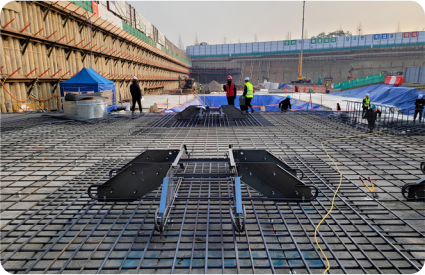
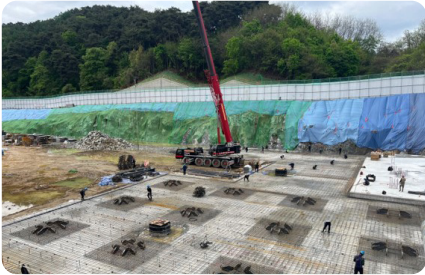


Site and Project References



Osan Segyo Station
H Construction site
(2-leg Type)



Gwanseol-dong, Wonju
D construction site
(2-leg Type)



H Apartment site
in Daemyeong-dong, Daegu
(Isolated Foundation, 1-leg Type)

Contractor	Project	Application Year
POSCO E&C	Busan Geumjeong The Sharp	2025
POSCO E&C	Jeju Yeondong 261-37 Mixed-use Complex	2024
SK ecoplant	SK Hynix M15X	2024
Hanwha E&C	Goyang Samsung IT Valley Knowledge Industry Center	2024
DL E&C	National Assembly-daero New Construction	2024
Taeyoung Construction	Guro Saenggak Factory (Top-down)	2024
DL E&C	Ulsan Sinjeong-dong Mixed-use New Construction (Top-down)	2024
Hyundai E&C	Daegu Sincheon-dong Residential Complex	2024
Lotte E&C	Magok MICE Complex CP3-1 (Top-down)	2024
Hyundai E&C	Yongin High-tech Center (Top-down)	2024
Ssangyong E&C	ASML Hwaseong New Campus P1 (Top-down)	2024
Hyundai E&C	Daegu Daemyeong-dong Hillstate Phase 2	2024
Lotte E&C	Seocho-dong Officetel (Top-down)	2024
Hyundai Engineering	Cheongju Integrated Terminal	2024
Lotte E&C	Dobong-gu Banghak-dong Mixed-use Complex	2024

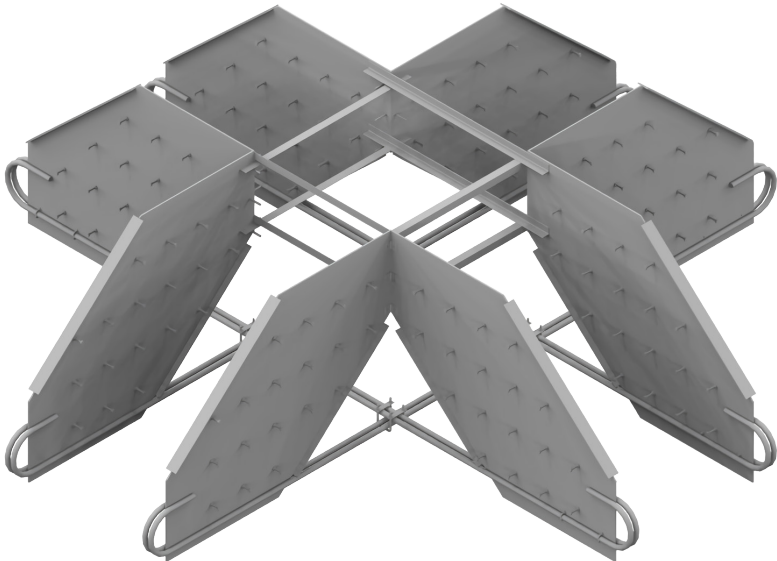
Successfully applied over 300+ construction sites

“We independently develop technologies that
can innovate construction sites.”



Thinner foundation, Stronger performance!

Foundation Reinforcement
Arch Plate - Modular Type

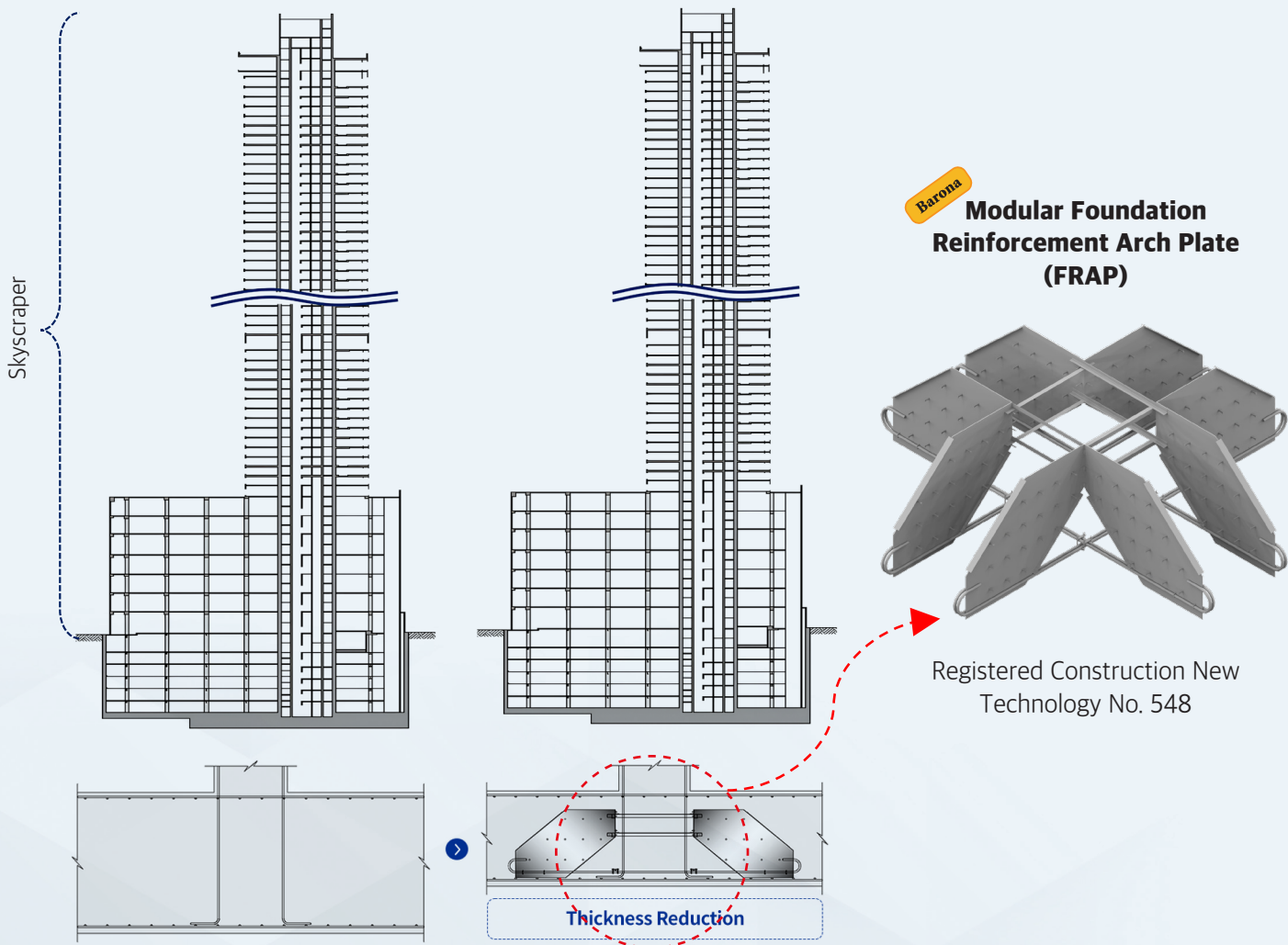


6thF Baro Bldg.9 Pungseong-ro 38-gil Gangdong-gu Seoul, Korea 05393
www.baro-ck.com
T/ 02.413.6503 F/ 02.413.6503
baro-ck@baro-ck.com



What's Barona Foundation Reinforcement Arch Plate (Barona FRAP)?

Barona Foundation Reinforcement Arch Plate is a construction method that installs foundation reinforcement capable of Strut-Tie Action inside the footing, enabling efficient load distribution and thereby reducing foundation thickness.



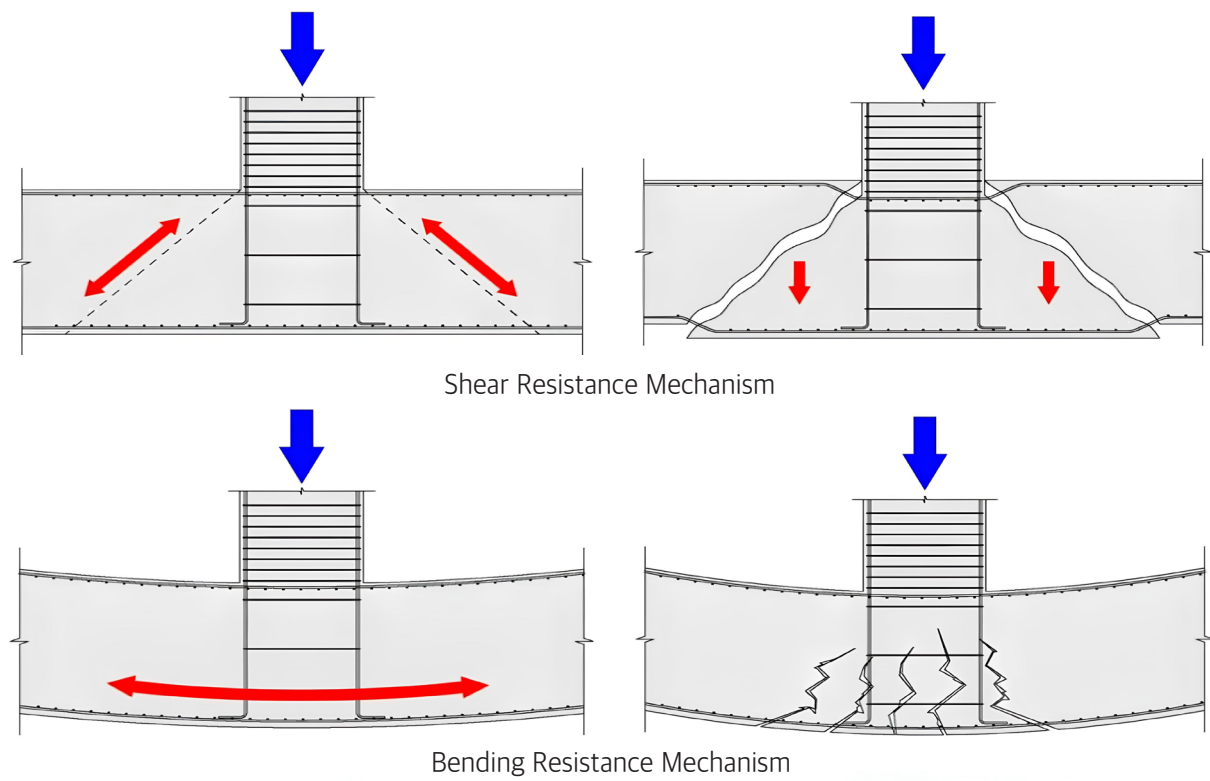
Why Barona FRAP?

- ✓ **20-30%** Reduction in Foundation Thickness
- ✓ Reduced Concrete Pouring Volume
- ✓ Improved Quality due to Reduced Heat of Hydration
- ✓ Fewer Construction Joints
- ✓ Reduced excavation leads to shorter construction periods
- ✓ Minimized vibration and noise from construction equipment
- ✓ Construction costs reduced by **10~30%**

Structural Principle

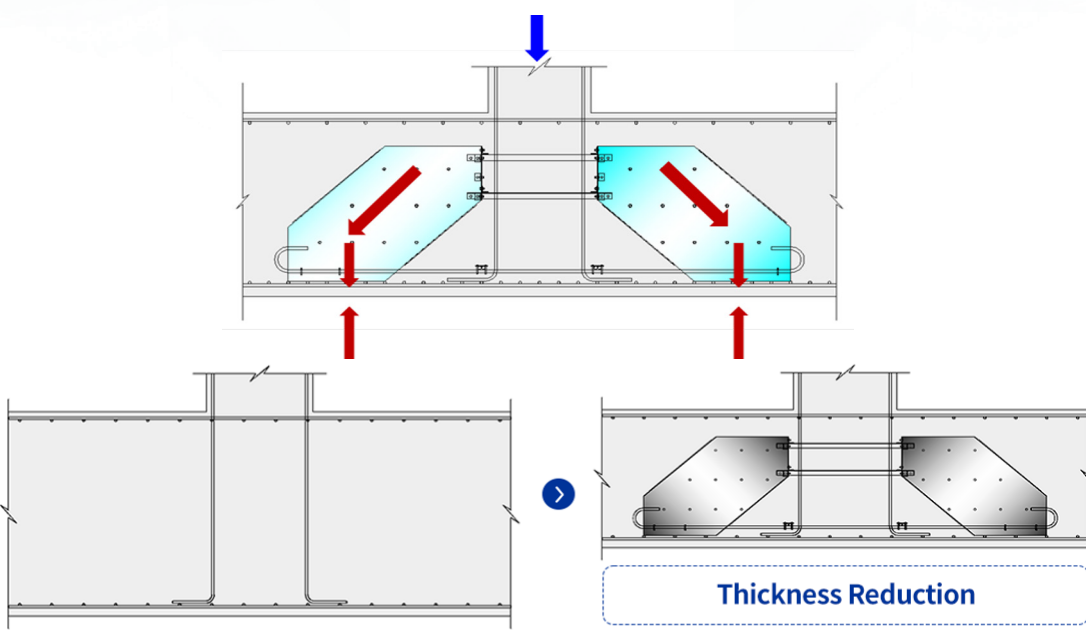
1. Foundation Stress

Foundation thickness and reinforcement quantity are determined based on shear force and bending



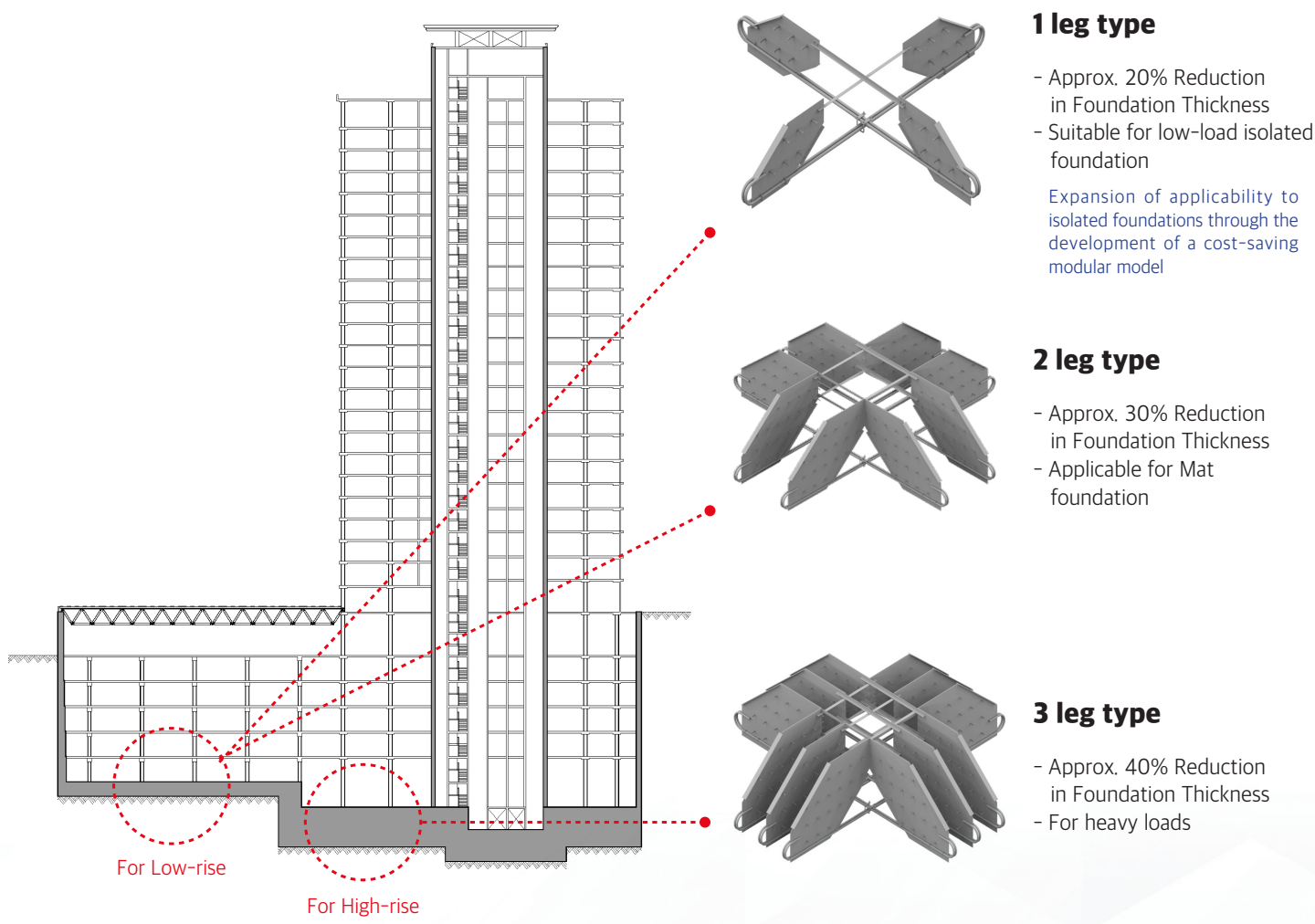
2. Strut-Tie Model Analysis (Designed according to Building Code KDS 41)

Based on this load path, the system was developed using STM (Strut-Tie Model) analysis.

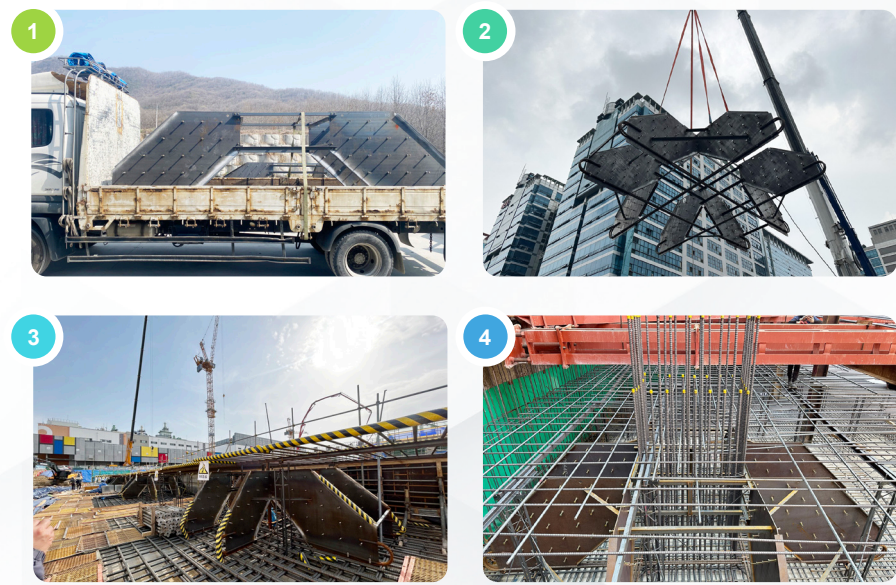


- According to test results, the foundation reinforcement showed over **155% increase in strength** compared to unreinforced foundations.
- It also demonstrated enhanced energy absorption capacity, making it **advantageous for seismic performance**.

Product type and sequence



Construction Sequence



- 1 Transport / Delivery
- 2 Hoisting
- 3 Installation
- 4 Column Rebar Placement

※ Preassembly and lifting may be carried out depending on site type (e.g., high-rise or top-down), or on-site assembly may be done after positioning