



ENGINEERING AWARD (DESIGN)

BUILDING

Northshore Cove

Project Overview

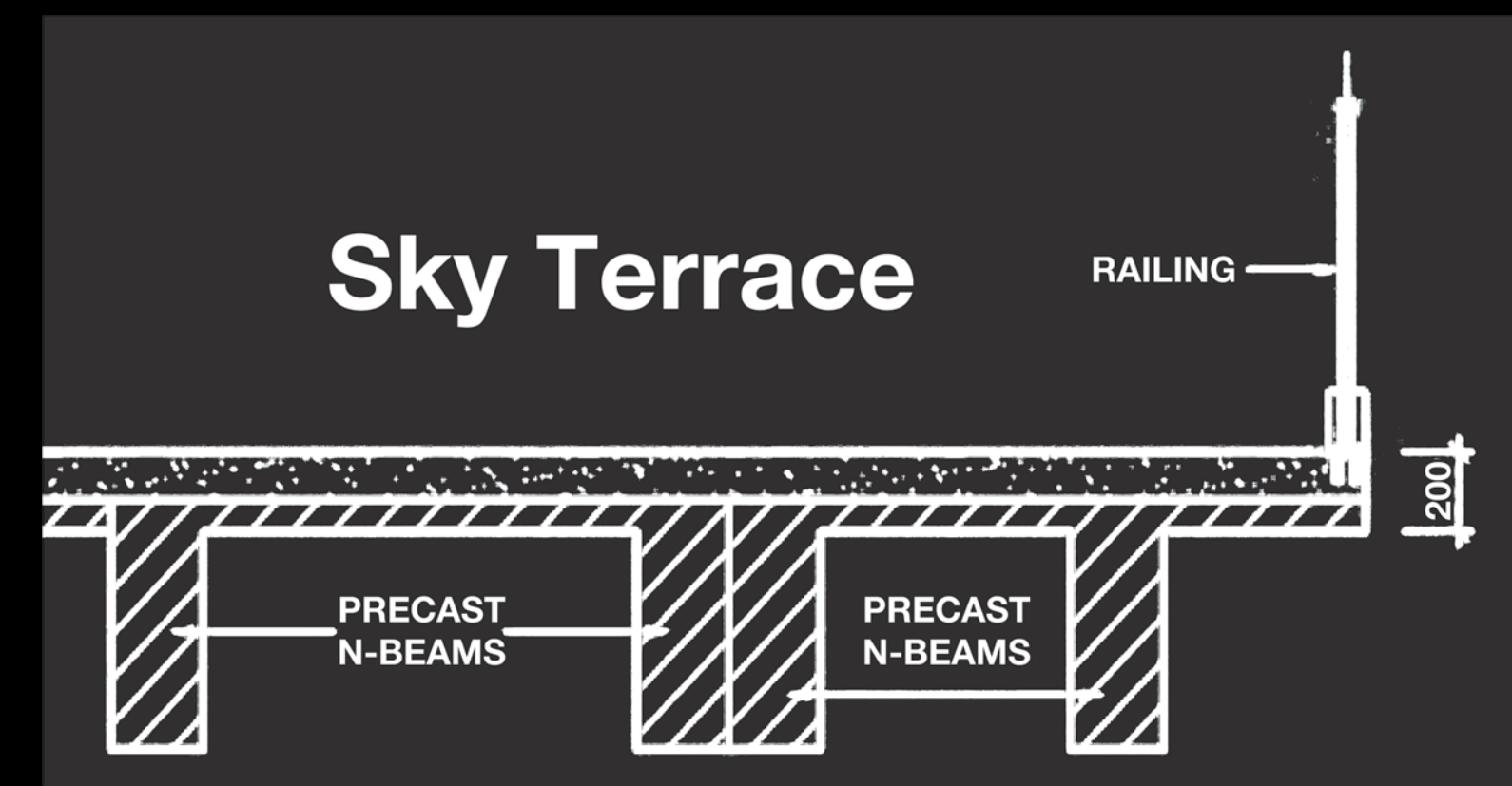
Northshore Cove comprises 4 blocks of 26-storey residential building with single storey basement car park, childcare centre, community facilities, electrical substation, precinct pavilion, sky terrace and communal roof garden. This project features a range of innovative engineering solutions, including the stormwater detention drain system and a fully precast self-supporting link bridge situated on the 19th storey rooftop garden. Additionally, the project efficiently maximised parking capacity within a single-storey basement through re-designing the basement car park, leading to a safer and more efficient construction process.

Project Achievements

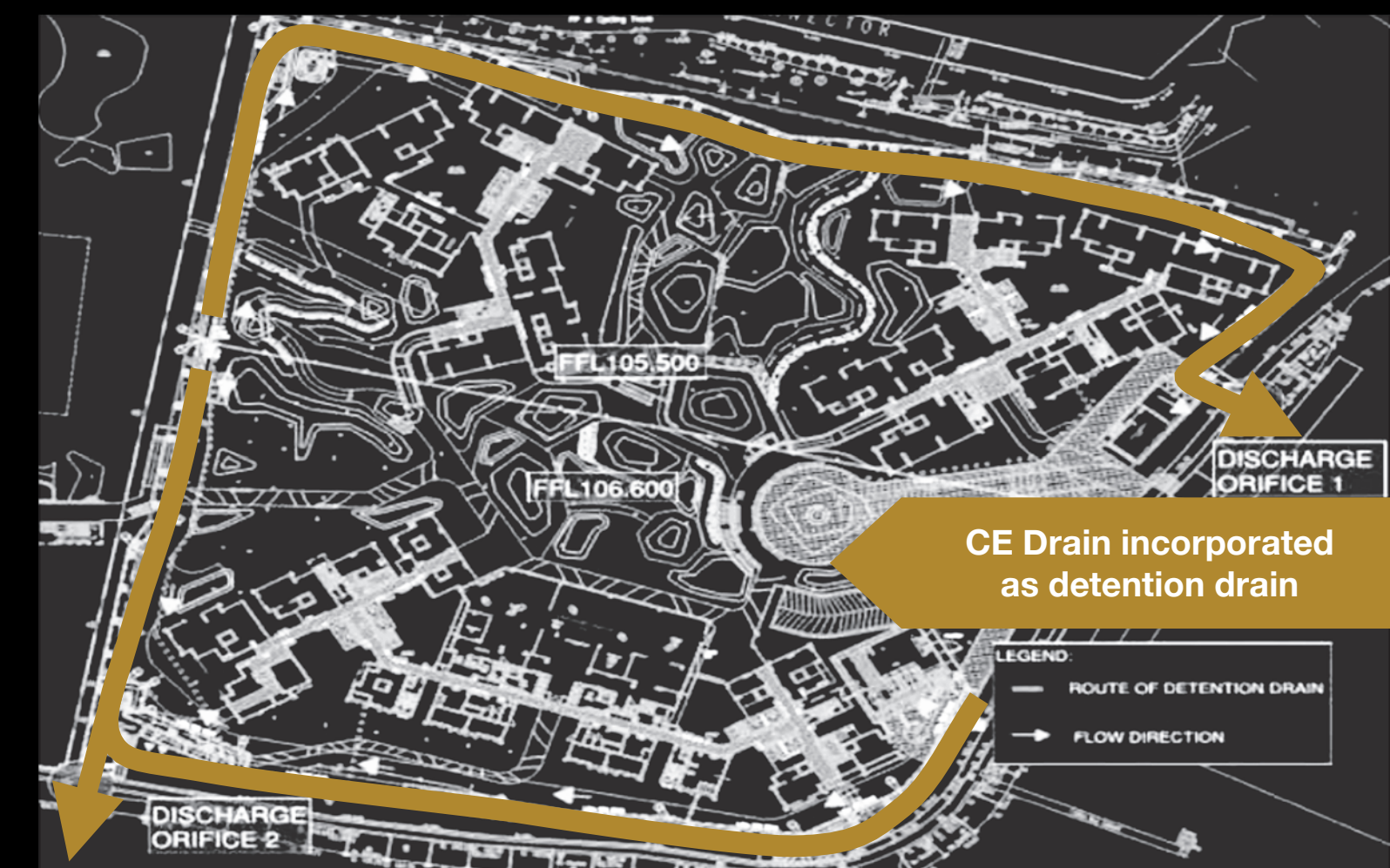
- Optimising car park and motorcycle lots layout within single storey basement, reducing depth and complexity of excavation works
- Reduction of construction material costs
- Higher productivity through shorter construction time
- Innovative integration of Civil Engineering (CE) drain as a stormwater detention system to attenuate episodes of rainstorm
- Precast N-profile beam for safer construction at height



Detention drain system along the precinct's boundary



Sectional diagram for precast N-beam system



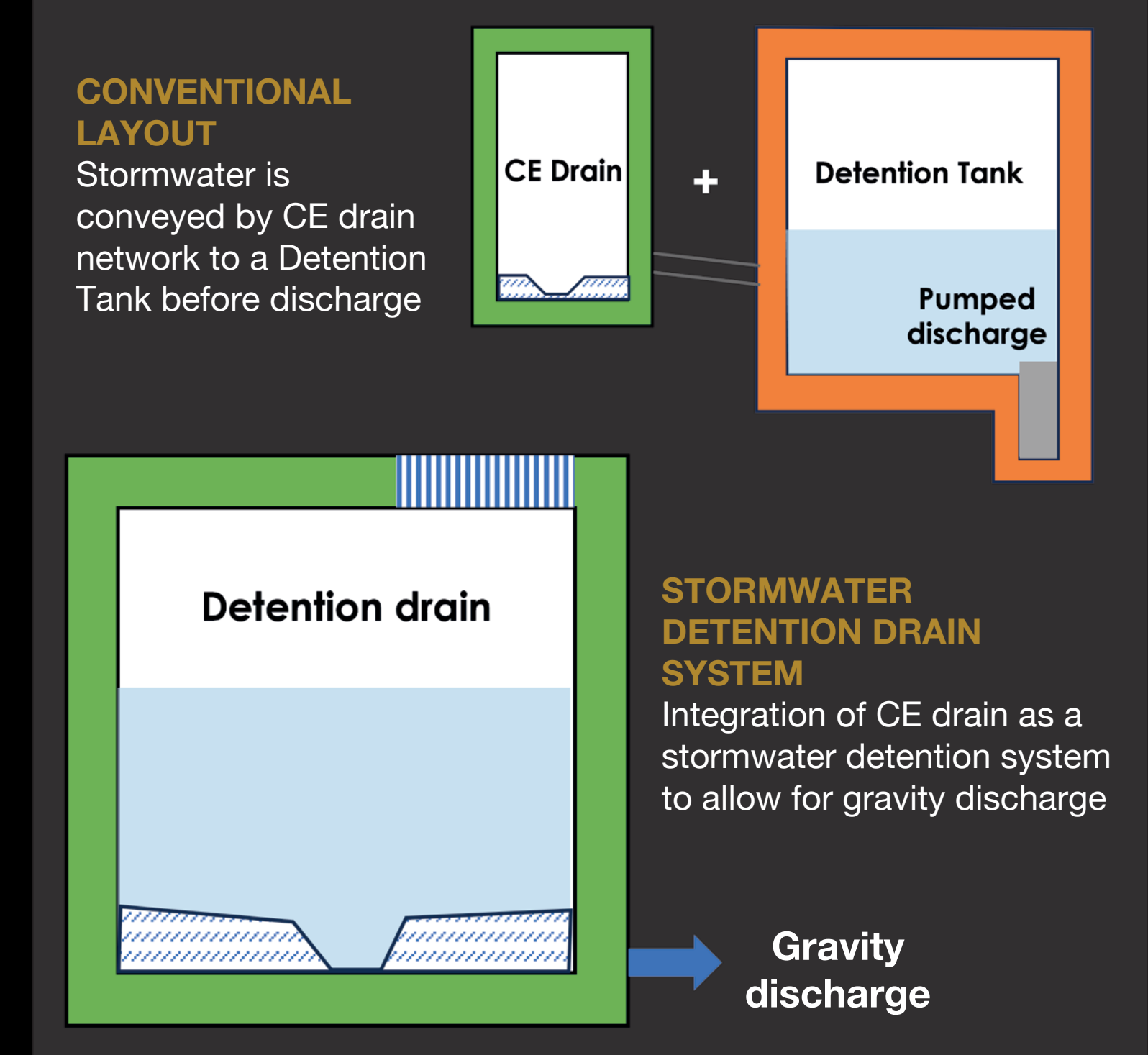
Site plan for adoption of detention drain



Link bridge at 19th storey between Blocks 423A and 423B supported by precast N-profile beams



Maximising footprint of basement car park to reduce excavation works, simplifying earth retaining and stabilising structure system



Innovative stormwater detention drain system to attenuate episodes of rain storm