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| PROJECT: | Capital Square Tower 2 |
| LOCATION: | PERTH WA 6000 |
| SCOPE OF WORK: | Wet/Dry Fire Protection |
| COMPLETION DATE: | August 2021 |
| CONTRACT VALUE: | \$2.2M |

Capital Square Tower 2 is a mixed-use, 16 level development which forms part of the Capital Square Hub located on the Western side of Perth's CBD.



The building is predominantly office space spread over 14 levels with an integrated podium that connects Towers 1 & 2. Basement 2 level incorporates the majority of plant and equipment infrastructure, and Basement 1 incorporates a plant and lift lobby plus end of trip facilities. Firesafe were contracted by D&C Corporation to complete the installation of Wet & Dry Fire Protection to the building as per the below scope.

SCOPE DETAILS

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

- Fire Sprinkler system in accordance with AS2118.1-2017
- Fire Hydrant system in accordance with AS2419.1
- Fire Hose Reel system in accordance with AS2441
- Fire Pumps in accordance with AS2941
- Fire Extinguishers in accordance with AS2444
- Fire Detection & Emergency Warning & Intercommunication system in accordance with AS1670.1, AS1670.4 and AS1668.1

Fire sprinkler control valve assemblies have been installed and are located for each building level within the Western fire isolated stairwell and are housed in a locked valve cupboard



COMPLETED PROJECTS

The wet fire system is interfaced with the Fire Indicator Panel which is located in the Fire Control Room on the Ground Floor.

The MFIP is an Ampac brand FireFinder Plus Analogue Addressable Fire Panel which also incorporates the Fire Fan Control Panel (FFCP) for manual override of the Smoke Management system. The panel is located in the Fire Control Room on the Ground Floor on Spring Street.

Fire Hydrants are installed throughout the whole building and are located on all levels within each of the East & West fire isolated stairwells with additional hydrants located on Levels B1 and to achieve compliant coverage. Feed hydrants are installed in the Fire Service Booster Cabinet located on Spring Street.



Fire Hose Reels form part of the combined fire sprinkler/fire hydrant and hose reel system and have been installed on Levels B1, B2, Lower and Upper Roof levels and are all connected to the combined fire services pipework infrastructure.

The combined fire sprinkler and fire hydrant pumps (Duty electric and back-up diesel) have been installed in the Basement, these pumps supply the combined fire sprinkler, fire hydrant and hose reel system. There is also a diesel relay pump for the Brigade use for fighting a fire on the upper levels of the building, levels 7 -17.



The water supply for the system is fed via the Water Corporation town's main which is connected to the two concrete 25kL effective water storage break tanks located in the Basement Pump Room.

The EWIS system is installed throughout all levels of the building including a EWIS panel located in the Fire Control Room on the Ground Floor. The system has five separate zones with manual function having automatic PA Alert and Evacuate options which are user selectable.



The Master Emergency Control Panel (MECP) is located in the FCR at Ground level. And the Sub Emergency Control (SECP) Data Gathering Panel is located on Level 16.

CHALLENGES & SOLUTIONS

Throughout the project we were faced with various challenges:

Given the central location of this project (Perth CBD), delivery logistics were at times difficult, with traffic management plans in place etc.

Also, there were some design changes during the construction phase of project which required prompt reaction to capture costs, materials ordering, delivery and installation as quickly as possible in order to mitigate any delays to the fast pace of the construction development.