



**DETAILS OF STEPPED IRONS**  
 NOTE: STEPPED IRONS SHALL BE 20 Ø GRADE 316 STAINLESS STEEL OR APPROVED ALTERNATIVE

**NOTE:**

1. ALL DIMENSIONS IN MILLIMETRES.
2. MANHOLE COVERS - HEAVY DUTY 'CLASS D' COVERS TO BE USED.
3. FOR HEALTH AND SAFETY REASONS 600 Ø MANHOLE COVERS ARE RECOMMENDED. REFER TO AS 3996.
4. ALL CAST IN SITU BENCHING AND HAUNCHING TO BE 30 MPa CONCRETE AT A BATTER OF 1V:2.5H.
5. ALL LATERALS SHALL ENTER WHERE PRACTICAL AT SAME SOFFIT LEVEL AS MAIN INCOMING PIPE.
6. STEPPED IRONS SHALL BE 20Ø GRADE 316 STAINLESS STEEL (OR AN APPROVED ALTERNATIVE).
7. STEPS TO BE ABOVE BENCHING WHERE POSSIBLE.
8. DOUBLE FLEXIBLE JOINTS TWO WITHIN 750mm OF MANHOLES TO BE INSTALLED WHEN USING SN16 PVC PIPES.
- 8a ONE FLEXIBLE JOINT ONE WITHIN 750mm OF MANHOLES TO BE INSTALLED WITH CONCRETE PIPES.
9. ANY SERVICES WITHIN NZTA ROAD CORRIDOR MUST COMPLY WITH NZTA REQUIREMENTS.
10. MAX DEPTH FOR 1050Ø MANHOLES IS 2m
11. MIN COVER 900mm ON GRAVITY SEWER MAINS IN CARRIAGEWAY

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 HDC AMENDMENTS TO NZS 4404:2010 SHOWN IN **BOLD**.



**STANDARD DRAWINGS**

**MANHOLES  
 STANDARD DETAILS**

Drawn	Designed	
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Approved	Revision Date	
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