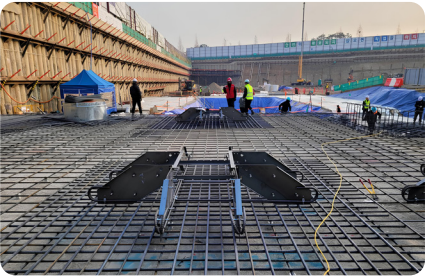
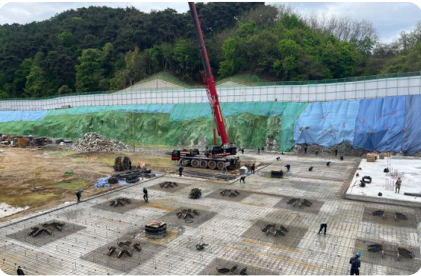


Site and Project References



Osan Segyo Station
H Construction
(2-leg Type)



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



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

| Contractor | Project | Application Year |
|-----------------------|---|------------------|
| Xai C&A | Seegene Hanam M Center Construction | 2025 |
| POSCO E&C | Busan Geumjeong The Sharp | 2025 |
| Gilbok Construction | Hanyang University 4th Engineering Building | 2025 |
| TDA | Bangbae-dong Urban Lifestyle Housing Construction | 2025 |
| Gyeryong Construction | Mia Station Area Revitalization Project | 2025 |
| Shinui Construction | Daegu Hyomok-dong Neighborhood Living Facility Construction | 2024 |
| POSCO E&C | Jeju Yeondong 261-37 Mixed-use Complex | 2024 |
| CJ Logistics | Dogok Orion Office Building | 2024 |
| SK Ecoplant | SK Hynix M15X | 2024 |
| Hanwha Construction | Goyang Samsung IT Valley Knowledge Industry Center | 2024 |
| DL E&C | National Assembly Avenue Construction | 2024 |
| Bando Construction | Yeongcheon District 2 Complex buidling | 2024 |
| Hanil Construction | Suwon Gyeonggi Nonghyup Bank | 2024 |
| Taeyoung Construction | Guro Idea Factory (Senggak Gongjang) | 2024 |
| Dooson Construction | Seocho-dong 1593-13 and 6 Other Parcels Office-tel | 2024 |

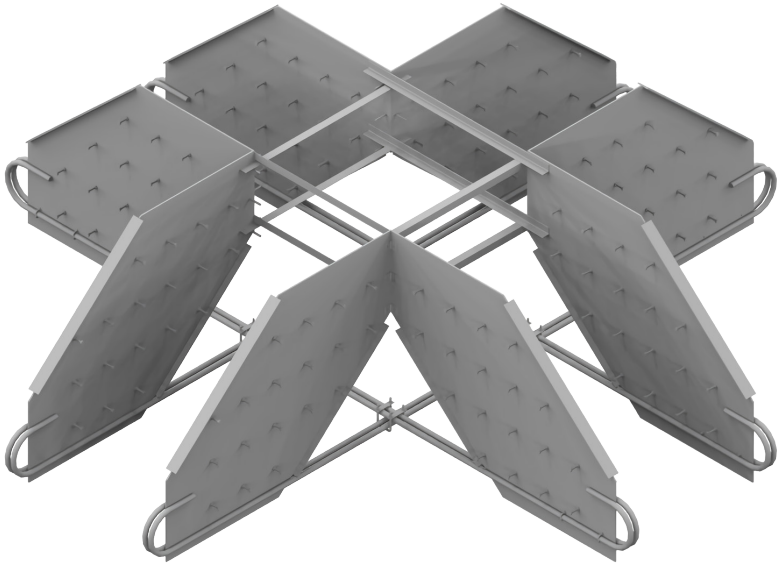
Successfully applied over 300+ construction sites

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



Thinner foundation, Stronger performance!

Foundation Reinforcement
Arch Plate - Modular Type

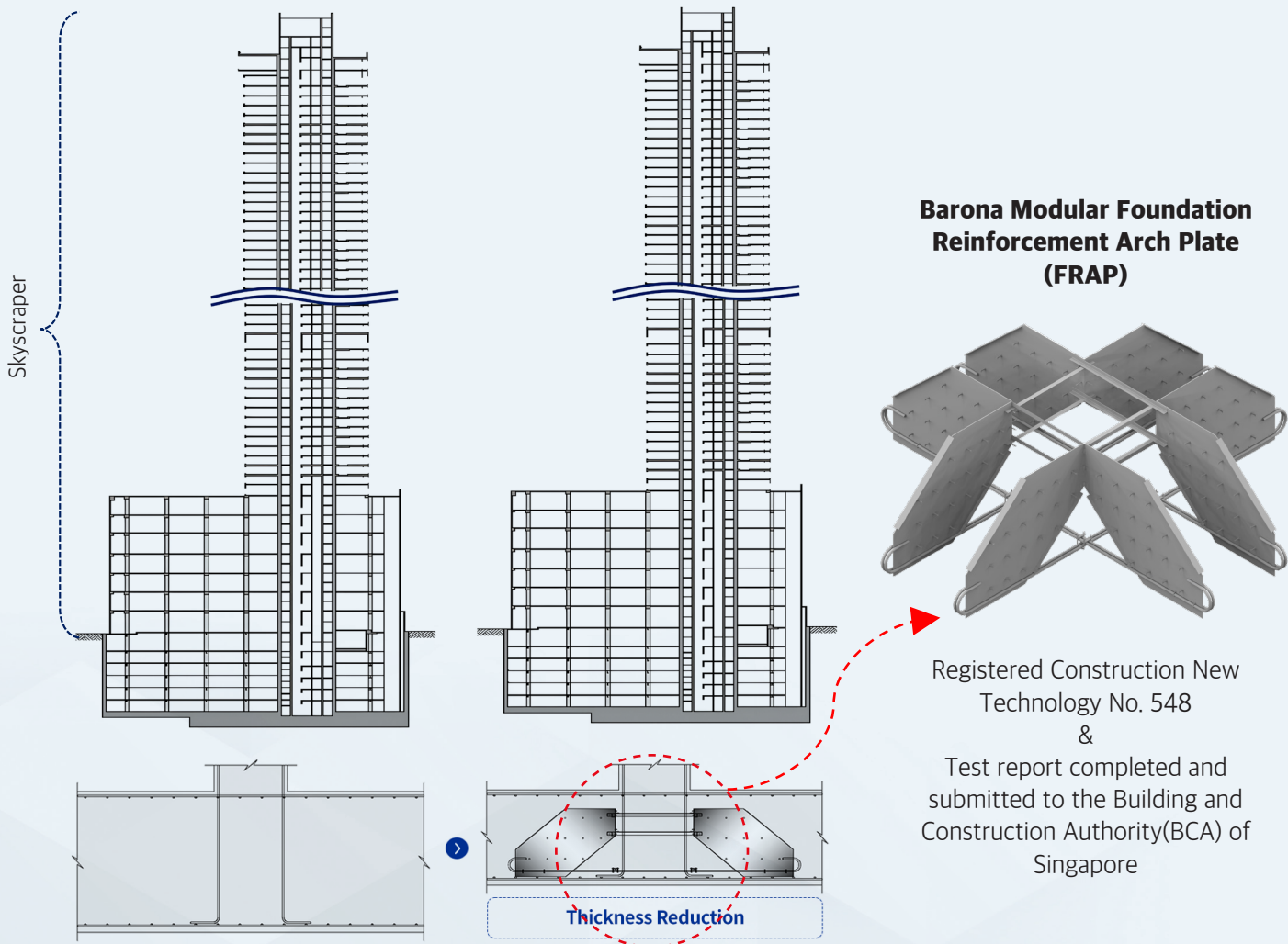


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What's Barona Foundation Reinforcement Arch Plate (Barona FRAP)?

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.



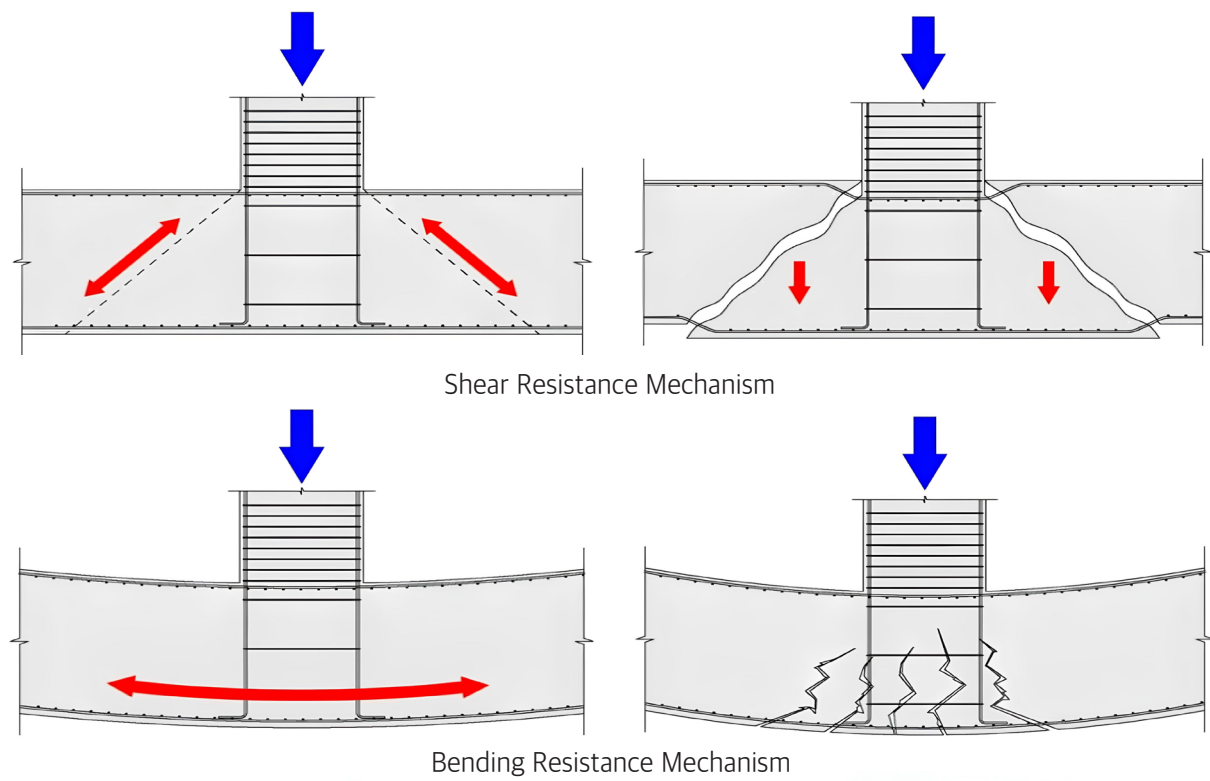
Why Barona FRAP?

- ✓ 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

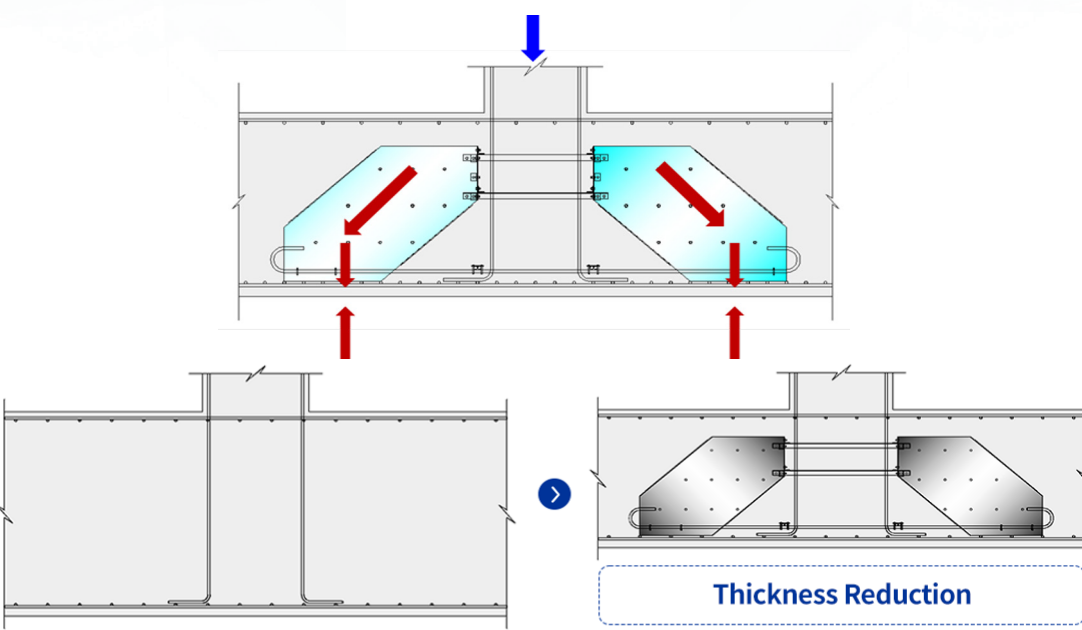
1. Foundation Stress

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



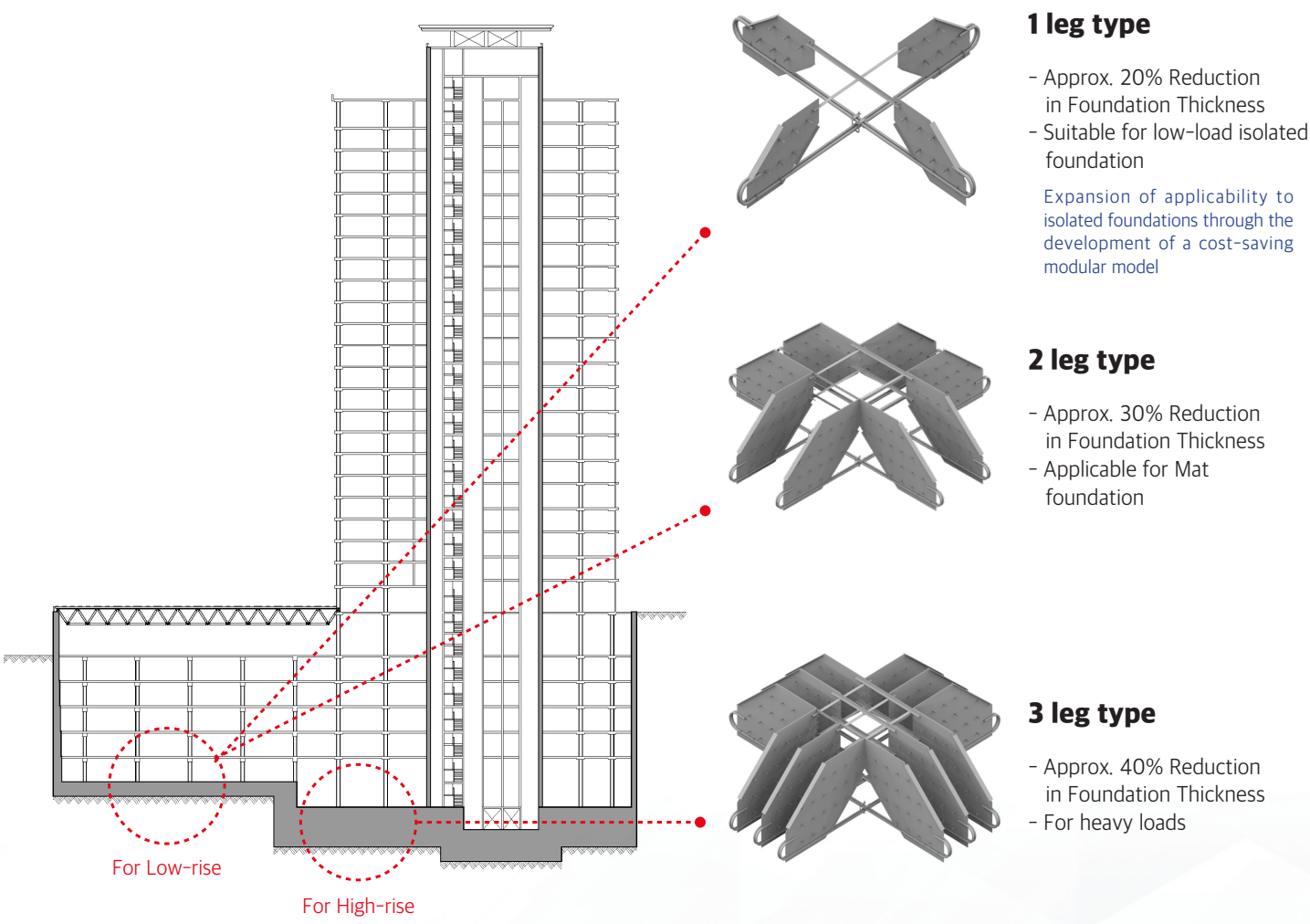
2. Strut-Tie Model Analysis (Designed according to Building Code KDS 41)

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

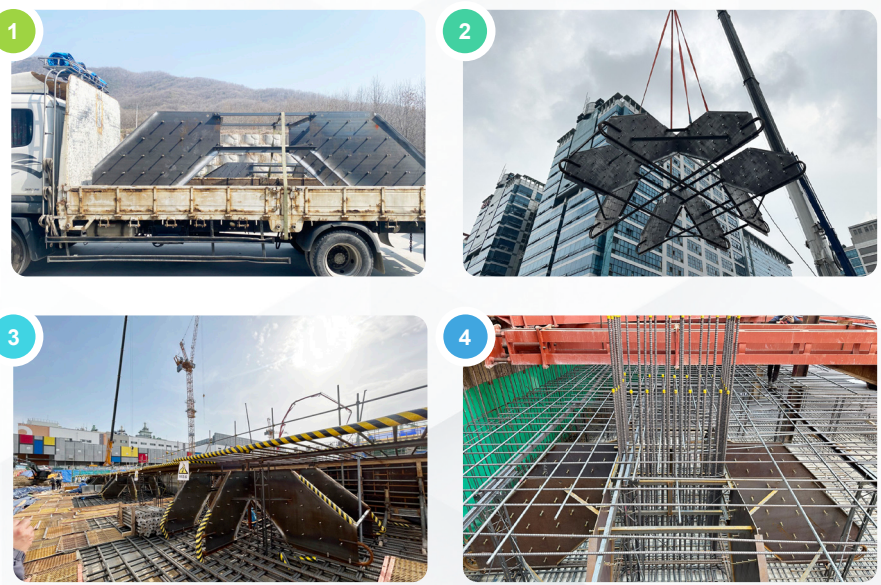


- According to test results, the foundation reinforcement showed over **155% increase in strength** compared to unreinforced foundations.
- It also demonstrated enhanced energy absorption capacity, making it **advantageous for seismic performance**.

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