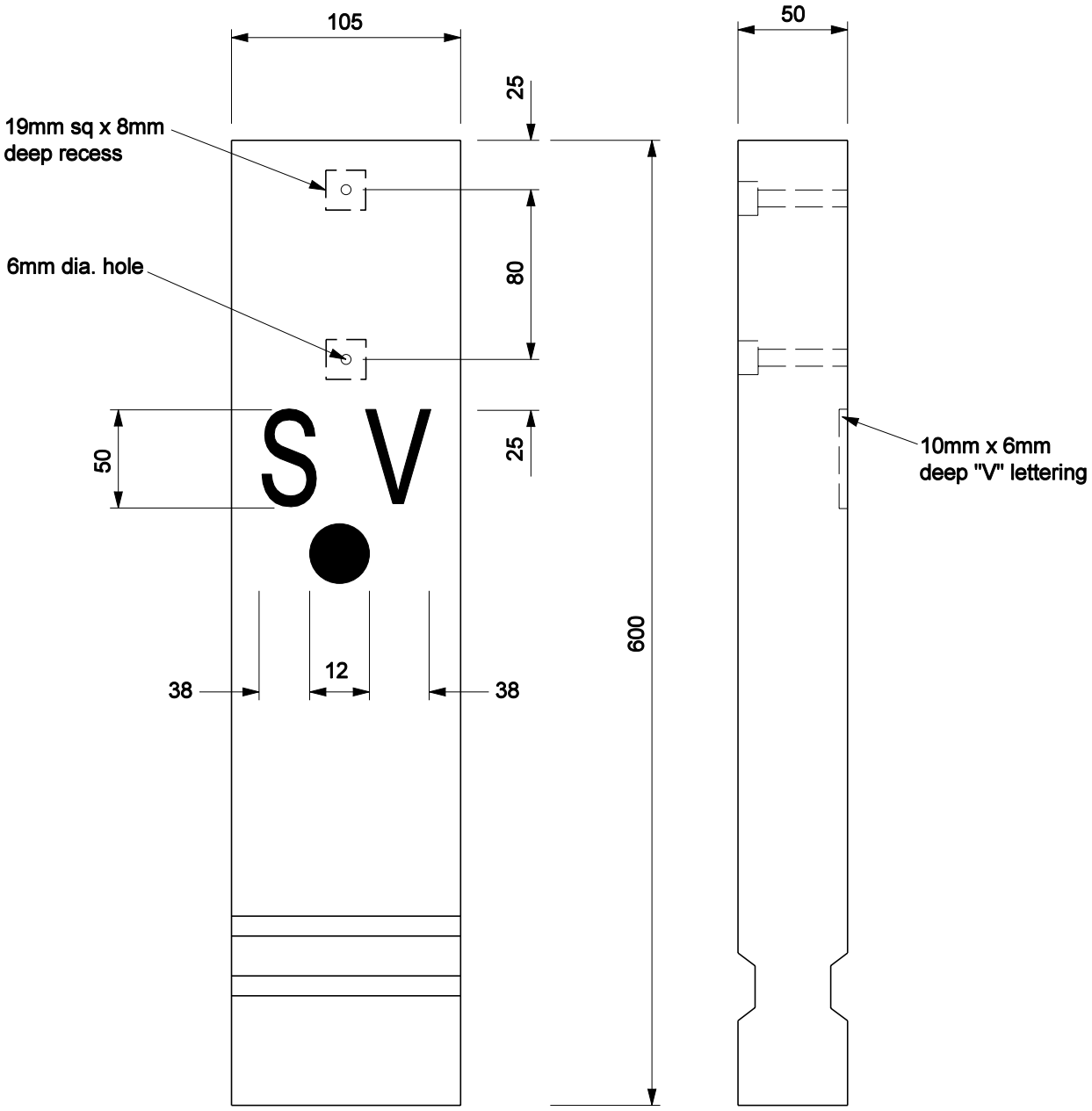


Concrete or H4 Tanalised timber

HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn

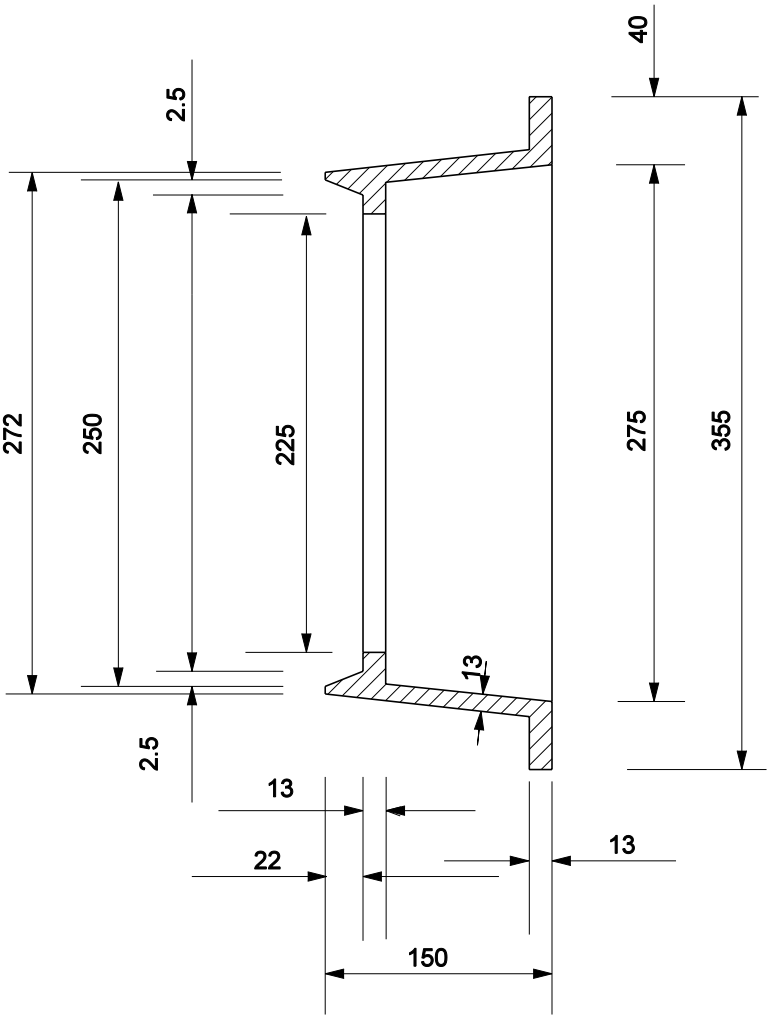
VALVE INDICATOR POSTS

DEVELOPMENT MANUAL

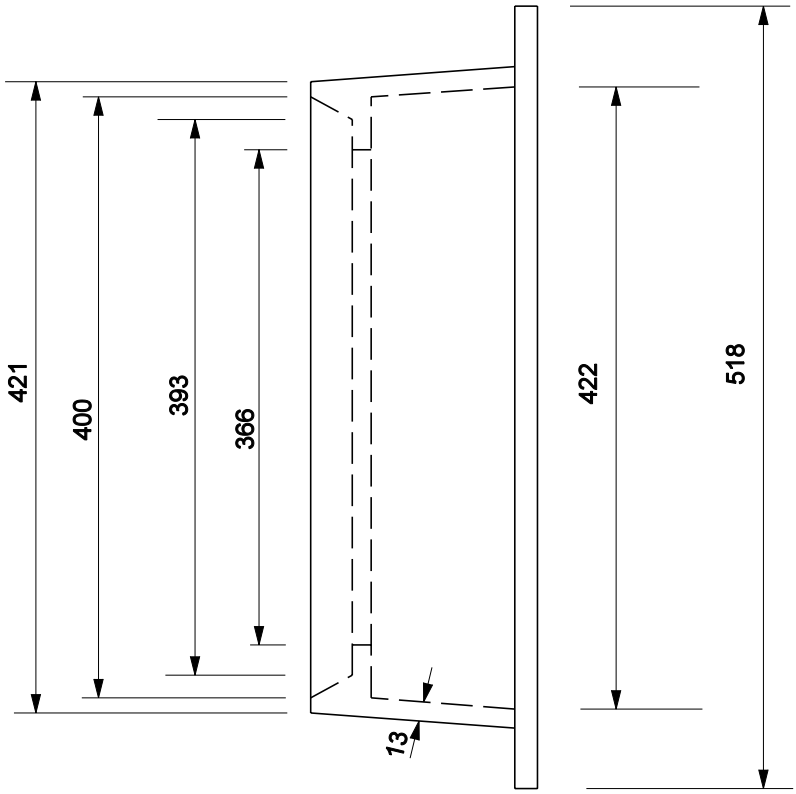
TS 602

Approved: WWS Manager

Version: August 2008



Cast Iron



HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn

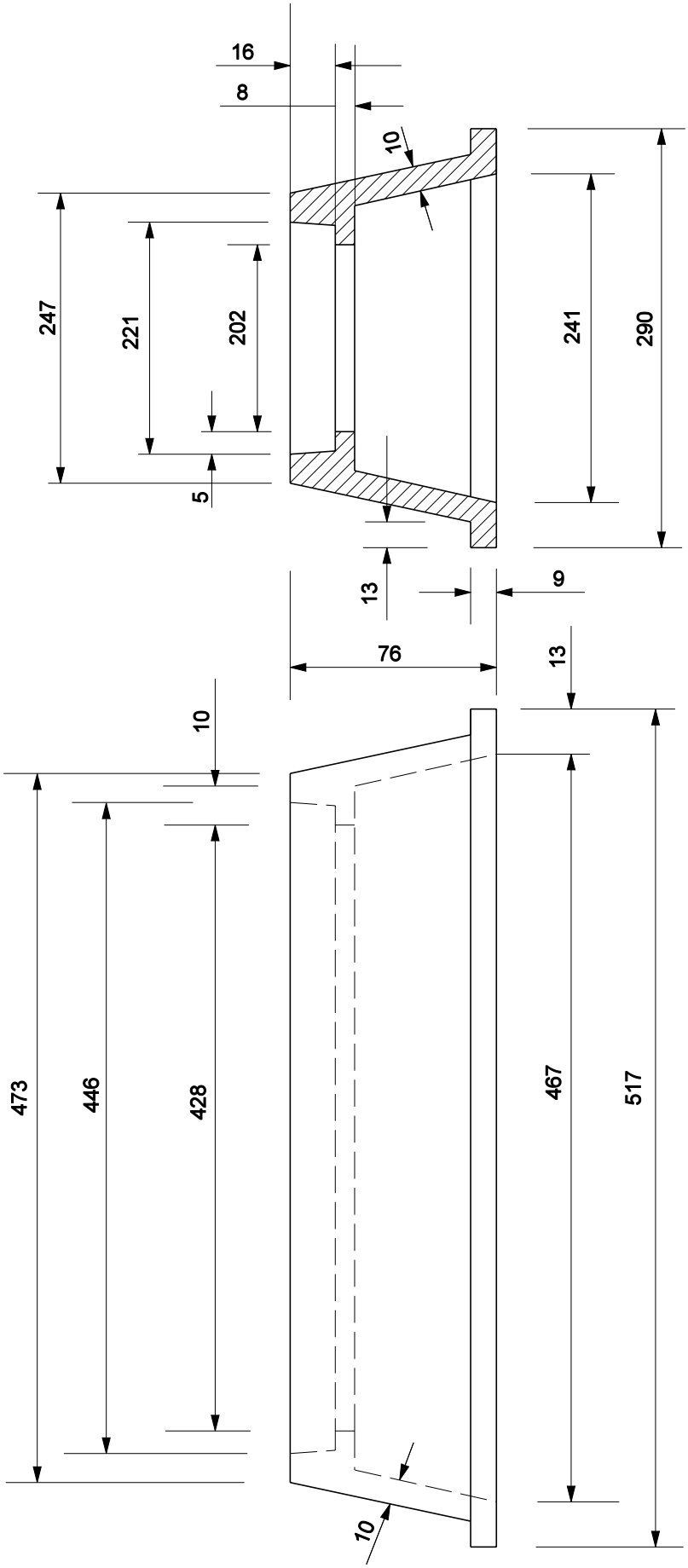
HYDRANT BOX

DEVELOPMENT MANUAL

TS 607

Approved: WWS Manager

Version: August 2008



HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn

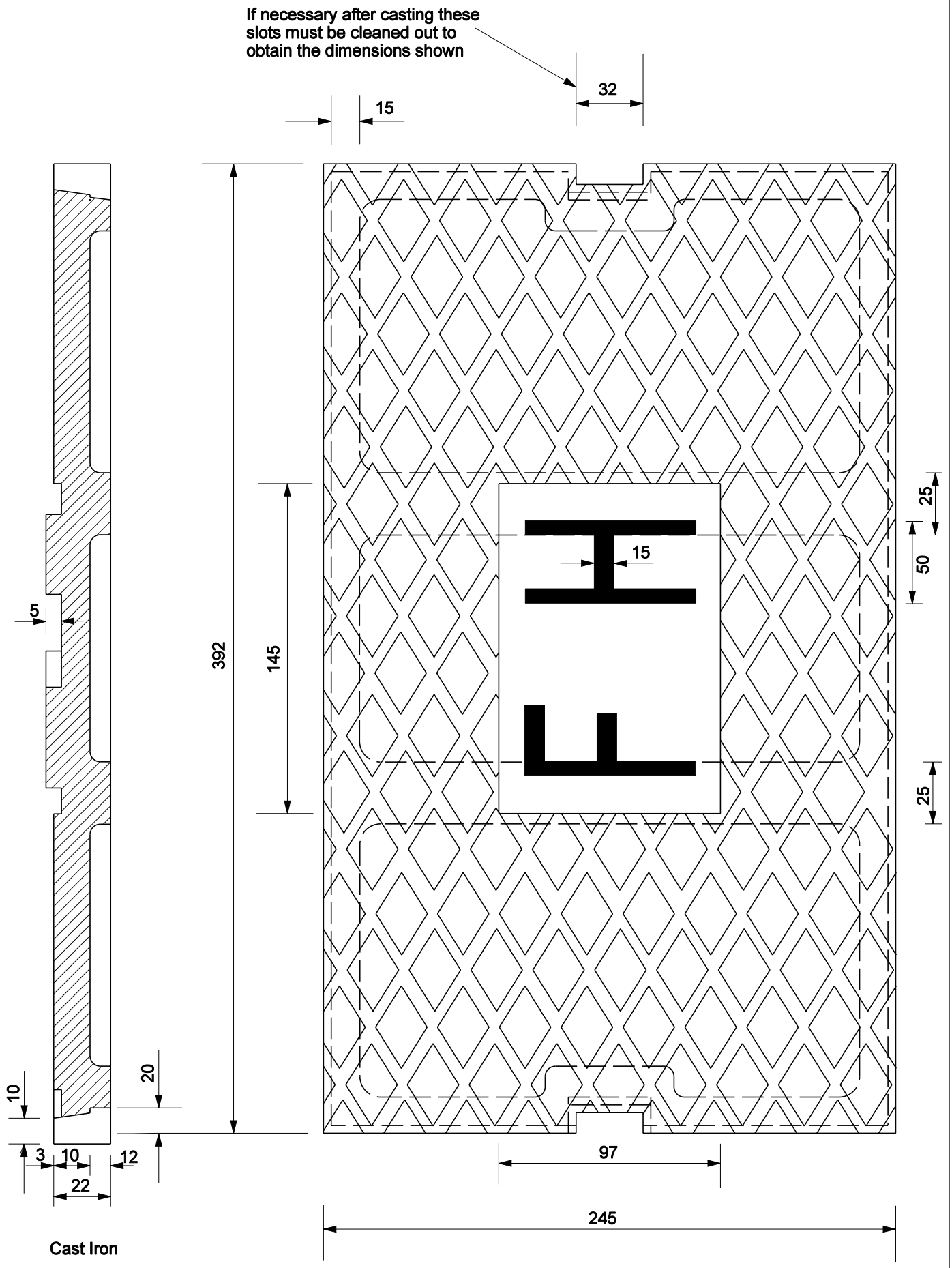
WATER METER BOX

DEVELOPMENT MANUAL

TS 608

Approved: WWS Manager

Version: August 2008

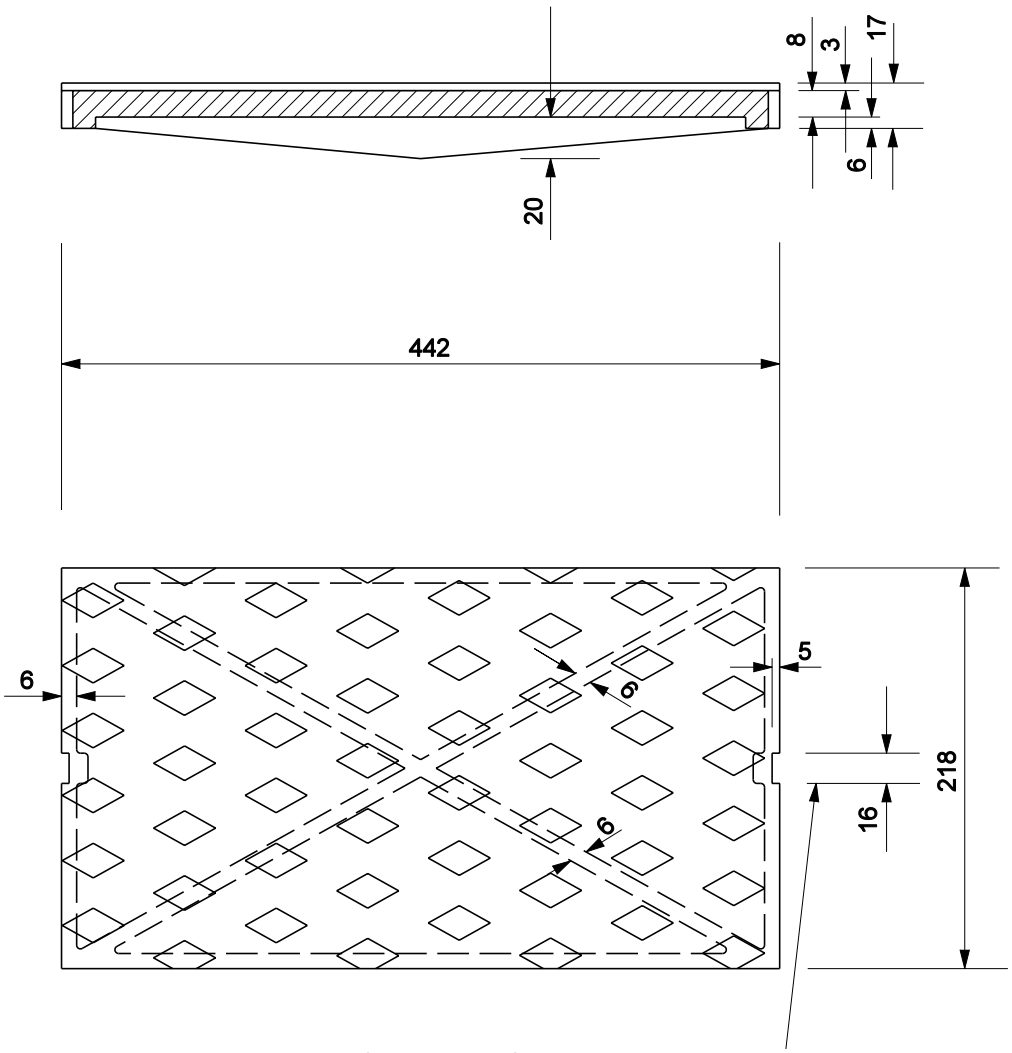


HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

HYDRANT BOX LID

DEVELOPMENT MANUAL
TS 609
Approved: WWS Manager
Version: August 2008

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn



Cast Iron

If necessary after casting these slots must be cleaned out to obtain the necessary dimensions shown.

HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn

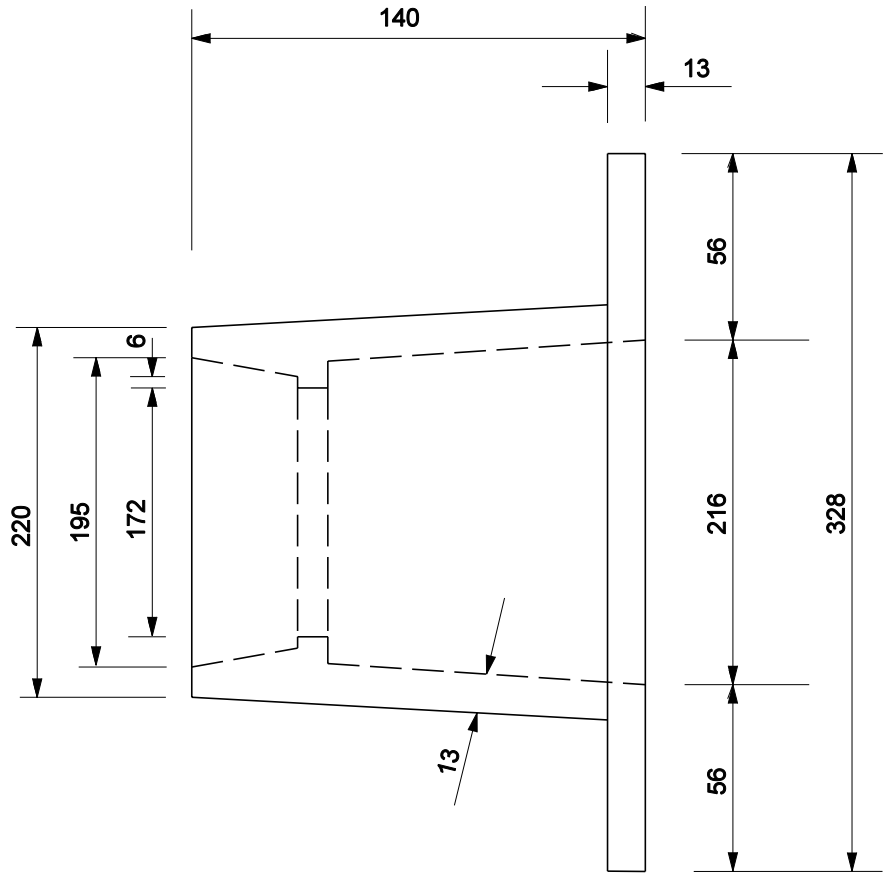
METER BOX LID
(Standard Pattern)

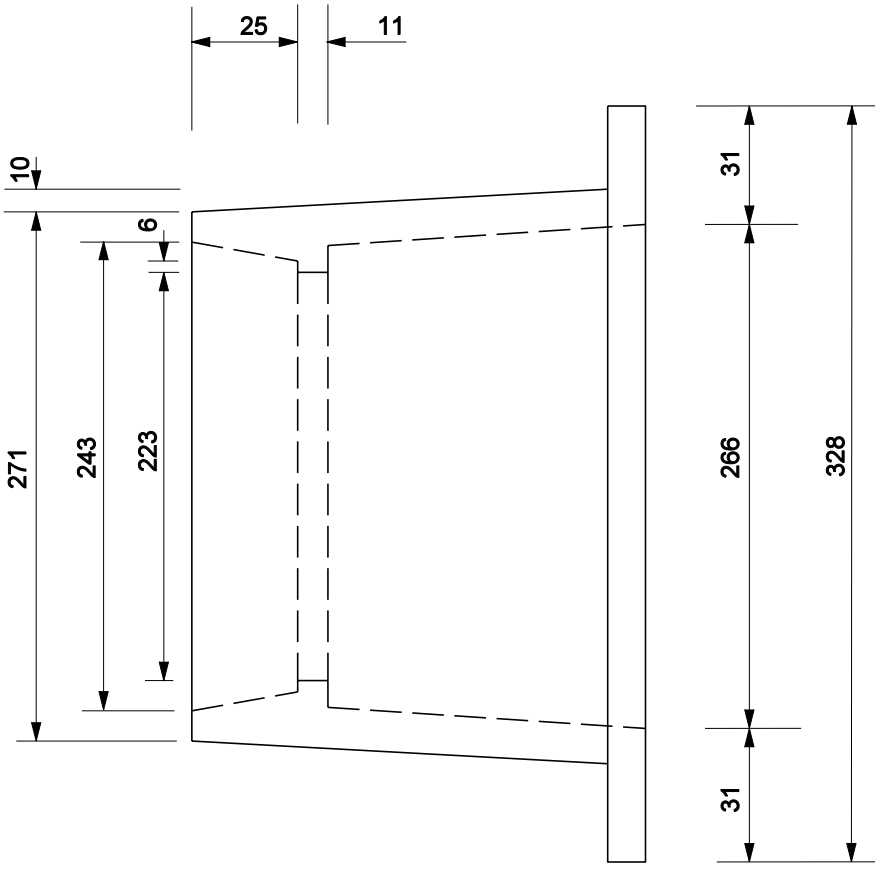
DEVELOPMENT MANUAL

TS 610

Approved: WWS Manager

Version: August 2008





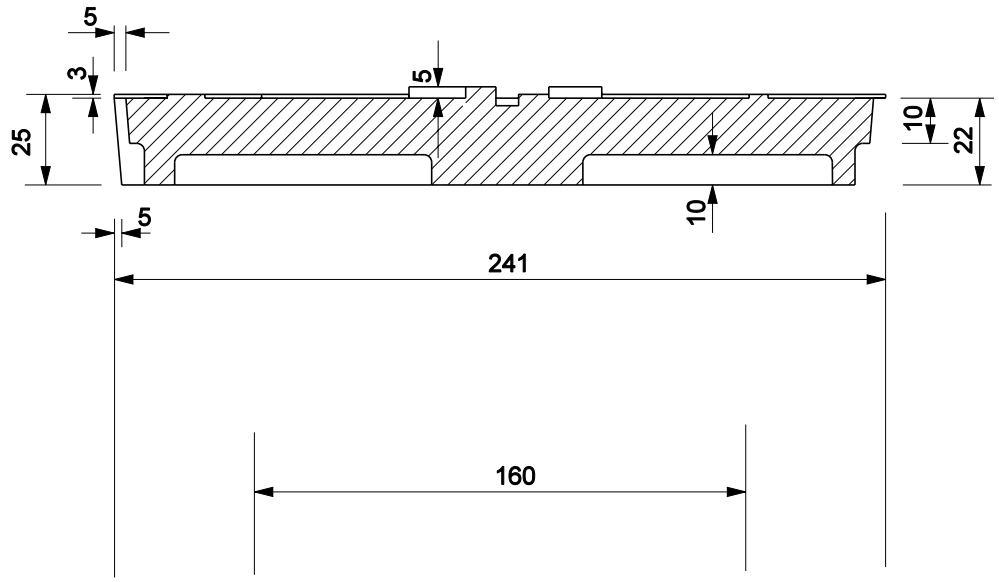
Cast Iron

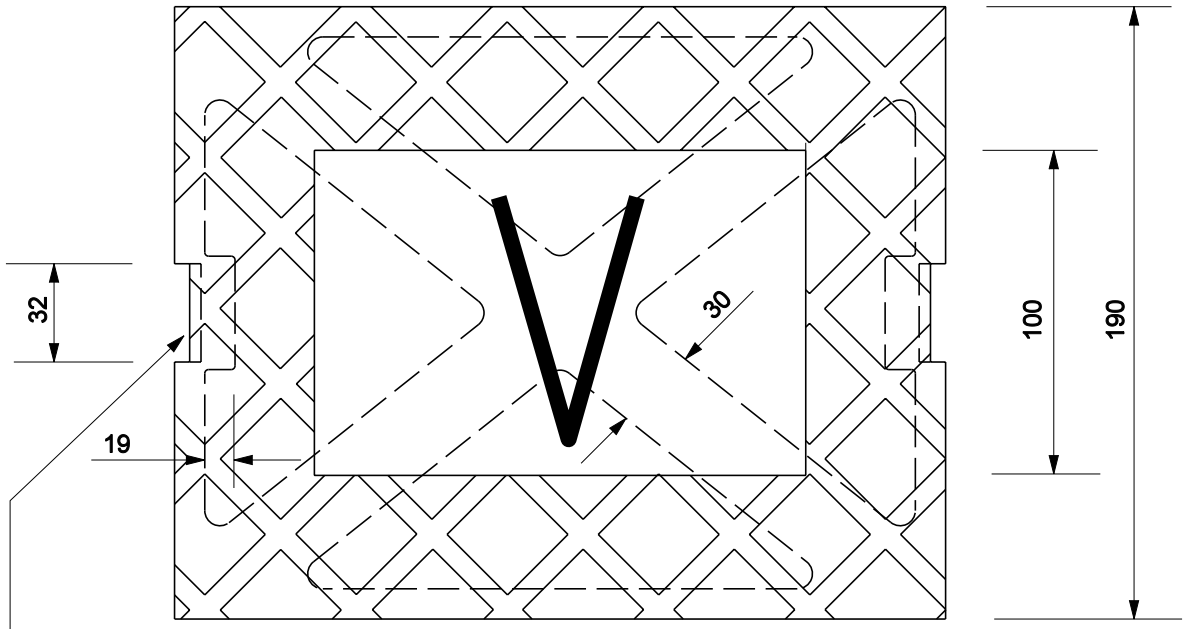
HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

VALVE BOX

DEVELOPMENT MANUAL
TS 611
Approved: WWS Manager
Version: August 2008

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn





If necessary after casting these slots must be cleaned out to obtain the dimensions shown.

Cast Iron

HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn

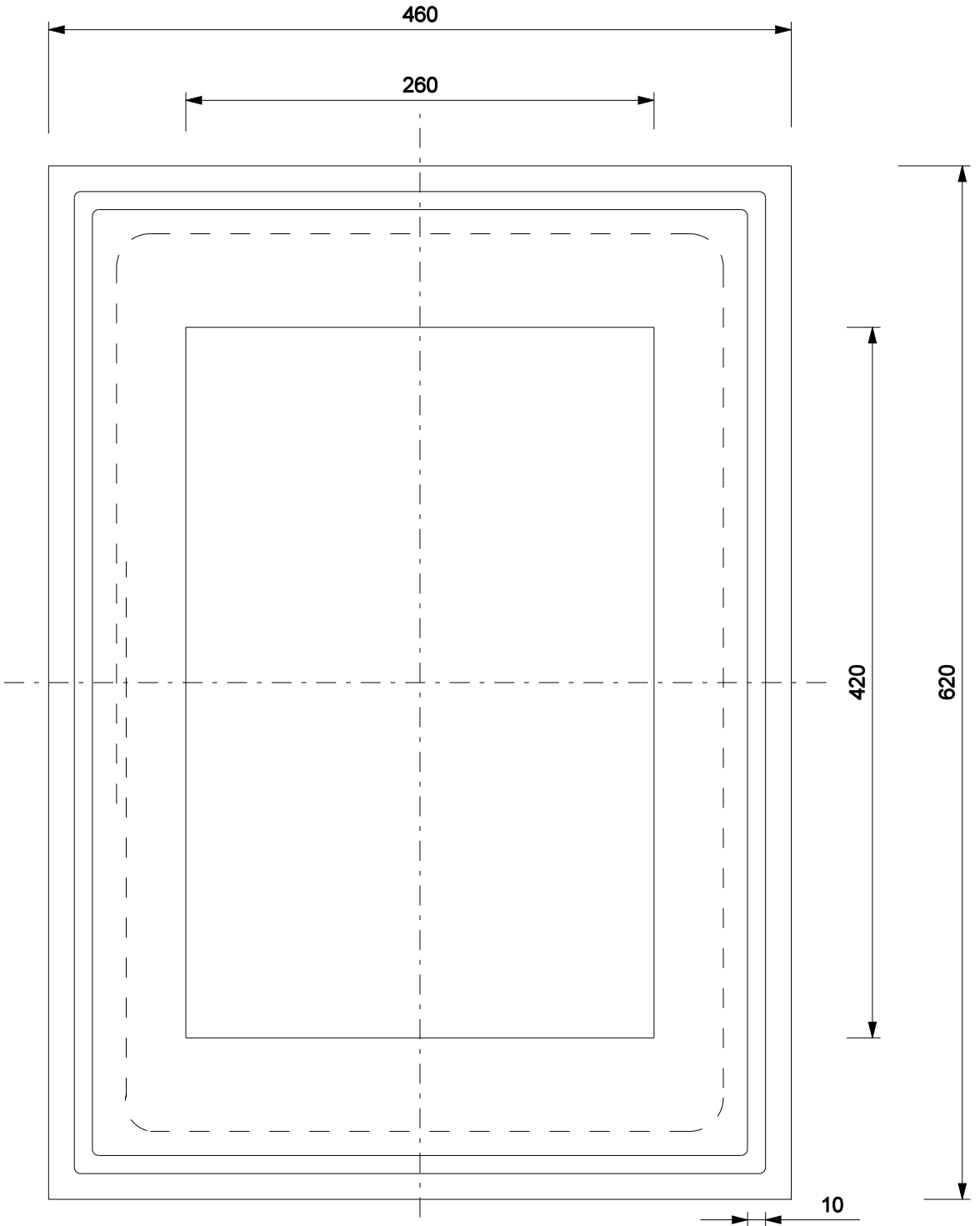
VALVE BOX LID

DEVELOPMENT MANUAL

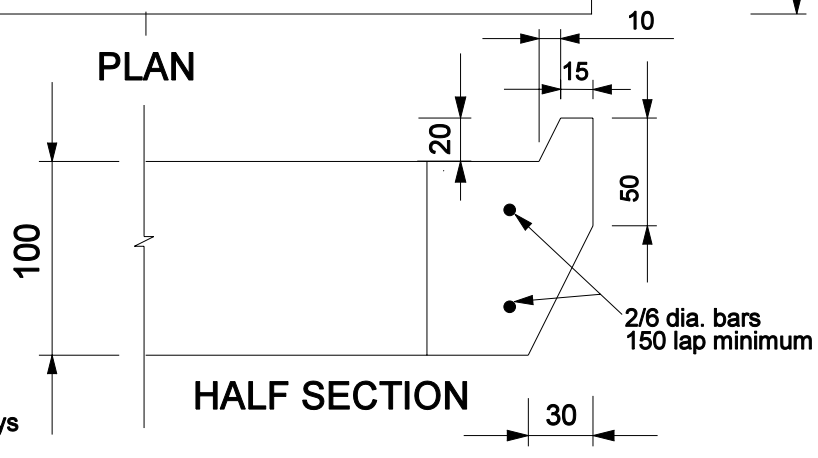
TS 612

Approved: WWS Manager

Version: August 2008



PLAN



HALF SECTION

NOTES:

1. Minimum 25mm cover to all steel
2. Concrete strength Min 20 MPa at 28 days

HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

100mm CONCRETE HYDRANT AND METER BOX SURROUND

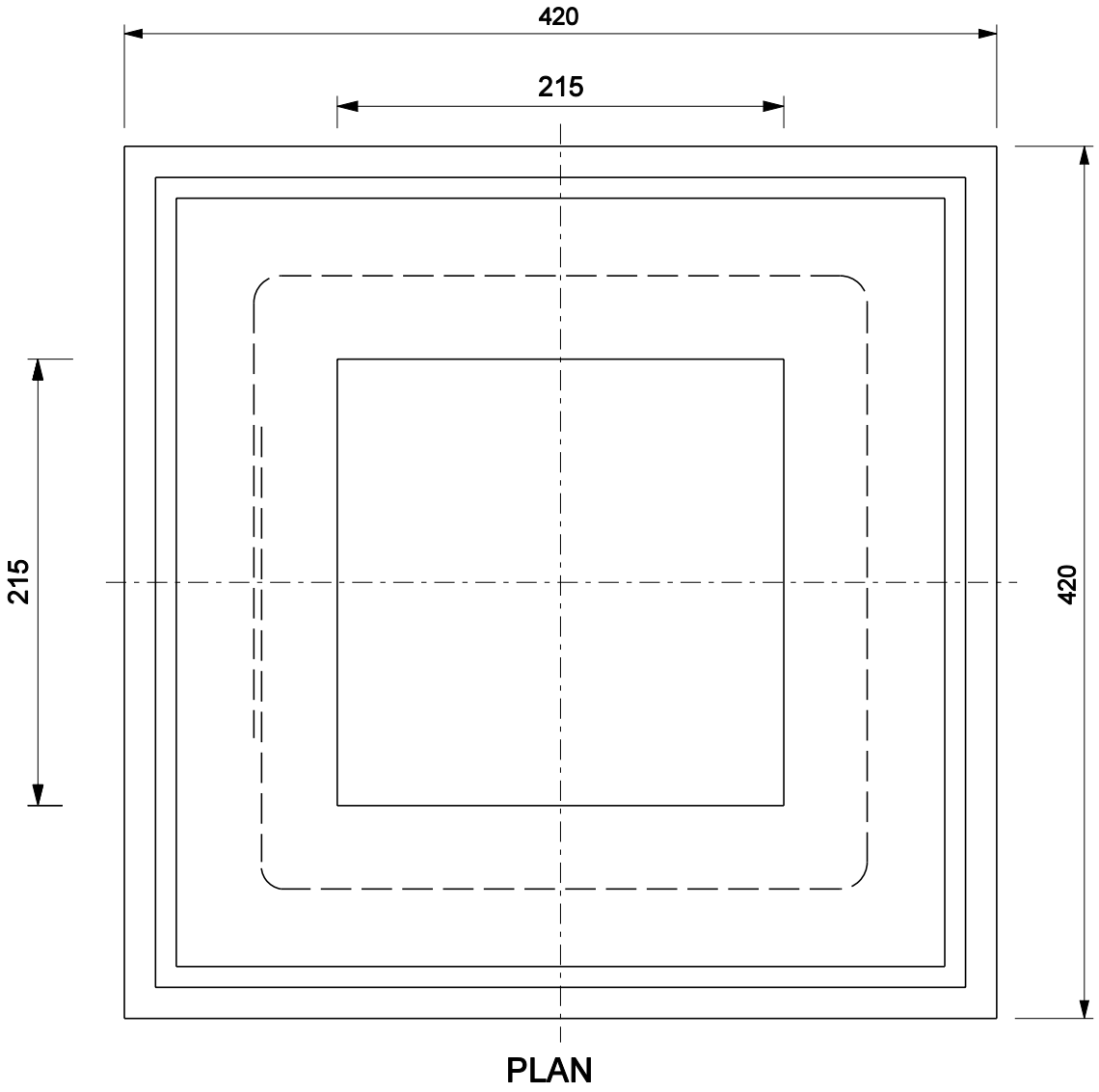
DEVELOPMENT MANUAL

TS 613

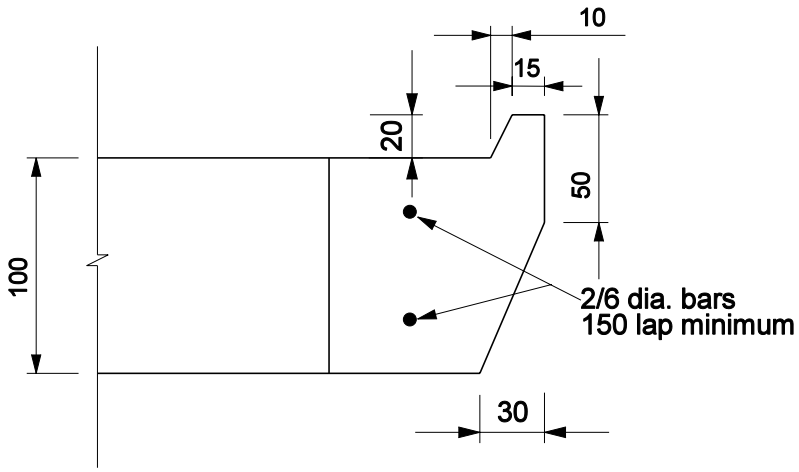
Approved: WWS Manager

Version: August 2009

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn



PLAN



NOTES:

1. Minimum 25mm cover to all steel.
2. Concrete strenght Min. 20MPa at 28 days.
3. Overall dimension of opening 215mm min.

HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn

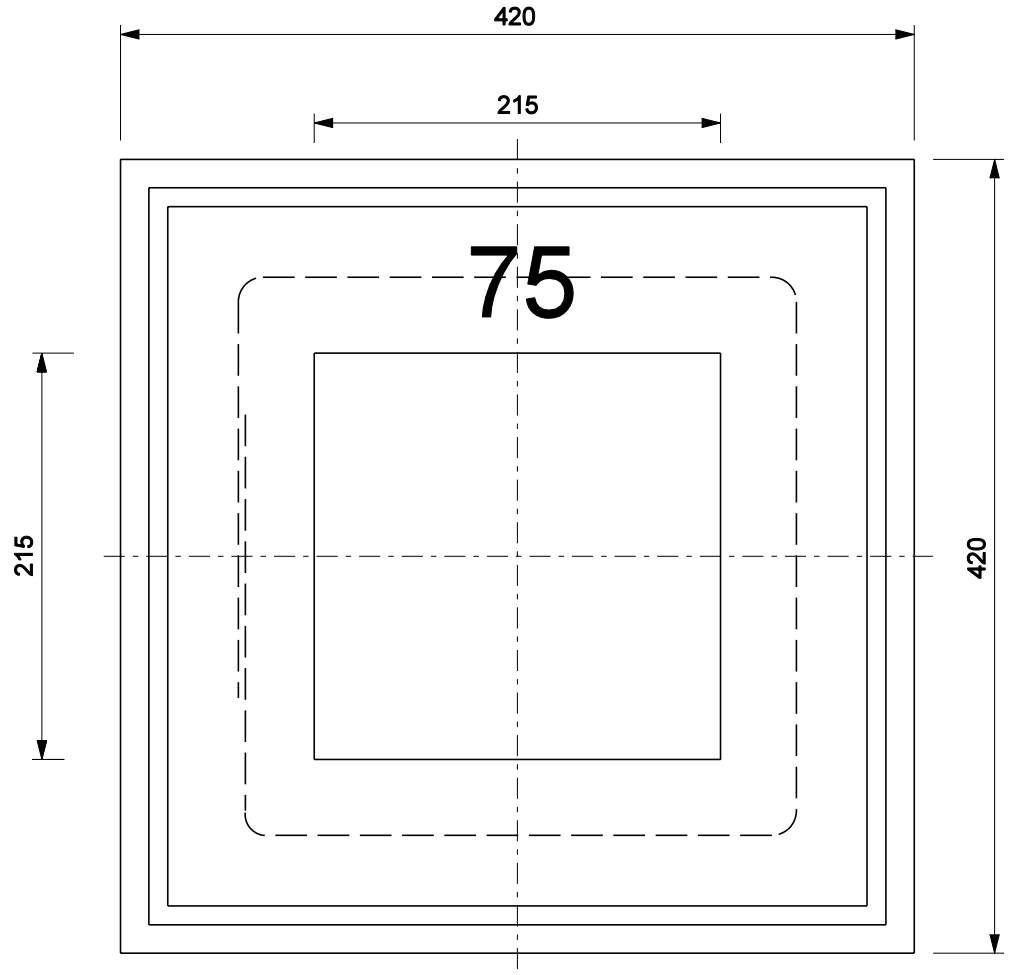
100MM CONCRETE VALVE SURROUND

DEVELOPMENT MANUAL

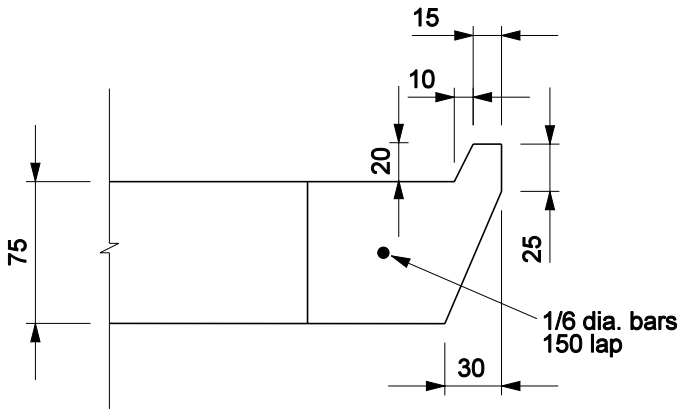
TS 614

Approved: WWS Manager

Version: August 2008



PLAN



HALF SECTION

NOTES:

1. Minimum 25mm cover to all steel
2. Concrete strength min. 20MPa at 28 days
3. Overall dimension of opening 215mm min.
4. The numbers "75" to be imprinted in the top face in letters at least 40mm high

HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn

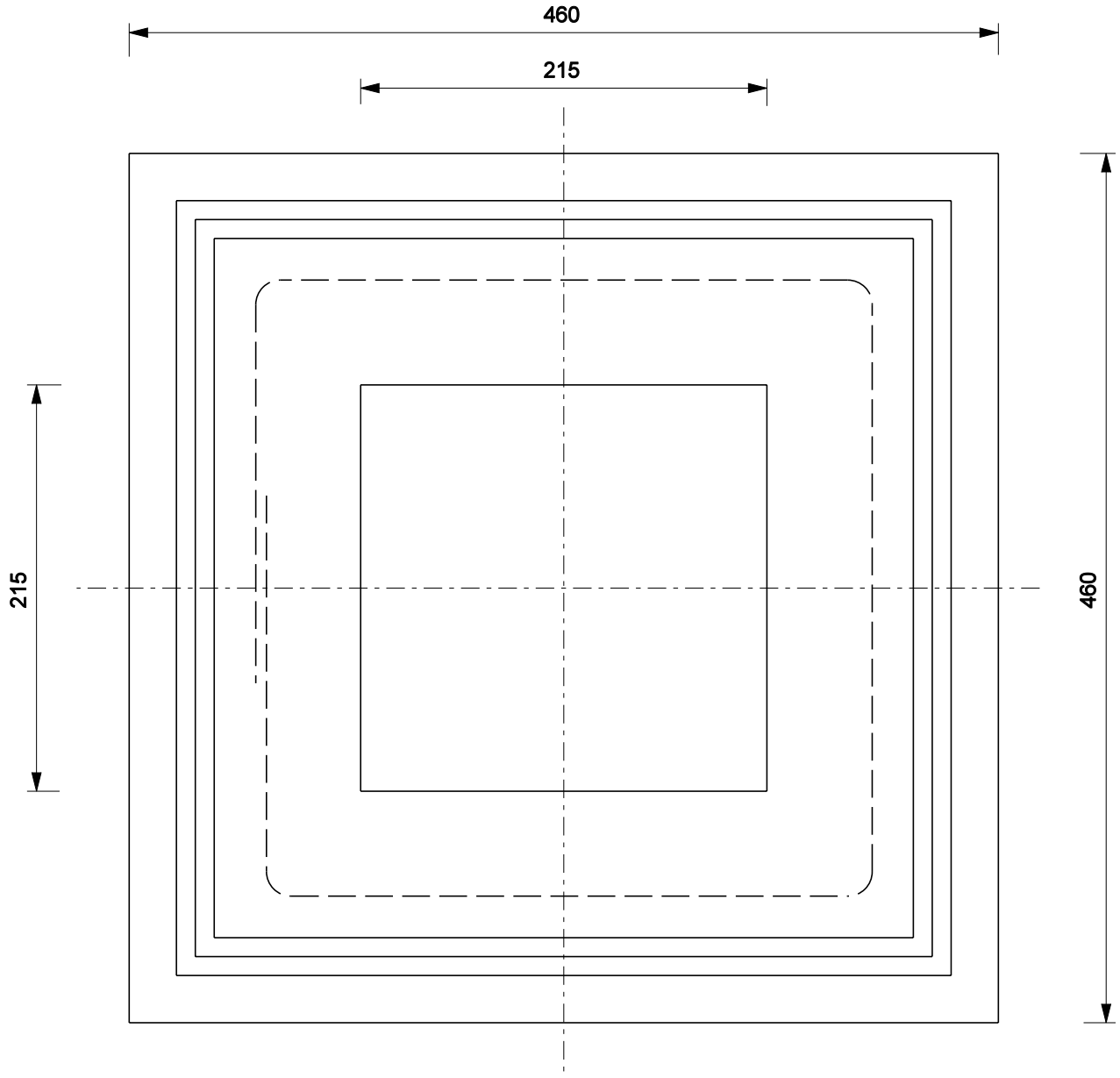
75MM CONCRETE VALVE SURROUND

DEVELOPMENT MANUAL

TS 615

Approved: WWS Manager

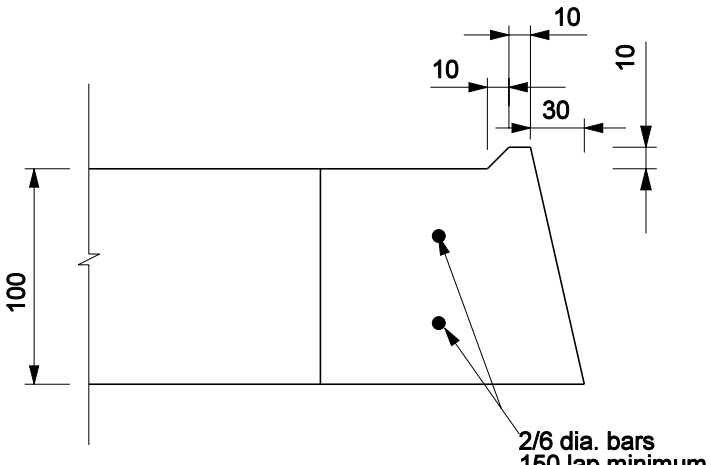
Version: August 2008



PLAN

NOTES:

1. Minimum 25mm cover to all steel.
2. Concrete strength min. 20MPa at 28 days.
3. Overall dimension of opening 215mm min.



HALF SECTION

HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

HEAVY DUTY CONCRETE VALVE SURROUND BASE

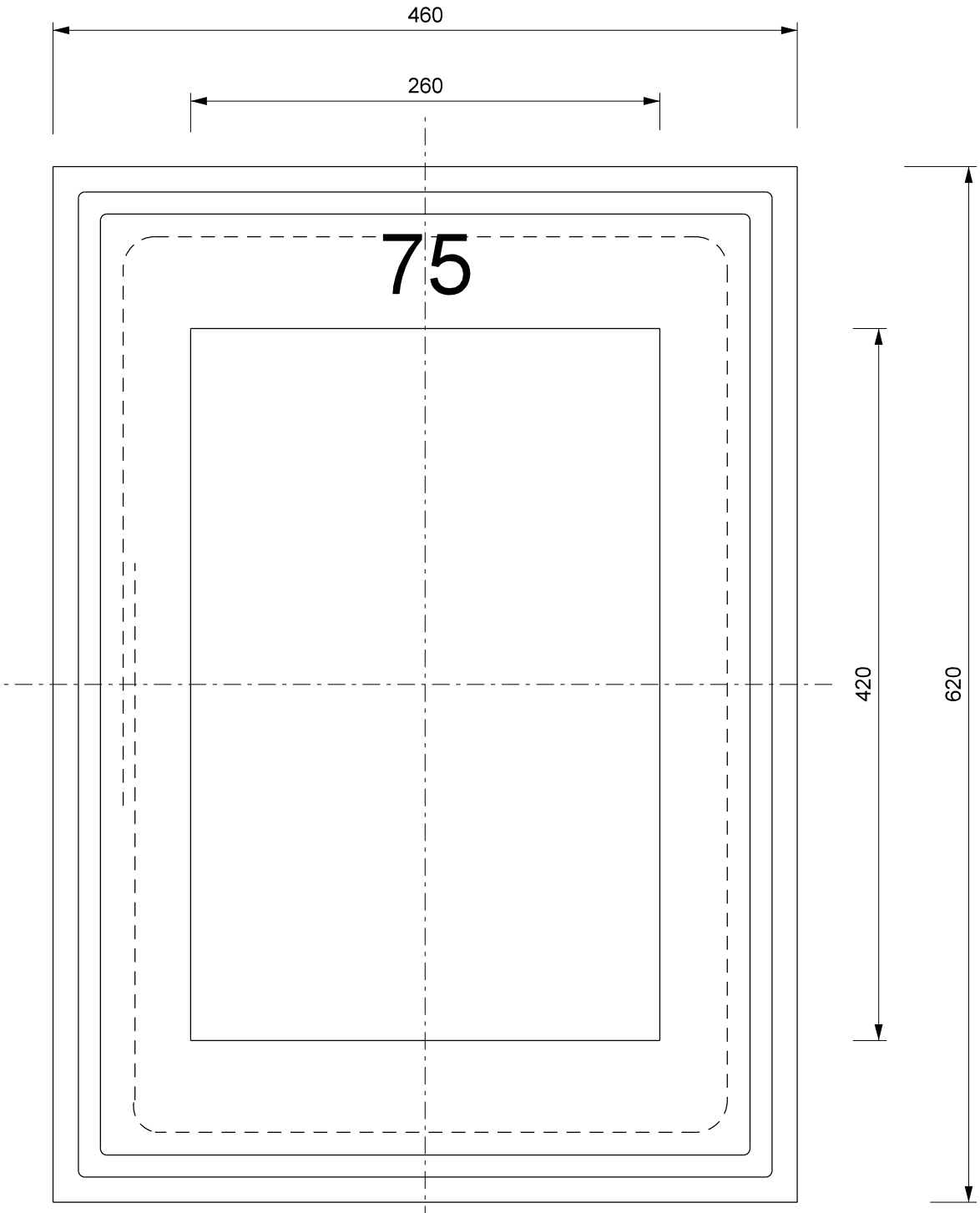
DEVELOPMENT MANUAL

TS 616

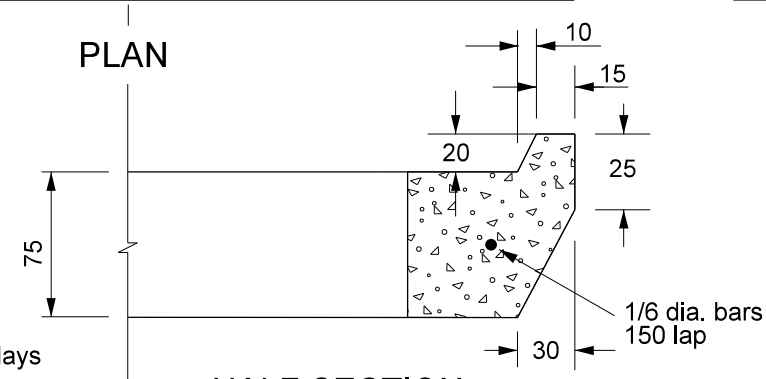
Approved: WWS Manager

Version: August 2008

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn



PLAN



HALF SECTION

See TS 613

NOTES:

1. Minimum 25mm cover to all steel
2. Concrete strength Min 20 MPa at 28 days
3. The number "75" to be imprinted in the top face in letters at least 40mm high

HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
CITY WATERS UNIT

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn

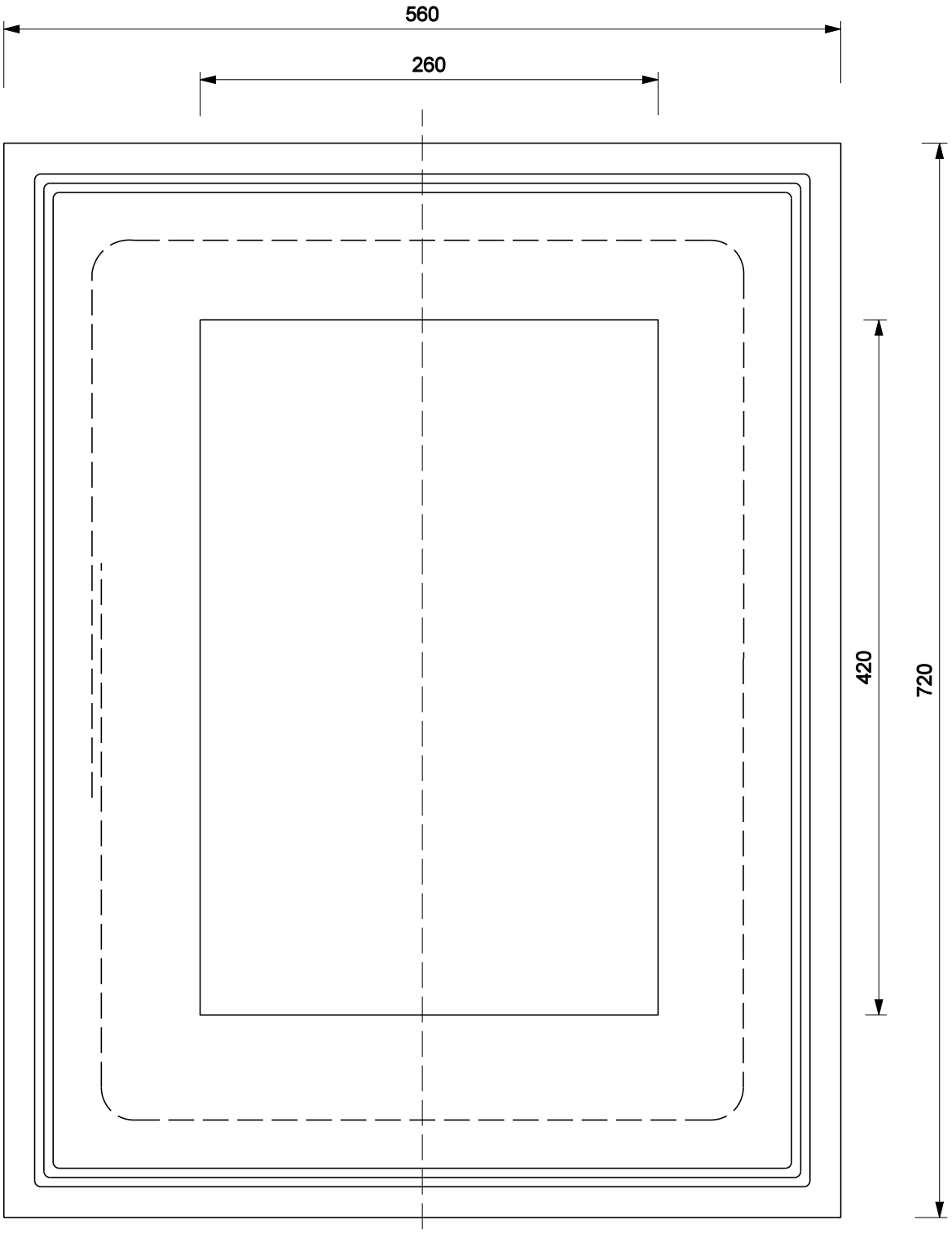
75MM CONCRETE HYDRANT SURROUND

DEVELOPMENT MANUAL

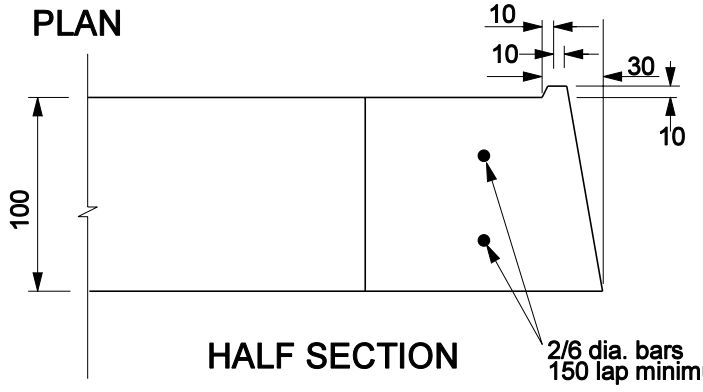
TS 617

Approved: City Waters Manager

Version: August 2010



PLAN



HALF SECTION

NOTES:

1. Minimum 25mm cover to all steel
2. Concrete strength Min 20 MPa at 28 days

HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn

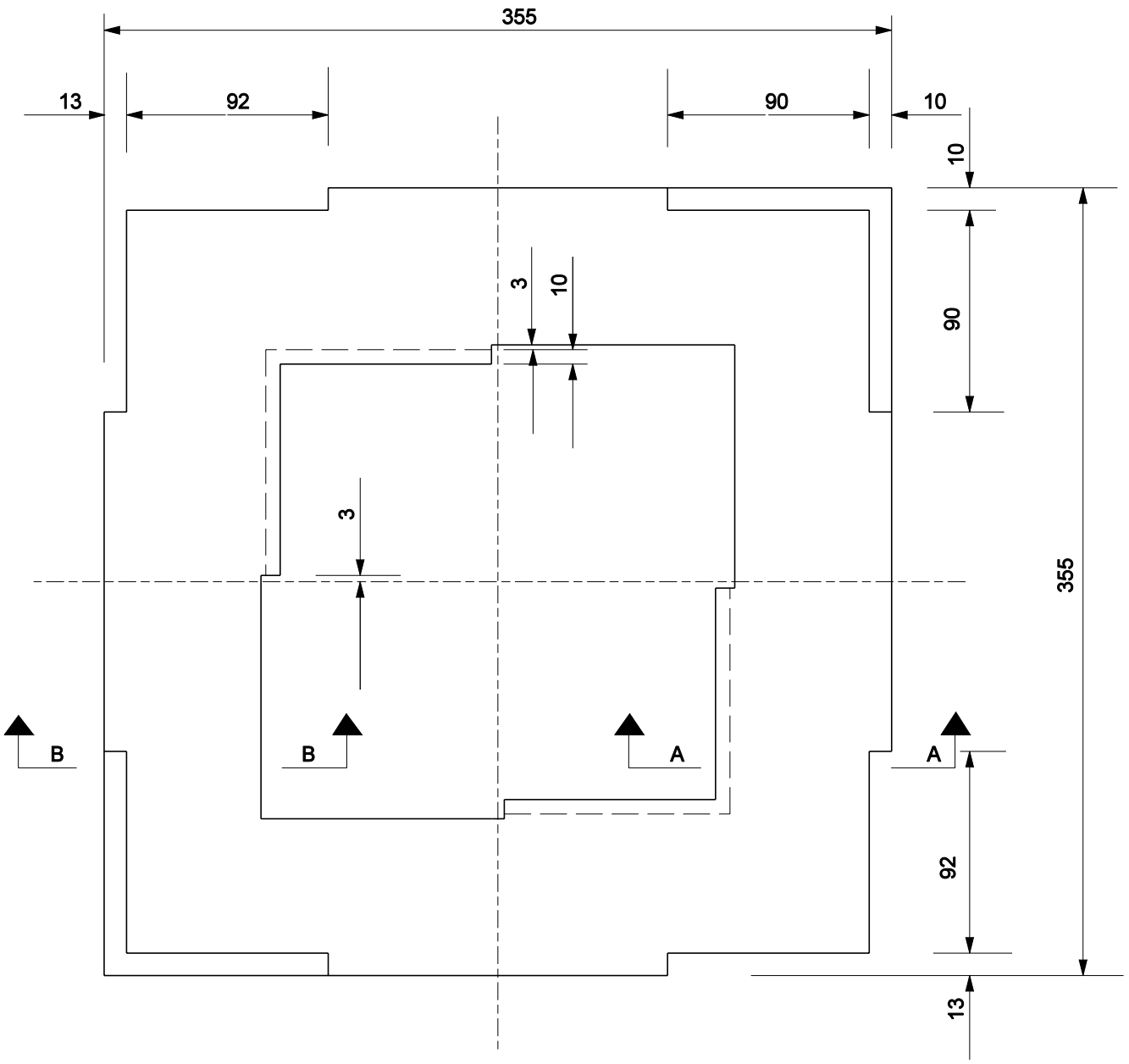
HEAVY DUTY CONCRETE HYDRANT SURROUND BASE

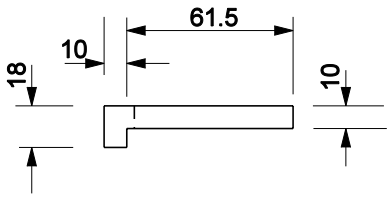
DEVELOPMENT MANUAL

TS 618

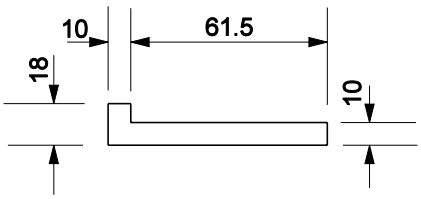
Approved: WWS Manager

Version: August 2008





SECTION A - A



SECTION B - B

NOTES:

1. All castings are to be flat and free from distortion or twisting.
2. Tolerances: +/- 2mm with the proviso that the packers interlock with each other. Packers that do not interlock will be rejected.
3. Drawings are not to be scaled for dimensions.

HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn

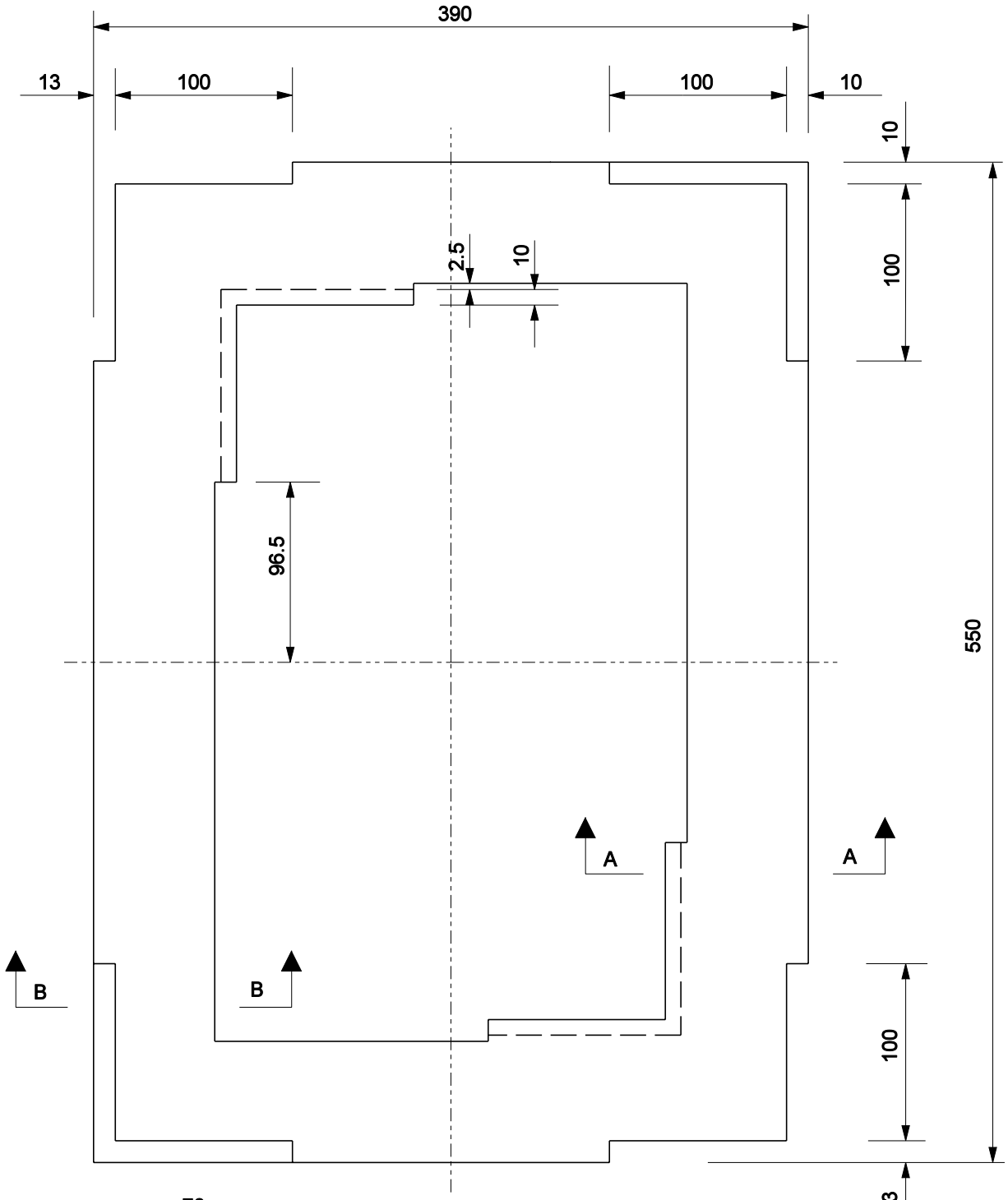
CAST IRON VALVE PACKER

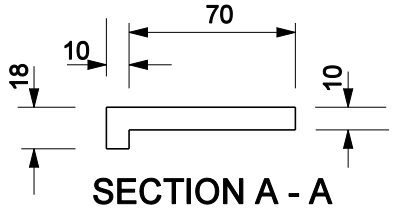
DEVELOPMENT MANUAL

TS 620

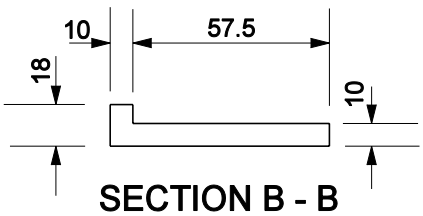
Approved: WWS Manager

Version: August 2008





SECTION A - A



SECTION B - B

NOTES:

1. All castings are to be flat and free from distortion or twisting.
2. Tolerances: +/- 2mm with the proviso that the packers interlock with each other. Packers that do not interlock will be rejected.
3. Drawings are not to be scaled for dimensions.

HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn

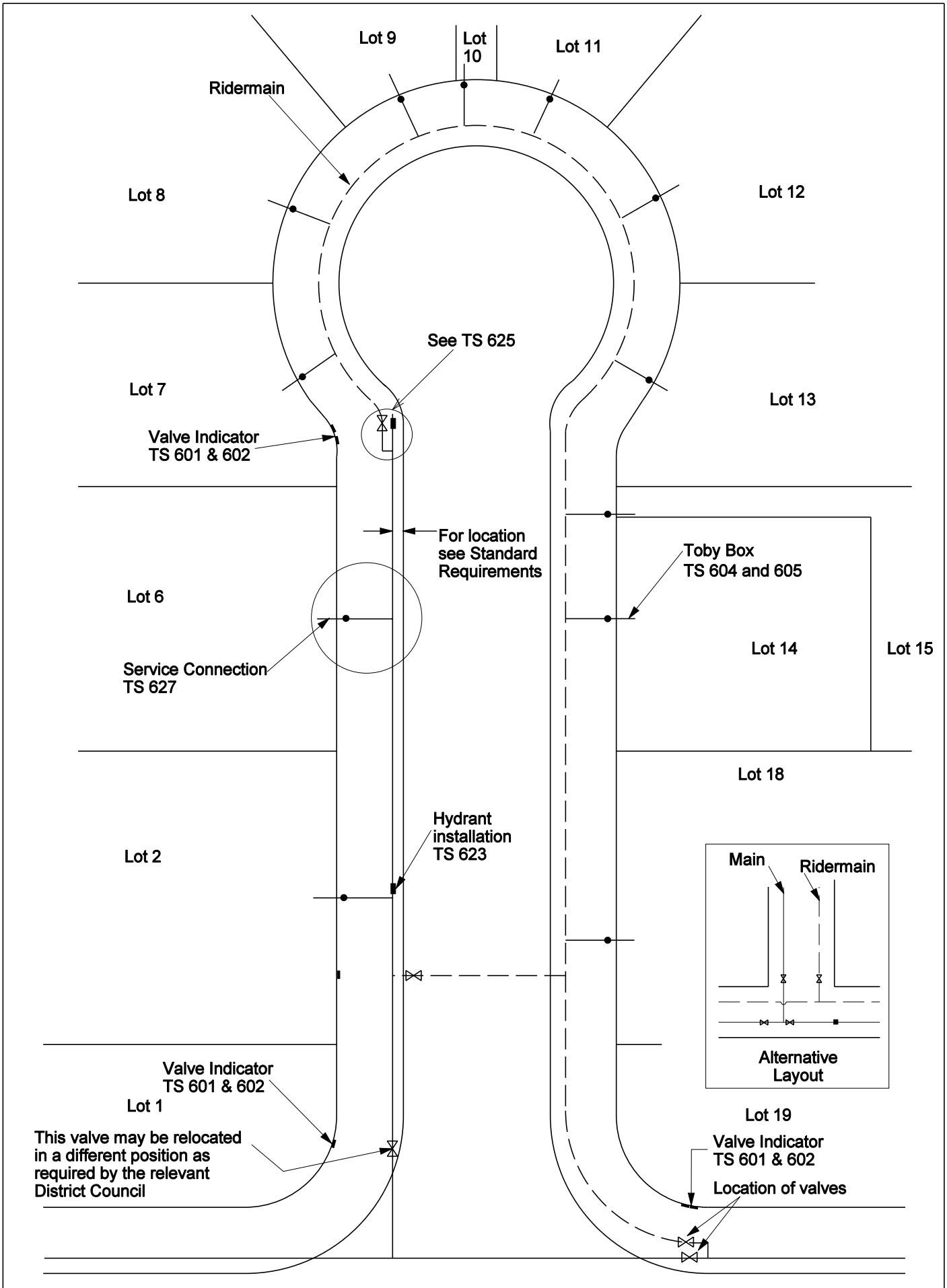
CAST IRON HYDRANT PACKER

DEVELOPMENT MANUAL

TS 621

Approved: WWS Manager

Version: August 2008



HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn

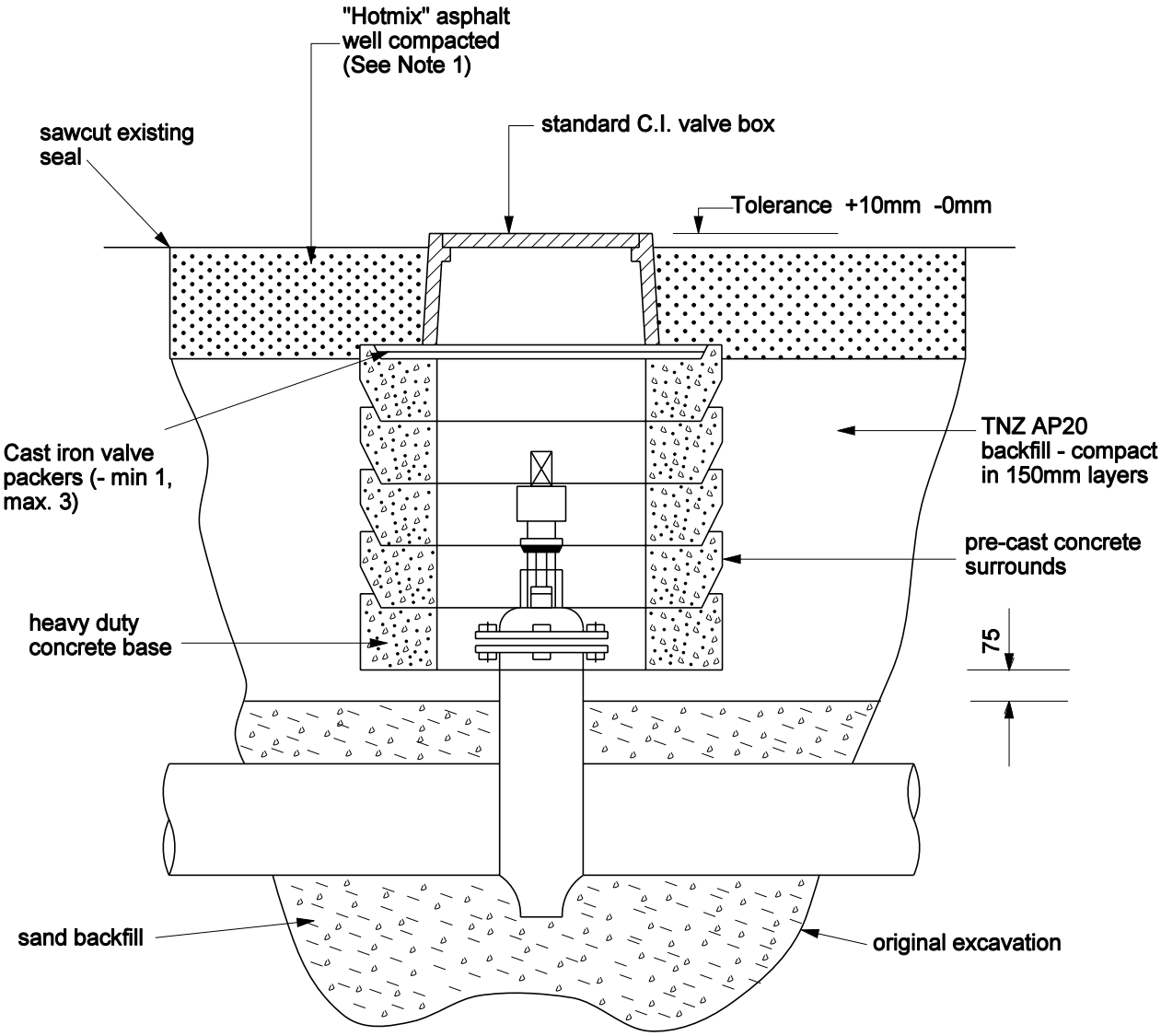
TYPICAL NETWORK LAYOUT

DEVELOPMENT MANUAL

TS 622

Approved: WWS Manager

Version: August 2008



NOTES:

1. In Berm Areas

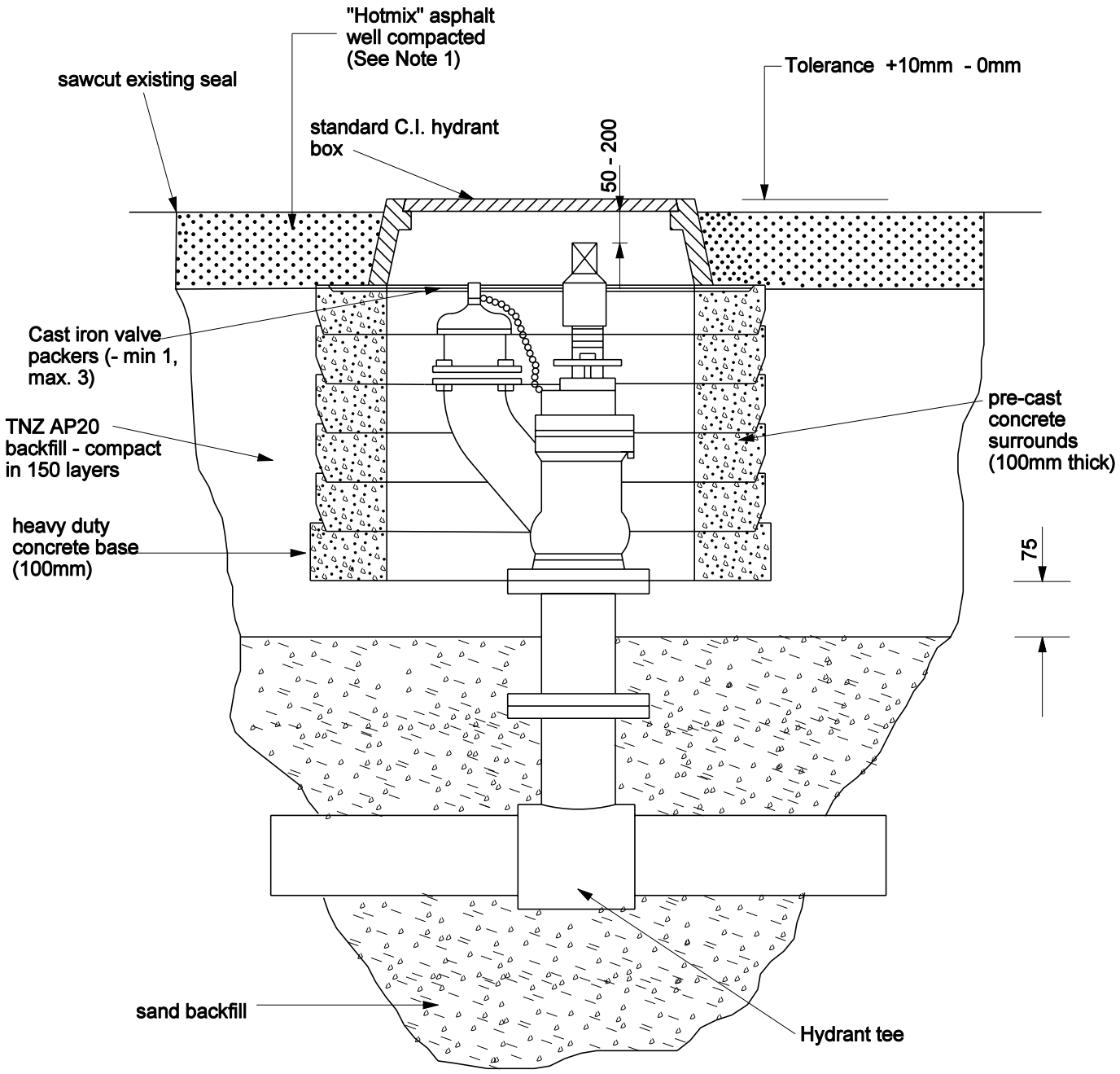
   a) the TNZ backfill can be replaced with pitsand
   b) the finished surface shall match the surrounding

HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn

SLUICE VALVE INSTALLATION CARRIAGEWAYS AND BERM AREAS

DEVELOPMENT MANUAL
TS 623
Approved: WWS Manager
Version: August 2008



NOTES:

1. In Berm Areas

   a) the TNZ backfill can be replaced with pitsand
   b) the finished surface shall match the surrounding

2. See TS 634 for roadmarking

HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

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STANDARD FIRE HYDRANT INSTALLATION CARRIAGEWAY AND BERM AREAS

DEVELOPMENT MANUAL
TS 624
Approved: WWS Manager
Version: August 2008

NOTE:

Tapped gibault may be replaced by suitably sized tapping band

HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

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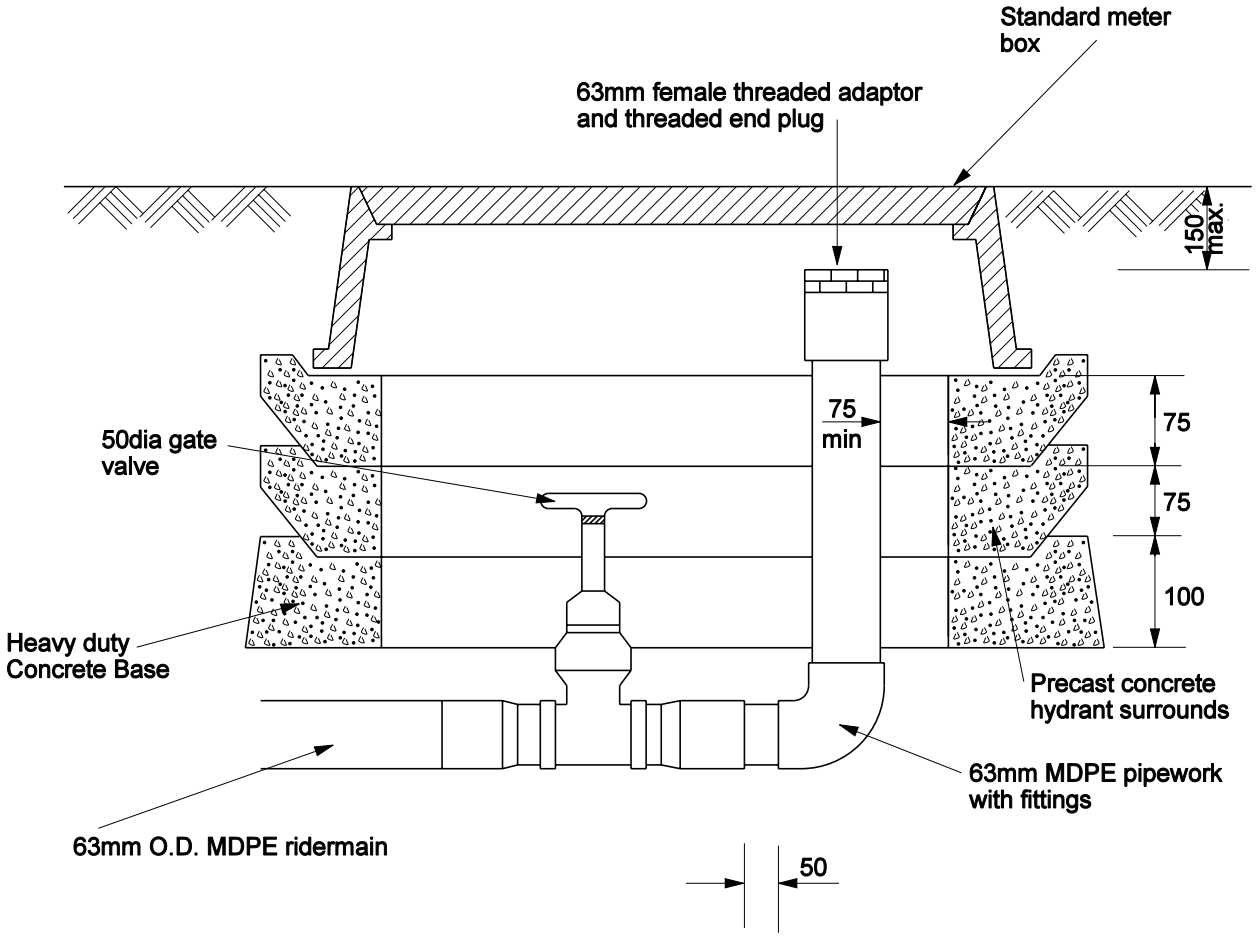
INSTALLATION OF A RIDERMAIN IN A CUL-DE-SAC AND ANCHOR BLOCK

DEVELOPMENT MANUAL

TS 625

Approved: WWS Manager

Version: August 2008



HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn

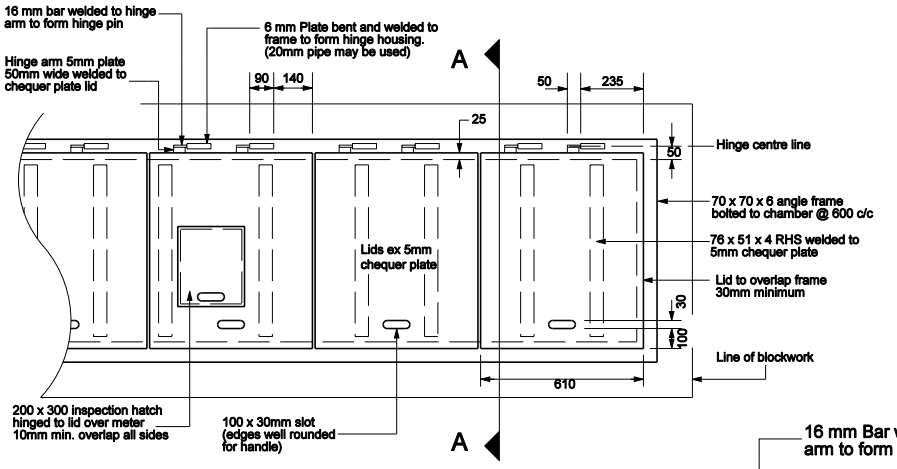
FLUSHOUT AT END OF RIDERMAIN

DEVELOPMENT MANUAL

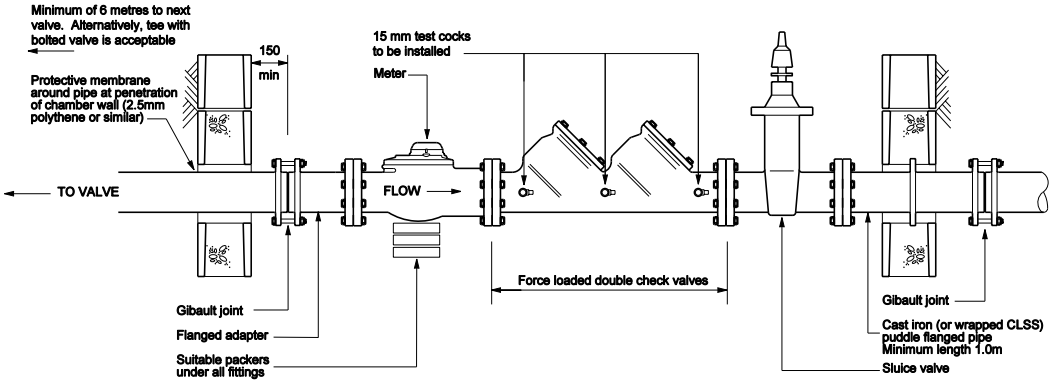
TS 626

Approved: WWS Manager

Version: August 2008

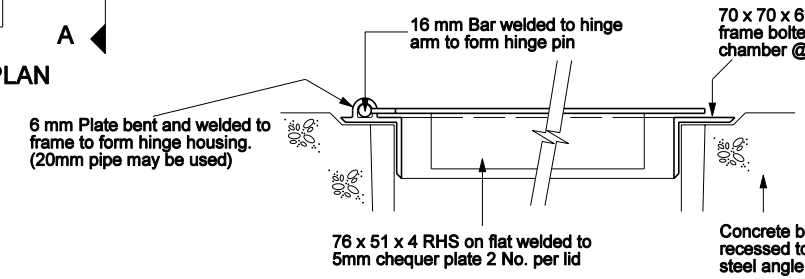


LID ASSEMBLY PLAN



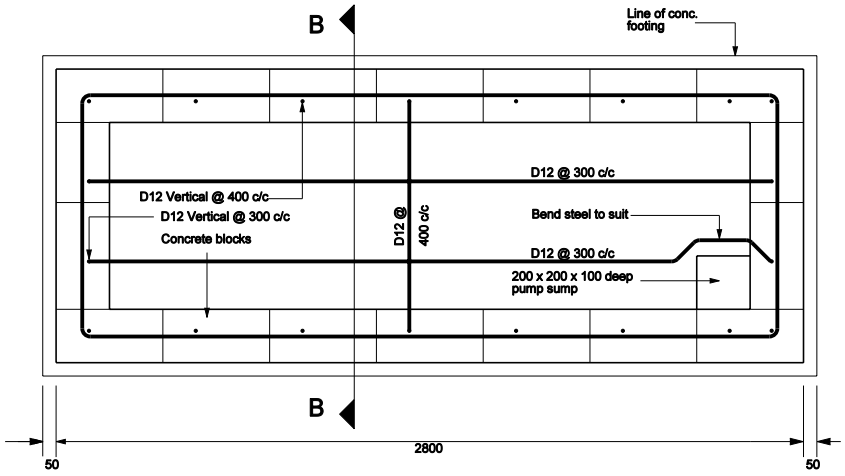
STANDARD PIPEWORK ARRANGEMENT

PROPORTIONAL NTS

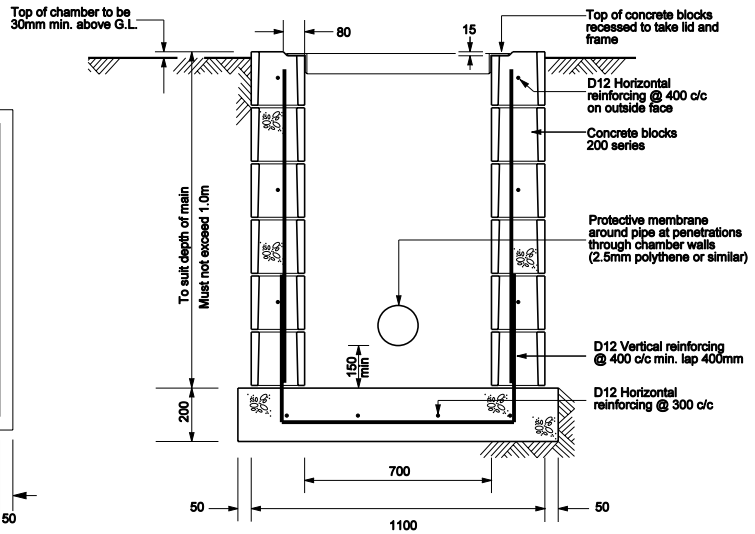


SECTION A - A

NOT TO SCALE



CHAMBER PLAN & FLOOR REINFORCEMENT DETAILS



SECTION B - B

NOTES

1. PIPEWORK

a) Pipework shown is standard arrangement and may be altered in consultation with Water, Drainage, Refuse Office

b) Suitable packers to be placed under pipework.

c) 2 flexible joints within 2.0m of chamber both sides to counteract settlement

2. CHAMBER

a) Floor slab concrete to achieve 25 MPa at 28 days.

b) Masonry to be 200 series. All cells to be filled, concrete to achieve 17.5 MPa at 28 days.

c) Reinforcing to be Grade 300 in accordance with NZS 3402 1989

d) Minimum cover 50 mm

e) Area around pipe penetration through chamber wall to be filled with concrete.

f) Minimum 400mm laps to reinforcing steel.

3. LID

a) All steelwork to be hot dipped galvanised after fabrication.

b) All welds are 8mm continuous fillet welds.

c) Lids and frames to be matched set.

HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn

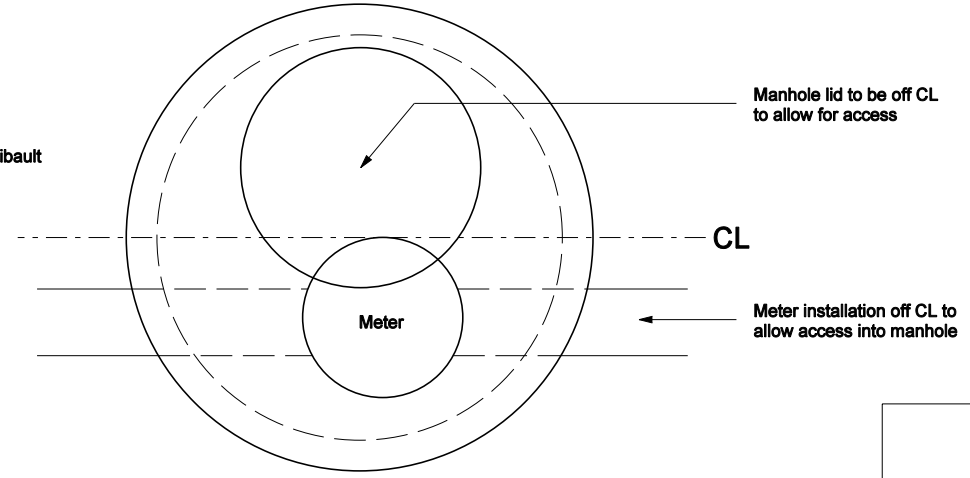
STANDARD METER AND 80mm - 150mm FORCE LOADED DOUBLE CHECK VALVE ASSEMBLY CHAMBER & PIPEWORK DETAILS

DEVELOPMENT MANUAL

TS 631

Approved: WWS Manager

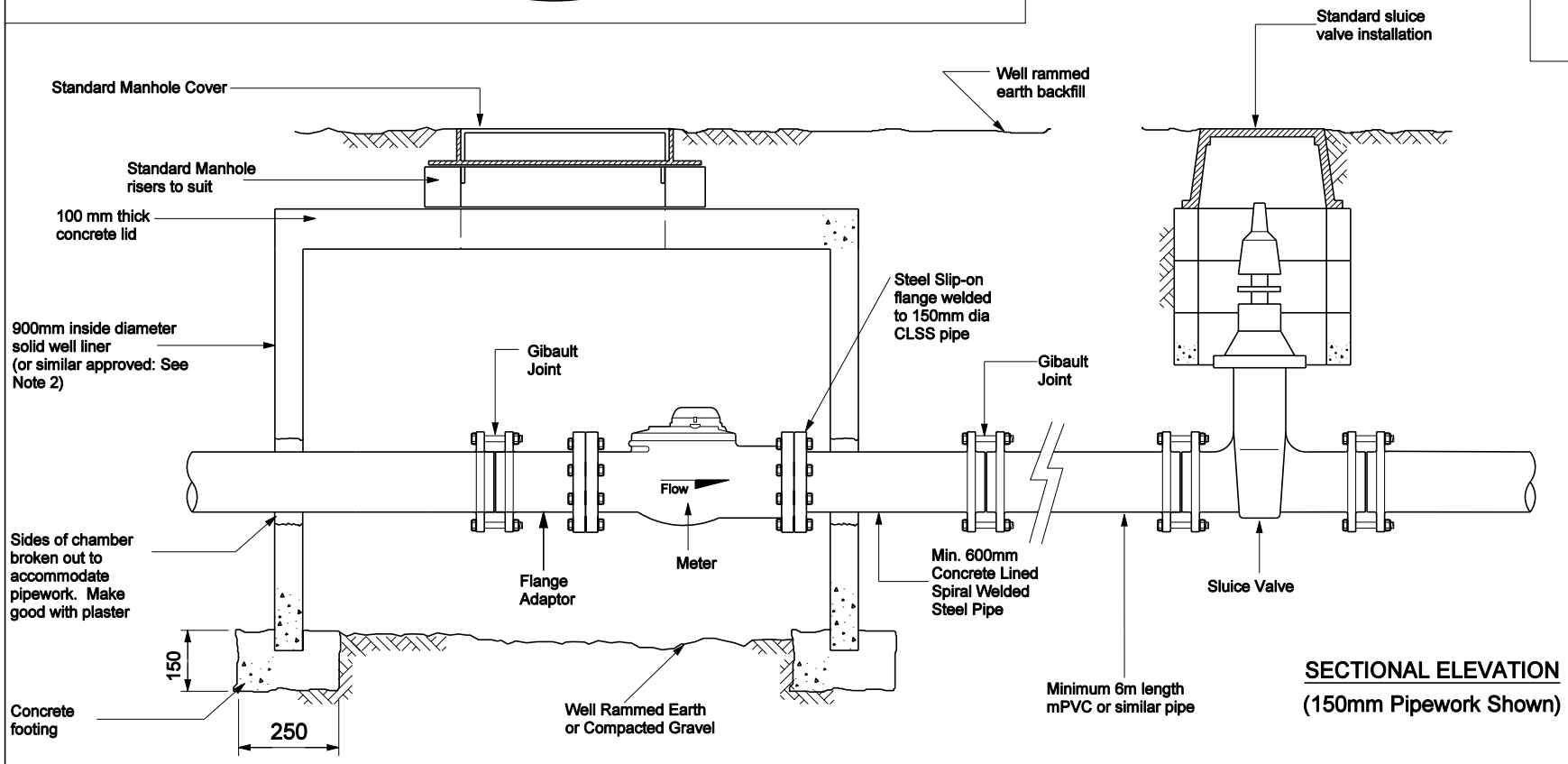
Version: August 2008



PLAN VIEW
(150mm Pipework Shown)

NOTES:

1. The Designer shall submit details of the proposed installation to Water, Drainage and Refuse Unit for approval.
2. Should space permit (e.g. behind boundary) a 1200mm manhole chamber shall be used.
3. Protective membrane to be wrapped around pipe where it passes through chamber wall (2.5mm Polythene)
4. 2 Flexible joints to be provided within 2m of chamber.
5. Protective wrapping to CLSS pipe to be made good after welding.
6. To generate sufficient earth friction on pipe, a minimum of 6m of pipe to be laid between meter and sluice valves.



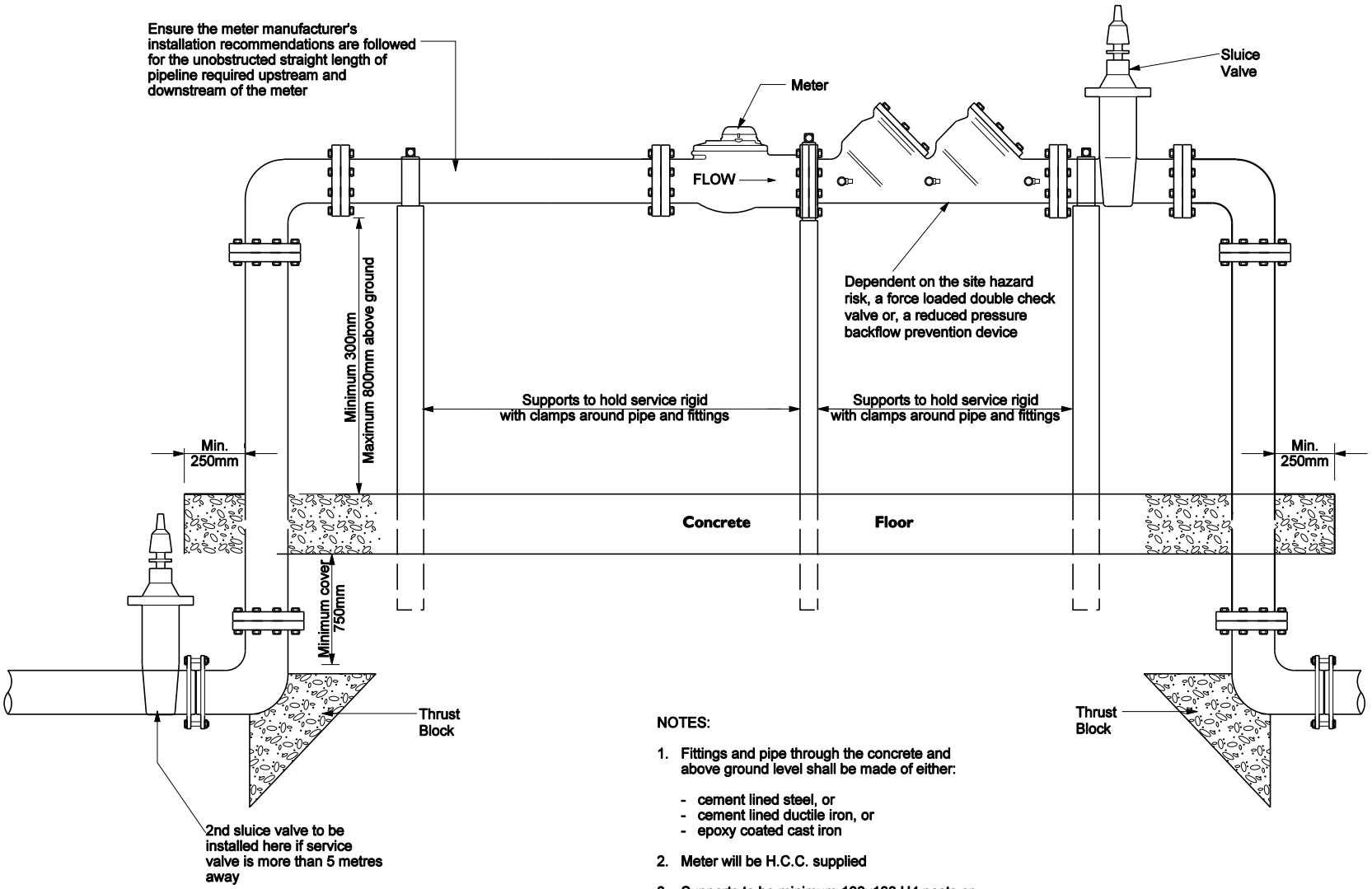
SECTIONAL ELEVATION
(150mm Pipework Shown)

HAMILTON CITY COUNCIL
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

Path g:\hccmap\standards\technical spec\water\std dwgs.dgn

STANDARD METER PIT FOR 100 & 150mm METERS

DEVELOPMENT MANUAL
TS 632
Approved: WWS Manager
Version: August 2008



NOTES:

1. Fittings and pipe through the concrete and above ground level shall be made of either:
   - cement lined steel, or
   - cement lined ductile iron, or
   - epoxy coated cast iron
2. Meter will be H.C.C. supplied
3. Supports to be minimum 100x100 H4 posts or 100 Ø galvanised pipe
4. Clamps to be galvanised
5. Service to be tested to 1400 KPA to 1st joint above ground

Not To Scale

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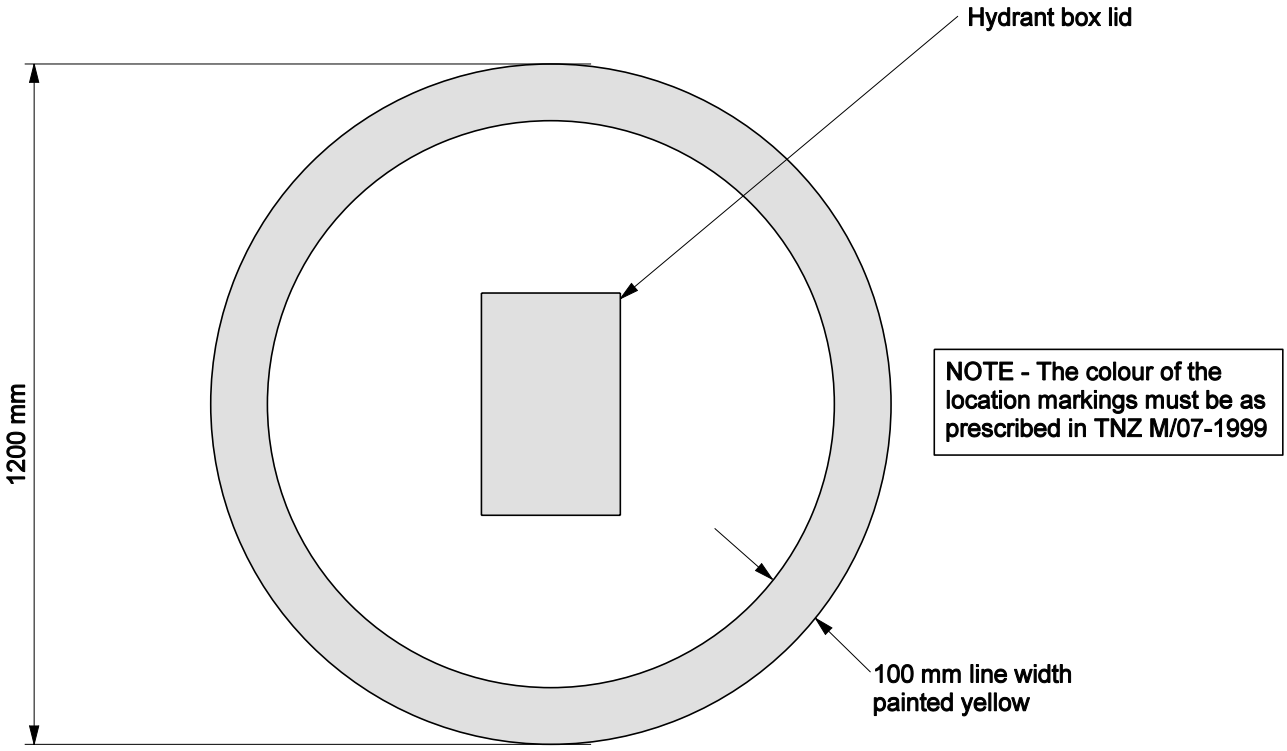
WORKS & SERVICES GROUP
WATER & WASTE SERVICES

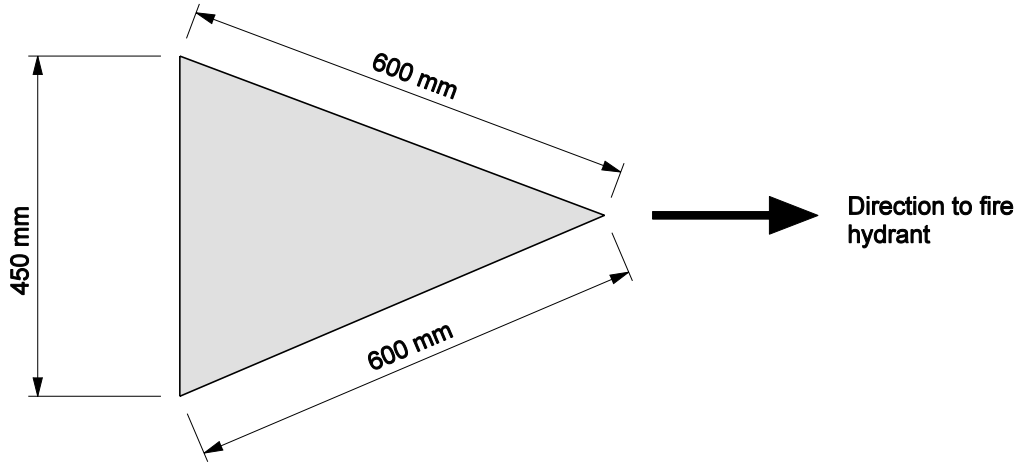
Path g:\hccmap\standards\technical spec\water\std dwgs.dgn

ABOVE GROUND 80 mm - 200mm METER AND BACKFLOW DEVICE PIPEWORK INSTALLATION

DEVELOPMENT MANUAL
TS 633
Approved: WWS Manager
Version: August 2008



(a) Circle marking for fire hydrants if location can be obscured by parked vehicles



(b) Triangle marking for all fire hydrants. Painted yellow on or close to the centreline of the carriageway

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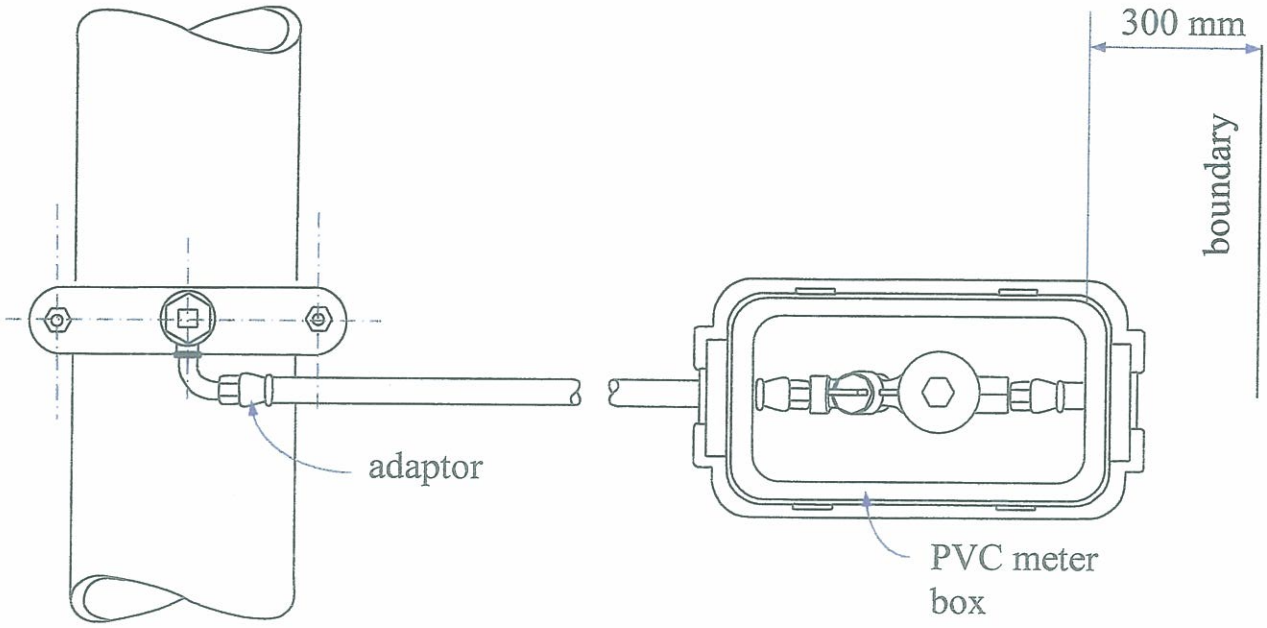
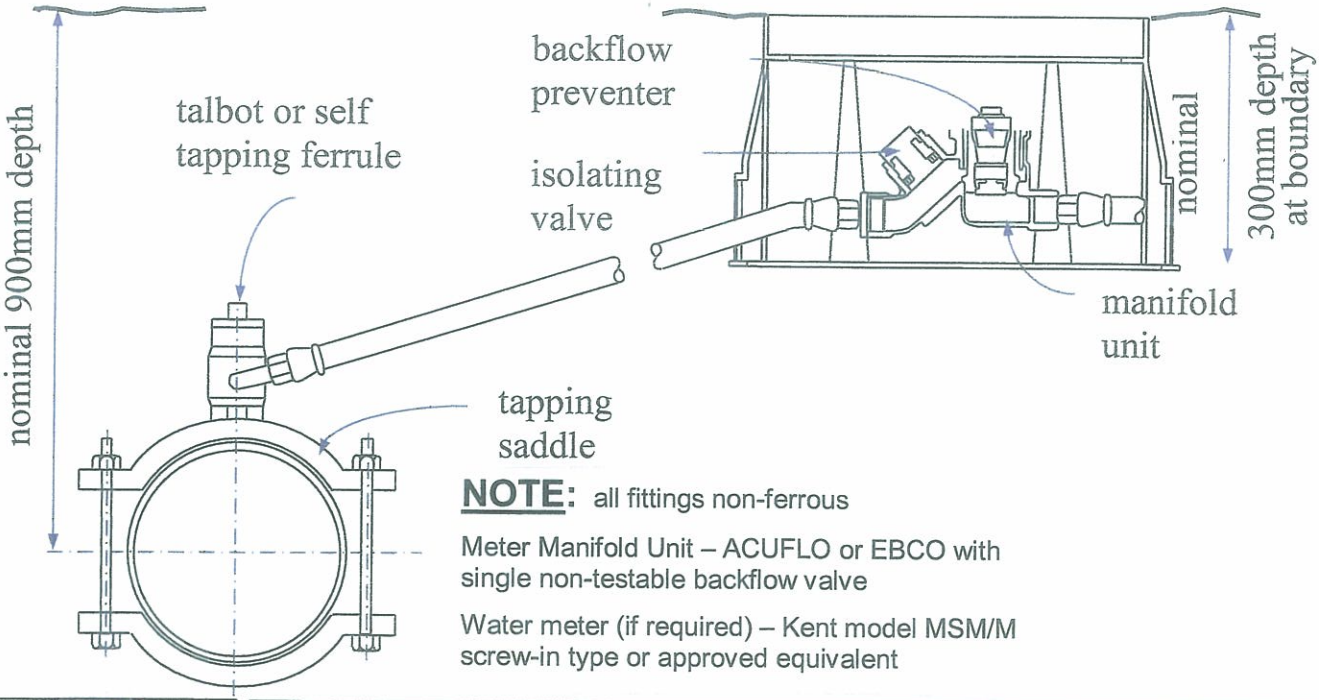
FIRE HYDRANT ROADMARKING STANDARDS

DEVELOPMENT MANUAL
TS 634
Approved: WWS Manager
Version: August 2008





NOTE: all fittings non-ferrous

Meter Manifold Unit – ACUFLO or EBCO with single non-testable backflow valve

Water meter (if required) – Kent model MSM/M screw-in type or approved equivalent

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STANDARD DRAWING – WATER SUPPLY

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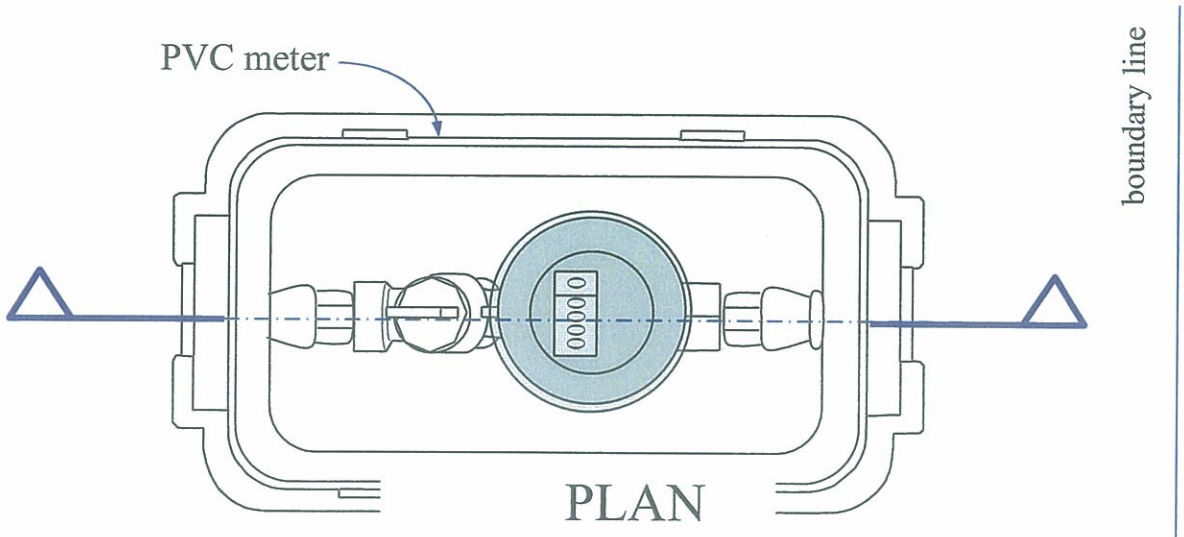
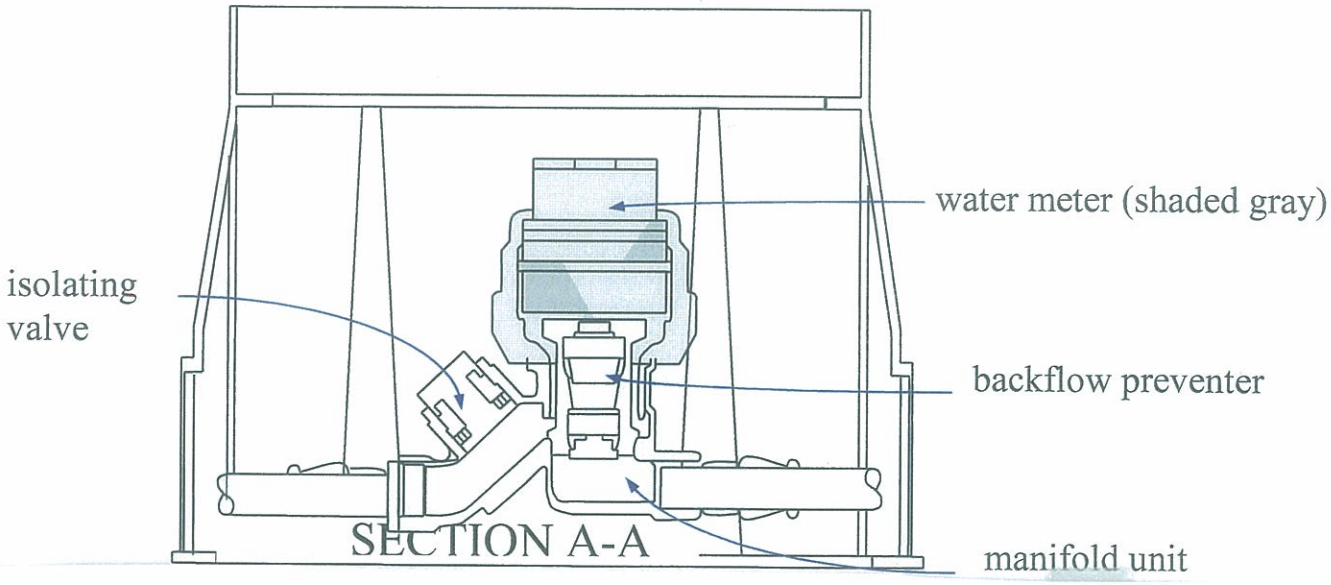
SERVICE CONNECTION

WS 01





Note: Meter manifold unit – ACUFLO or EBCO with double or single not testable backflow valve

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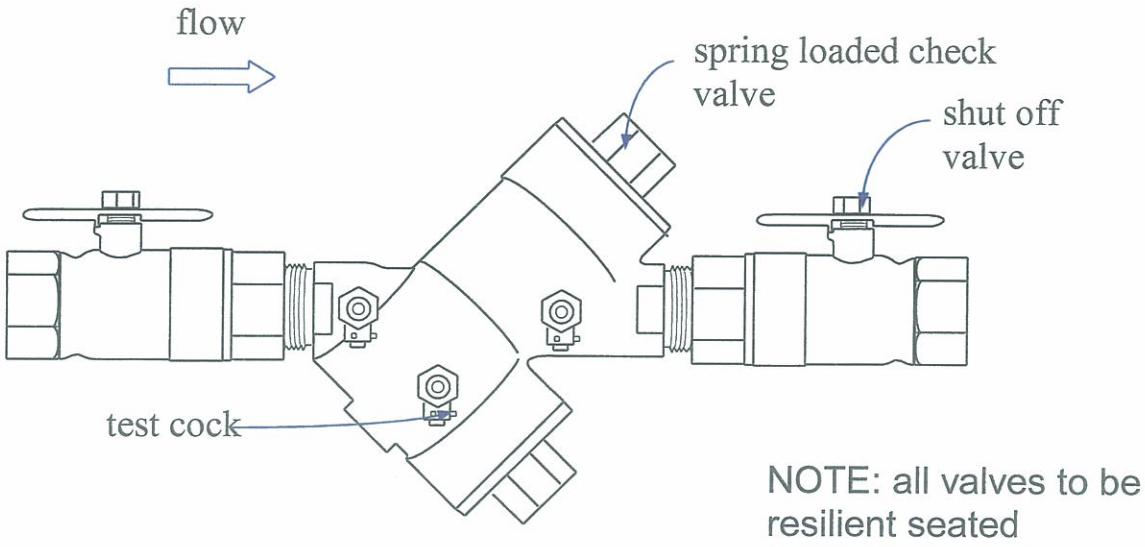
STANDARD DRAWING – WATER SUPPLY

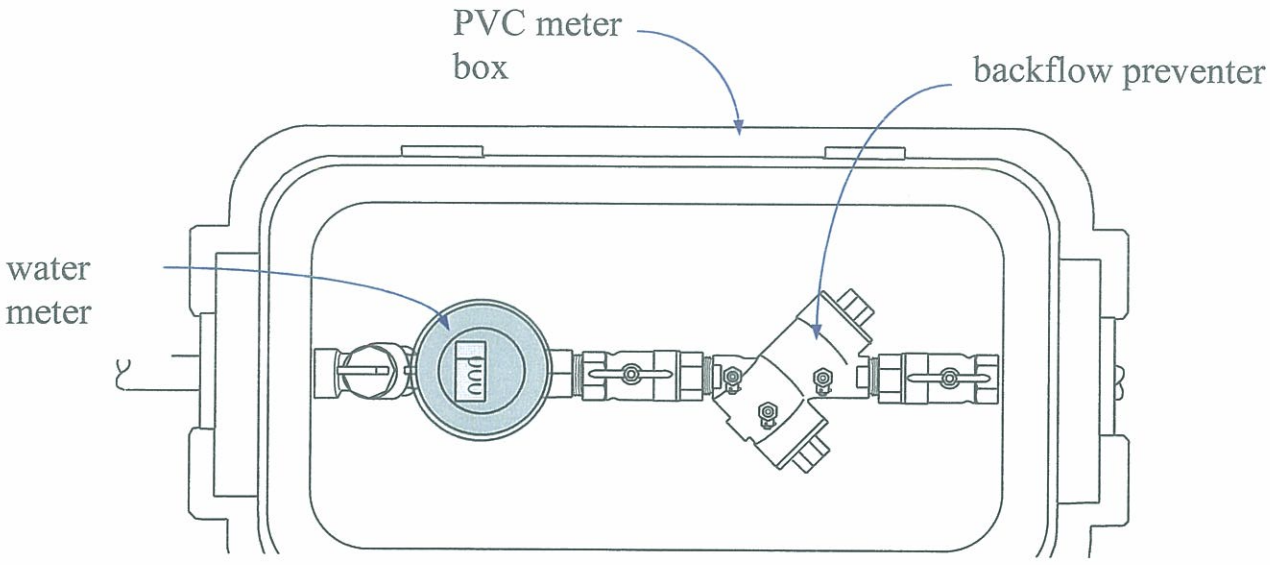
NOT TO SCALE

METERED CONNECTION

WS 02

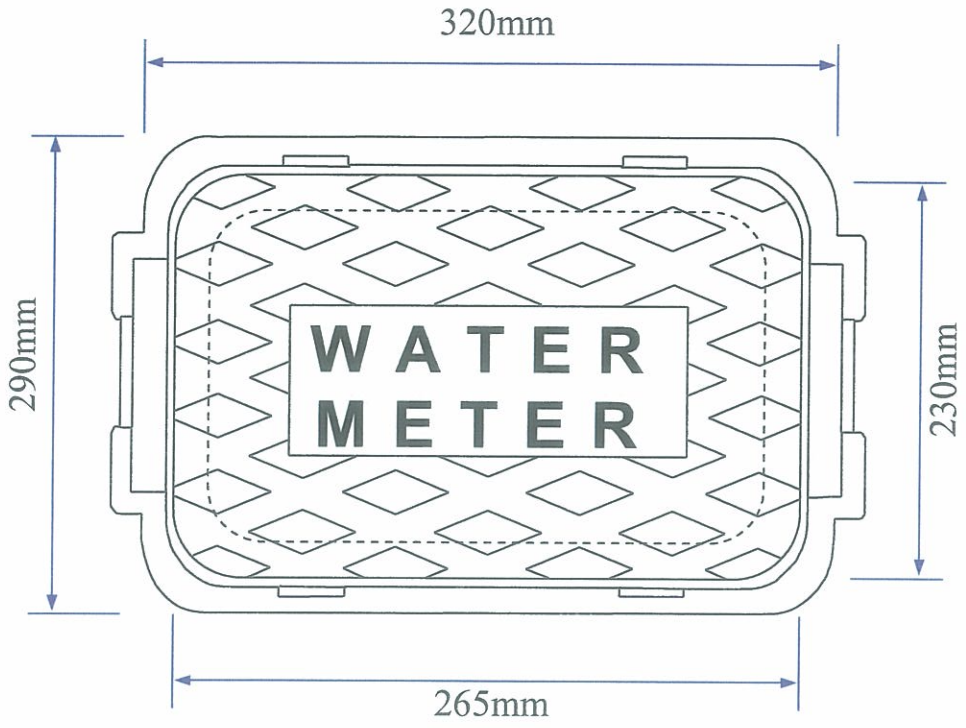


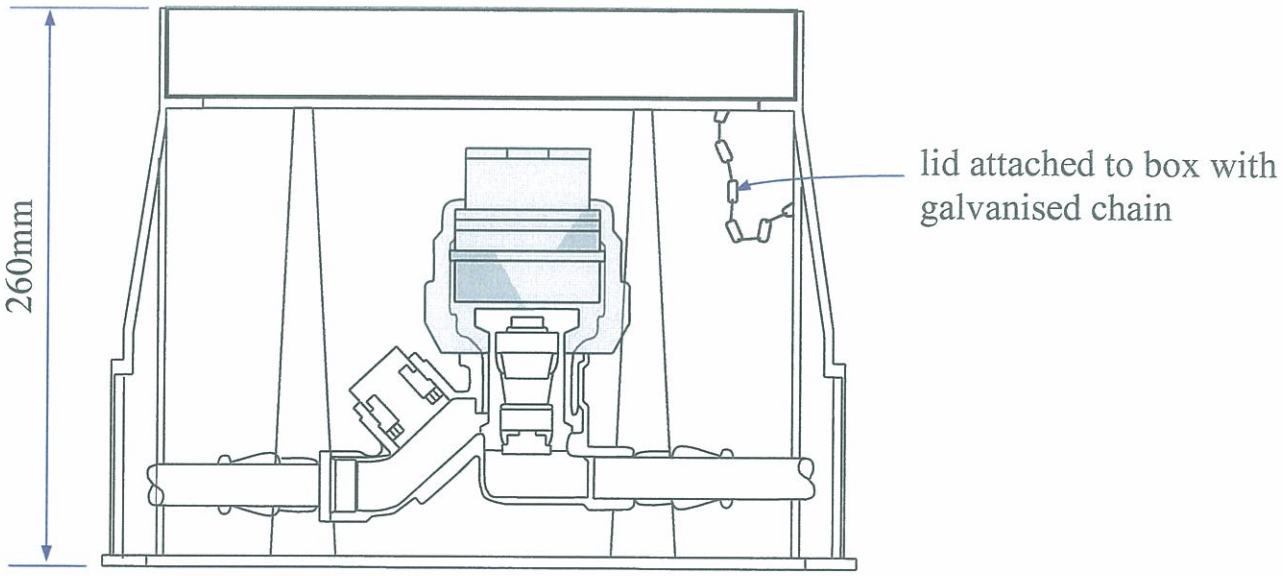
LOW RISK BACKFLOW PREVENTER



NOTE: install with a minimum clearance of 300mm from finished grade and provide 150mm of clean drainage metal install with adequate side clearance for testing and maintenance install adequate support blocks protect from freezing

matamata piako district council	STANDARD DRAWING – WATER SUPPLY	NOT TO SCALE
	LOW RISK BACKFLOW PREVENTER TYPICAL INSTALLATION DETAIL	WS 03





NOTE: to be manufactured from UV resistant, high impact, high density polyethylene, must be able to withstand light or heavy vehicular loads. Lid colour to be blue.

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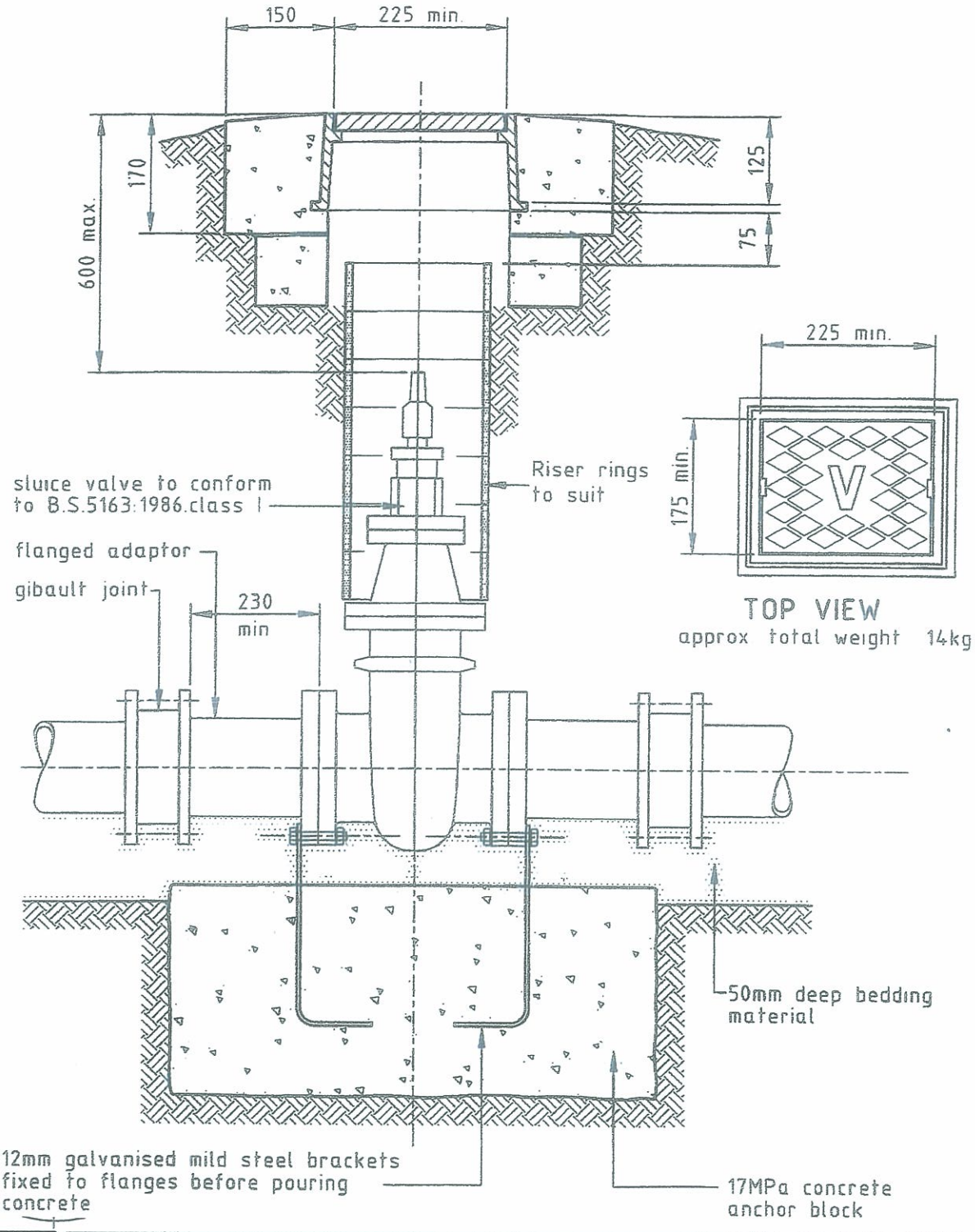
STANDARD DRAWING – WATER SUPPLY

NOT TO SCALE

WATER METER BOX

WS 04



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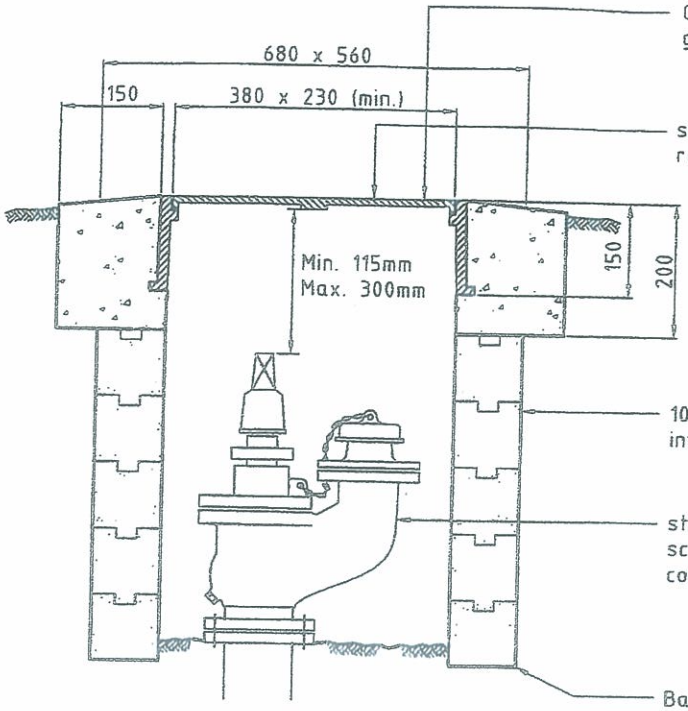
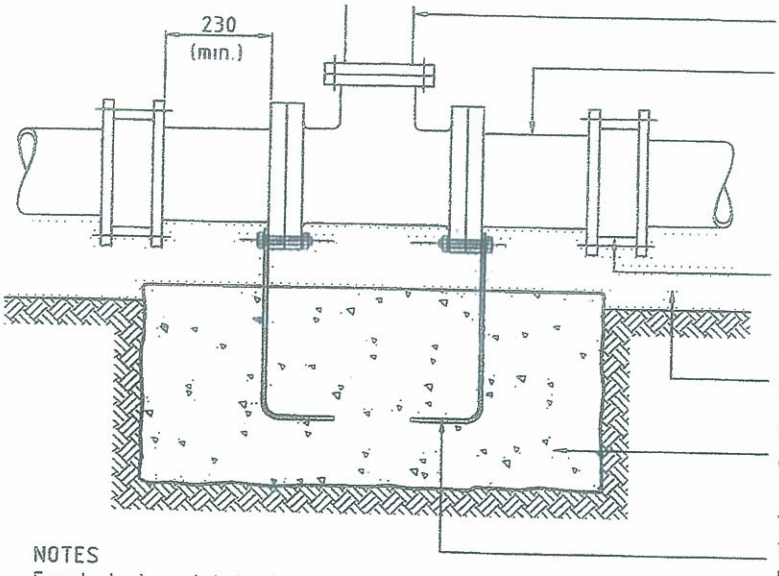
STANDARD DRAWING – WATER SUPPLY

NOT TO SCALE

VALVE DETAIL

WS 05





NOTES
Frost drain point to be plugged

When mains are constructed in PVC, use standard cast iron hydrant tee and step gibault joint

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STANDARD DRAWING – WATER SUPPLY

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HYDRANT DETAIL

WS 06