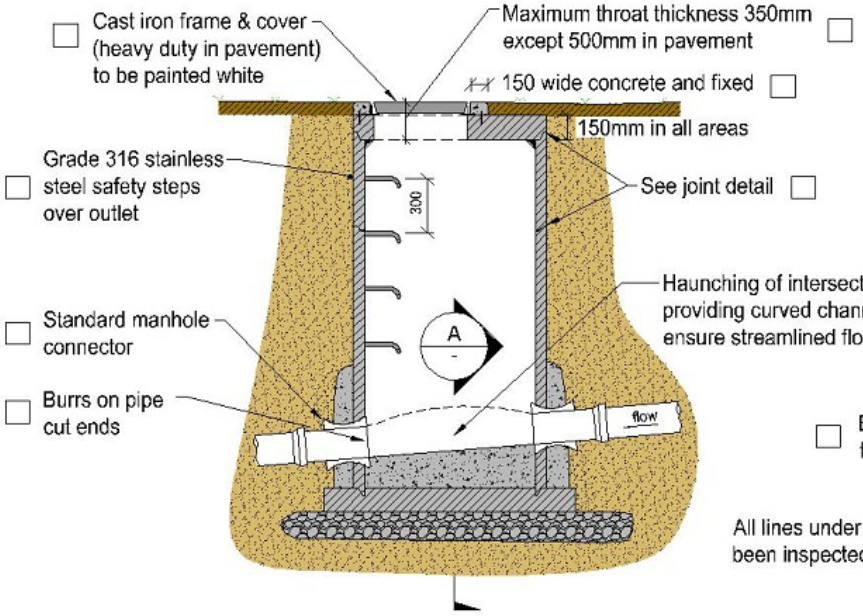
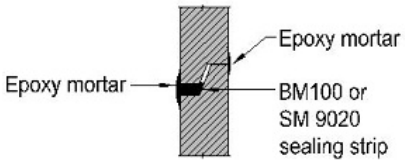
DATE: ..... **RC NUMBER:** .....

DEVELOPMENT NAME & STAGE: .....

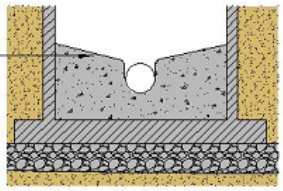


MANHOLE NUMBER: .....



JOINT DETAIL

Benching not flatter than 1 in 3



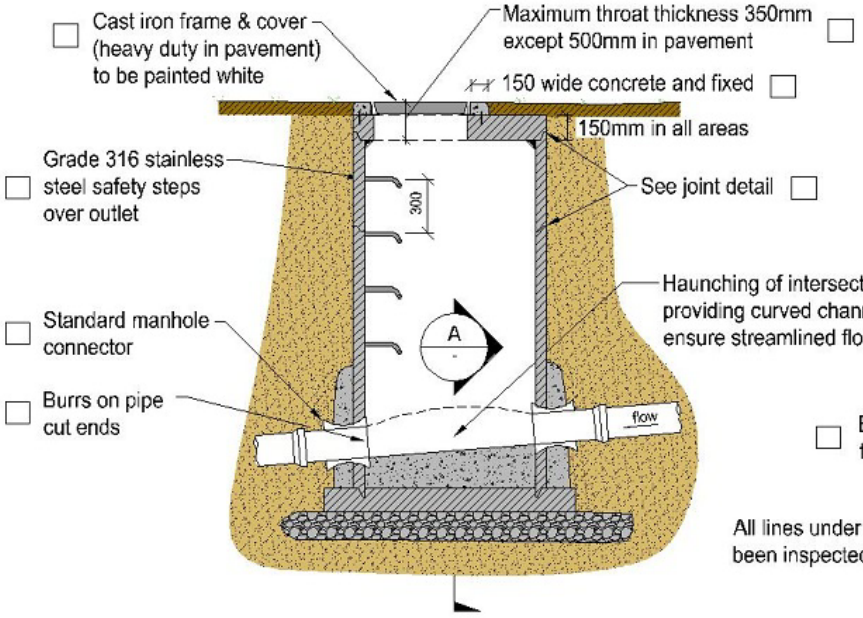
SECTION A

All lines under 50m long have been inspected and passed

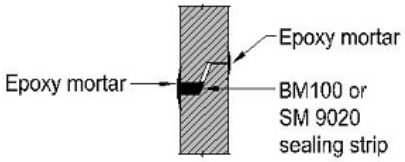
PASS

COMMENTS: .....

.....

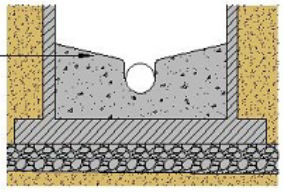


MANHOLE NUMBER: .....



JOINT DETAIL

Benching not flatter than 1 in 3



SECTION A

All lines under 50m long have been inspected and passed

PASS

COMMENTS: .....

.....

..... **(CONTRACTOR)**

..... **(CERTIFYING ENGINEER)**

..... **(COUNCIL REPRESENTATIVE - WITNESS)**

INSPECTION SHEET

WASTEWATER MANHOLE & PIPELINE <50m LENGTH

IS6.1

TaurangaCity

INFRASTRUCTURE DEVELOPMENT CODE

VERSION 1
JUL 2011

Date:…….. RC Number:……

Development Name and Stage:……

Line ID	(P)ass/(F)ail after 15mins	Comments

……....(contractor) …….(certifying engineer)

……..……..(council representative – witness)

Waste water low pressure air test procedure

Testing Apparatus:

- Enough blank plugs for all non capped laterals and the open end of pipe to be tested.
- A test plug with sufficient length of clear hose to reach 1 meter above the manhole lid.
- A clear vessel containing 300mm depth of clean water.
- Spray bottle of soapy water.

Procedure:

1. Install blank plugs into all open ends of pipes to be tested.
2. Install test plug into the end of the main pipe and bring the hose to the top of the manhole.
3. Blow into the test pipe until there is sufficient pressure then put the end of the pipe into the bottom of the vessel.
4. Once the pressure has stabilised a bubble will sit at the base of the pipe.
5. If this bubble moves up the pipe there is a leak in the system, spray soapy water around the plugs to make sure there are no leaks.
6. If after fifteen minutes the bubble has not risen in the pipe then the test has passed.

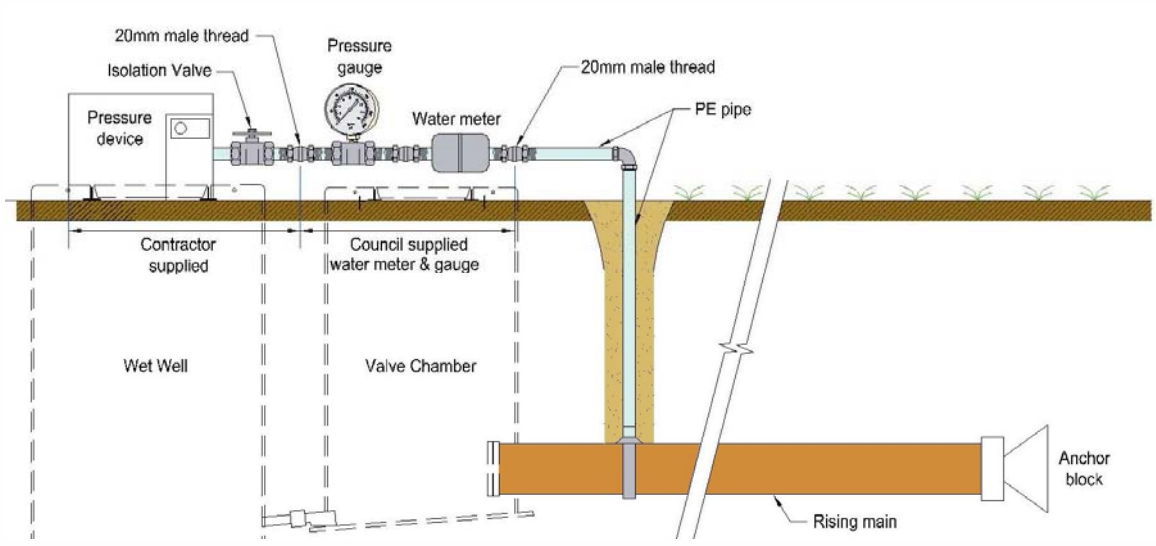
Date:…….. RC Number:…….

Development Name and Stage:…….

Line ID	Mins for pressure drop.	(P)ass/(F)ail	Comments

……....(contractor) ……(certifying engineer)

……..……..(council representative – witness)



Wastewater rising main pressure test

Testing Apparatus:

- A pipe, that can be connected to the main, with a pressure gauge capable of reading 1400KPa and a water meter. This should contain a valve to isolate the system and the pressure gauge from the water blaster (see example below).
- A water blaster capable of attaining 900 KPa.

Procedure:

1. The testing apparatus shall be connected to the lowest point of the reticulation system to be tested.
2. Open all valves and turn the water blaster on until the pressure on the gauge reaches 900KPa then shut the isolation valve and disconnect the water blaster.
3. Take a reading on the meter and write this down on the sheet with the time.
4. After period of 15 minutes turn the water blaster back on and open the isolation valve until the pressure reaches 900KPa again then shut the isolation valve.
5. Take another reading on the meter and write this down on the sheet with the time.
6. If the volume of water added after 15minutes is less than the calculated allowable loss, shown on the test sheet, then the test has passed. If the volume is more then there is a leak in the system.

The maximum allowable loss is defined as:

$$Loss_{(allowable)} \leq 1\ litre * \frac{pipe\ diameter\ [mm]}{10} * length\ [km] * duration\ [hr]$$

Example:

- Pipe diameter: 40.3 mm
- Pipe length: 680 m
- Test duration: 15 minutes

$$Loss_{(allowable)} \leq 1\ litre * \frac{40.3\ [mm]}{10} * 0.68\ [km] * 0.25\ [hr]\ = \mathbf{0.68}\ \frac{mm}{10}\ km\ hr$$

Date:…….. RC Number:…….

Development Name and Stage:…….

Manhole ID	Volume of makeup water	(P)ass/(F)ail	Comments

Comments:

…….....(contractor) ……(certifying engineer)

……..……..(council representative – witness)

Manhole Infiltration test procedure

Testing Apparatus:

- Enough high pressure blank plugs for all pipes into and out of the manhole to be tested.
- A means of inflating the test plugs, such as a compressor.
- Measuring vessel.

Procedure:

1. Install blank plugs into all pipes coming into the man hole.
2. Fill the manhole with water and mark the water level in the throat.
3. After 30mins measure how much water it takes to fill the manhole back up to the mark.
4. The allowable loss shall not exceed 1 litre per meter depth in a 1050mm manhole.