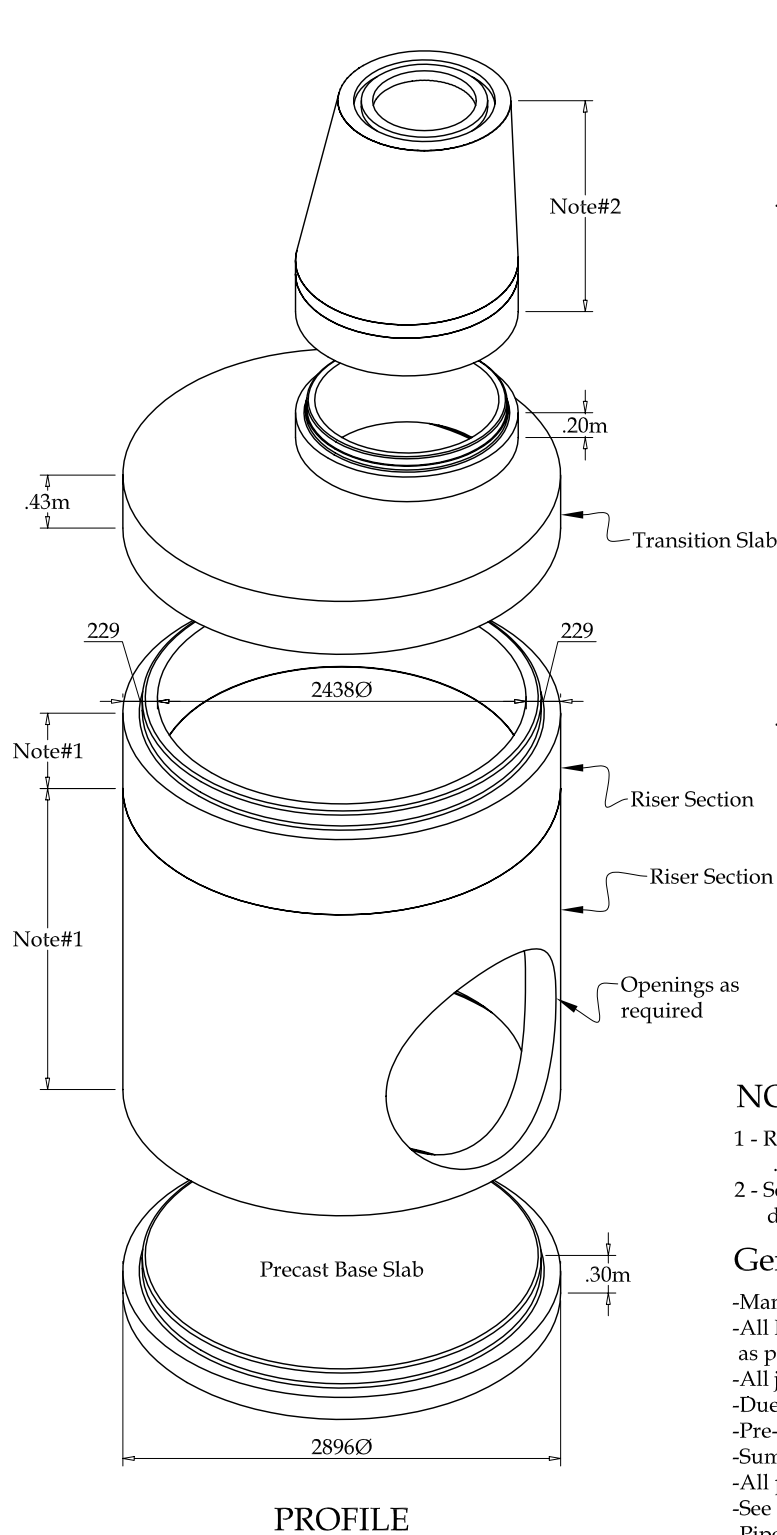
MARCH 2005

PRODUCT

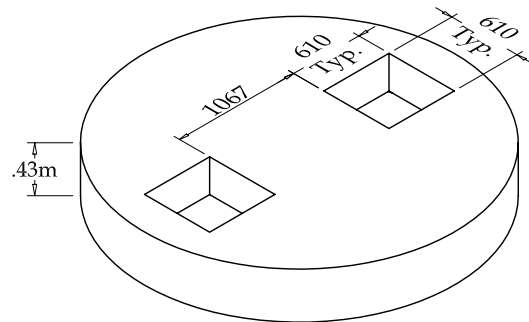
1800mmØ Maintenance Hole

DRAWING #

A-3



FLAT CAP c/w  
686Ø Openings



FLAT CAP c/w  
2 - 610 x 610 Openings

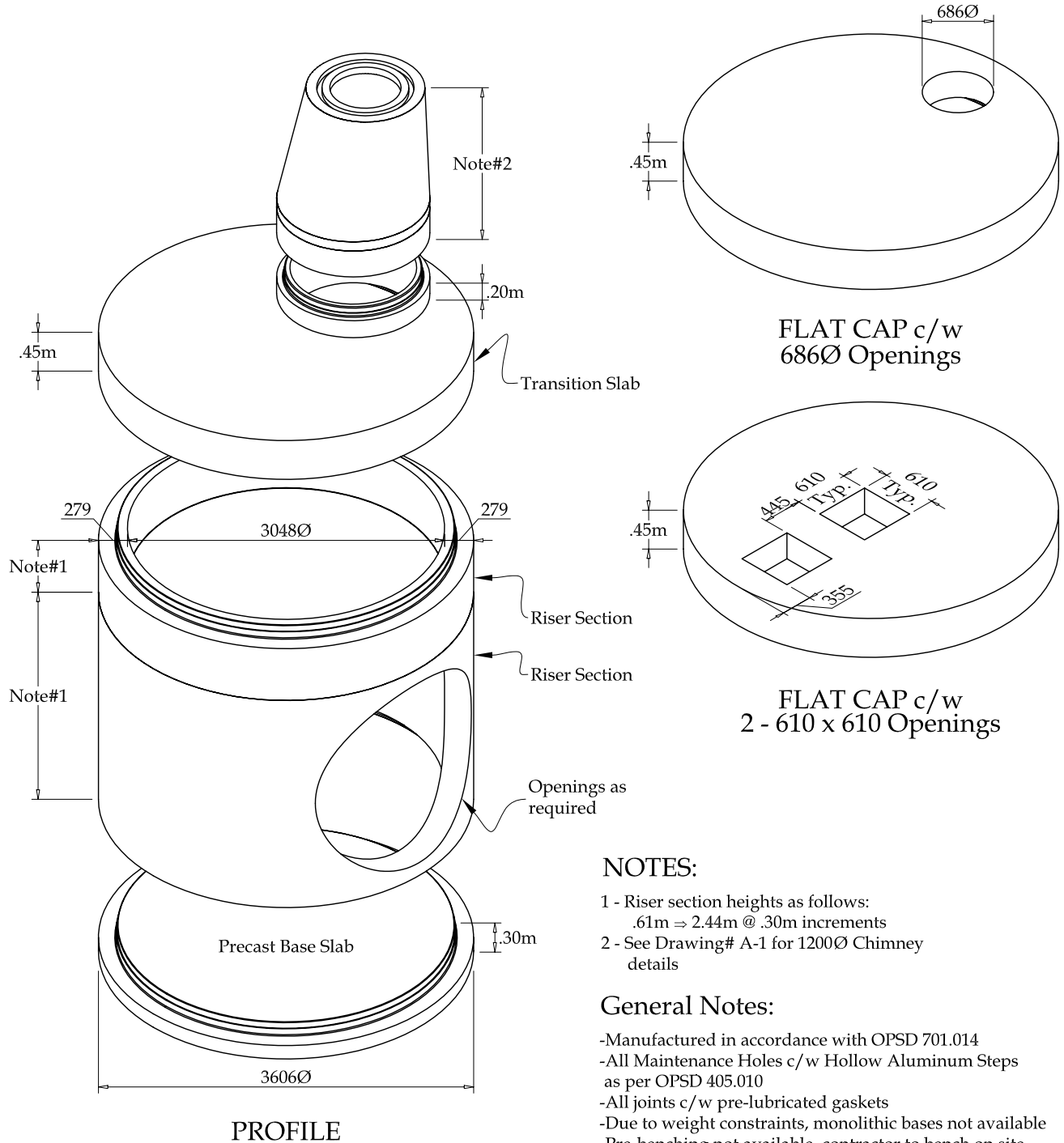
### NOTES:

- 1 - Riser Section heights as follows:  
.61m  $\Rightarrow$  2.44m @ .30m increments
- 2 - See Drawing# A-1 for 1200Ø Chimney details

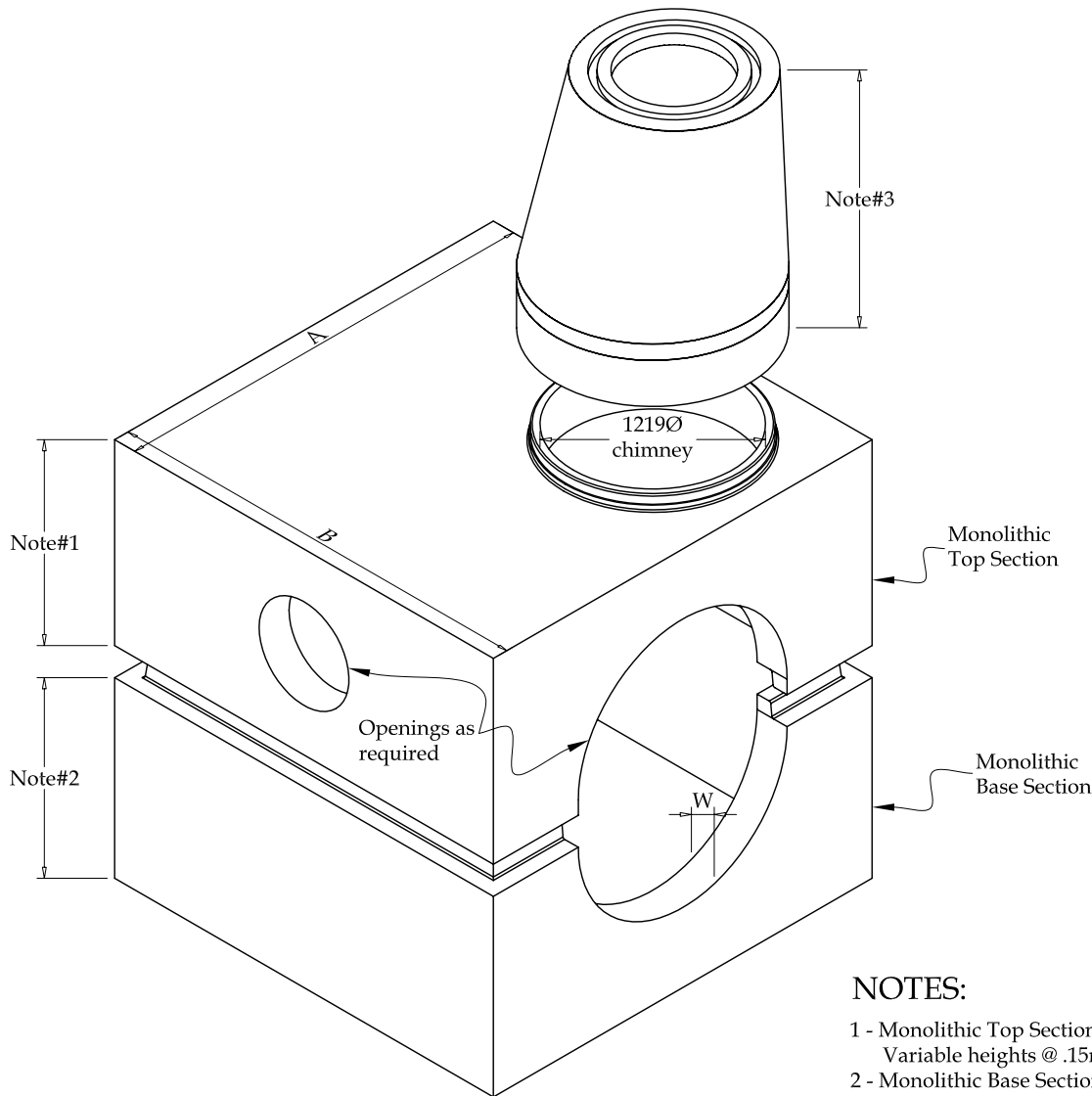
### General Notes:

- Manufactured in accordance with OPSD 701.013
- All Maintenance Holes c/w Hollow Aluminum Steps as per OPSD 405.010
- All joints c/w pre-lubricated gaskets
- Due to weight constraints, monolithic bases not available
- Pre-benching not available, contractor to bench on site
- Sump available as per OPSD 701.010 - "SUMP DETAIL"
- All pieces c/w lifting anchors
- See Drawing# A-8 for alternative Flat Cap designs
- Pipe gaskets available upon request
- For adjusters refer to Drawing# F-1
- For maximum pipe sizes see Maintenance Hole sizing tables

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	2400mmØ Maintenance Hole	A-4



ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	3000mmØ Maintenance Hole	A-5



### NOTES:

- 1 - Monolithic Top Section heights as follows:  
Variable heights @ .15m increments
  - 2 - Monolithic Base Section heights as follows:  
Variable heights @ .15m increments
  - 3 - See Drawing# A-1 for 1200Ø Chimney details
- Riser Sections also available with variable heights @ .15m increments

### General Notes:

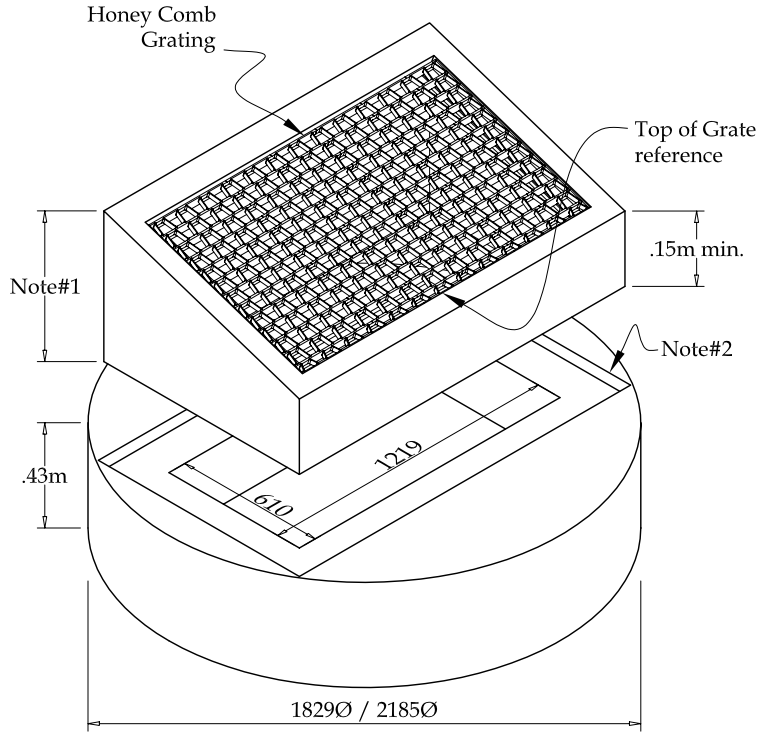
- Manufactured in accordance with OPSS 1351
- Variable openings available in top slab upon request (ie. 686Ø, 762Ø, Hatches...)
- All Maintenance Holes c/w Hollow Aluminum Steps as per OPSD 405.010
- All joints c/w butyl gaskets
- Reinforcing details available upon request
- Pre-benching not available, contractor to bench on site
- Sump available as per OPSD 701.010 - "SUMP DETAIL"
- All pieces c/w lifting anchors
- Pipe gaskets available upon request
- For adjusters refer to Drawing# F-1
- For maximum pipe sizes see Maintenance Hole sizing tables

Box Name	Inside Dimensions	Outside Dimensions		Top Slab Thickness	Bott. Slab Thickness	Wall (W) Thickness
		"A"	"B"			
M-3.3	914 x 914	1218	1218	152	152	152
M-4	1219 x 1219	1677	1677	229	229	229
M-5	1524 x 1829	1982	2287	229	229	229
M-5.5	1829 x 1829	2287	2287	229	229	229
M-6	1676 x 2438	2134	2896	229	229	229
M-6.5	1829 x 2438	2287	2896	229	229	229
M-7	1676 x 3048	2134	3506	229	229	229
M-7.5	1829 x 3048	2287	3506	229	229	229
M-8	2438 x 2438	2896	2896	254	254	229
M-9	2438 x 3048	2896	3506	254	254	229
M-9.5	3048 x 3048	3506	3506	254	254	229
M-10	2438 x 3810	2896	4268	254	254	229
M-11	3048 x 3810	3506	4268	254	254	229

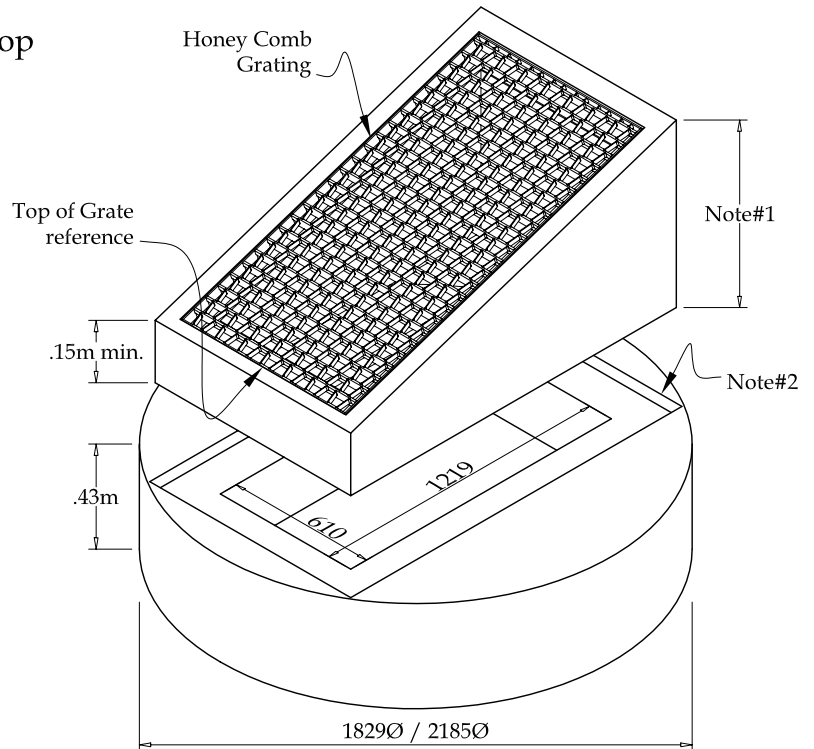
\*Custom sizes available upon request, contact M-Con's technical team\*

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	Typical Box Maintenance Hole c/w 1200mmØ Chimney	A-6





FLAT CAP c/w  
Type "A" Ditch Inlet Top



FLAT CAP c/w  
Type "B" Ditch Inlet Top

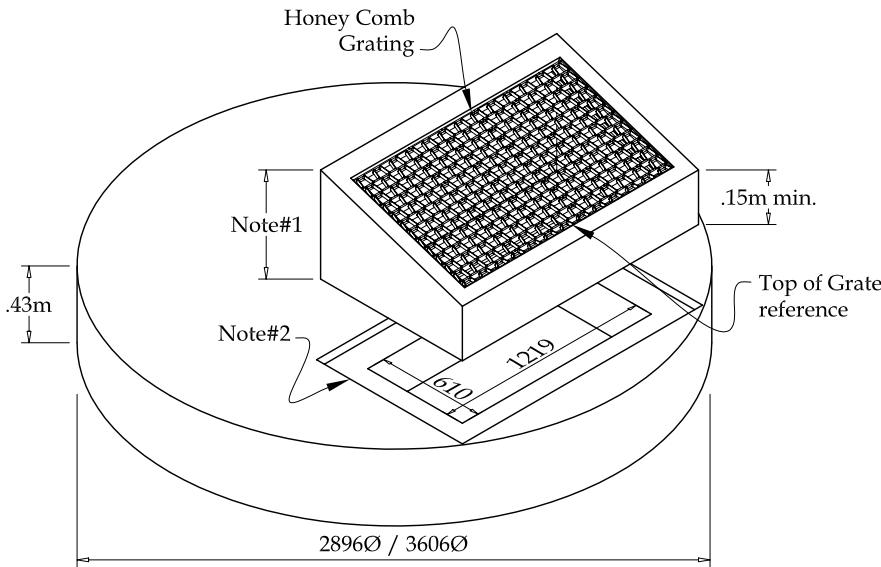
**NOTES:**

- 1 - Sectional Top sizes as follows:  
 .61m - 2.13m @ .15m increments  
 \*.76m min. for 2:1 slope Type "A"  
 \*.107m min. for 2:1 slope Type "B"
- 2 - 50mm recess to accomodate  
 Ditch Inlet Top

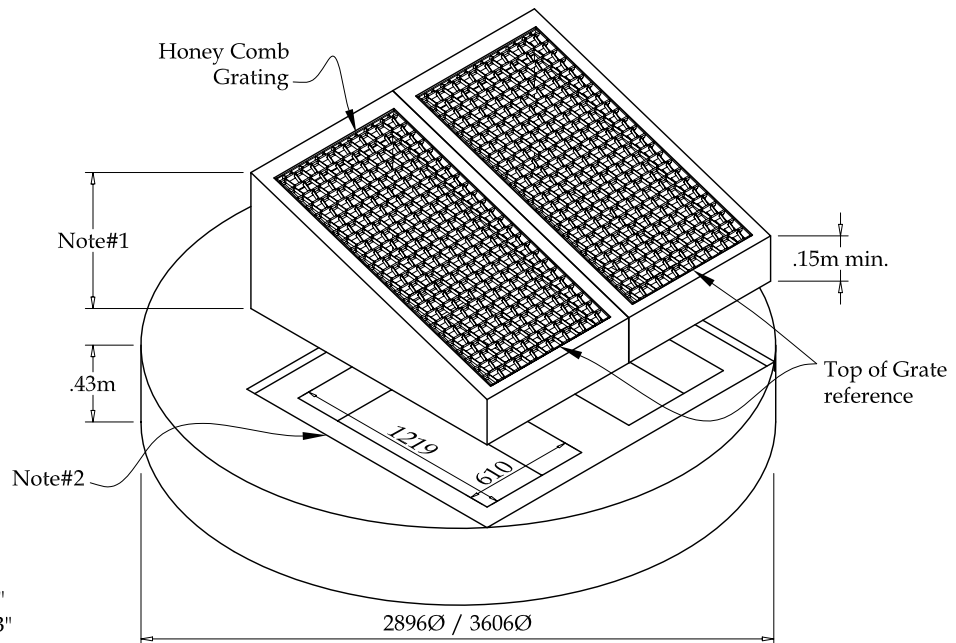
**General Notes:**

- 1500Ø Flat Cap manufactured in accordance  
 with OPSD 706.010
- 1800Ø Flat Cap manufactured in accordance  
 with OPSD 706.020
- Honey Comb Grating manufactured in accordance  
 with OPSD 403.010
- See Drawing# B-5 & B-6 for additional 600 x 1200 Ditch  
 Inlet Top details
- For base & section sizes see Drawing# A-2 & A-3

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	1500mmØ / 1800mmØ Flat Cap c/w 600mm x 1200mm Ditch Inlet Top	A-7



FLAT CAP c/w  
 Type "A" Ditch Inlet Top



FLAT CAP c/w  
 Type "B" Ditch Inlet Top

**NOTES:**

- 1 - Sectional Top sizes as follows:  
 .61m - 2.13m @ .15m increments  
 \*.76m min. for 2:1 slope Type "A"  
 \*1.07m min. for 2:1 slope Type "B"
- 2 - 50mm recess to accommodate  
 Ditch Inlet Top

**General Notes:**

- 2400Ø Flat Cap manufactured in accordance  
 with OPSD 706.030 & OPSD 706.031
- 3000Ø Flat Cap manufactured in accordance  
 with OPSD 706.040 & OPSD 706.041
- Honey Comb Grating manufactured in accordance  
 with OPSD 403.010
- See Drawing# B-5 & B-6 for additional 600 x 1200 Ditch  
 Inlet Top details
- For base & section sizes see Drawing# A-4 & A-5

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	2400mmØ / 3000mmØ Flat Cap c/w 600mm x 1200mm Ditch Inlet Top	A-8

60° Separation

PIPE SIZE	300	375	450	525	600	675	750	825	900	975	1050	1200	1350	1500
300	1500													
375	1500	1500												
450	1800	1800	1800											
525	1800	1800	1800	2400										
600	1800	1800	2400	2400	2400									
675	1800	2400	2400	2400	2400	2400								
750	2400	2400	2400	2400	2400	2400	2400							
825	2400	2400	2400	2400	2400	2400	2400	3000						
900	2400	2400	2400	2400	2400	2400	3000	3000	3000					
975	2400	2400	2400	2400	2400	3000	3000	3000						
1050	2400	2400	2400	2400	3000	3000	3000							
1200	2400	2400	3000	3000										
1350	3000	3000												

75° Separation

PIPE SIZE	300	375	450	525	600	675	750	825	900	975	1050	1200	1350	1500
300	1200													
375	1200	1200												
450	1500	1500	1500											
525	1500	1500	1500	1800										
600	1500	1500	1800	1800	1800									
675	1500	1800	1800	1800	1800	1800								
750	1800	1800	1800	1800	1800	1800	2400							
825	1800	1800	1800	1800	1800	2400	2400	2400						
900	1800	1800	1800	1800	2400	2400	2400	2400	3000					
975	1800	1800	2400	2400	2400	2400	2400	3000	3000	3000				
1050	1800	2400	2400	2400	2400	2400	3000	3000	3000	3000	3000			
1200	2400	2400	2400	2400	3000	3000	3000	3000	3000					
1350	2400	3000	3000	3000	3000	3000	3000							
1500	3000	3000	3000	3000	3000									
1650	3000	3000	3000											
1800	3000													

90° Separation

PIPE SIZE	300	375	450	525	600	675	750	825	900	975	1050	1200	1350	1500
300	1200													
375	1200	1200												
450	1200	1200	1200											
525	1200	1200	1500	1500										
600	1200	1500	1500	1500	1500									
675	1500	1500	1500	1500	1800	1800								
750	1500	1500	1500	1500	1800	1800	1800							
825	1500	1500	1500	1800	1800	1800	1800	1800						
900	1800	1800	1800	1800	1800	1800	1800	1800	2400					
975	1800	1800	1800	1800	1800	1800	1800	2400	2400	2400				
1050	1800	1800	1800	1800	1800	1800	2400	2400	2400	2400	2400			
1200	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	3000	3000		
1350	2400	2400	2400	2400	2400	2400	2400	2400	3000	3000	3000	3000		
1500	2400	2400	2400	2400	2400	3000	3000	3000	3000	3000	3000			
1650	3000	3000	3000	3000	3000	3000	3000	3000						
1800	3000	3000	3000	3000	3000									
1950	3000	3000	3000											

Sizing Steps: (Please contact M Con Products Inc. Technical Services for sizes not shown.)

- 1 - Determine all degrees of separation between each set of pipes.
- 2 - If an angle measured does not correspond to any of the tables then round down the angle to the nearest corresponding table.
- 3 - Take each set of pipes and their corresponding angle of separation then compare them to their appropriate Table.
- 4 - The largest size of MH will govern - Table is based on OPSD 701.021 (Nov 2009 Rev#3)

105° Separation

PIPE SIZE	300	375	450	525	600	675	750	825	900	975	1050	1200	1350	1500	1650	1800	1950
300	1200																
375	1200	1200															
450	1200	1200	1200														
525	1200	1200	1200	1200													
600	1200	1200	1200	1200	1500												
675	1500	1500	1500	1500	1500	1500											
750	1500	1500	1500	1500	1500	1500	1500										
825	1500	1500	1500	1500	1500	1500	1800	1800									
900	1800	1800	1800	1800	1800	1800	1800	1800	1800								
975	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800							
1050	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	2400						
1200	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400					
1350	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	3000				
1500	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	3000	3000	3000			
1650	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000				
1800	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000				
1950	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000						

135° Separation

PIPE SIZE	300	375	450	525	600	675	750	825	900	975	1050	1200	1350	1500	1650	1800	1950
300	1200																
375	1200	1200															
450	1200	1200	1200														
525	1200	1200	1200	1200													
600	1200	1200	1200	1200	1500												
675	1500	1500	1500	1500	1500	1500											
750	1500	1500	1500	1500	1500	1500	1500										
825	1500	1500	1500	1500	1500	1500	1500	1500									
900	1800	1800	1800	1800	1800	1800	1800	1800	1800								
975	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800							
1050	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800						
1200	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400					
1350	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400				
1500	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400			
1650	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000		
1800	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
1950	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000

150° - 180° Separation

PIPE SIZE	300	375	450	525	600	675	750	825	900	975	1050	1200	1350	1500	1650	1800	1950
300	1200																
375	1200	1200															
450	1200	1200	1200														
525	1200	1200	1200	1200													
600	1200	1200	1200	1200	1200												
675	1500	1500	1500	1500	1500	1500											
750	1500	1500	1500	1500	1500	1500	1500										
825	1500	1500	1500	1500	1500	1500	1500	1500									
900	1800	1800	1800	1800	1800	1800	1800	1800	1800								
975	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800							
1050	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800						
1200	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400					
1350	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400				
1500	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400			
1650	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000		
1800	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
1950	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000

Sizing Steps: (Please contact M Con Products Inc. Technical Services for sizes not shown.)

- 1 - Determine all degrees of separation between each set of pipes.
- 2 - If an angle measured does not correspond to any of the tables then round down the angle to the nearest corresponding table.
- 3 - Take each set of pipes and their corresponding angle of separation then compare them to their appropriate Table.
- 4 - The largest size of MH will govern - Table is based on OPSD 701.021 (Nov 2009 Rev#3)

ISSUE DATE

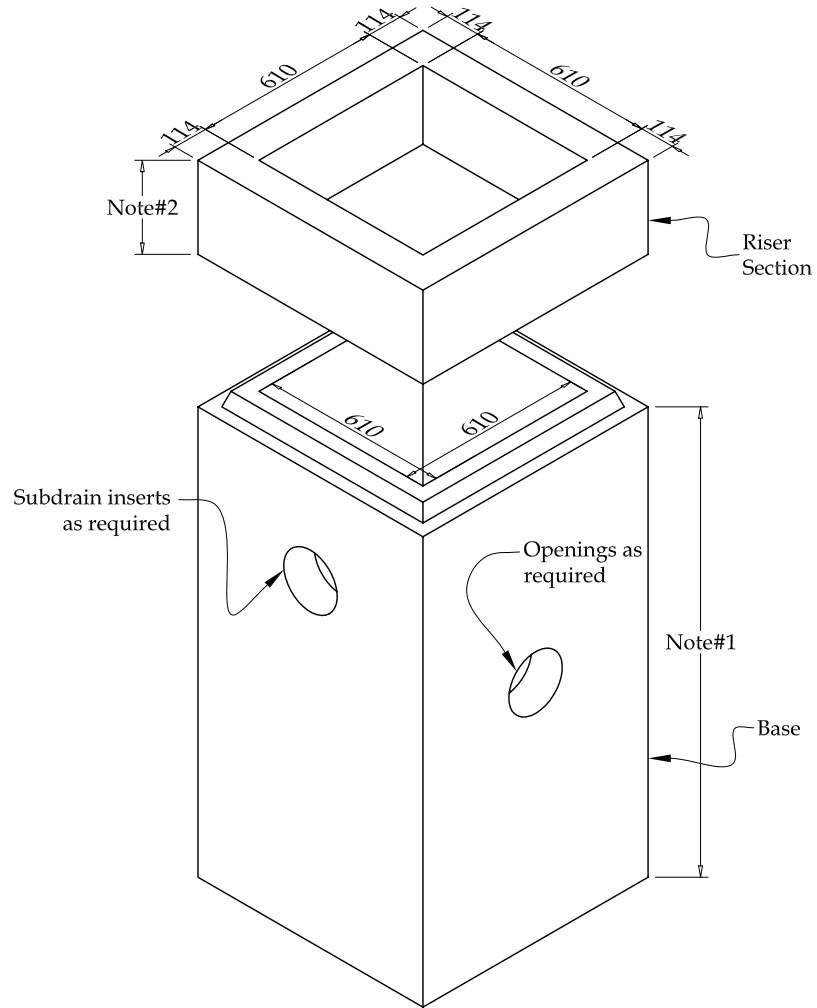
PRODUCT

DRAWING #

JANUARY 2012

Circular Maintenance Hole Sizing Tables  
 105°, 135° & 135° -180°

A-10



## NOTES:

- 1 - Base heights as follows:  
 .61m  $\Rightarrow$  2.13m @ .15m increments
- 2 - Riser Section heights as follows:  
 .30m  $\Rightarrow$  1.68m @ .15m increments

## General Notes:

- Manufactured in accordance with OPSD 705.010
- All pieces c/w lifting anchors
- Standard sump of 600mm is provided
- Pipe gaskets available upon request
- For adjusters refer to Drawing# F-1

ISSUE DATE

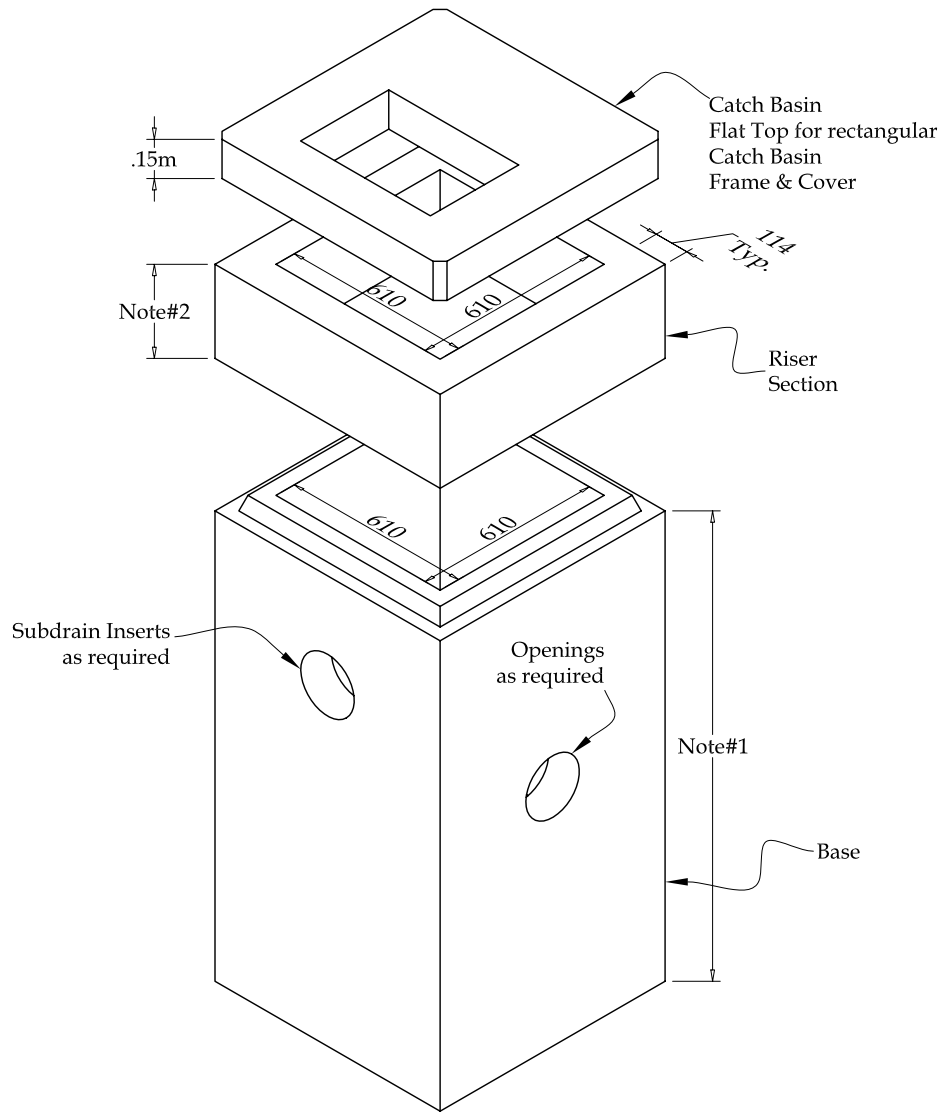
PRODUCT

DRAWING #

MARCH 2005

600mm x 600mm Catch Basin

B-1



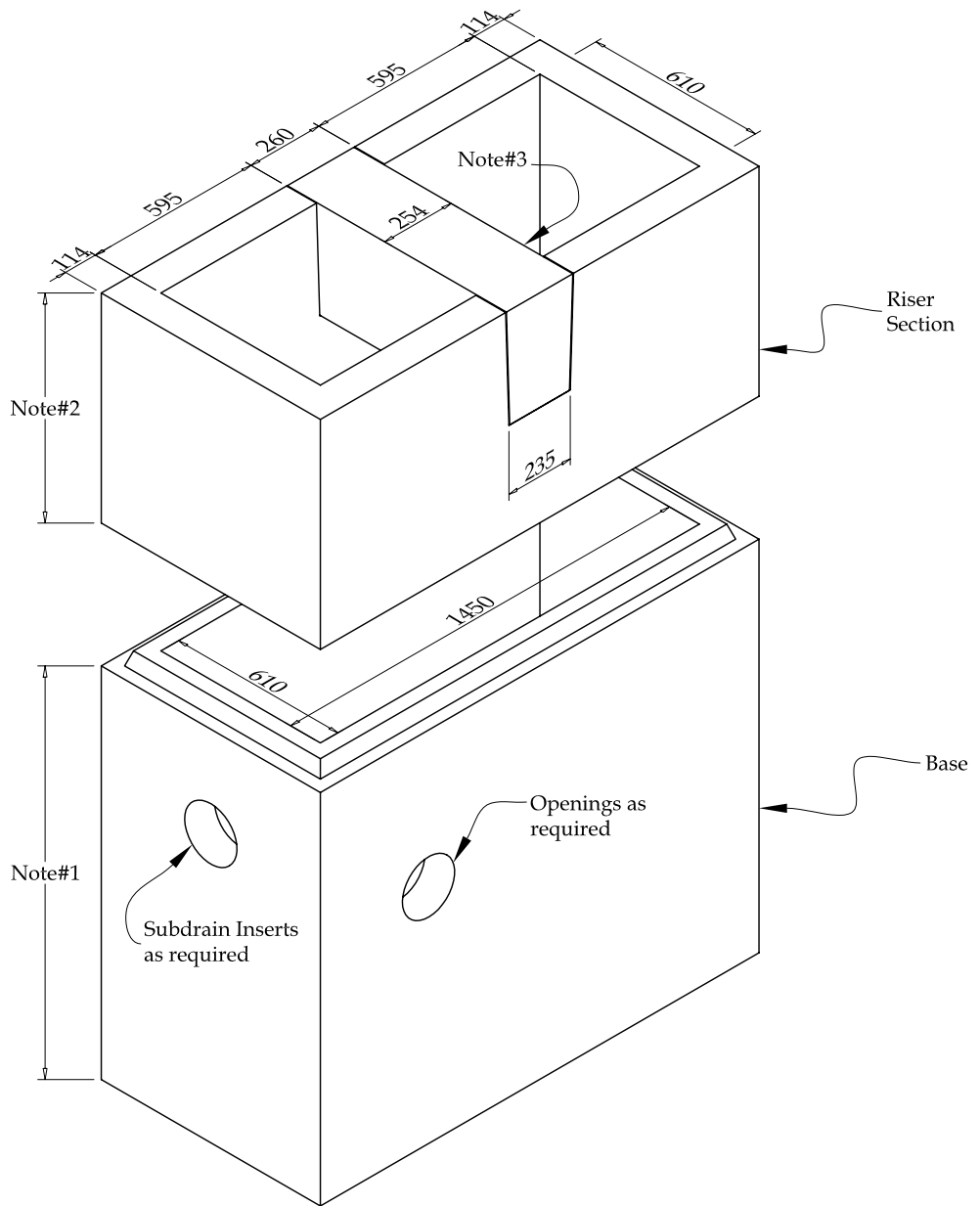
### NOTES:

- 1 - Base heights as follows:  
 .61m  $\Rightarrow$  2.13m @ .15m increments
- 2 - Riser Section heights as follows:  
 .30m  $\Rightarrow$  1.68m @ .15m increments

### General Notes:

- Manufactured in accordance with OPSD 705.010
- All pieces c/w lifting anchors
- Standard sump of 600mm is provided
- Pipe gaskets available upon request
- For adjusters refer to Drawing# F-1
- City of Ottawa rear yard catch basin

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	600mm x 600mm Catch Basin c/w Flat Top	B-2



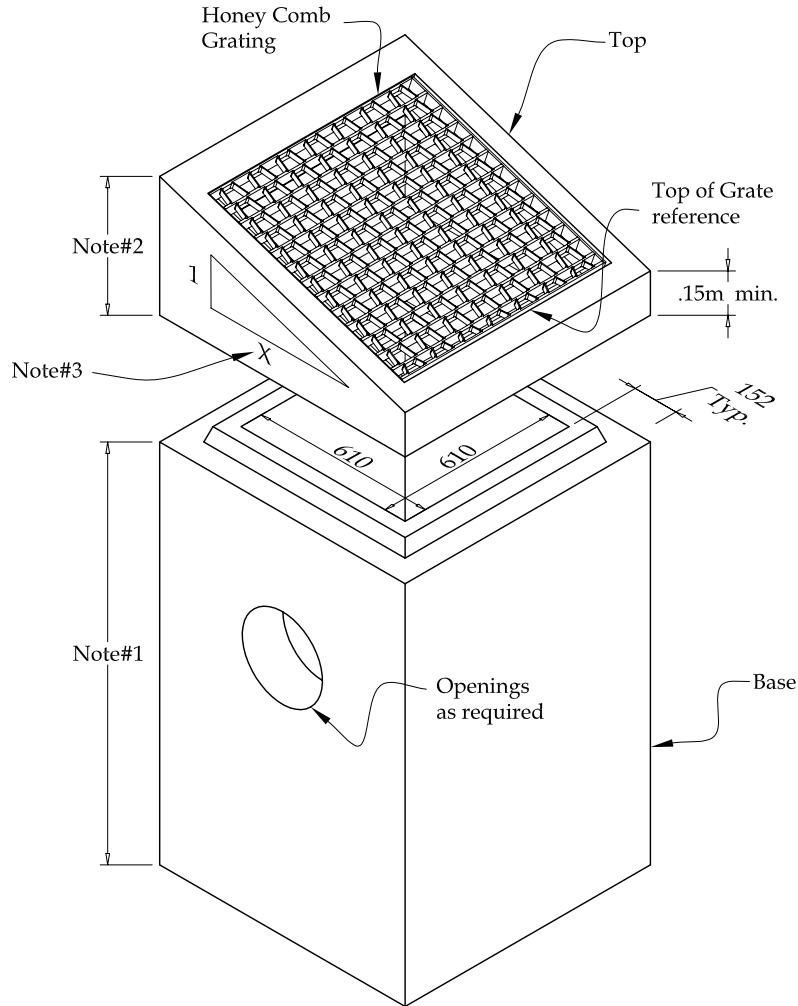
### NOTES:

- 1 - Base heights as follows (Structures can be made in 1 piece):  
 .61m - 2.13m @ .15m increments
- 2 - Riser Section heights as Follows:  
 .76m - 1.68m @ .15m increments
- 3 - Removable catch basin beam  
 to support Frame & Covers

### General Notes:

- Manufactured in accordance with OPSD 705.020
- All pieces c/w lifting anchors
- Standard sump of 600mm is provided
- Pipe gaskets available upon request
- For adjusters refer to Drawing# F-1

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	600mm x 1450mm Twin Inlet Catch Basin	B-3



### NOTES:

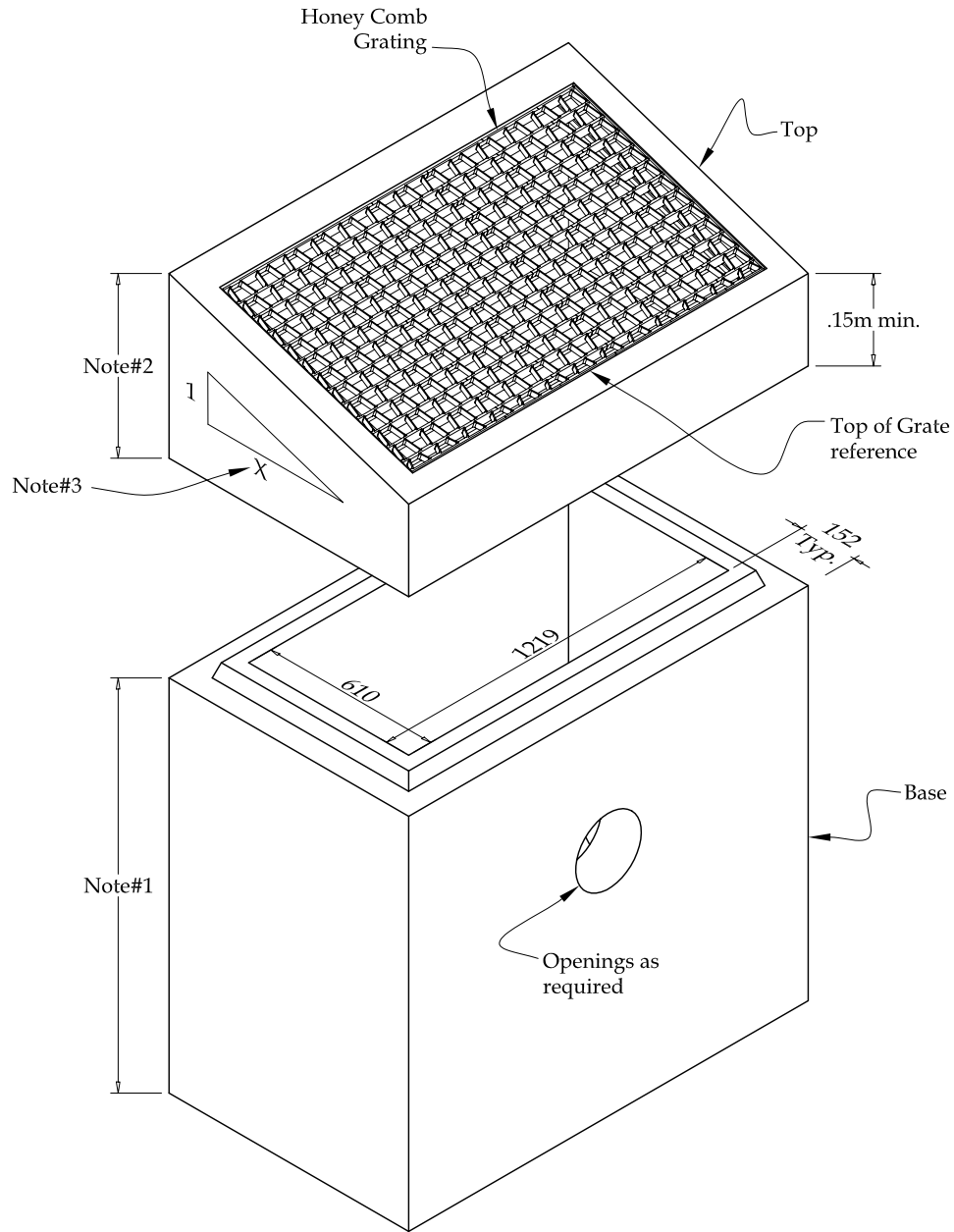
- 1 - Base heights as follows (Structures can be made in 1 piece):  
 .61m - 2.13m @ .15m increments
- 2 - Riser Top Section heights as follows:  
 .45m - 1.68m @ .15m increments  
 \*.61m min. for 2:1 slope
- 3 - Slopes available as follows:  
 X = 2, 3, 4, 6, & Horizontal

### General Notes:

- Manufactured in accordance with OPSD 705.030
- Honey comb grating manufactured in accordance with OPSD 403.010 -Type "A"
- All pieces c/w lifting anchors
- Standard sump of 600 is provided
- Pipe gaskets available upon request

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	600mm x 600mm Ditch Inlet Catch Basin	B-4





### NOTES:

- 1 - Base heights as follows (Structures can be made in 1 piece):  
 .61m - 2.13m @ .15m increments
- 2 - Riser Top Section heights as follows:  
 .61m - 1.68m @ .15m increments  
 \*.76m min. for 2:1 slope
- 3 - Slopes available as follows:  
 X = 2, 3, 4, 6, & Horizontal

### General Notes:

- Manufactured in accordance with OPSD 705.040 Type "A"
- Honey comb grating manufactured in accordance with OPSD 403.010 - Type "B"
- All pieces c/w lifting anchors
- Standard sump of 600mm is provided
- Pipe gaskets available upon request

ISSUE DATE

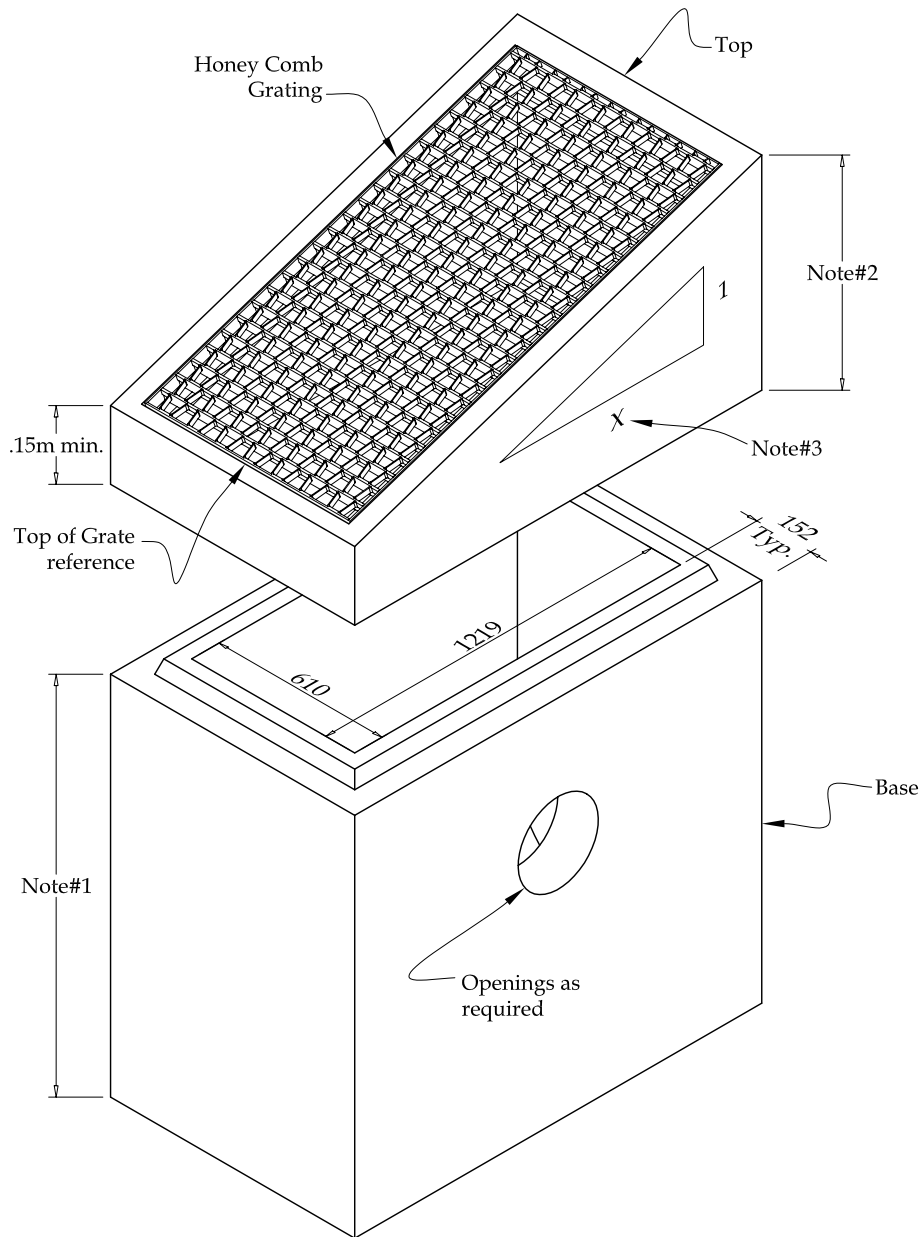
MARCH 2005

PRODUCT

600mm x 1200mm Ditch Inlet Catch Basin - Type "A"

DRAWING #

B-5



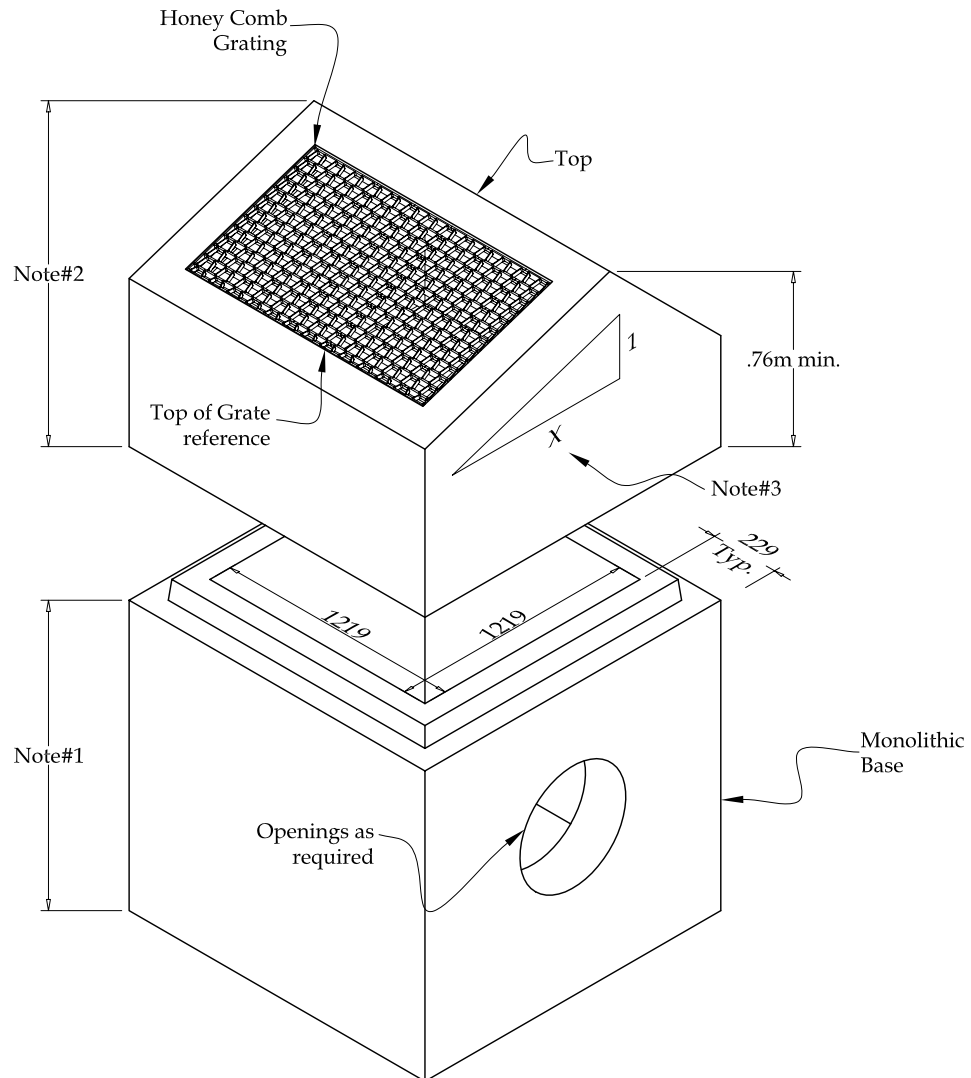
### NOTES:

- 1 - Base heights as follows (Structures can be made in 1 piece):  
 .61m - 2.13m @ .15m increments
- 2 - Riser Top Section heights as follows:  
 .76m - 1.68m @ .15m increments  
 \*1.07m min. for 2:1 slope
- 3 - Slopes available as follows:  
 X = 2, 3, 4, 6, & Horizontal

### General Notes:

- Manufactured in accordance with  
 OPSD 705.040 Type "B"
- Honey comb grating manufactured in accordance  
 with OPSD 403.010 - Type "B" or Type "C"
- All pieces c/w lifting anchors
- Standard sump of 600mm is provided
- Pipe gaskets available upon request

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	600mm x 1200mm Ditch Inlet Catch Basin - Type "B"	B-6



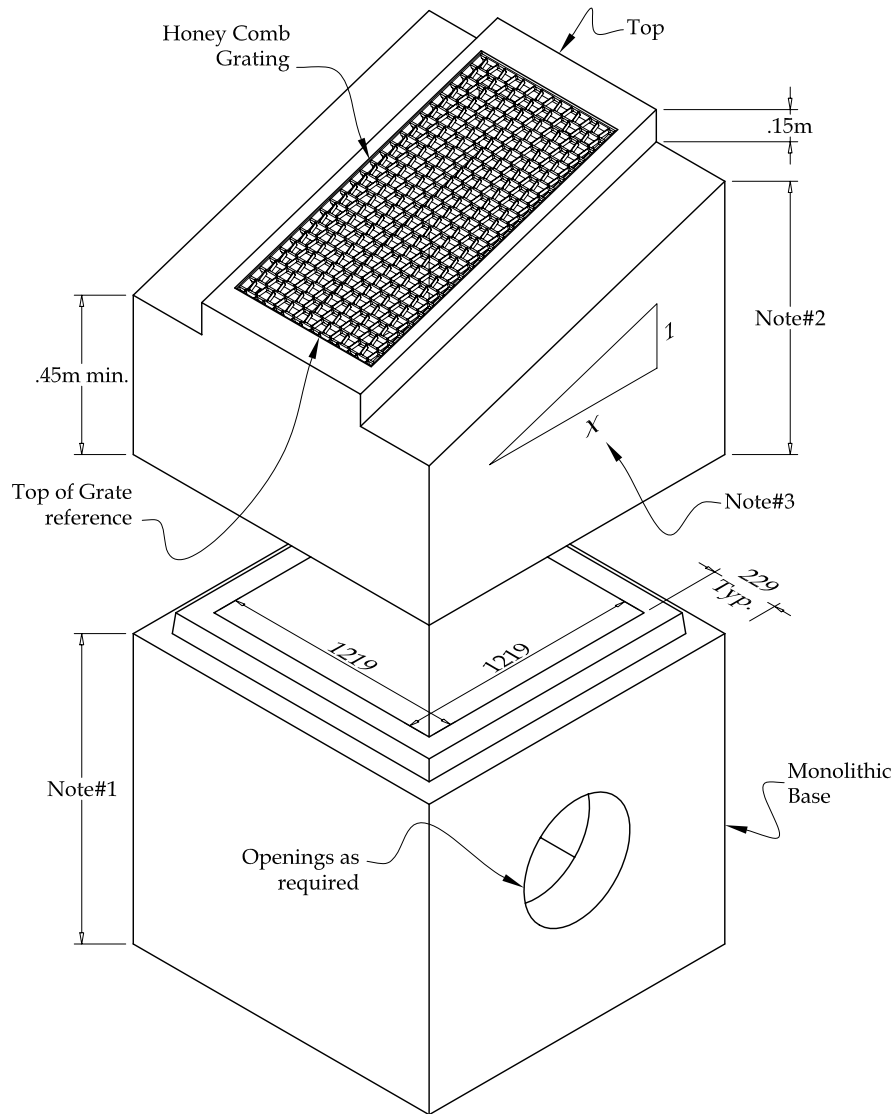
### NOTES:

- 1 - Monolithic Base heights as follows:  
 .61m - 1.53m @ .15m increments
  - 2 - Riser Top Section heights as follows:  
 .76m - 1.22m @ .15m increments
  - 3 - Slopes available as follows:  
 X = 2, 3, 4, 6, & Horizontal
- \*Sections also available with variable heights @ .15m increments

### General Notes:

- Manufactured in accordance with OPSD 702.040
- Honey comb grating manufactured in accordance with OPSD 403.010 - Type "B"
- All Maintenance Holes c/w Hollow Aluminum Steps as per OPSD 405.010
- All pieces c/w lifting anchors
- Standard sump of 300mm is provided
- Pipe gaskets available upon request

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	1200mm x 1200mm Ditch Inlet Catch Basin - Type "A"	B-7



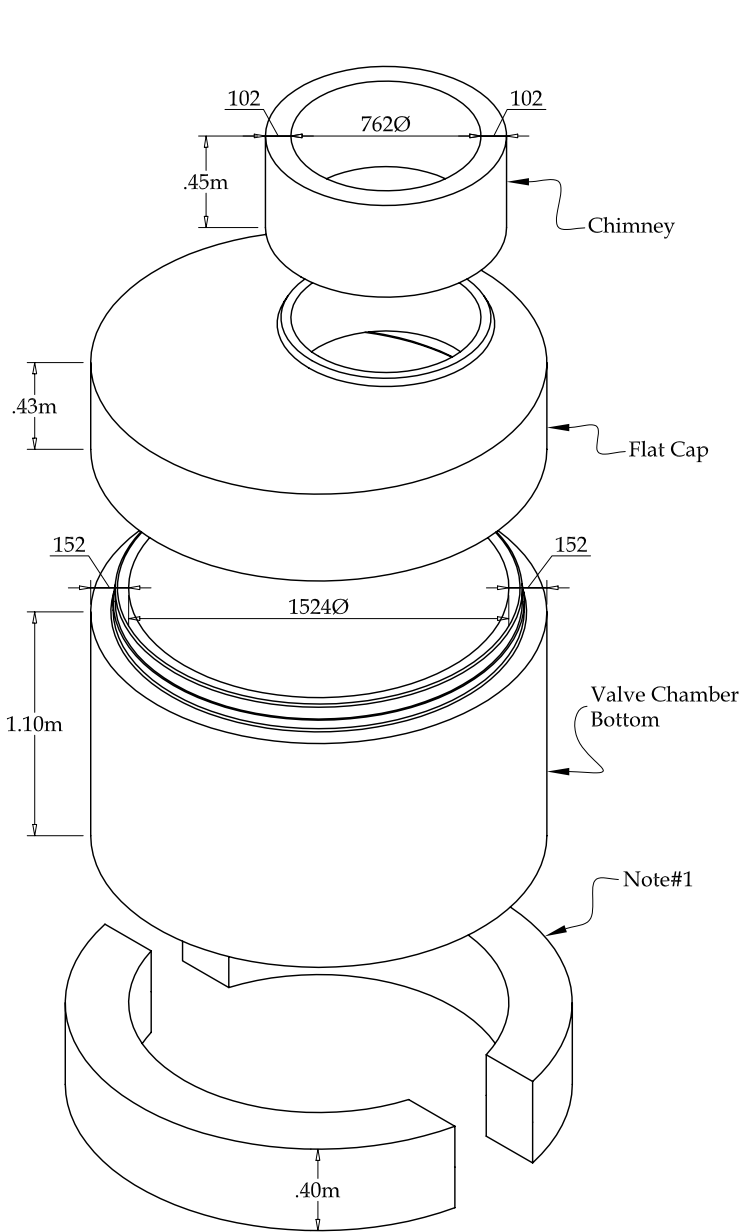
### NOTES:

- 1 - Monolithic Base heights as follows:  
 .61m - 1.53m @ .15m increments
  - 2 - Riser Top Section heights as Follows:  
 .45m - 1.22m @ .15m increments
  - 3 - Slopes available as follows:  
 X = 2, 3, 4, 6, & Horizontal
- \*Sections also available with variable heights @ .15m increments

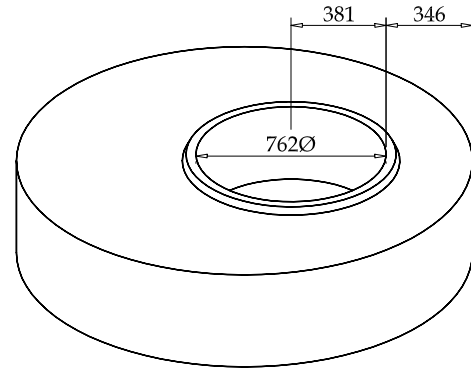
### General Notes:

- Manufactured in accordance with OPSD 702.050
- Honey comb grating manufactured in accordance with OPSD 403.010 - Type "B" or Type "C"
- All Maintenance Holes c/w Hollow Aluminum Steps as per OPSD 405.010
- All pieces c/w lifting anchors
- Standard sump of 300mm is provided
- Pipe gaskets available upon request

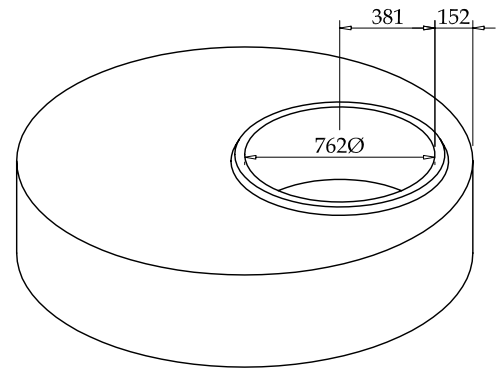
ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	1200mm x 1200mm Ditch Inlet Catch Basin - Type "B"	B-8



PROFILE



FLAT CAP for Gate Valve Opening



FLAT CAP for Butterfly Opening

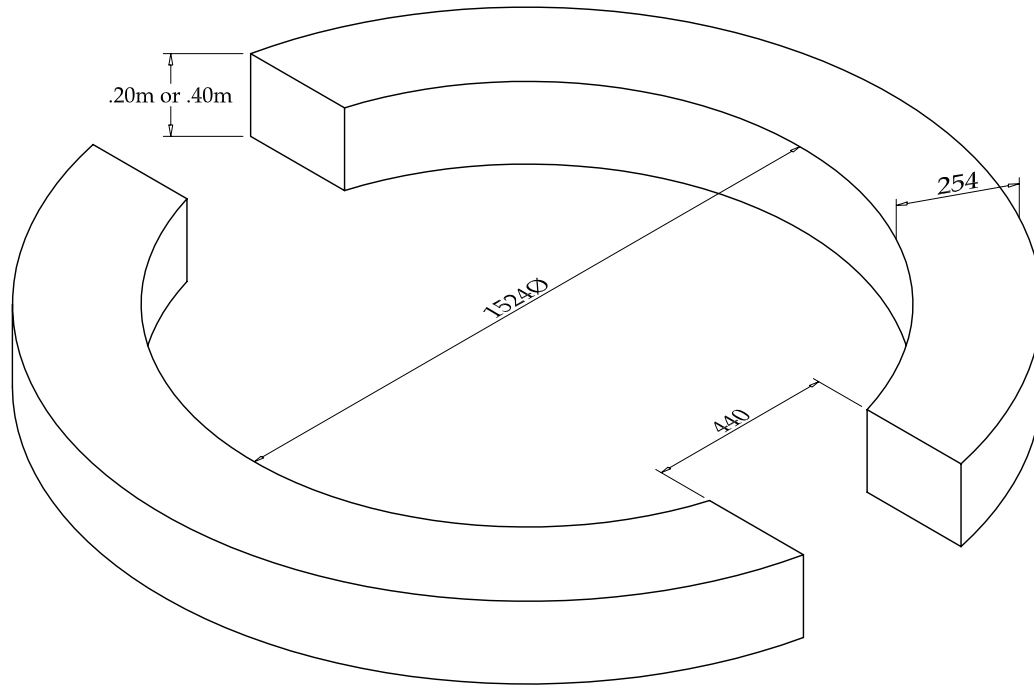
**NOTES:**

- 1 - Valve Chamber Base Sets as per City of Ottawa Standard W-5
- \*See Drawing# C-2

**General Notes:**

- Manufactured in accordance with OPSD 701.011 as well as the City of Ottawa Standard W-2 (Butterfly VC) & W-3 (Gate VC)
- 762mmØ chimney manufactured in accordance with City of Ottawa Standard W-9
- All Valve Chambers c/w Hollow Aluminum Steps as per OPSD 405.010
- All pieces c/w lifting anchors
- For adjusters refer to Drawing# F-1

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	City of Ottawa 1500mmØ Valve Chamber	C-1

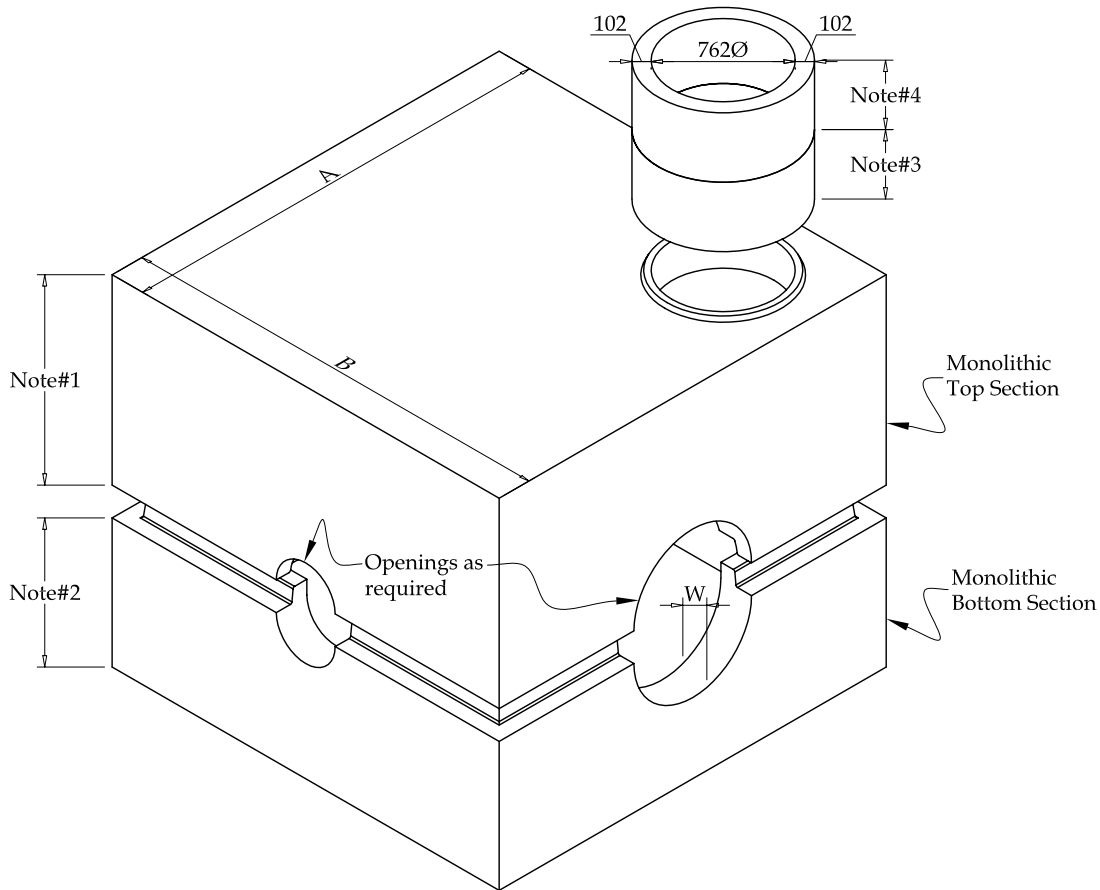


PROFILE

### General Notes:

- Manufactured in accordance with City of Ottawa drawing W-5
- All pieces c/w lifting anchors
- For 300Ø and 400Ø Watermain, base sets to be 400mm high
- For 250Ø and smaller Watermain, base sets to be 200mm high

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	City of Ottawa Valve Chamber Base Sets	C-2



### NOTES:

- 1 - Monolithic Top Section heights as follows:  
Variable heights @ .15m increments
  - 2 - Monolithic Base Section heights as follows:  
Variable heights @ .15m increments
  - 3 - 762Ø Valve Chamber sections available in - .15m, .23m, .30m, .45m, .61m & .76m
  - 4 - 762Ø Valve Chamber Tops available in - .15m, .30m, & .45m
- \*Box Valve Chamber Riser Sections also available with variable heights @ .15m increments

City of Ottawa Specification	Inside Dimensions	Outside Dimensions		Top Slab Thickness	Bott. Slab Thickness	Wall (W) Thickness
		"A"	"B"			
W31.1	1524 x 1829	1982	2287	229	229	229
W10 ~ R1	1676 x 2438	2134	2896	229	229	229
W10 ~ R2	1676 x 3048	2134	3506	229	229	229
W11 ~ R3	2438 x 3048	2896	3506	254	254	229
W11 ~ R4	3048 x 3810	3506	4268	254	254	229
W12 ~ R3	2438 x 3048	2896	3506	254	254	229
W12 ~ R4	3048 x 3810	3506	4268	254	254	229
W13 ~ R4	3048 x 3810	3506	4268	254	254	229

\*Custom sizes available upon request, contact M-Con's technical team\*

### General Notes:

- Manufactured in accordance with City of Ottawa Standards
- All Valve Chambers c/w Hollow Aluminum Steps as per OPSD 405.010
- All pieces c/w lifting anchors
- Pipe gaskets available upon request
- All joints to be sealed with Hydrophilic Waterstop & a Waterproofing membrane
- For adjusters refer to Drawing# F-1

ISSUE DATE

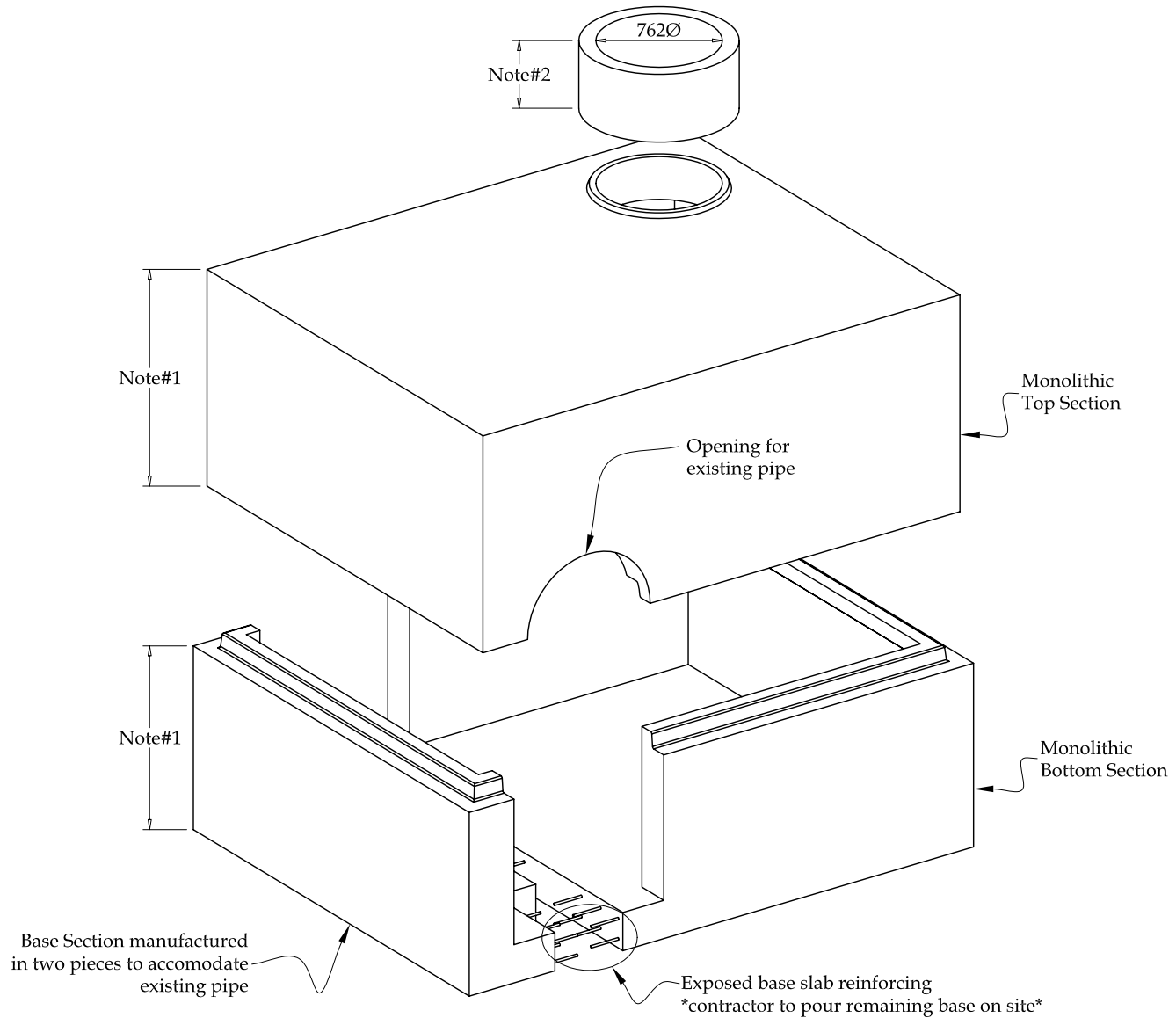
MARCH 2005

PRODUCT

City of Ottawa Box Valve Chamber

DRAWING #

C-3



### NOTES:

- 1 - All heights as per City of Ottawa standards
- 2 - 762Ø chimney height as required

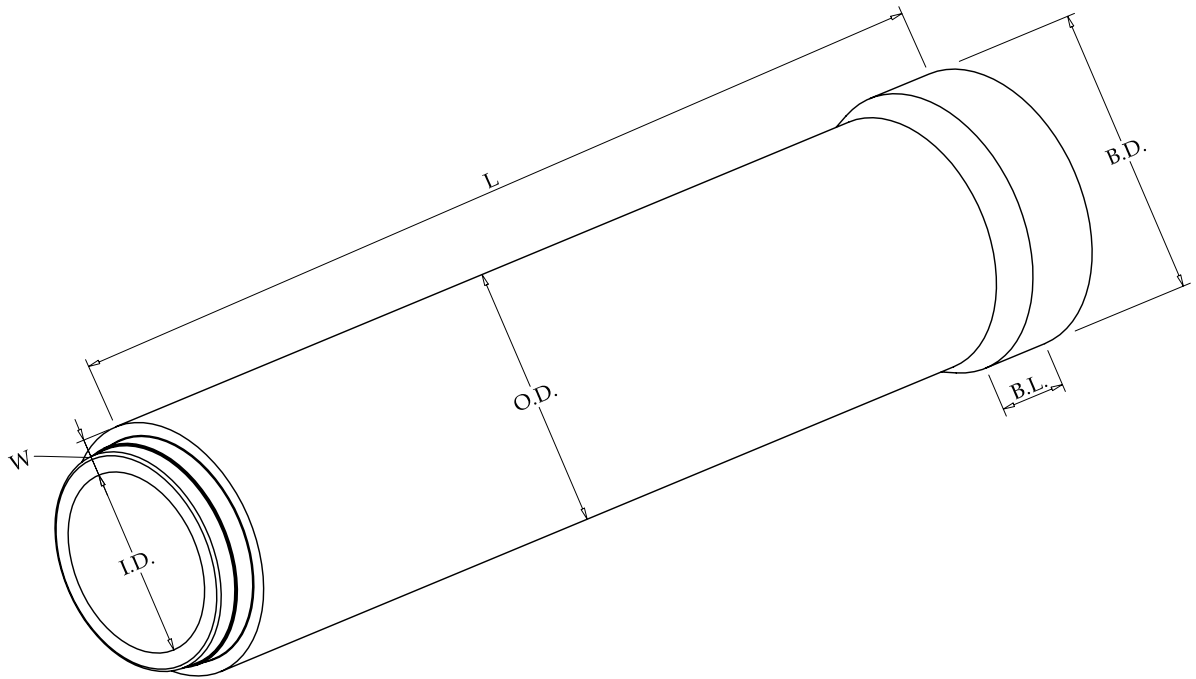
\*For available Valve Chamber sizes see Drawing# C-3

### General Notes:

- Manufactured in accordance with City of Ottawa specification W-11.1
- All Valve Chambers c/w Hollow Aluminum Steps as per OPSD 405.010
- All pieces c/w lifting anchors
- For adjusters refer to Page# F-1

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	City of Ottawa T.V.S. Valve Chamber	C-4



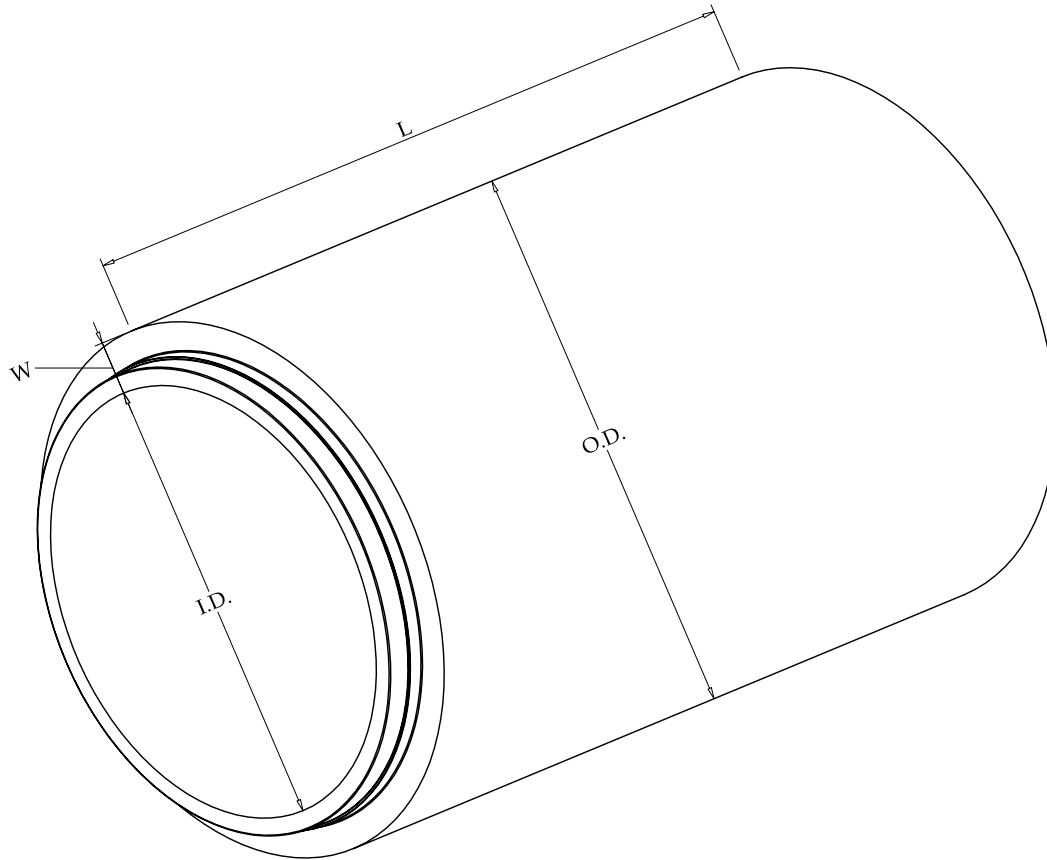


I.D. (Nominal)	Wall (W) Thickness	O.D.	L	B.D.	B.L.
300	70	445	2286	498	165
375	76	533	2286	587	165
450	83	622	2286	676	165
525	89	711	2286	752	178
600	95	800	2286	829	178
675	102	889	2286	905	178
750	108	978	2286	1003	178

### General Notes:

- Manufactured in accordance with CSA-A257.2
- All standard reinforced concrete pipe classes are available
- All joints c/w pre-lubricated gaskets

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	Concrete Pipe Dimensions - 300mmØ to 750mmØ	D-1

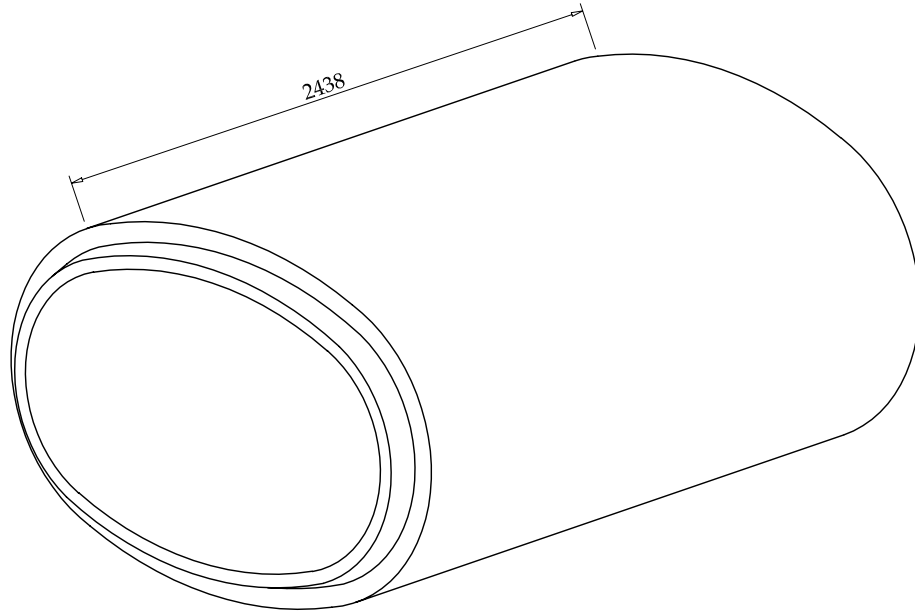


I.D. (Nominal)	Wall (W) Thickness	O.D.	L
825	114	1067	2286
900	121	1156	2286
975	127	1245	2286
1050	133	1334	2286
1200	146	1511	2286 / 2438
1350	159	1689	2286
1500	171	1867	2438
1650	184	2045	2438
1800	197	2223	2438
1950	191	2362	2438
2100	203	2540	2438
2440	229	2896	2438
3050	279	3607	2438

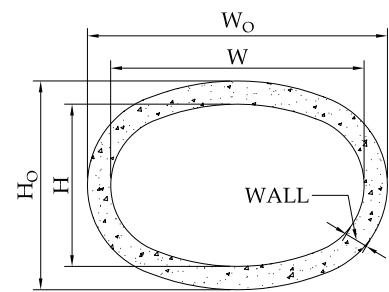
### General Notes:

- Manufactured in accordance with CSA-A257.2
- All standard reinforced concrete pipe classes are available
- All sizes 975Ø and larger c/w lifting anchors
- All joints c/w pre-lubricated gaskets

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	Concrete Pipe Dimensions - 825mmØ to 3050mmØ	D-2



SIZE	Equiv. Dia.	W	H	W <sub>o</sub>	H <sub>o</sub>	WALL
865 x 1345	1050	1353	864	1607	1118	127
965 x 1525	1200	1521	972	1801	1252	140
1220 x 1930	1500	1918	1223	2248	1553	165
1475 x 2310	1800	2291	1469	2673	1851	191
1600 x 2490	1950	2491	1592	2897	1998	203

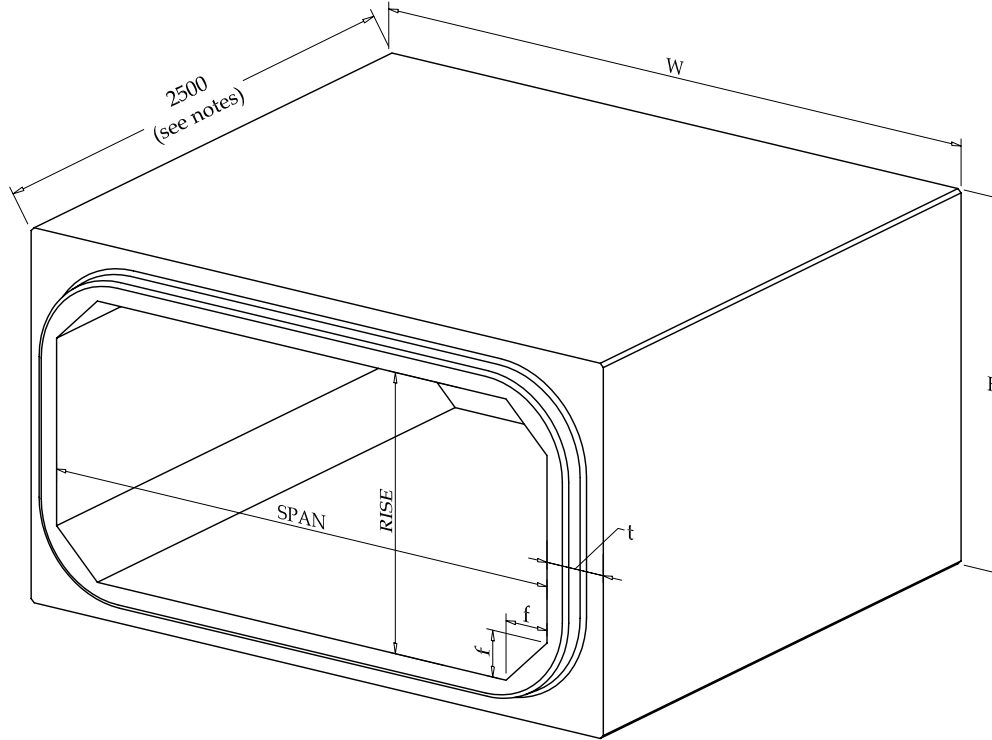


CROSS SECTION

**General Notes:**

- Manufactured in accordance with ASTM C 507M
- All standard reinforced concrete pipe classes are available
- All joints to be mortar joints
- Other sizes available upon request

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	Concrete Pipe Dimensions - Horizontal Elliptical	D-3



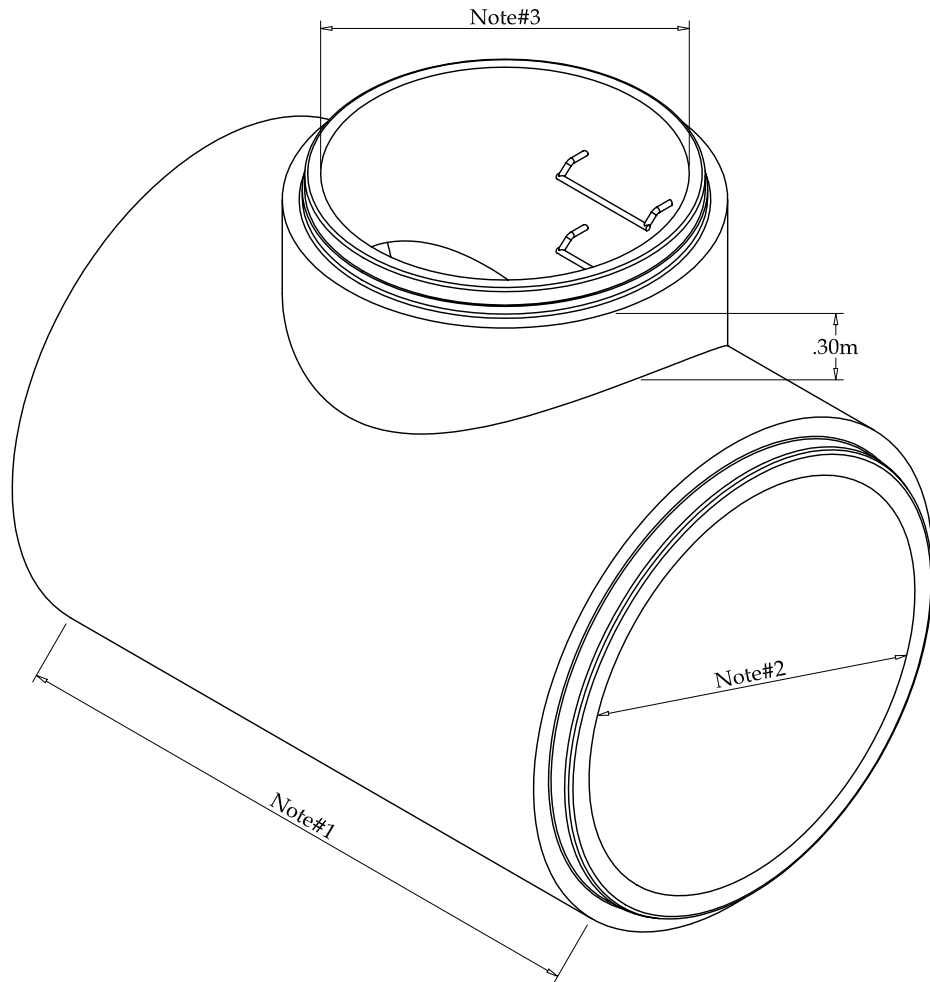
Size (Nominal) SPAN x RISE	Wall Thick. t	Haunch f	Outside W	Outside H
1800 x 900	200	200	2200	1300
1800 x 1200	200	200	2200	1600
2400 x 1200	200	200	2800	1600
2400 x 1500	200	200	2800	1900
2400 x 1800	200	200	2800	2200
3000 x 1500	250	250	3500	2000
3000 x 1800	250	250	3500	2300
3000 x 2100	250	250	3500	2600
3000 x 2400	250	250	3500	2900

### General Notes:

- Manufactured in accordance with OPSS 1821
- Special designs are also available
- For special applications shorter lengths are also available
- All pieces c/w lifting anchors

\*Custom sizes available upon request, contact M-Con's technical team\*

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	Box Culverts	D-4



### NOTES:

- 1 - 2.29m (1350Ø)  
2.44m (1200Ø, 1500Ø - 3000Ø)
- 2 - Variable (1200Ø min.)
- 3 - Variable (1200Ø min.) maintenance hole chimney

### General Notes:

- Manufactured in accordance with OPSD 707.010
- All Maintenance Hole tees c/w Hollow Aluminum Steps as per OPSD 405.010
- All tees c/w lifting anchors

ISSUE DATE

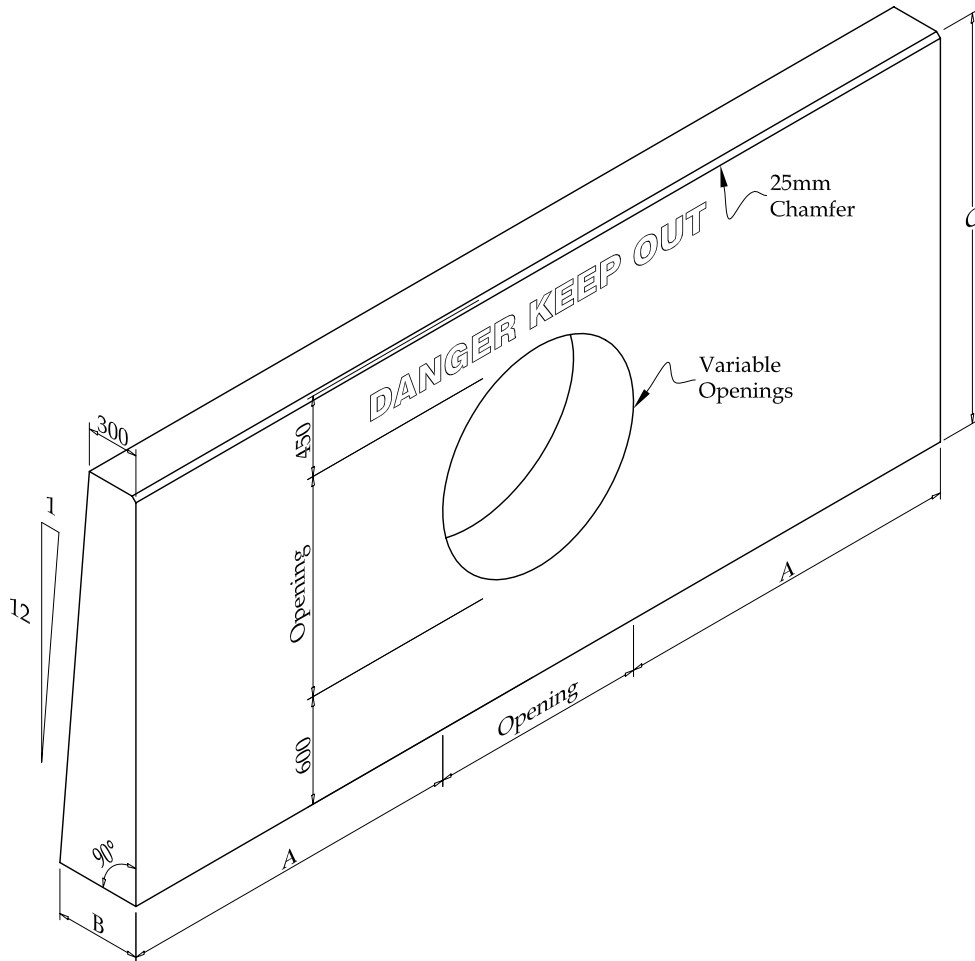
PRODUCT

DRAWING #

MARCH 2005

Concrete Pipe Maintenance Hole Tees

D-5



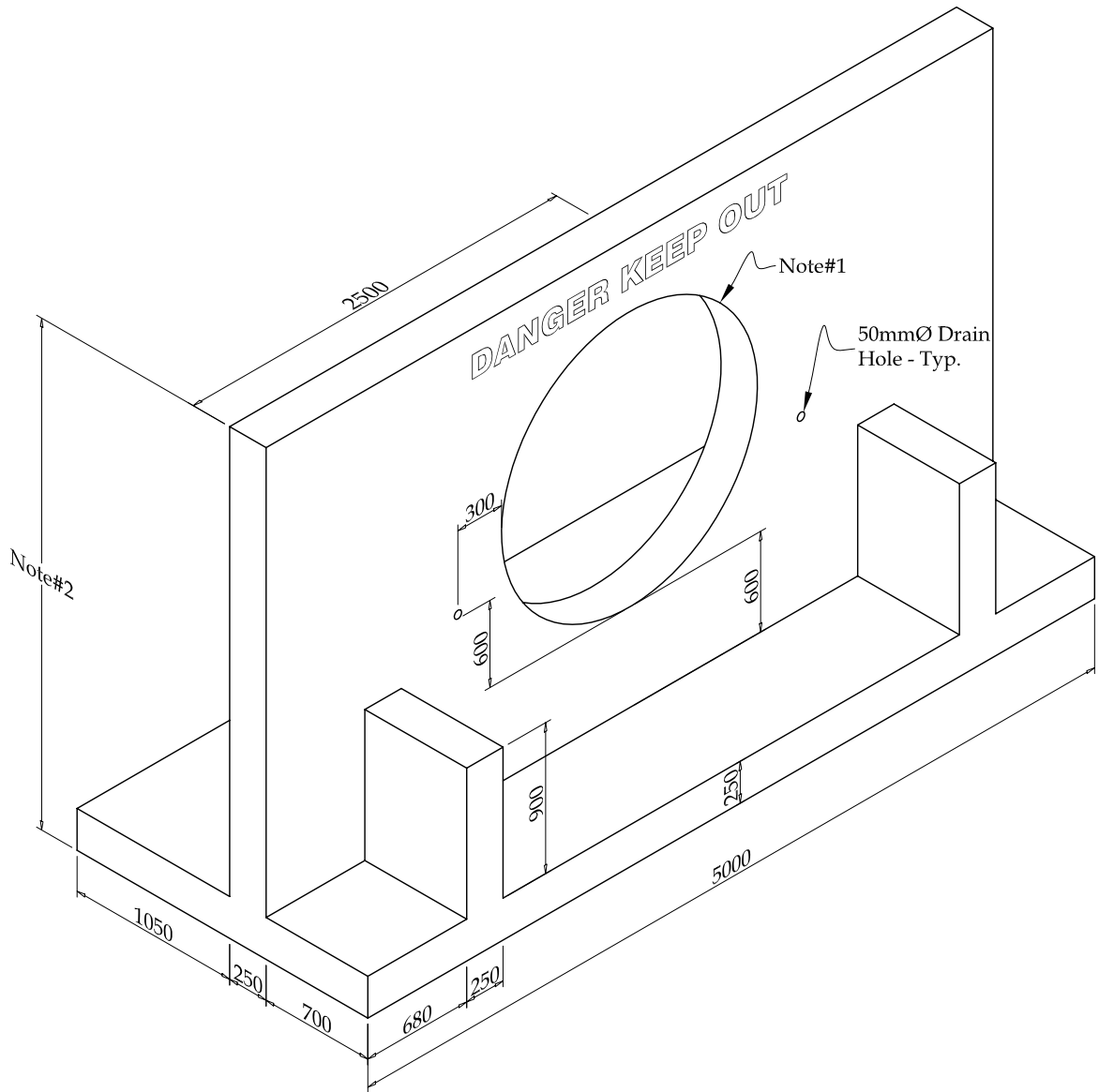
### DIMENSIONS:

- A = Opening + 750
- B =  $\frac{1}{12}$  (Opening + 450 + 600) + 300
- C = Opening + 450 + 600

### General Notes:

- Manufactured in accordance with OPSD 804.030
- All headwalls c/w lifting anchors
- Available for pipes up to and including 900mmØ

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	Concrete Headwall - Up to 900mmØ	E-1



**NOTES:**

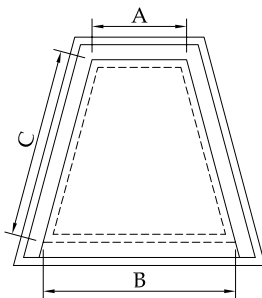
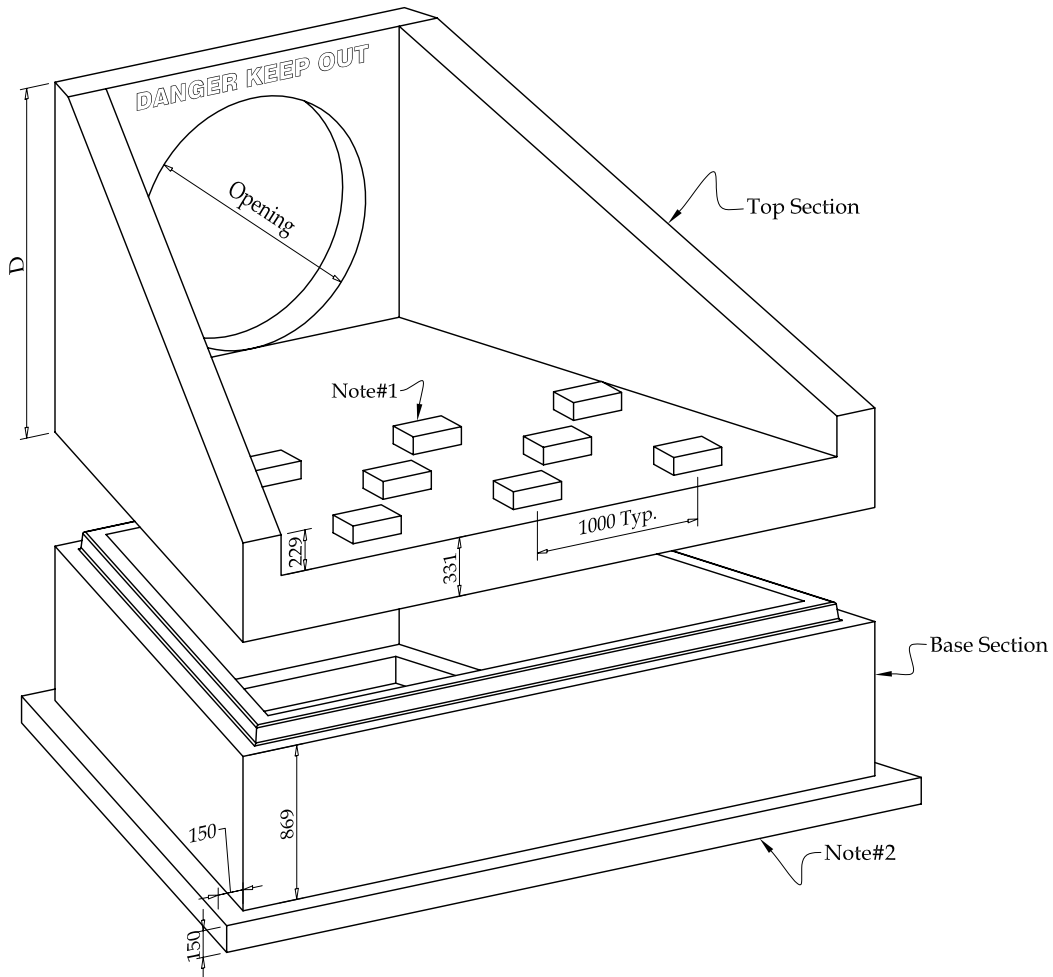
- 1 - Variable Openings:  
Maximum Pipe Size of 1500Ø
- 2 - Height depends on size of pipe

**General Notes:**

- Alternative to OPSD 804.021 & OPSD 804.020
- All headwalls c/w lifting anchors
- Available for all pipe sizes up to and including 1500mmØ

Max. weight: 15 000 kg

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	Concrete Headwall - Up to 1500mmØ	E-2



TOP VIEW

**Notes:**

- 1 - 300x200 x 100 high Chute Blocks installed @ 1000 o/c horizontally and 500 o/c vertically
- 2 - 529<sup>W</sup> x 150<sup>H</sup> Footing

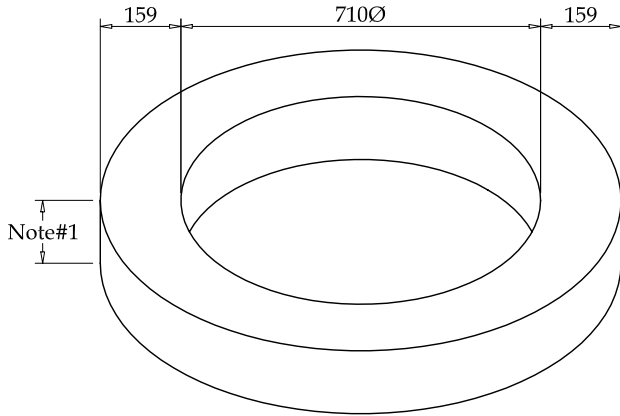
**General Notes:**

- Alternative to OPSD 804.040
- All headwalls c/w lifting anchors
- Chute blocks provided upon request

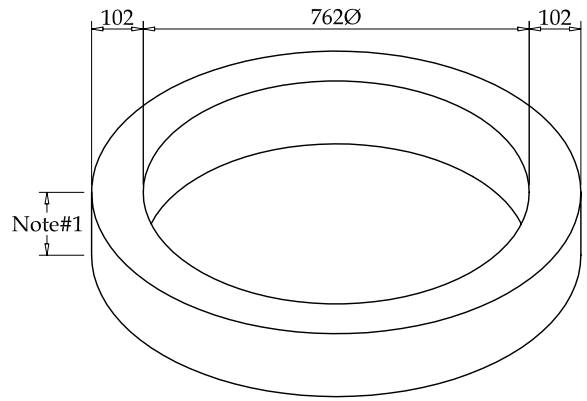
PIPE SIZE SIZE (mm Ø)	A (mm)	B (mm)	C (mm)	D (mm)	MAX. TOP WEIGHT	MAX. BOTTOM WEIGHT
600 → 750	1219	2481	2438	opening + 630	7200 kg	6700 kg
825 → 1200	1829	3407	3048	opening + 630	11300 kg	8700 kg
1350 → 1650	2438	4016	3048	opening + 630	14000 kg	9600 kg

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	Concrete Headwall - Up to 1650Ø	E-3

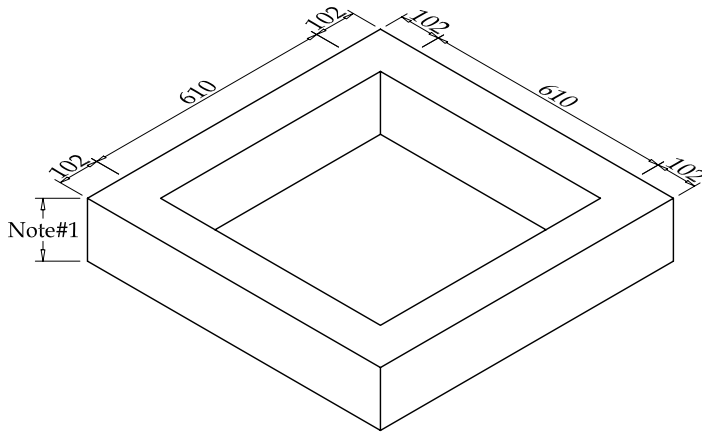




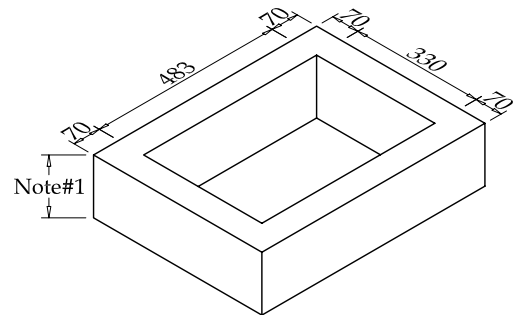
MAINTENANCE HOLE  
ADJUSTER



VALVE CHAMBER  
ADJUSTER



CATCH BASIN  
ADJUSTER

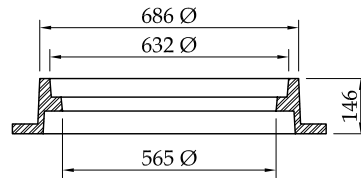
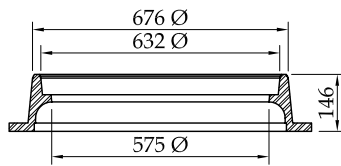
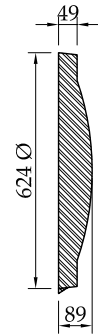
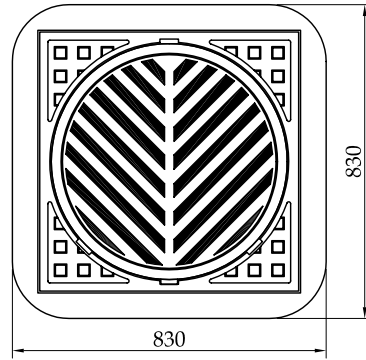
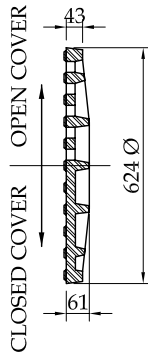
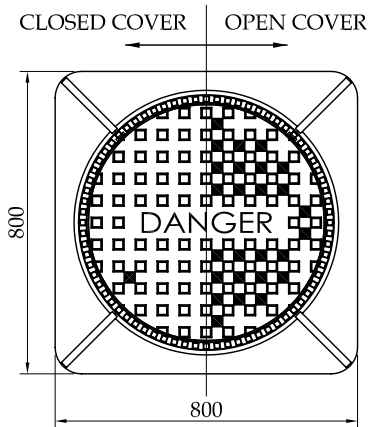


REAR YARD CATCH BASIN  
ADJUSTER

**NOTES:**

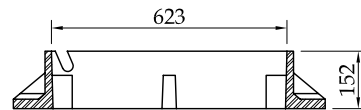
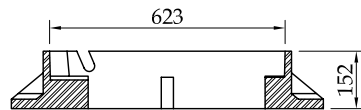
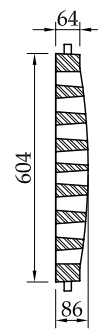
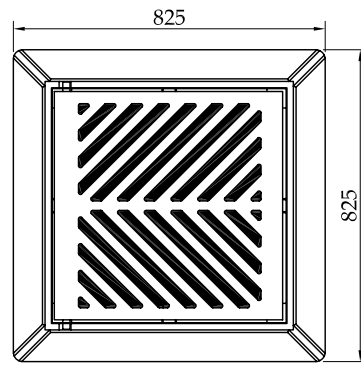
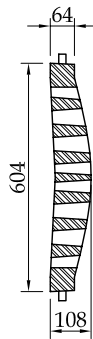
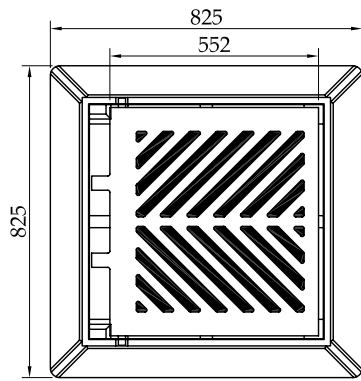
1 - Heights as follows:  
 50mm, 75mm, 100mm, & 150mm

ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	Concrete Adjusters	F-1



Maintenance Hole Frame & Cover  
 OPSD 401.010 - Type "A" & "B"

Catch Basin Frame & Cover  
 OPSD 400.070

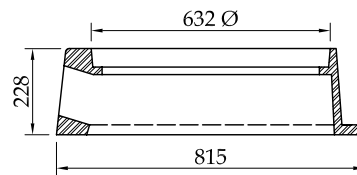
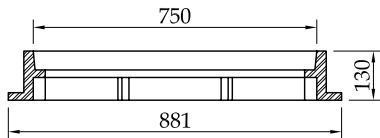
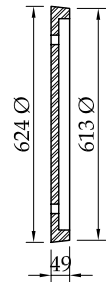
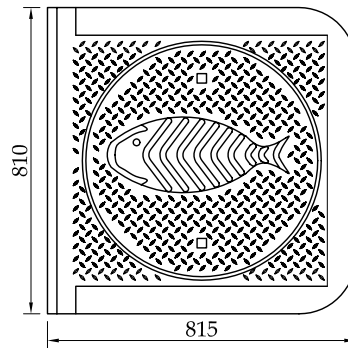
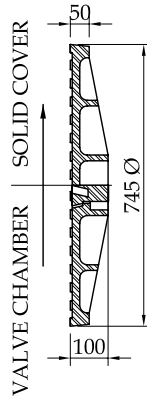
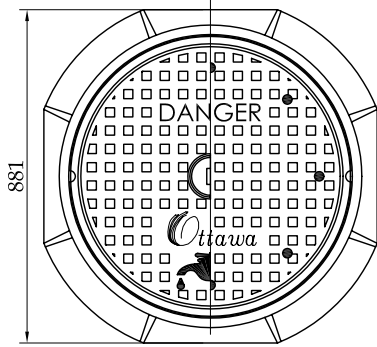


Catch Basin Frame & Cover  
 OPSD 400.010

Catch Basin Frame & Cover  
 OPSD 400.020

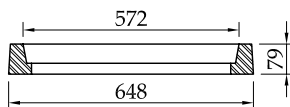
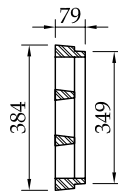
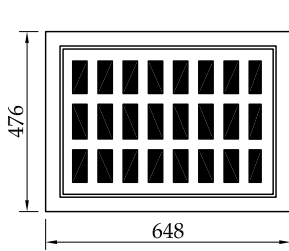
ISSUE DATE	PRODUCT	DRAWING #
MARCH 2005	OPSD Frame & Covers	F-2

VALVE CHAMBER      SOLID COVER

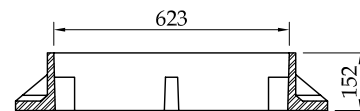
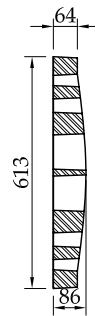
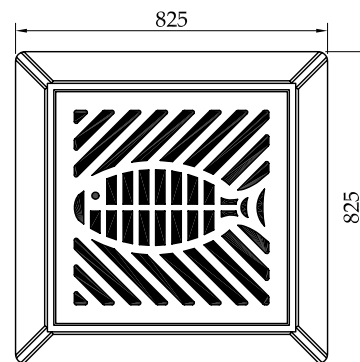


Valve Chamber / Maintenance Hole  
 City of Ottawa Frame & Cover

Curb Inlet Catch Basin  
 City of Ottawa Frame & Cover



Rear Yard Catch Basin  
 City of Ottawa Frame & Cover



Catch Basin  
 City of Ottawa Frame & Cover

ISSUE DATE

PRODUCT

DRAWING #

MARCH 2005

City of Ottawa Frame & Covers

F-3

M-CON looks forward to supplying the sewer and watermain industry with a complete line of high quality concrete pipe, manholes and accessories. If other precast concrete related products are required, please do not hesitate to contact one of our affiliated companies:



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Fax (613) 225-5318

Website [www.centralprecast.com](http://www.centralprecast.com)  
Email [info@centralprecast.com](mailto:info@centralprecast.com)

**PRODUCT LINE**

Landscape Products	Distributors of interlocking stones, retaining walls, slabs and curbing
Architectural Precast	Manufacturers of Architectural Precast for buildings such as Home Depot and Canadian Tire
Masonry Furnishings	Manufacturers of standard masonry furnishings that include sills, lintels, coping and caps
Site Furnishings	Manufacturers of standard planters, steps, garbage receptacles, benches, ashtrays, etc.
Fencing	Manufacturers of various precast concrete fencing systems
Columns & Signs	Manufacturers of custom columns and signs to your specifications
Shelters	Manufacturers of a variety of standard shelters



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**PRODUCT LINE**

Concrete Poles	Manufacturers of concrete poles for hydro distribution, street lighting
Utility Structures	Manufacturers of utility vaults, distribution chambers and other electrical structures
Highway Barriers	Manufacturers of standard OPSD concrete barriers
Specialty Items	Bollards, Aluminum Pole bases