

<b>PROJECT:</b>	<b>Costco Wholesale Casuarina</b>
<b>LOCATION:</b>	<b>CASUARINA WA 6167</b>
<b>SCOPE OF WORK:</b>	Wet/Dry Fire Protection
<b>COMPLETION DATE:</b>	November 2022
<b>CONTRACT VALUE:</b>	\$1.3Million



*The Costco Wholesale warehouse is located in the South Metropolitan region of the City of Kwinana and covers an area of approximately 14,000 sq/m of floor areas, 827 parking spaces and also includes a fuel station.*



Firesafe were awarded the contract to design, supply, install and commission Wet and Dry Fire protection to the new development.

### SCOPE DETAILS

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

- A compliant Fire Sprinkler system in accordance with AS2118.1 - 2017
- Fire Hose Reels in accordance with AS 2441
- Fire Pumps in accordance with AS 2941
- Fire Water Storage Tanks in accordance with AS 3500.1
- Fire Extinguishers in accordance with AS 2444
- A Fire Detection and Warning system in accordance with AS 1670.1, AS 1670.4 and AS 1668.1
- A Wet Chemical Kitchen Suppression system in accordance with AS 3772-2020

The sprinkler system includes 2 x standalone systems to the general retail areas, deli/meat/bakery and food prep areas, café office and BOH storage areas and the Fire Tanks and Pumprooms. ESFR High Hazard sprinklers have been installed throughout the main warehouse areas.

Activation of the sprinklers, hydrants or hose reels will automatically start the pumps which in turn will send a signal to the Main Fire Indicator Panel which is located at the main entrance to the building.



## COMPLETED PROJECTS

The sprinkler system is interfaced with the Fire Indicator Panel which is located at the GL2-8. Operation of any sprinkler head will transmit a signal to the FIP via a pressure switch, activating the occupant warning system and transmitting a signal to the fire monitoring authority.

Fire sprinkler control valve assemblies have been installed and located within the Pump Room.

Internal Fire Hose Reels have been installed which are fed from individual incoming supply pipes fed from the standalone hydrant system installed by others. The fire hose reels are located throughout the office and sales areas.

The combined fire sprinkler and fire hydrant pumps consist of 2 x diesel pumps and a jockey pump. In the event of a fire both of the fire pumps activate due to a loss in pressure on system trunk mains.

The fire water supply for the fire system is supplied from 2 x galvanised cylindrical tanks with full capacity of 190KI each and includes tank liners. We have also installed a 150mm diameter infill pipe.



The Kitchen Suppression system is a wet chemical system and is installed to the 3x commercial kitchen exhaust hoods within the bakery and hot food prep areas. The system consists of a supply of wet chemical stored in cylinders and valve assemblies. Each cylinder is pressure activated by a valve actuator.

The Fire Detection system is installed to the sales floor and offices, the Occupant Warning system is installed to the cold room, sales area, pump room and offices.

Upon completion, all systems will be tested and maintained in accordance with AS 1851 – 2012.



## CHALLENGES & SOLUTIONS

Throughout the project we were faced with below challenges:

The building structure was different to anticipated resulting in longer installation / load out times. This was overcome by re assessing our installation method on site.

Flooring schedule / programme resulted in phased installation not giving full continuity of works. Works proceeded without delay to contract with close communication between ourselves and all other relevant trades.