

OUR CORE BUSINESS

Construction

Built many of Singapore's landmarks and iconic buildings

Property Development and Investment

Renowned developer in Singapore and Malaysia

Investments in Singapore and the United Kingdom

OUR REACH

Has businesses in **Singapore**, **Malaysia** and the **United Kingdom** with focus on construction, property development and investment

To be a quality property developer and leading builder in Singapore and in the region

OUR VISION

We are committed towards **global**sustainability, safety, quality
excellence and value creation
for all our stakeholders

We establish partnerships with strategic players and deliver projects exceeding clients' satisfaction

We are a progressive organisation that fosters a **people-excellence culture** based on merit and equal opportunity

OUR MISSION



Technologically advanced and innovative construction solutions

Dynamic and **high-performing** team of committed professionals

Extensive **expertise** and **experience** in a diverse range of projects

Financially-strong with good corporate governance

High quality standards

Strong Environmental, Health and Safety values

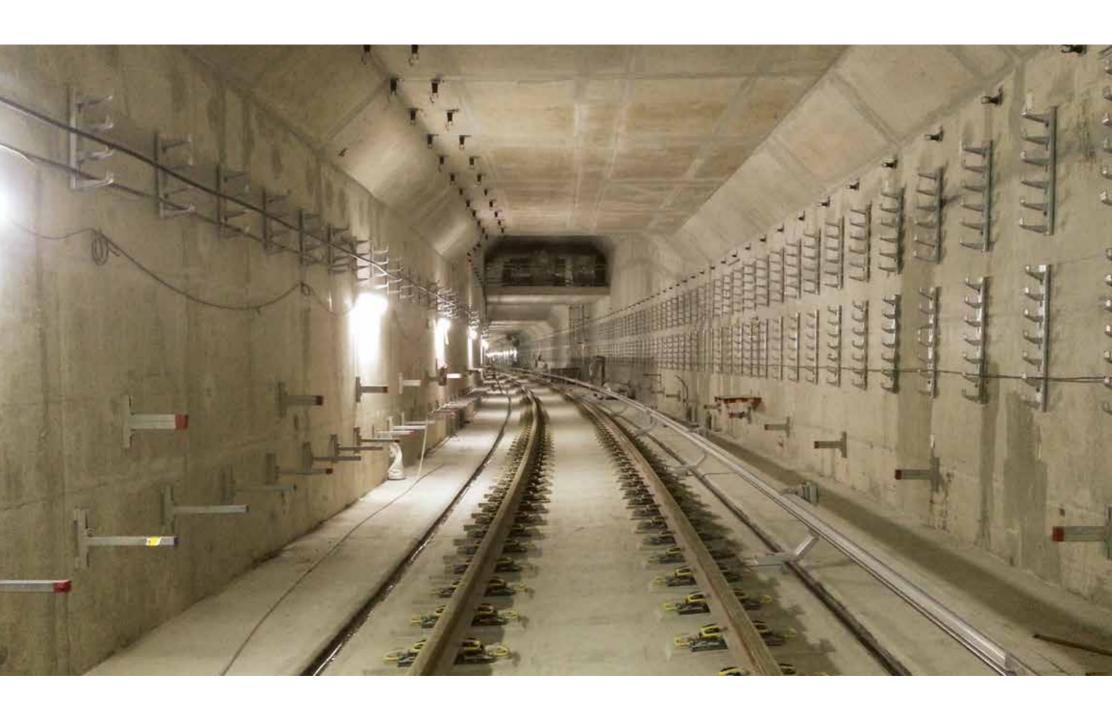
UR PEOPLE OUR PEOPLE O

Lum Chang's success is driven by our people. Their **commitment** to offer **value-added solutions** to overcome numerous engineering challenges have enabled us to successfully deliver the many complex projects that we see in Singapore's landscape today.

Our people are an integral part of our business.
With their hard work, dedication and innovation, the awards and repeat customers that we have garnered over the years are a **testimony** of the industry's **recognition** of Lum Chang's journey from **strength** to **strength**.

OUR PEOPLE

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CAPABILITIES AND SERVICES

Fully integrated services to translate clients' vision into reality

Build Only

Design & Build

Infrastructure Development Construction Management

Project Management Restoration of Properties for Conservation

Major Upgrading

CISANDE GURES KEY FACTS AND FIGURES

>80 Years of construction experience

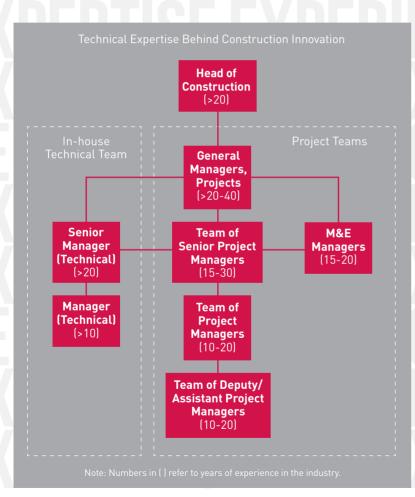
Backed by portfolio of projects valued at > \$\\$11.5 \ Billion

Completed more than 170 major construction projects since 1972

S\$1.81 Billion worth of order book outstanding at end June 2021

1 st local contractor to clinch an MRT Design and Build main contract independently

EXPERIENCE AND EXPERTISE



Lum Chang's ability to deliver projects on time and to the best quality for our clients is backed by a more than 20-member senior management team leading our pool of 600 plus-strong highly skilled, competent and dedicated workforce with the tenacity to give the best in what they do.

With their rich and diverse experience in the industry and strong engineering fundamentals, our passionate senior management team provide strong strategic and technical leadership to both on-site and centralised technical departments, steering our project teams through a wide range of projects from high rise buildings to deep underground infrastructure works.

SOCIAL RESPONSIBILIT

Lum Chang is committed to being an environmentally and socially responsible builder

We proactively engage all > Our Quality, necessary resources and implement a framework and programme to prevent ill-health, injury and pollution in our workplace.

Environmental, Health and Safety Policy

We are committed to using our natural resources efficiently, and minimising waste and pollution. We endeavour to mitigate negative impacts to the general public, and ensure that public safety is not compromised.

> Our Green and **Gracious Policy**

RECENT AWARDS AND ACCOLADES

>2019

WSH Performance (Silver) Award 2019

WSH Performance (SHARP) Award 2019 for

- Tanah Merah MRT Station (Contract T315)
- Tekka Place
- Northpoint City

>2020

BCA Construction Excellence Award, Industrial Buildings Category, Excellence 2020 Kingston

BCA Construction Excellence Award, Commercial / Mixed Development Buildings Category, Excellence 2020 Northpoint City >2020

BCA Green & Gracious Builders Award 2020 – Star Champion

BCA Green Mark Gold^{Plus} Award, 2020 Tekka Place

BCA Green Mark Platinum Award, 2020

- Woodlands North Coast 7 North Coast
- PSA Liveable City

JTC Construction Safety Award 2020 Woodlands North Coast

RoSPA Health & Safety Awards 2020 – Gold

WSH Performance (Silver) Award 2020

WSH Performance (SHARP) Award 2020 for

- Tanah Merah MRT Station (Contract T315)
- North-South Corridor Tunnel (Contract N110)
- Tekka Place

>2021

BCA Design & Engineering Safety Awards, Project Category, 2021

- Tekka Place

BCA Construction Excellence Award - Merit, Commercial/Mixed Development Buildings Category, 2021

- Tekka Place

BCA Integrated Digital Delivery Gold Award, Firm Category 2021

BCA Integrated Digital Delivery Gold Plus Award, Project Category 2021

- North-South Corridor - Tunnel (Contract N110)

ACCREDITATIONS ACCREDITATIONS ACCRED ALIONS ACCREDITATIONS ACCREDITATIONS I

Quality <

Management System Certificate

ISO 9001: 2015

SS ISO 9001: 2015

Design Management, Piling, Building & Civil Engineering Construction Services

Environment

Management System Certificate

ISO 14001 : 2015

SS ISO 14001 : 2015

Piling, Building & Civil Engineering Construction Services

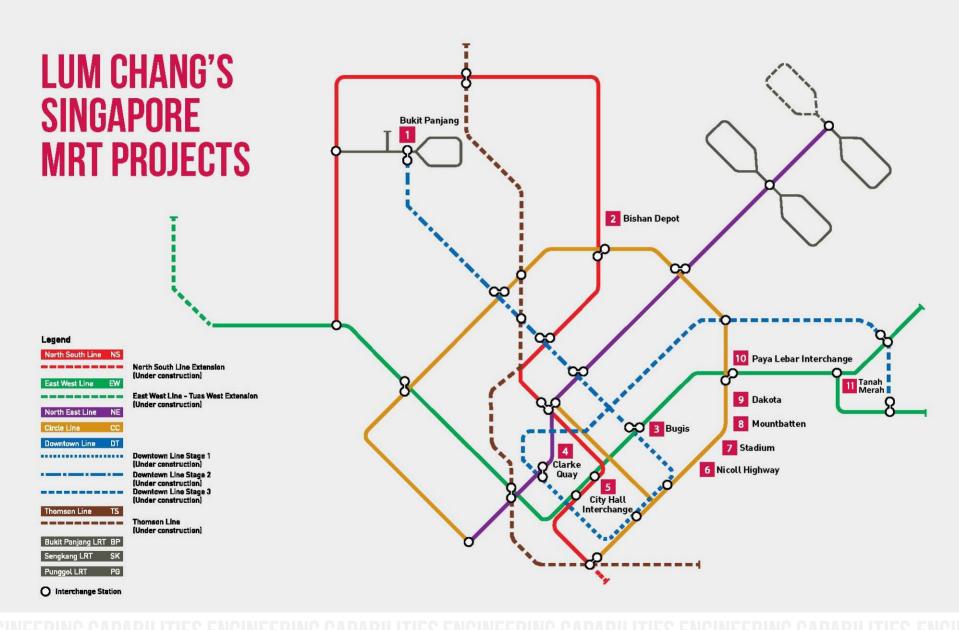
Occupational < Safety and Health Management System Certificate

ISO 45001 : 2018

Piling, Building & Civil Engineering
Construction Services



ENGINEERING CAPABILITIES



ENGINEERING CAPABILITIES



BUKIT PANJANG STATION



BISHAN DEPOT



BUGIS STATION



CLARKE QUAY STATION



CITY HALL INTERCHANGE



NICOLL HIGHWAY STATION



STADIUM STATION



MOUNTBATTEN STATION



DAKOTA STATION



PAYA LEBAR INTERCHANGE

MRT DOWNTOWN LINE STAGE 2 CONTRACT 912

Client Land Transport Authority

Description

Design and construction of station at Bukit Panjang and tunnels including three basement levels (concourse platform and under-platform)

Location **Bukit Panjang, Singapore**

Contract Value **\$\$505 million**

Completed in 2015







In 2009, we were awarded the Downtown Line Stage 2 Contract (C912), making us the **first local contractor to win a Design & Build MRT main contract independently**, without any joint venture partners. This strongly illustrates the industry's resounding recognition of, and confidence in, Lum Chang's construction expertise in civil engineering works.

Completed in mid 2015, the C912 project scope included an underground station with three basement levels (which also serves as a Civil Defence shelter) and a 1.8km cut-and-cover tunnel stretching from C911 (Gali Batu Depot) to the C913 bored tunnel in front of The Linear residential development.

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C912

Engineering Challenges at C912

Deep Excavations

- Deep excavation works of up to 25m below ground level
 - Piling and blasting of Bukit Timah granite formation

Underpinning Works for Bukit Panjang LRT Pier P521

Value-engineered solution for underpinning works at P521 (located in between the DTL2 tunnels)

Integration of existing pilecap with post-tensioned (PT) transfer beam, supported at the ends by a diaphragm wall that was already employed for Earth Retaining and Stabilising Structures (ERSS)

Resulted in less disturbances to existing piles during construction and a more robust strutting system for excavation and construction



Extent of Excavation Works as Seen from Top Views



LRT Viaduct Pier P521 Underpinning





Underpinning Works for Canal

Necessary underpinning works for a 21m canal located along Woodlands Road, to construct tunnels below

Proposed new design and innovative construction method of underpinning entire canal box with micropiles

New method posed less construction risk and eliminated risk of damage to SingTel cables

Rock Fissure Grouting through Reservation Ducts in Diaphragm Walls/Secant Bored Piles

Introduced Swedish technique of rock fissure grouting using microfine cement to cut off seepage during rock excavation

ENGINEERING CAPABILITIES

C912

Utility Diversions

Innovative and robust utility support designs for diversion of larger-sized utilities

Fabricated and installed steel manholes, supported under traffic and construction decks, thereby overcoming difficulties in supporting reinforced concrete manholes

Traffic Diversions

Project site located at a highly built-up area with substantial traffic flow

Diversions planned to cause minimal disruptions and disturbances to other stakeholders

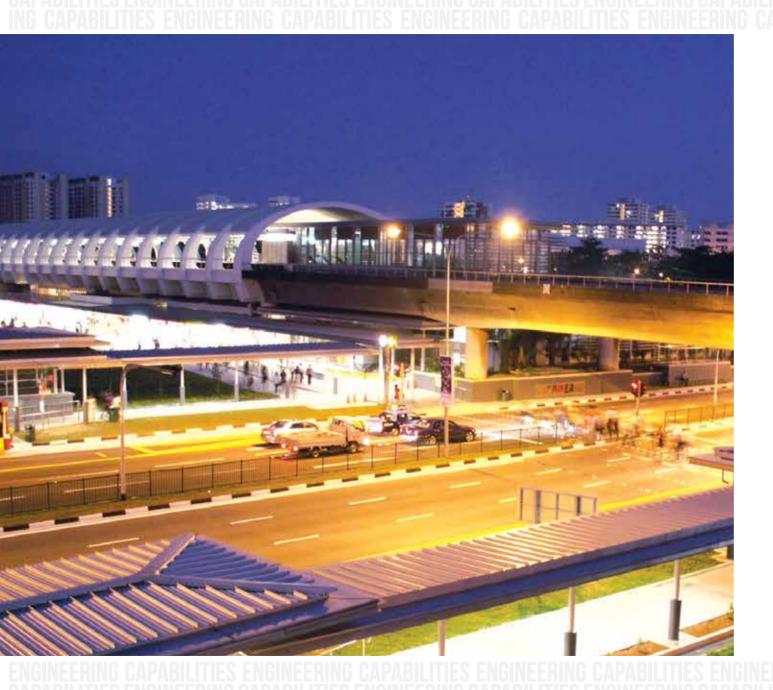
Innovative design solutions such as signalised roundabout at a busy road junction



Traffic Diversions at Various Locations Along Project Site



A Section of Completed Tunnel



MRT CIRCLE LINE STAGE 2 CONTRACT 823

Client Land Transport Authority

Description

Construction and completion of stations at Mountbatten, Dakota and Paya Lebar including tunnels

Location

Mountbatten Road/Old Airport Road/ Paya Lebar Road

Contract Value **\$\$322 million**

Award

BCA Construction Excellence Award (Civil Engineering Projects Category), 2011

Completed in 2009

BILITIES ENGINEERING CAPABILITIES ENGINEERING

C823

Part of the fully underground Circle Line (CCL), Stage 2 is a section of approximately 5.4km length running from Stadium Boulevard to Upper Paya Lebar. There are five stations and one depot, with the Paya Lebar Station serving as an interchange for the existing East-West Line (EWL) as well.

Contract 823 (C823) comprises the construction of three MRT stations (two of which are Civil Defence shelters), as well as 1.66km of bored tunnel and 150m of cut-and-cover tunnels. Under this contract, Lum Chang took on the works at Paya Lebar Station, the cut-and-cover tunnels north and south of the station, as well as the canal upgrading from Paya Lebar to Tanjong Katong (including box bridge culverts at Geylang, Guillemard and Dunman).









Engineering Challenges at C823

Excavation for Station and Cut-and-Cover Tunnels

Station size approximately 175m long by 38m wide and 14.5m in height; maximum excavation depth of 18m

Bottom-up construction within strutted diaphragm wall used to construct station and tunnels

ENGINEERING CAPABILITIES

C823

Underpinning Works for Paya Lebar Station

Underpinning works required to facilitate removal of obstructing piled foundations of existing EWL viaduct piers (Piers 115E and 115W)

Vertical loading of existing piers transferred to new frame system, comprising transfer beams, jacks and barrette piles

First such operation carried out in Singapore on a live MRT viaduct

Real-time monitoring of piers and viaducts to ensure work suspension level not breached during construction

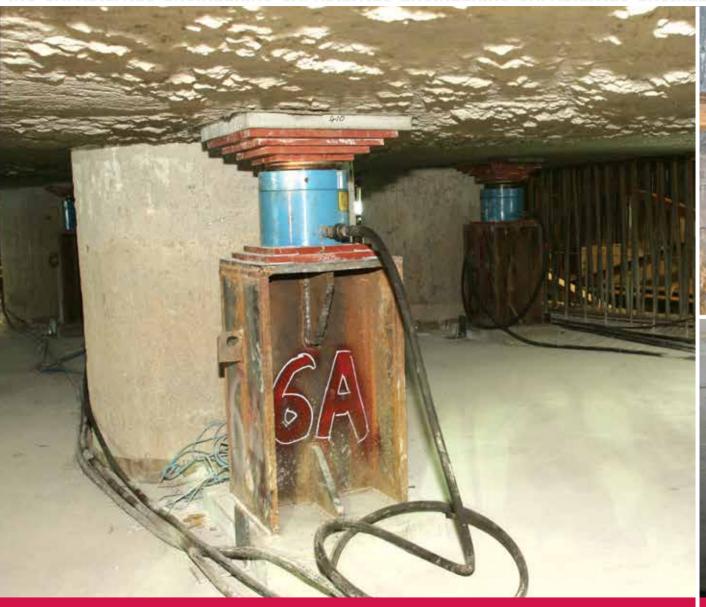
Underpinning carried out successfully and safely with no impact on EWL operations





Photos of Existing Piers that Require Underpinning

ENGINEERING CAPABILITIES







Preload Jacking at P115E

CHANGI WATER RECLAMATION PLANT — CONTRACT 2B

Client
Public Utilities Board

Description

Construction of an influent pumping station that forms a part of the PUB's S\$2 billion state-of-the-art Deep Tunnel Sewerage System (DTSS)

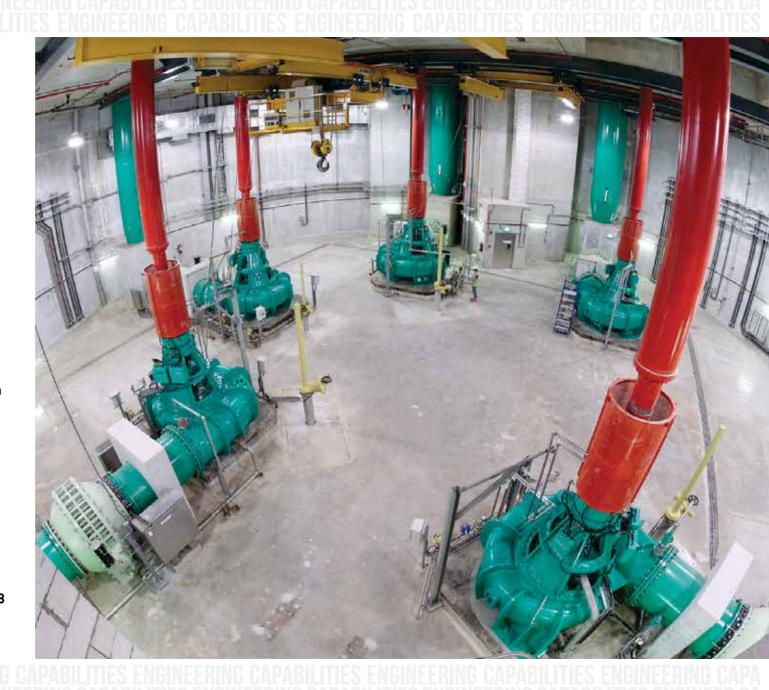
Location Changi, Singapore

Contract Value **\$\$215 million**

Award

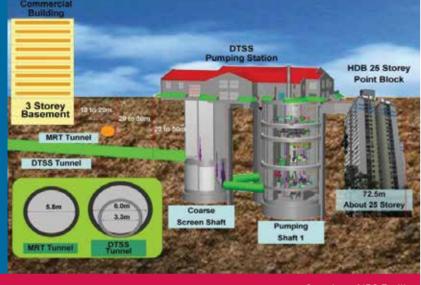
BCA Award for Construction Excellence, (Civil Engineering Projects Category), 2008

Completed in 2007



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CONTRACT 2B



Overview of IPS Facility



Schematic Drawing of Changi Deep Tunnel Sewage System

Phase 1 of the PUB's Deep Tunnel Sewerage System (DTSS) covers the northeastern part of the island, and uses cross-island deep tunnels to intercept wastewater and convey it by gravity to the new Changi Water Reclamation Plant (CWRP).

Lum Chang was commissioned by the PUB to build the Influent Pumping Station (IPS) Facility of the CWRP. The IPS Facility receives influent from the DTSS at 60m below ground level and pumps it to the treatment facility through large diameter pressure pipes.

Our scope of Civil Works included the construction of the following key structures:

Three 70m deep shafts and the IPS Building located atop; twin running underground pipelines of 1.5km length by 4.3m diameter; two Sub-Stations, a 32m tall Effluent Junction Chamber (EJC), Fuel Tank Building.

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CONTRACT 2B

Technical Expertise

Construction Expertise in Safe Temporary Works

Substantial temporary works, bulk of which were designed and executed in-house

Extensive shoring and strutting work for 13m wide by 18m deep braced excavation for underground pipelines

Specially designed diaphragm wall to restrict ground movements within specified limit; used along 500m stretch adjoining Tanah Merah Coast Road and the Sea-Face Cut-off Wall

Value-Engineering Capability

Value-engineered proposal for the high-pressure 4.3m diameter underground twin pipelines from steel to concrete

Pipelines built using cast-in-situ High Density Polyethylene (HDPE) lined reinforced concrete for better long-term corrosion protection

Innovative combination of custom-made self-travelling formwork from Italy, and a special high-flow concrete mix to enable casting of pipeline encasement with minimum compaction

Short six to seven-day cycle for each twin 13m length casting



Temporary Works for Shafts and Pipelines



Casting Cycle of Pipelines

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CONTRACT 2B

Project Management and Logistics Planning

Casting of thick floor slabs

Developed innovative and optimal methodology for casting of 2m thick shaft floor slabs, which required temperature-controlled monolithic concrete pours

'Sandwich concept' developed to prevent thermal cracking due to temperature difference

Poured concrete at different temperatures, using a combination of Ordinary Portland Cement and Low-heat Cement, in layers to achieve optimal adiabatic composite

Specialised M&E works

Procured and installed specially imported technical equipment such as large knife gate valves and ball valves

Ensured smooth equipment performance despite not having prior experience in this area

Transport of materials

Worked with specialist fabricator to transport large steel pipe sections on barges, from fabrication yard in Jurong to project site in Changi by sea to overcome logistic issues in transporting by road







Transportation of Oversized Pipe Sections on Barges

ONGOING INFRASTRUCTURE PROJECTS







MRT EAST WEST LINE CONTRACT T3 15

NORTH-SOUTH CORRIDOR CONTRACT N 1 10

Client

Land Transport Authority

Description

Addition and alteration works to the existing Tanah Merah Station and viaducts

Location

Tanah Merah, Singapore

Contract Value **\$\$325 million**

Under Construction

Client

Land Transport Authority

Description

Design and construction of 1.95 km tunnel structures, a facility building, at-grade roads and drainage system. Work on culverts and relevant connections, commuter facilities and pedestrian overhead bridges is also included in the contract.

Location

Between Ang Mo Kio Avenue 3 and Avenue 9, Singapore

Contract Value **\$\$799 million**

Under Construction

THE METROPOLIS

MIXED DEVELOPMENT

Client
Ho Bee (One North) Pte Ltd

Description
21 and 23-storey office towers with three levels of basement car park

Location
North Buona Vista Drive, Singapore

Contract Value **\$\$298 million**

Completed in 2013







This project involved the construction of two tower blocks with three basements of car park, as part of the One North Development. Due to the relatively short construction period of 30 months and the requirement to achieve early TOP for Tower One by 27 months, the design of Earth Retaining or Stabilising Structures (ERSS) works was critical in ensuring that excavation works could be carried out efficiently and safely.

THE METROPOLIS

Engineering Challenges at Metropolis

Close Proximity to Neighbouring Structures

Project site directly adjacent to the underground Buona Vista Station (Circle Line), with permanent basement walls just 6m from the outer edge of underground MRT structures

Close to existing Ministry of Education Complex

13.5m excavation for three basement car parks need to be done with minimal impact to neighbouring structures, especially the MRT station





Construction in Progress

THE METROPOLIS



Top-Down Construction for Tower One



Semi Top-Down Construction for Tower Two

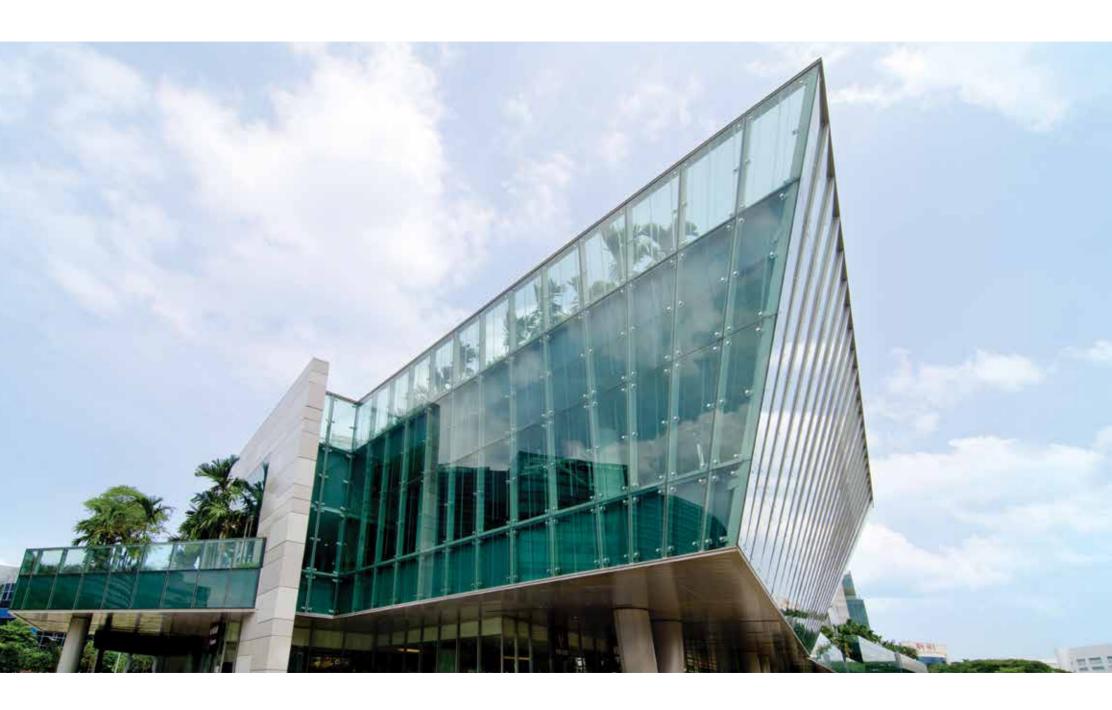
Top-down Construction for Tower One

Contiguous Bored Pile with full top-down construction method necessary to meet the tight schedule for Tower One

Allowed superstructure works to concurrently proceed while excavation works for basement were on-going

Semi Top-down Construction for Tower Two

Hybrid system that can be applied due to longer time frame for Tower Two



PROJECT HIGHLIGHTS

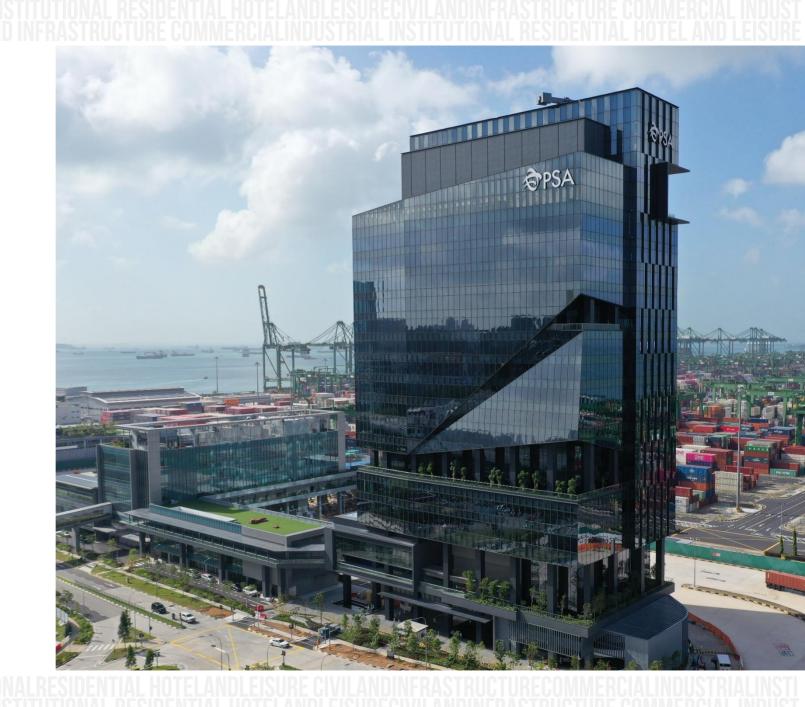
PSA LIVEABLE CITY OFFICE

Client PSA Corporation Ltd

Description
20-storey office tower and
an adjacent 4-storey block with
recreational amenities

Location **Harbour Drive, Singapore**

Contract Value **\$\$137 million**





TEKKA PLACE MIXED DEVELOPMENT

Client Corwin Holdings Pte Ltd

Description

Mixed development with retail podium and hotel.
Adjoining annex block will undergo major refurbishment to include retail and parking facilities and also a rooftop commercial-cum-culture space

Location **2 Serangoon Road, Singapore**

Contract Value **\$\$86 million**

TOP obtained on 26 November 2019

NORTHPOINT CITY

MIXED DEVELOPMENT

Client

North Gem Development Pte Ltd and FC North Gem Trustee Pte Ltd as trusteemanager of North Gem Trust

Description

Three-storey podium block comprising retail, community club and bus interchange with two basements and mezzanine of retail and carparks, and 12 Blocks of 10-storey residential development above

Location
Yishun Central 1 / Yishun Avenue 2

Contract Value **\$\$478 million**





DNV TECHNOLOGY CENTRE

OFFICE

Client

Ascendas Land (Singapore) Pte Ltd

Description

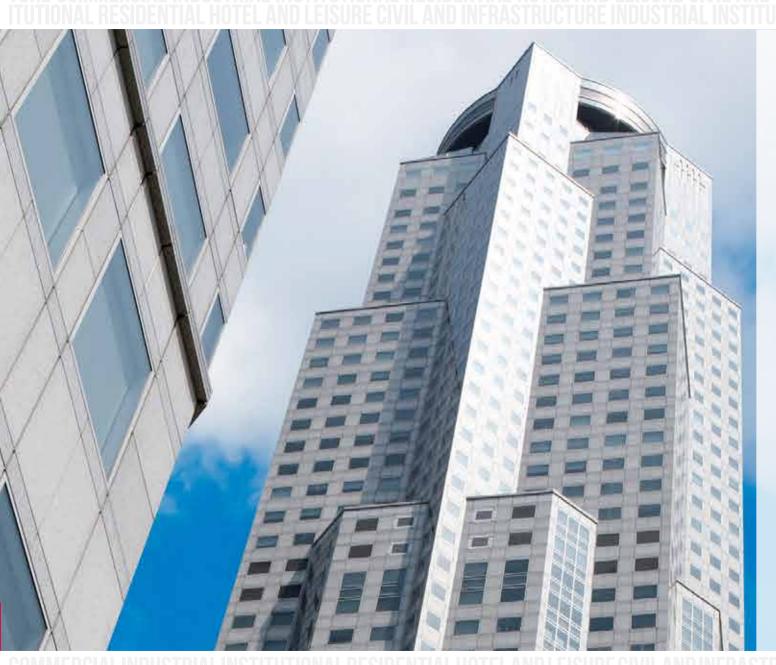
One block of seven-storey and two blocks of eight-storey business park development

Location

Science Park Drive, Singapore

Contract Value **\$\$152 million**





UOB PLAZA 1

Client United Overseas Bank Ltd

Description 280m high, 66-storey office tower

Location Raffles Place, Singapore

Contract Value **\$\$314 million**

Awards

BCA Award for Construction Excellence, Merit, (Civil Engineering Category) 1994

BCA Award for Construction Excellence, Merit, (Commercial Buildings Category) 1995

AMK HUB MIXED DEVELOPMENT

Client

SLF AMK Pte Ltd NTUC Income Insurance Co-operative Ltd NTUC Fairprice Co-operative Ltd

Description

Four-storey retail mall with two retail basements and one basement carpark, including a bus interchange and connecting access to Ang Mo Kio MRT station

Location

Ang Mo Kio, Singapore

Contract Value **\$\$129 million**





PARAGON MIXED DEVELOPMENT

Client

Times Properties Pte Ltd, Orchard 290 Ltd

Description

A&A works to existing retail mall and construction of new 14-storey office tower

Location

Orchard Road, Singapore

Contract Value **S\$116 million**

Award

BCA Award for Construction Excellence, Merit, (Commercial Buildings Category) 2002

NUCLEOS

Client

Ascendas Venture Pte Ltd

Description

Seven-storey commercial development with mezzanine floor and basement car park

Location

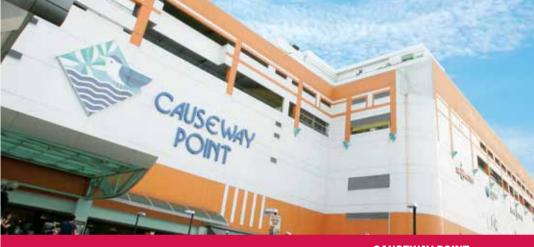
Biopolis Road/Biomedical Grove, Singapore

Contract Value **S\$92 million**



COMMERCIAL





BUGIS JUNCTION RETAIL





CHANGI BUSINESS PARK OFFICE



COMMERCIAL

WOODLANDS NORTH COAST

Client JTC Corporation

Description

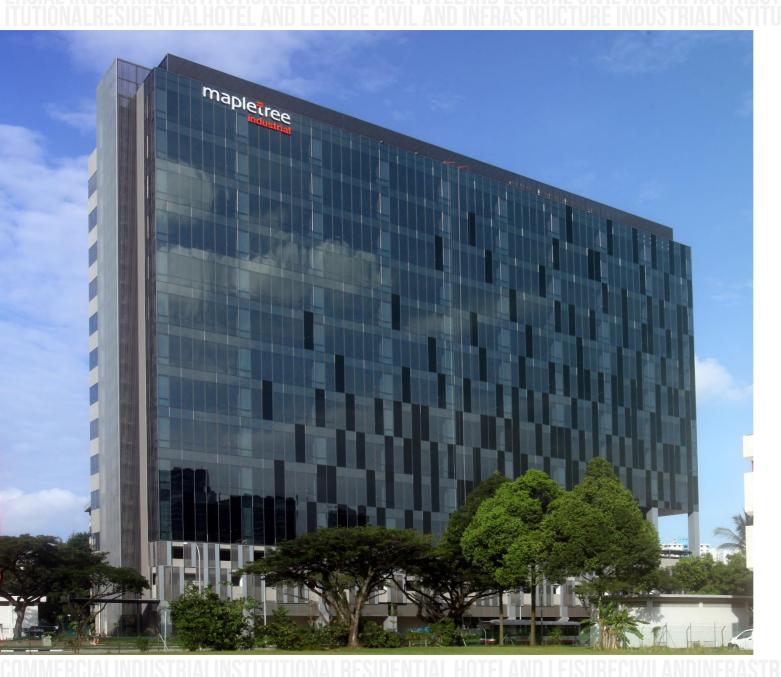
Construction of a new eight-storey, and one other nine-storey light industrial building with one level of basement carpark, and a covered walkway to Republic Polytechnic

Location

Junction of Woodlands Avenue 4 and 9

Contract Value **\$\$200.5 million**





HI-SPECIFICATION INDUSTRIAL BUILDING

Client

DBS Trustee Limited as Trustee of Mapletree Industrial Trust

Description

Construction of a 14-storey multi-user high-specification building with twostorey carpark, and asset enhancement works for three existing buildings

Location

Junction of Boon Keng Road and Kallang Place

Contract Value **\$\$60.8 million**

DRIL-QUIP MANUFACTURING FACILITY

Client

Dril-Quip Asia Pacific Pte Ltd

Description

Industrial complex with 12 buildings serving as Dril-Quip Asia Pacific's manufacturing facility and office

Location

Tuas South Avenue 1, Singapore

Contract Value

S\$47 million

Award

BCA Award for Construction Excellence, (Industrial Buildings Category), 2013







LUM CHANG BUILDING

Client

Lum Chang Property Investments Pte Ltd

Description Nine-storey industrial development

Location

14 Kung Chong Road, Singapore

Contract Value **\$\$18 million**

INDUSTRIAL



CORPORATION PLACE



TECHNOPARK @ CHAI CHEE



ASIA PACIFIC BREWERIES



INDUSTRIAL



CROWNE PLAZA CHANGI AIRPORT

Client LC Airport Hotel Pte Ltd

Description Nine-storey hotel

Location Changi Airport Terminal 3, Singapore

Contract Value **\$\$77 million**

Award
BCA Design and Engineering Safety
Excellence Award, Merit, (Commercial
Buildings Category), 2009

MARRIOTT SINGAPORE

Client

CENTRE

Tang Choon Keng Realty (Pte) Ltd, CK Tang Limited

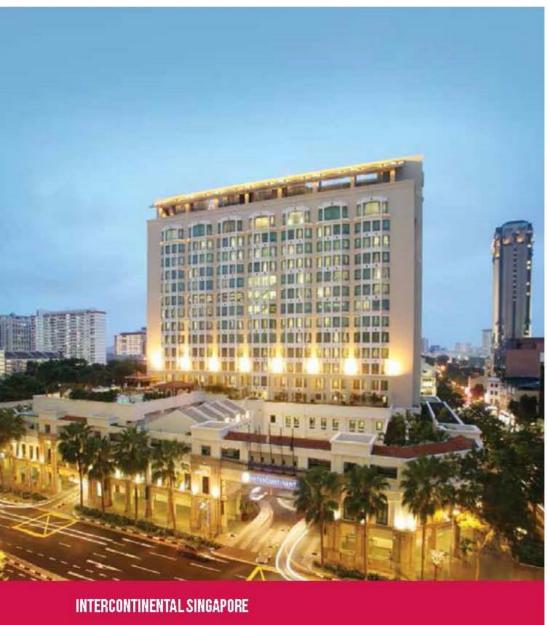
Description
Five-star unique oriental-style hotel

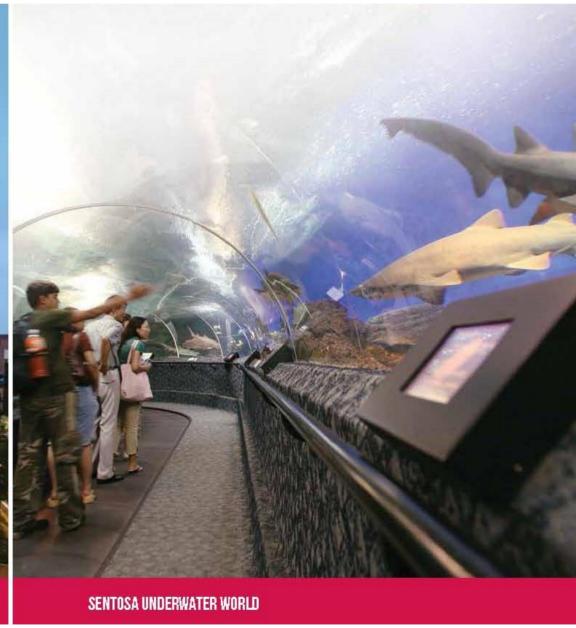
Location
Orchard Road, Singapore

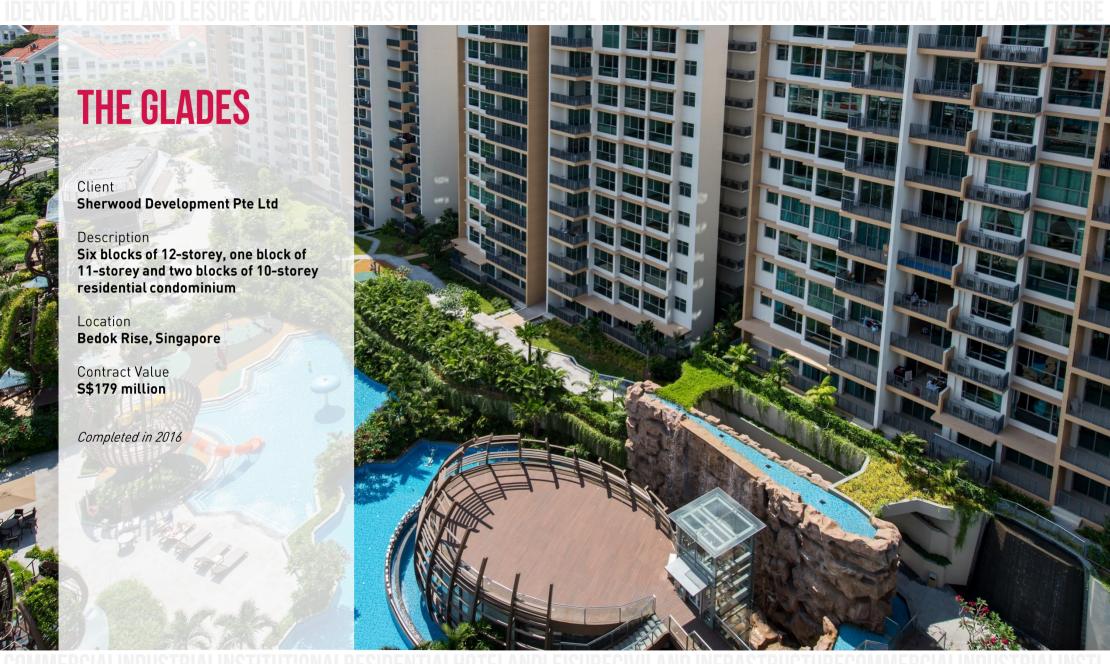
Contract Value **S\$77 million**



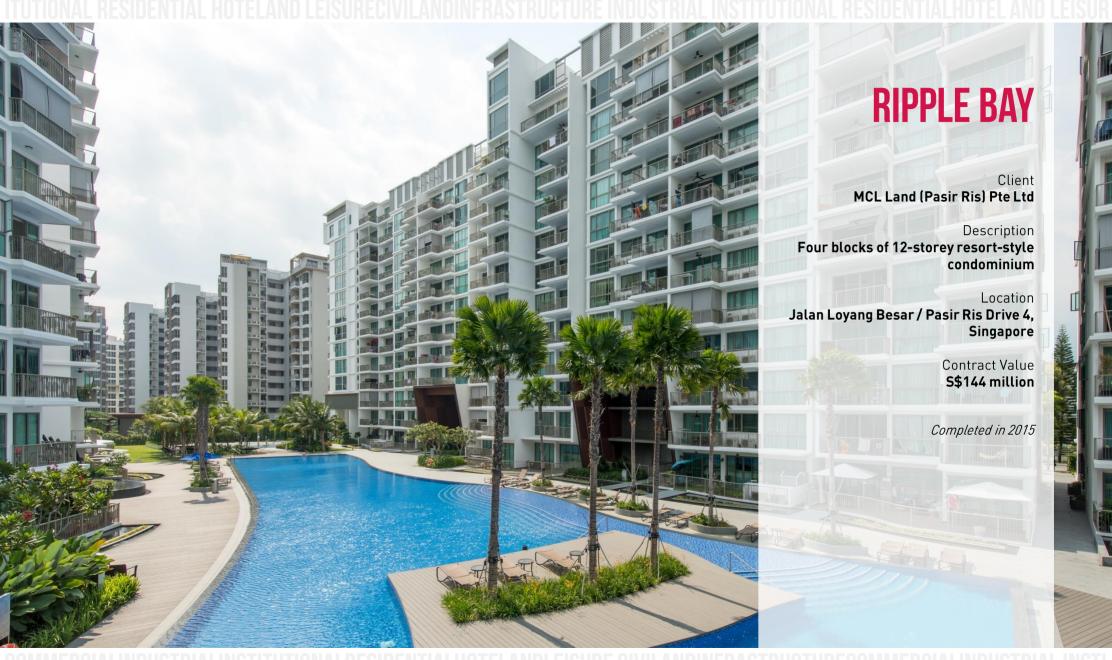
HOTEL AND LEISURE







LRESIDENTIAL



RESIDENTIAL



COMPASS HEIGHTS



THE LEVELZ

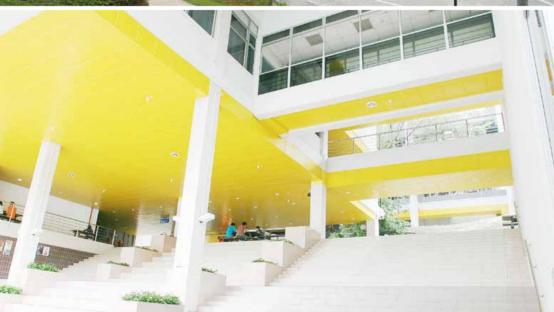


ESPARINA RESIDENCES



CASABELLA







NATIONAL UNIVERSITY OF SINGAPORE

Client National University of Singapore

Description

Construction and A&A works for various buildings at NUS Campus

Location
Kent Ridge Road, Singapore

Contract Value **\$\$245 million**

Completed in phases between 1970s and 1980s

NATIONAL LIBRARY

Client

National Library Board

Description

15-storey library block with a drama centre and 16-storey programming block with three basements

Location

Victoria Street, Singapore

Contract Value

S\$204 million

Awards

BCA Award for Construction Excellence, (Institutional Buildings Category), 2007

BCA Universal Design Award, Silver, (Institutional Buildings Category), 2007

BCA Best Buildable Design Award, Merit, (Institutional Buildings Category), 2006

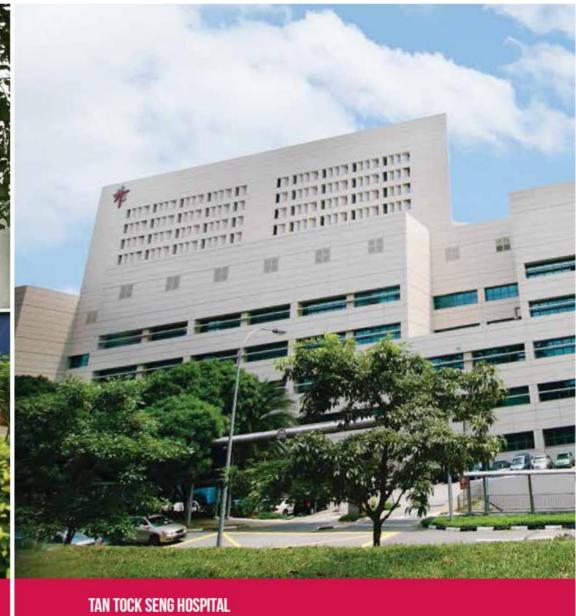
Green Mark Platinum Award, 2006

Asean Energy Award, (Energy Efficient Building-New and Existing Category), 2007



INSTITUTIONAL







Lum Chang Building Contractors Pte Ltd

14 Kung Chong Road #08-01 Lum Chang Building Singapore 159150

T: (65) 6273 8888

F: (65) 6933 6699

E: lch@lumchang.com.sg

www.lumchang.com.sg