

Hynds Stormwater Superpit

Technical Guide D5.9

Hynds Superpit units are designed and positioned to increase kerb inlet capacity above that of standard cesspit grate inlets.



02.25 | DRAINAGE | D5.9 HYNDS STORMWATER SUPERPIT

Applications

High flow areas
Increased inlet flow needs
Retrofit for flooded streets

Product Attributes

Simple to install
Increased inlet flows
Multiple stormwater entries
An additional solution for system overflows

Approval / standards

NZS 3109, Concrete Construction

Sustainability

Available in Hynds LC® low carbon concrete
Verifiable carbon footprint data available
Customisable for climate-resilient infrastructure

Quality/Environment/Health & Safety

ISO 9001:2015, ISO 14001:2015 and
ISO 45001:2018

Superpits are located at road level, adjacent to standard road cesspits and grates. The units are positioned to allow excessive kerb line stormwater to enter an upstream inlet prior to the standard grate.

Installation

- Hynds Superpits have two 1.3 tonne lifting anchors installed in the top face of each unit
- The Hynds superpit is made up of the standard unit [SP1] and the modified unit [SP1M] installed in series
- The modified unit is centred above a back entry 675 x 450 cesspit
- System overflows can be re-directed to the rear outlet end of the modified unit. A 225 mm diameter Hynds spun concrete pipe can be fitted in lieu of plugging the end
- In-situ concrete benching is used to form a natural drop into the cesspit grate.
- The kerb line fall leading up to the superpit should be shaped towards the berm promoting high stormwater flows into the inlet.
- For steep road gradients, ramped kerb lines leading into the inlets are required
- Refer to figure 4 and 5 for details



FIG. 1 Stormwater Superpit



FIG. 2 SP1 Standard Unit

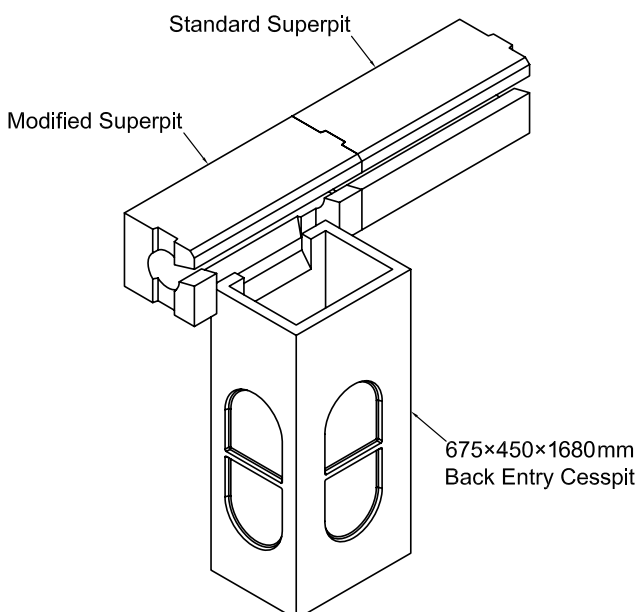
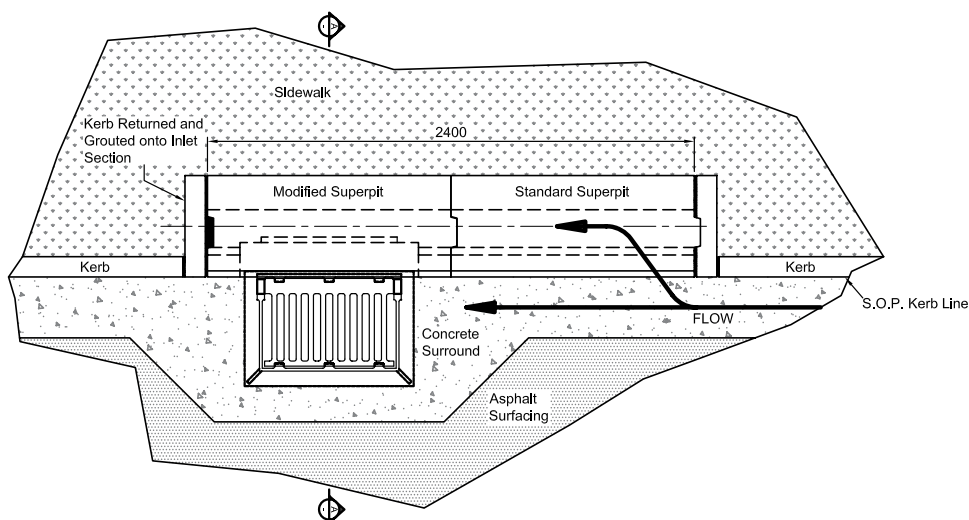
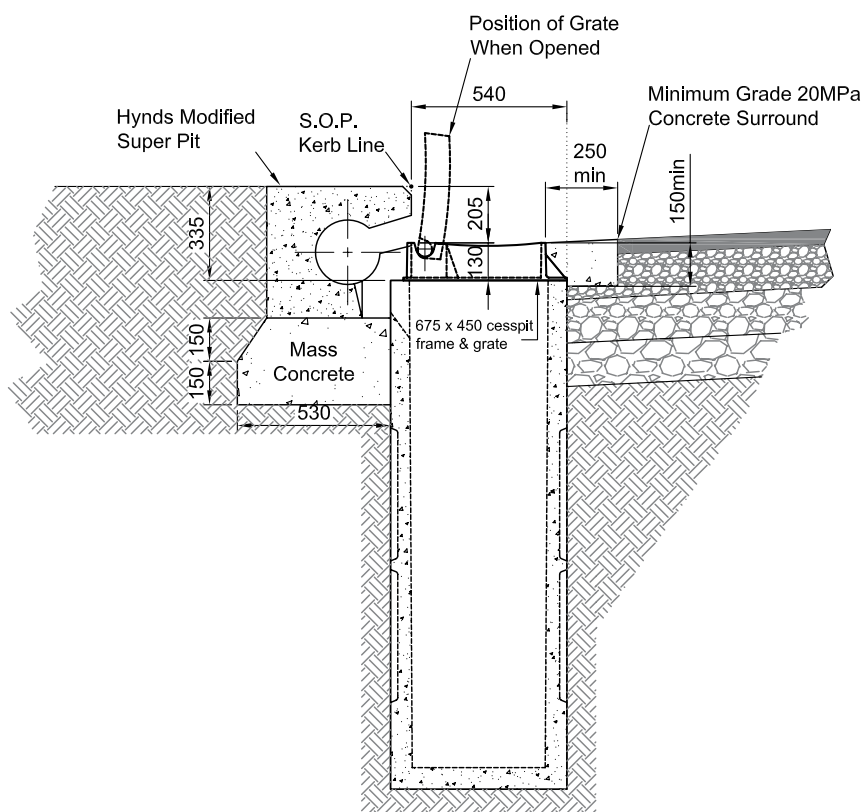


FIG. 3 Isometric View

TABLE 1 Superpit components

Product code	Description	External Length (mm)	External Width (mm)	External Height (mm)	Mass (kg)
SP1	Hynds Standard Superpit	1200	500	455	501
SP1M	Hynds Modified Superpit	1200	500	455	444
CIC675450GF	Cast Iron Grate and Frame 675 x 450	832	572	130	118
CP675450SBE	Cesspit Back Entry 675 x 450 x 1680	820	610	1760	900

**FIG. 4** Superpit installation (not to scale)**FIG. 5** Section A – A (not to scale)

Lifting and Handling

All Hynds Stormwater Superpit incorporate Swiftlift lifting anchors for safe lifting and must be used with the correct lifting clutch.

Hynds Pipe Systems has designed and manufactured Hynds Stormwater Superpit with a minimum dynamic factor of 1.2. This dynamic factor requires that all the following conditions are observed when lifting, moving or placing the superpits:

1. Lifting with mobile plant (*such as an excavator or similar*) where equipment is specifically exempt from the requirements of the PECPR Regulations 1999, subject to the conditions outlined in the New Zealand Gazette, No. 104, September 2015 and
2. Lifting, travelling and placing over rough or uneven ground where anchor failure is not anticipated to cause harm or injury, by adopting procedures such as:
 - a. Transporting the element as close as practical to ground level (300mm recommended)
 - b. Establishing and maintaining exclusion zones
 - c. Transporting only precast concrete elements that are unlikely to topple if they were to hit the ground
 - d. Inspecting lifting anchors both after transportation and before final lifting into place
3. Hynds uses both Reids and Ancon lifting anchors which are both designed to (*Haeussler*) specifications and as such are compatible with Reid, Deha or Ancon anchors, clutches, and recess formers of the same load range.

Refer to "Safe work with precast concrete - Handling, transportation and erection of precast concrete elements" published by Worksafe New Zealand (October 2018)

Shock loads resulting from travelling with suspended superpits over rough terrain and uneven ground may exceed design, dynamic and safety factors of the lifting systems. It is essential that care is taken during lifting and transporting as additional stresses could result in anchor failure.

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Disclaimer: While every effort has been made to ensure that the information in this document is correct and accurate, users of Hynds product or information within this document must make their own assessment of suitability for their particular application. Product dimensions are nominal only, and should be verified if critical to a particular installation. No warranty is either expressed, implied, or statutory made by Hynds unless expressly stated in any sale and purchase agreement entered into between Hynds and the user.