

Living With Rainfall And Floods

—Study on urban rainflood resilience strategy under extreme weather for Central & Eastern Area of Pazhou



Monographic Study

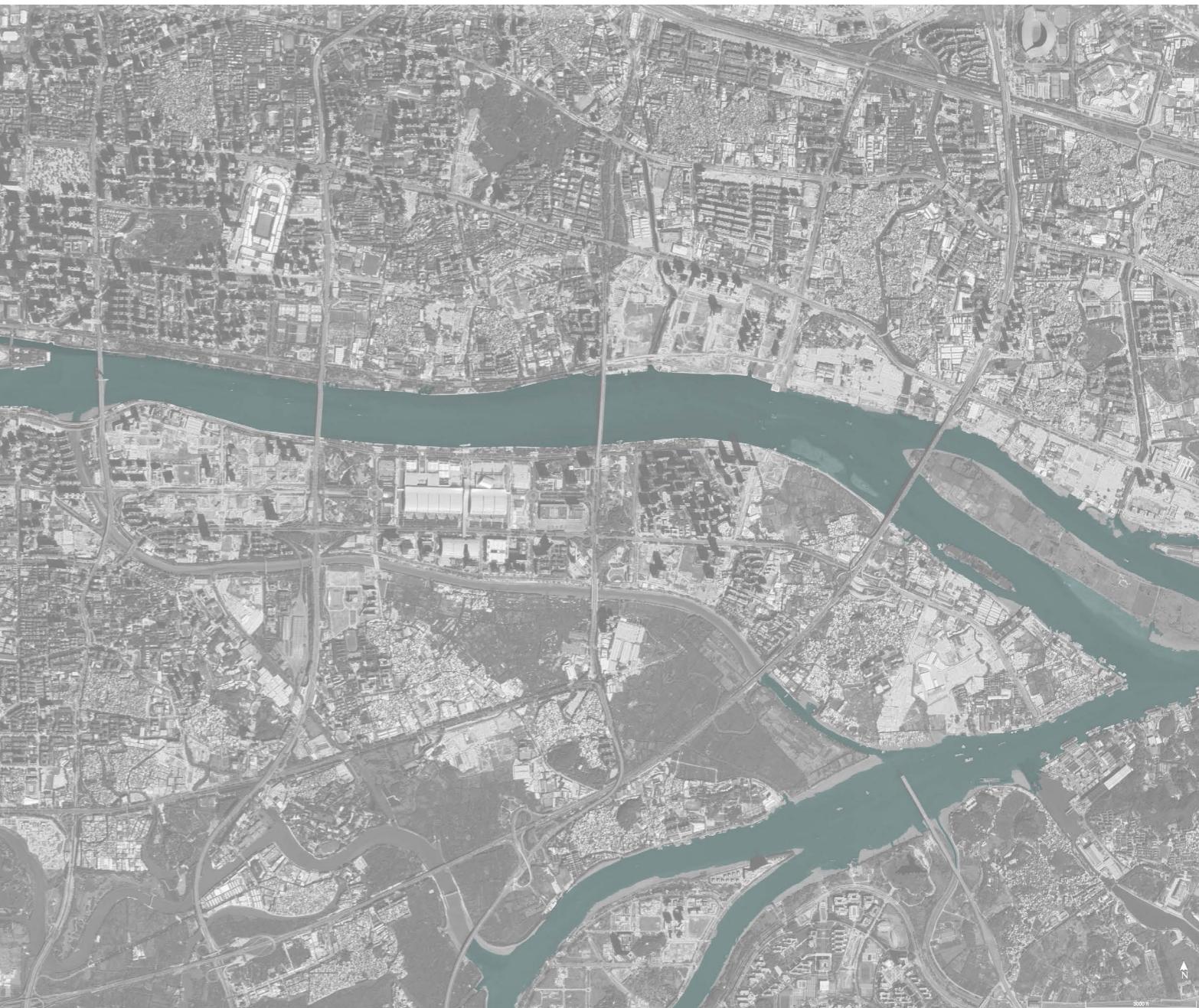
Team work of 5 people

First semester of postgraduate freshman

2019.01.13-01.19

SCUT×UC Berkeley Conceptual Urban Design

International Workshop



Current Site Permeability and Storm Water Conditions

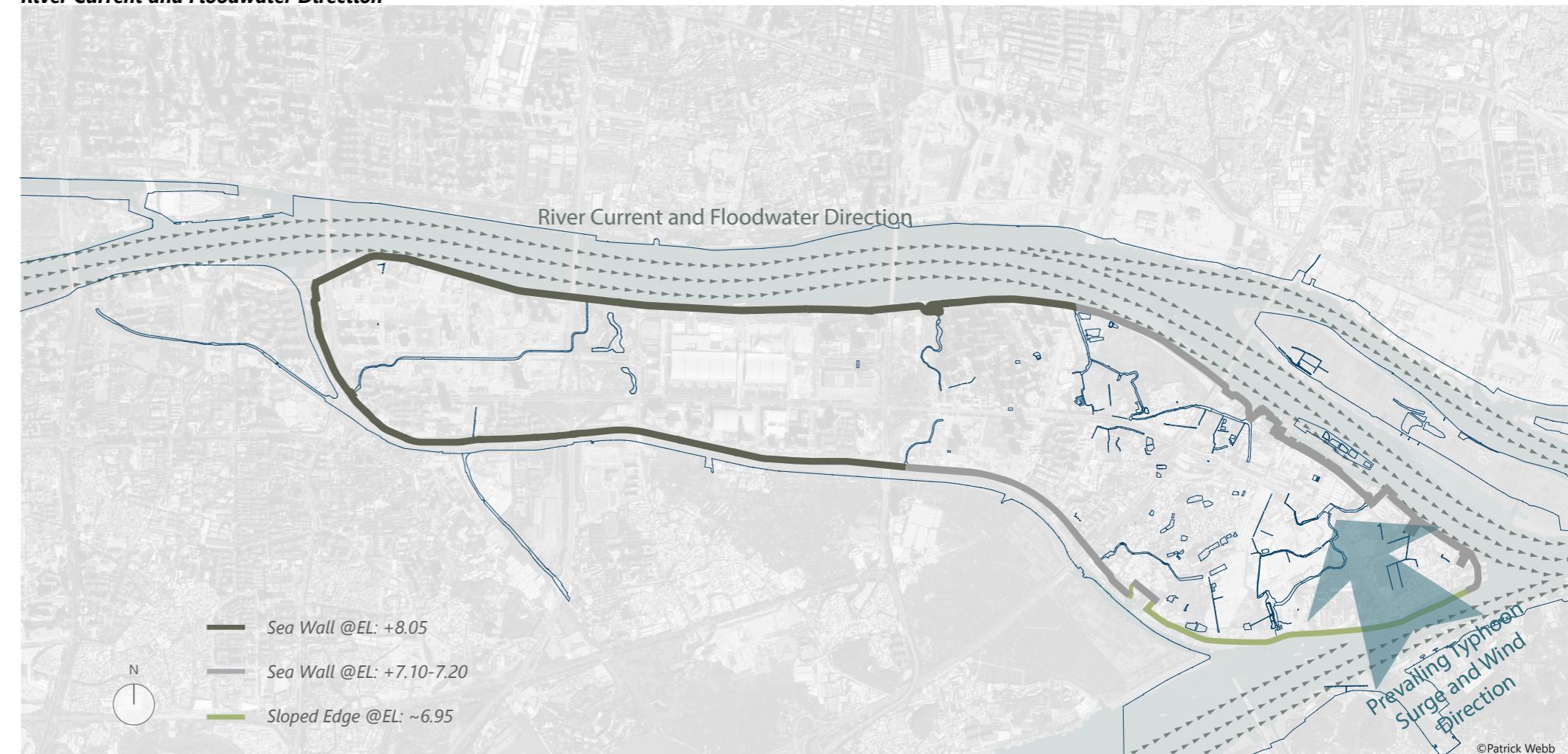


STORM WATER CALCULATION

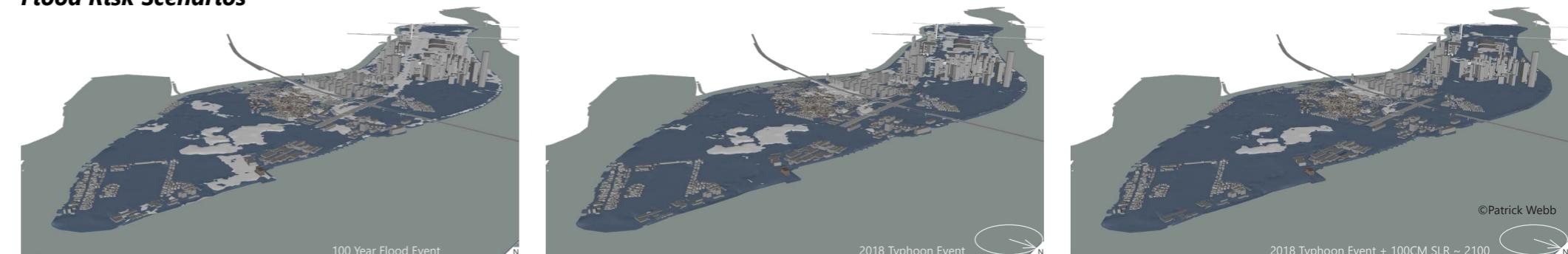
Recorded rainfall event on Sept. 2010 produced: 202.5 mm

Total Island Wide Rainwater Accumulated Volume Per Event: $2,052,570 \text{ m}^3$

River Current and Floodwater Direction



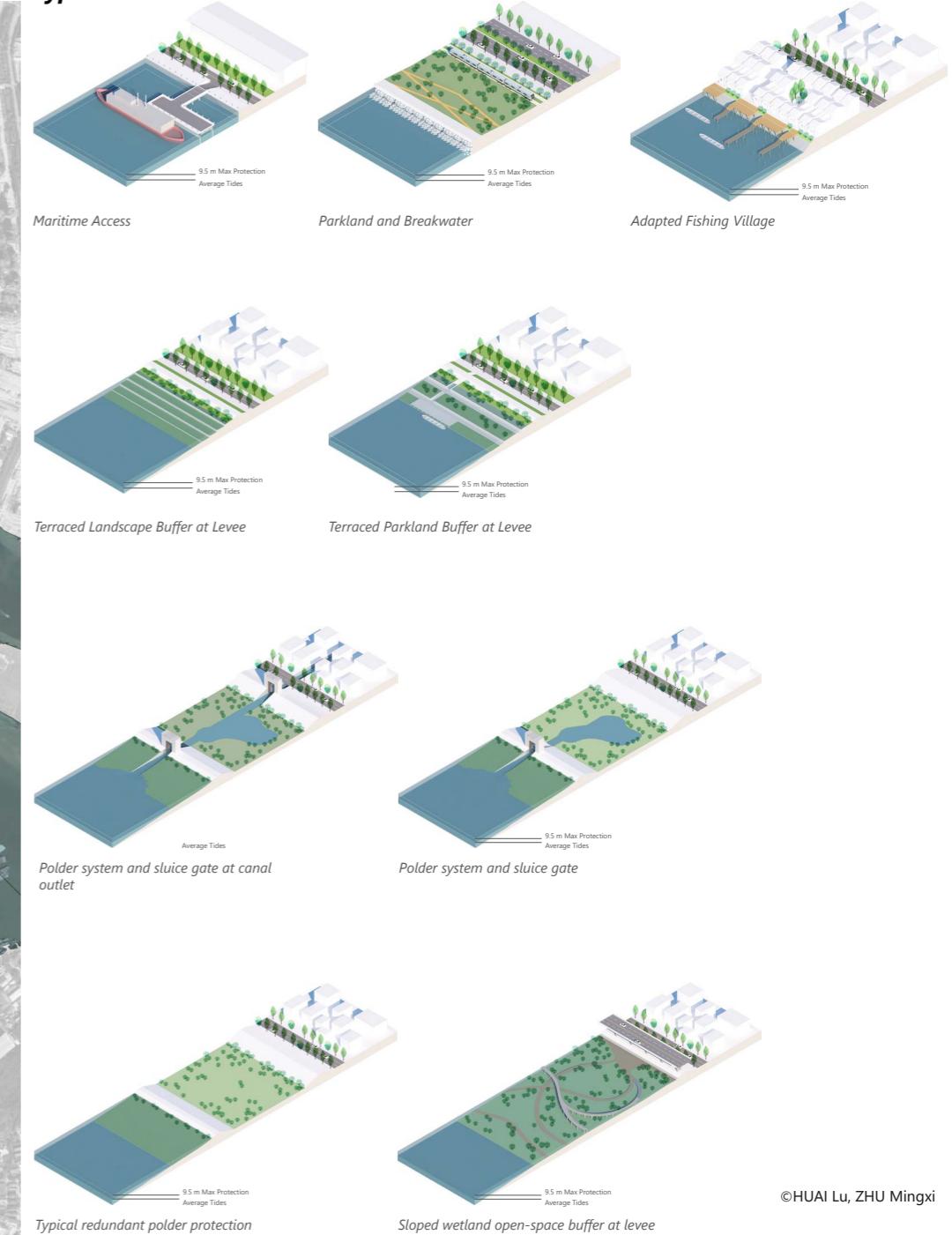
Flood Risk Scenarios



Edge Condition Typologies to Solve the Rain Flood

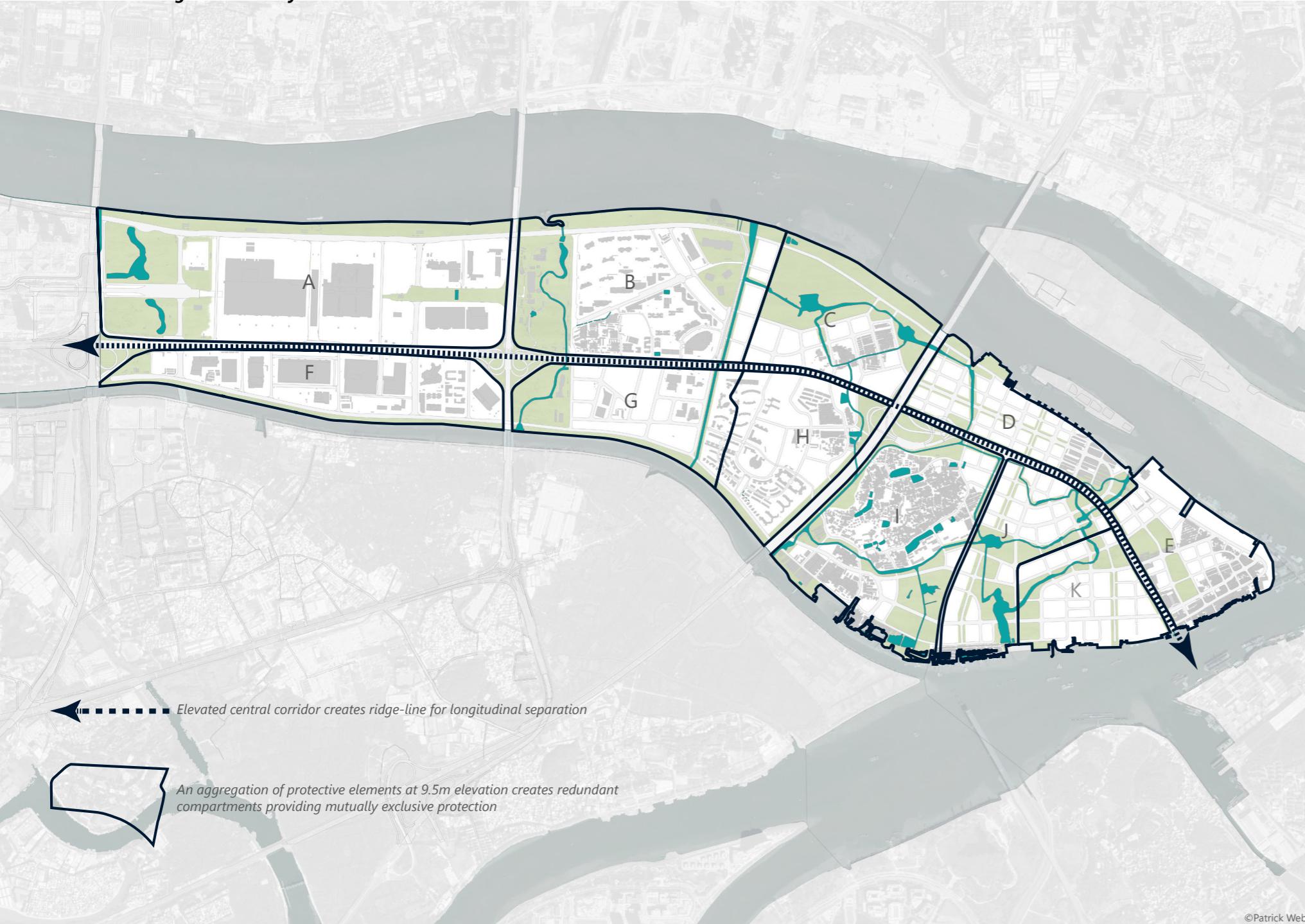


Typical section

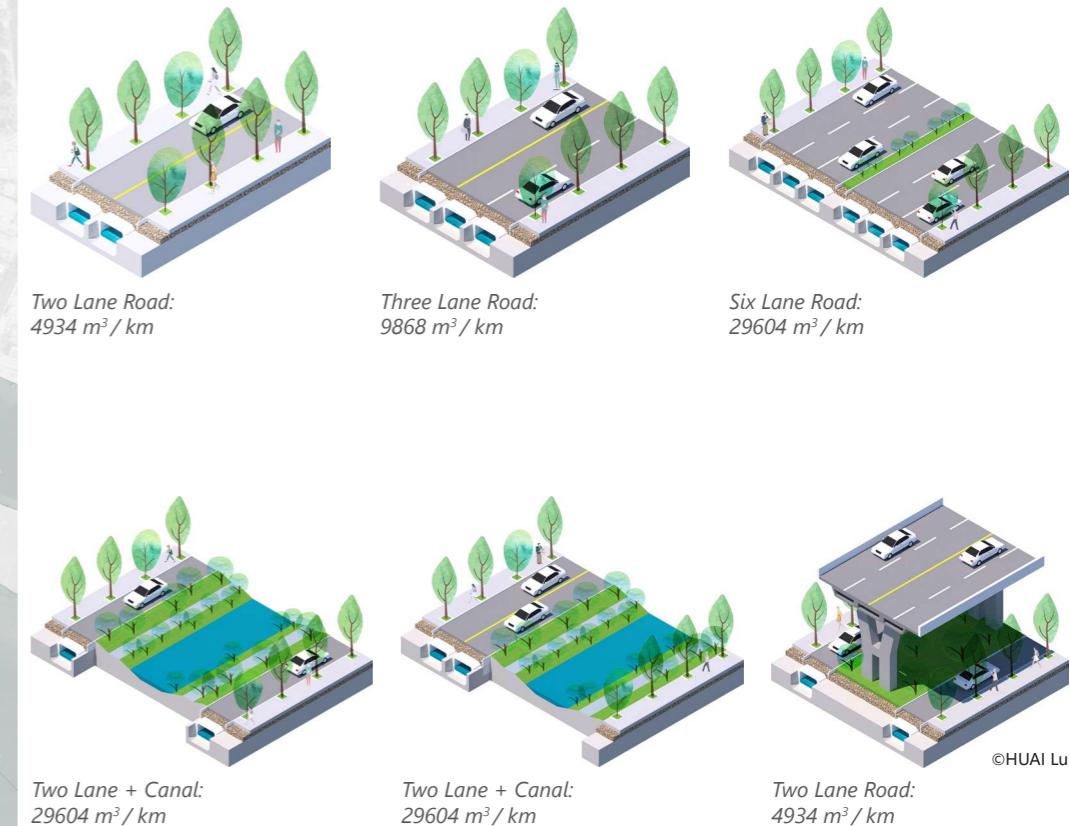


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Resilience through Redundancy at 9.5m



Typical method



CALCULATIONS PERFORMED FOR STORM WATER STORAGE POTENTIAL PER MASTER PLAN:

Total Street-scape Storage: 1,397,866 m³
 Total Canal Storage: 659,769 m³
 Total Parkland Storage: 322,869 m³
 Total Storage Potential: 2,380,505 m³