

PROJECT:	Equinix PE3
LOCATION:	Perth WA
SCOPE OF WORK:	Fire Suppression System
COMPLETION DATE:	December 2021
CONTRACT VALUE:	\$2.8M

Equinix is the world's digital infrastructure company which offers global design standards with direction connection key subsea cables. They interconnect industry-leading companies in finance, manufacturing, mobility, transportation, government, healthcare and education across a cloud-first world.

The new PE3 Equinix building located in Shenton Park is a data centre that provides services ideal to support a wide range of companies.

The building consists of Colocation Halls on Level 1 and 2, an Administration Area on Levels 1,2, and 3, Electrical Rooms on Levels 1, 2 and 3, and Generators.



SCOPE DETAILS

Within our scope, Firesafe were tasked with the design and installation of:

- A compliant automatic sprinkler and Pre-Action Fire Sprinkler system in accordance with AS2118-2017 and FM Global Data Sheet 2.0
- A compliant Fire Hydrant system in accordance with AS2419.1-2005
- Fire Hose Reels in accordance with AS2441-2005
- Fire Pumps in accordance with AS2941-2013
- A compliant Fire Detection and Emergency Warning & Intercommunication system in accordance with AS1670.1-2015, AS1670.4-2015

The sprinkler systems are Nitrogen fed Pre-Action Systems and conventional Wet Pipe Sprinkler System which have been installed to protect the Admin Building and Loading Dock/Receiving Offices. Pre-action systems have been installed to protect the Colocation Halls and Electrical Blocks.



Fire Sprinkler Control Valve Sets have been installed as part of the Fire Sprinkler system, made up of a series of components including stop valve, alarm valve, alarm test valve and motorised alarm bell.

The system has valve sets located at:

- In the Sprinkler Valve Room on the North Side of the site next to the TX Rooms
- The Pre-Action (PAC) units have been installed in the Common Valve Room located on the North side of the Building.



Fire pumps consisting of electric pumps for the Sprinkler/Pre-Action system and diesel pumps for the Hydrant system have been installed.

The pumps set installed at the project for the Sprinkler/Pre-Action system comprises:

- 2 x Electric Pumps (Duty & Standby)

There are also 2 x Diesel Pumps (Duty & Standby) for the Hydrant system which were installed as part of the upgrade for PE3.

The water supply is fed via the Water Corporation towns mains connected to the 4 x above ground fire water storage tanks located the North side of the site.



The Fire Detection and Emergency Warning system has been designed to alert occupants to a

possible fire condition by initiation of Alert and Evacuation tones enabling early egress. The system will monitor the Data Halls & Electrical Blocks via multi-aspiration smoke detection system, with the admin block monitored via smoke and heat detectors all connected to the Fire Indicator Panel located on Level 1 – Fire Control Room.

There is a Fire Graphic System on Level 1 – Fire Control Room along with Multi Aspirated Smoke Detection system (VESDA) units installed throughout and a Mimic Panel in the Security Office.



CHALLENGES & SOLUTIONS

Throughout the project we were faced with various challenges:

We were subject to a scope change midway through the design phase of the project owing to client's insurance requirements. This led to significant re-design and installation changes such as:

- Re-calculation, change in pipework size and spec
- Larger fire sprinkler pumps, larger tanks, modified equipment supply.

Firesafe were able to adapt to these design and installation changes efficiently to minimise the project timelines for completion.

Additionally, a large number of services needed to be installed in a relatively small space, so coordination with other trades was challenging. We overcame this by continual communication with other trades to coordinate works with minimal impact.