PROJECT:	**South Metro Bentley TAFE – Fire Hydrant Upgrade**
LOCATION:	**Bentley**
SCOPE OF WORK:	Fire Hydrant Upgrade including New Pumps & Tanks
COMPLETION DATE:	November 2021
CONTRACT VALUE:	$814,000.00

Bentley TAFE campus is known for its quality training specialising in hospitality, fashion and vet nursing studies. The campus is located across the road from the Curtin University and next to the Technology Park and is within 10 minutes from the Perth CBD.

Firesafe were awarded the contract by LKS Constructions to upgrade the Fire Hydrant service to the campus.

SCOPE DETAILS

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

- A compliant Fire Hydrant system in accordance with AS2419.1-2005
- Fire Pumps installed in accordance with AS2941-2008
- Fire Extinguishers in accordance with AS2444
- Dry fire & Electrical Interfacing to Existing Security Panel
- Underground Boring of selected areas to achieve Ring Main installation

Redundant existing hydrant pipework and fire hose reels were disconnected or capped.
The hydrants are located throughout the Campus covering Buildings blocks from A to M. There are also hydrants located internal to the B Block on Levels 1,2,3 and 4.

The water for the hydrant system is fed via the Water Corporation town's main which is connected to the two above ground tanks located at the Fire Compound adjacent to the car park entrance off Grenville Street.

New fire pumps consisting of 1 x electric duty pump and 1 x diesel standby pump have been installed. The fire pump room is located next to E Block and adjacent to the Staff car park.

Power for the pump room including lighting, emergency lighting, GPO and electric pressure maintenance was installed by Firesafe. We also connected the main pump to the existing MSB.

Inground electrical and communication conduits have been installed as well as installation of the remote start and monitoring to the new booster cabinet.

Additionally, Flow Meters have been installed internal of Fire Pump Room, these monitor the Annubar Test Line and Both Tank's 1 & 2 Infill Rate.

A Booster Cabinet is installed at the entrance to the car park off Hayman Road entrance. There are also new Crash Gate Barrier installed at the alternate end of the entrance of Hayman Road to allow for Truck/Tender to navigate in the event of a fire.

New external signage and DFES Appliance Hardstand have been completed to ensure DFES if required to respond to a Fire can navigate to Booster Cabinet location.

CHALLENGES & SOLUTIONS

Throughout the project we were faced with various challenges:

- Installation was completed during normal operation of Campus, therefore we had to be mindful of students and staff movements including vehicles.
- Underground Boring was utilized to ensure that minimal impact to daily classes and activities.
- Timing of electrical shutdown was difficult, but Firesafe worked with the Campus team and always found a positive solution to ensure the project moved in a positive direction.
- We came across high volumes of existing underground services and although we could not always ensure their protection the Firesafe team prides themselves on ensuring any potential break to an existing service is repaired prior to backfilling.
- Firesafe were required to Survey in detail the complete installation. We carried this out by building strong relationships with external sub-contractors to which we would utilize again to ensure correct As-Constructed drawings are handed over to our client minimising the turnaround for defects and errors.