



# *Land Transport Excellence Awards 2022*

Land Transport  Authority  
We Keep Your World *Moving*



# AWARDS

## Environment Category

### Environmental Excellence – Civil Contractor (Mega)

*Recognises and honours the most outstanding organisation(s) that has consistently achieved a track record for good corporate wide environment practices within the land transport sector, for contract value above \$50 million.*





Award Finalist - Environment

## Environmental Excellence – Civil Contractor (Mega)

### CHINA RAILWAY FIRST GROUP CO., LTD. SINGAPORE BRANCH

**Award Title** : Environmental Excellence – Civil Contractor (Mega)

**Award Criteria** : The Environmental Excellence Award recognises and honours the most outstanding organisation that has consistently achieved a track record for good corporate wide environmental practices on land transport development for contract value above \$50 million. The award recipient must be an award winner at the LTA's Annual SHE Award Convention (ASAC) held in the last three years.

**Organisation** : China Railway First Group Co., Ltd. Singapore Branch

China Railway First Group Co., Ltd (CRFG), a wholly owned subsidiary of China Railway Group Limited (CREC) — a Global 500 Fortune Company, was established in 1950. CRFG has 34 subsidiaries in China and 22 subsidiaries overseas, with over 24,000 employees worldwide.

CREC set up its Singapore Branch in 2015. Our business includes constructing of MRT stations and TBM Tunnelling, Trackwork, and Civil Works. Current projects in Singapore include:

- T302 Founders' Memorial Station and Tunnels
- T2180 - Floating Slab Trackwork for Thomson-East Coast Line Stage 2 & 3
- T250A Trackwork for TEL Stage 4 & 5 & DTL Stage 3 Extension & East-West Line Upgrade.
- N108 Design and Construction of North South Corridor.
- J150 Jurong Region Line Trackwork

At CRFG, our vision is to '**THINK GREEN AND BUILD GREEN**'. Being a finalist for this award demonstrates CRFG's strong commitment and capabilities in achieving environmental excellences through its Environmental Management Plan, education efforts, ground leadership training, innovation and initiatives.

Faced with environmental challenges in constructing a 3-km length of tunnels and the underground Founders' Memorial Station over construction site of 63,000m<sup>2</sup> (approximately eleven Soccer fields combined) abutting historic waterfront landmark Marina Bay Reservoir, Garden by the Bay East and Marina Bay Golf Club, CRFG mitigated these challenges with the following implementations:

- Designed a corporate management system to ensure that the sanctuary and tranquility of Marina Bay areas were maintained and remained intact.
- Conducted effective EHS Operation Procedures, Waste Management Plan, Recycle/Reuse/Reduce process with Green & Gracious Practice to mitigate environmental impacts from air pollution, construction noise, dengue, flooding, waste and energy consumption reduction at the construction sites.
- Invested in construction technology to achieve environmental sustainability through the installation of technologies such as Mast Climbing Platform, System Modular Formworks and Auto Wheel Washer just to name a few.
- Built a garden to house 787 transplanting trees and keeping 141 at the Nursery.

CRFG received BCA's Green and Gracious Builders Award Excellent Category in both 2018 and 2019, LTA Construction Environmental Award in 2019 and LTA Construction Environmental Award in Certificate of Merit at the Annual SHE Award Convention (ASAC) in 2020.





Award Finalist - Environment

## Environmental Excellence – Civil Contractor (Mega)

### NISHIMATSU CONSTRUCTION CO., LTD. – BACHY SOLETANCHE SINGAPORE PTE LTD JOINT VENTURE (NBJV)

**Award Title** : Environmental Excellence – Civil Contractor (Mega)

**Award Criteria** : The Environmental Excellence Award recognises and honours the most outstanding organisation that has consistently achieved a track record for good corporate wide environmental practices on land transport development for contract value above \$50 million. The award recipient must be an award winner at the LTA's Annual SHE Award Convention (ASAC) held in the last three years.

**Organisation** : Nishimatsu Construction Co., Ltd. – Bachy Soletanche Singapore Pte Ltd Joint Venture (NBJV)

**Nishimatsu Construction Co., Ltd.** (Nishimatsu) was founded in 1874 in Japan. Nishimatsu set up its Singapore Branch Office in 1980 and has been involved in numerous infrastructures and building projects in Singapore since. Among them, Nishimatsu was involved in numerous MRT projects, including the building of stations and tunnels for the current rail transit system. **Bachy Soletanche Singapore Pte Ltd** (Bachy) was incorporated in 1982 and has contributed significantly to Singapore's built environment both in the building and civil engineering sectors. The joint venture between Nishimatsu Construction Co., Ltd. and Bachy Soletanche Singapore Pte Ltd (NBJV) was awarded the contract (Contract T228) for the Construction of Gardens by the Bay Station and Tunnels for Thomson East Coast Line in 2014.

Contract T228 consisted of the construction of Gardens by the Bay station with twin bored tunnels undercrossing the Marina Channel, also known as Marina Reservoir. Being close to some of Singapore's famous tourist attraction such as Marina Barrage, Gardens by the Bay, Satay by the Bay and park connectors of Marina East and South, it was important to ensure that pristine condition of the surrounding area was maintained throughout the entire period of the project.

Ensuring zero pollution to the surrounding water body and the sea during tunnel boring works, soil improvement works and diaphragm wall construction was challenging and could only be achieved through proper planning and precision execution. NBJV is proud to highlight that we successfully overcame all the challenges safely and delivered on schedule.

In terms of conserving energy and water consumption, various innovative and practicable ideas were implemented. These included the usage of NEWater for production work activities, recycling of clean discharge water from water treatment plants, use of solar panels for instrumentation monitoring, use of sea water for deep cement mixing works, deployment of electric buggy to transport personnel across marina barrage, etc. Contract T228 also saw Singapore's first directional grouting carried out under the Marina Channel. This innovative solution allowed for ground treatment works to be carried out safely, and without any disruption or pollution to the Marina Channel.

In support of Singapore government's push for greener measures and to reduce carbon emissions, NBJV also adopted several initiatives to reduce carbon emissions. The re-launch of tunnel boring machine (TBM) at Marina East via a TBM U-turn initiative allows potential carbon emission activities involving heavy lifting, transportation, logistics and machineries to be eliminated or significantly reduced.

NBJV was involved in Nishimatsu's BCA's Green and Gracious Builder Scheme (GGBS) application audit, which attained GGBS Star Level. Contract T228 also completed the project with 6.3 million accident-free manhours with no environmental infringement issued throughout the contract duration.





Award Finalist - Environment

## Environmental Excellence – Civil Contractor (Mega)

### SHANGHAI TUNNEL ENGINEERING CO (SINGAPORE) PTE LTD (STEC)

- Award Title** : Environmental Excellence – Civil Contractor (Mega)
- Award Criteria** : The Environmental Excellence Award recognises and honours the most outstanding organisation that has consistently achieved a track record for good corporate wide environmental practices on land transport development for contract value above \$50 million.
- Organisation** : Shanghai Tunnel Engineering Co (Singapore) Pte Ltd (STEC)

#### TOP MANAGEMENT WSHE COMMITMENT

STEC is ISO14001 certified and fully supportive of "Green and Gracious Builder Scheme" that was introduced in 2009 to raise its environmental consciousness and professionalism. It is also a benchmark of STEC's corporate social responsibility to the environment and public during the construction of projects. To achieve these objectives, STEC implements a robust environmental policy and control procedures in all their projects to raise awareness, educate and inculcate best green and gracious environmental practices at all levels.

#### SUSTAINABLE ENVIRONMENTAL MANAGEMENT

To enable the effective environment management during the construction phase, STEC implemented proper record keeping of environmental risks and full legal environmental compliance monitoring. STEC management ensures that relevant information is recorded and made available to stakeholders.

#### IMPORTANCE OF WSHE TEAMWORK & TRAINING

To upkeep good Workplace Safety, Health and Environment (WSHE) standards, STEC Projects go the extra mile to ensure all its workers have good environmental awareness through training so that they are equipped with proper WSHE knowledge and measures for every job undertaken. STEC also encourages staff to be environmentally responsible and conserve natural resources. Thus, all project teams are trained on the best environmental initiatives and practices through mandatory WSHE Induction trainings and regular environmental campaigns.

#### ENVIRONMENTAL INITIATIVES WITH TECHNOLOGY

STEC continually improves on its environmental standards through implementing green and gracious initiatives. One of the initiatives, the "3-R" approach, was effectively implemented in all STEC projects to ensure all construction wastes are Reduced, Reused and Recycled to save project costs and resources.

STEC also established solid waste management plans and procedures to encourage recycling or reduction of construction waste and office waste in all projects. For example, one of the initiatives introduced to the worksite was the conversion of food waste collected from the canteen into organic fertilizer for site greenery plantation. As part of water conservation initiatives, STEC developed the Water Efficiency Management Plan (WEMP). Weekly reading and recording of water main and sub-system line are carried out to monitor the usage of water.

STEC partnered with non-profits organisations through sponsorship and employee volunteerism.

#### ENVIRONMENTAL EXCELLENCE ACHIEVEMENTS

STEC's efforts to enhance its environmental performance and management were rewarded with several exemplary awards. Most notably, STEC was nominated for LTA's Annual Safety, Health and Environmental Award Convention (ASAC) Finalist from 2015 to 2018 and winning the ASAC Contractor's Challenge Shield in 2017 & 2018. In addition, STEC also won the LTA ASAC Construction Environmental Excellence Award in 2018, PUB Exemplary Earth Control Measures Officer (ECMO) Award in 2019, BCA G&G Builder Award - STAR Champion in 2019, as well as Champion Award in Eco-Office Certified by Singapore Environmental Council in December 2021.



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