



GEOMETRIC STEELS

Engineering Metro Rail Infrastructure Projects.

Aluminium Ventilation Louvers · Roof Access Hatches · Steel Decking Sheets

Purpose-engineered building systems for metro stations, depots and viaducts.

IS 513 / IS 277 Compliant

In-House Roll Forming

Pan-India Project Execution



THE CHALLENGE

Metro Infrastructure Demands More Than Standard Building Products



Sustained heavy public footfall

Concourse, platform and footbridgedecking must carry continuous live loads without deflection, cracking or long-term fatigue.



Continuous plant-room heat load

Traction substations, AC plant, signalling and OHE rooms generate constant heat ventilation cannot be an afterthought.



Safe, code-compliant access

O&M staff need secure, weather-tight access to roof plant rooms and underground cable trenches daily, for the life of the asset.



50-year design life

Stations are built once. Corrosion protection and coating specification have to be right the first time.



Fast-track construction schedules

Factory-engineered, drawing-matched components install faster and more predictably than site-fabricated alternatives.

WHERE GEOMETRIC STEELS FITS

One Manufacturing Partner Across the Station



Aluminium Louvers

Plant-room / AHU ventilation, facade sunshade & substation intake-exhaust



Roof & Floor Access Hatches

Safe O&M access to plant rooms, cable ducts & utility trenches



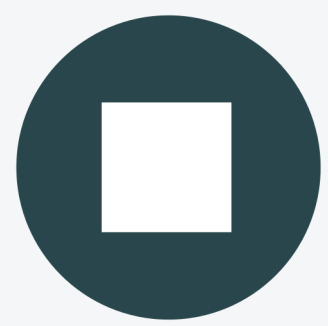
Steel Decking Sheets

Composite flooring for concourse, platform & footbridge slabs

ABOUT GEOMETRIC STEELS

A Single-Source Manufacturing Partner for Metro Rail Infrastructure

Geometric Steels Roll Forming Pvt. Ltd. (Pune) designs, roll-forms and supplies engineered steel and aluminium building systems roofing & ventilation, access hatches, steel decking sheets, and structural accessories manufactured to IS 513 / IS 277 specification and supplied factory-finished, ready to install.



In-House Roll Forming

Full control over profile quality, tolerances and lead time no import dependency for critical infrastructure components.



IS-Standard Compliance

Base metal, zinc coating and yield strength documented to IS 513 / IS 277 on every product line.



Infrastructure-Grade Manufacturing

Products engineered for industrial, commercial and public-infrastructure duty cycles, not retail construction.



Custom Fabrication to Drawing

Louvers, hatches and decking profiles configured to project GA drawings and site conditions.

Relevant to This Project

For metro rail work, three GS product lines directly serve station and depot construction: Aluminium Ventilation Louvers, Roof & Floor Access Hatches, and Steel Decking Sheets covered in detail over the following pages.

PRODUCT 01

Aluminium Ventilation & Sunshade Louvers

'Z'-type and rectangular blade louvers in powder-coated aluminium, custom-fabricated to project drawings.



SPECIFICATION

Blade profile	'Z'-type & rectangular (40x100mm); GSA-38 / 493 / 514 / 515 series
Material	Aluminium, Nalco / Hindalco or equivalent
Thickness	1.10 mm – 2.00 mm (variant dependent)
Profile depth	30 mm – 108 mm across blade series
Finish	Powder coated, 80 microns, standard colours
Fixing	SS 304 self-tapping, self-drilling screws

WHY IT MATTERS FOR METRO PROJECTS

- Passive, continuous ventilation for plant rooms, AHU enclosures and substations no moving parts to maintain.
- Sand-trap and bird-mesh variants purpose-built for dust-laden ambient air on elevated and at-grade corridors.
- Sunshade configuration controls solar heat gain on station facades, reducing cooling load on platform HVAC.
- Powder-coated aluminium construction resists corrosion in humid and coastal metro corridors over decades.

PRODUCT 02

Roof & Floor Access Hatches

Weather-tight, lockable access hatches engineered for safe O&M entry to roof plant rooms and underground utility spaces.



VARIANTS AVAILABLE

Single skin	GI, powder coated, standard RAL 7024
Double skin insulated	Rock-wool core; superior thermal/acoustic performance
Aluminium thermal insulated	Alloy 3105/A6061, EPDM D-seal, weather-tight
Daylight / polycarbonate	16mm multi-wall polycarbonate, UV-stabilized
Floor access hatch	4mm chequered plate, drainage channel, anti-slip

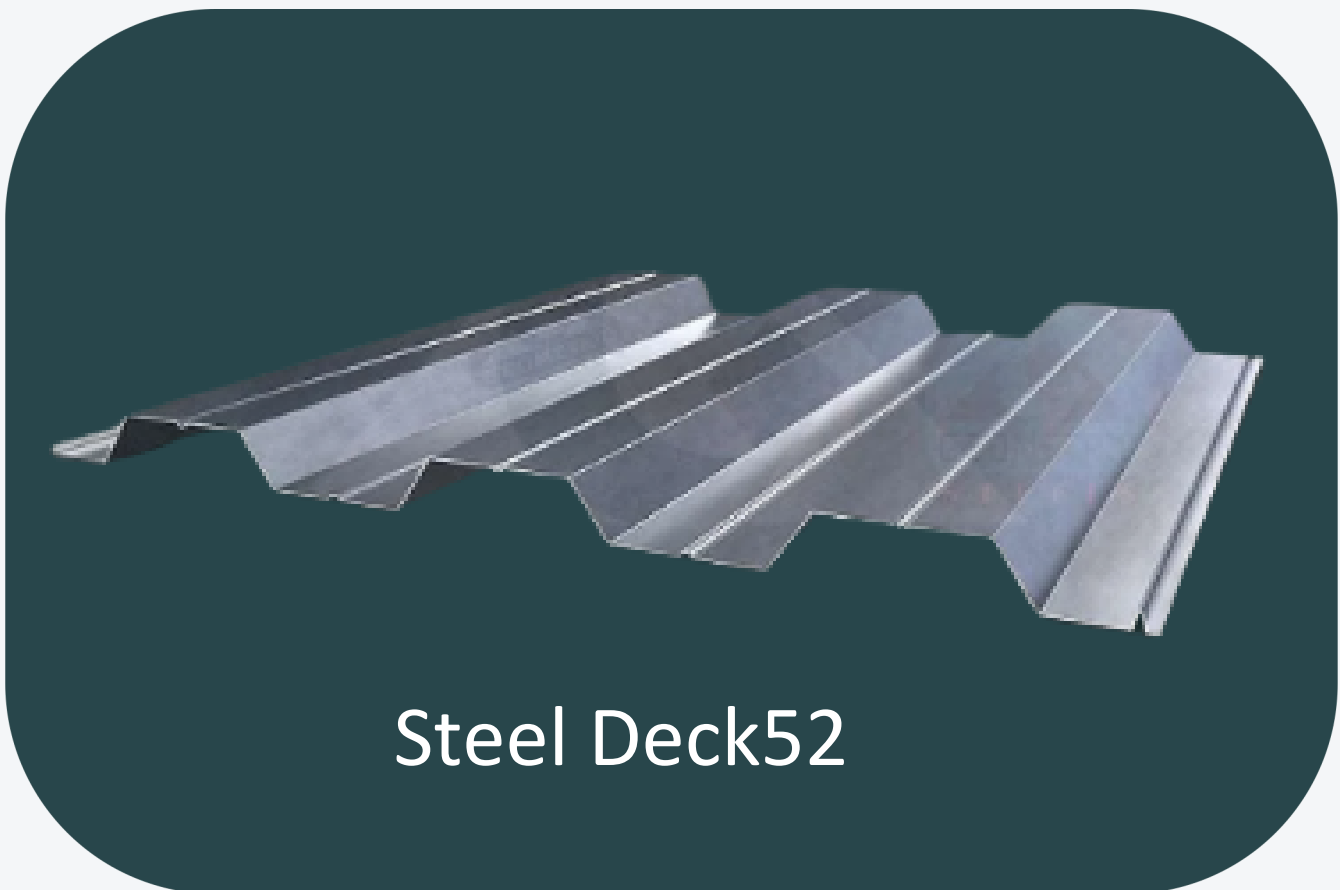
WHY IT MATTERS FOR METRO PROJECTS

- Secure, code-compliant daily access for maintenance staff to rooftop plant, signalling and E&M equipment.
- Gas-strut assisted opening and lockable latches safe, one-person operation, restricted access by design.
- Insulated variants reduce heat gain into station plant rooms in exposed elevated/viaduct sections.
- Anti-slip floor access hatch with integrated drainage suits underground cable trenches and utility ducts.

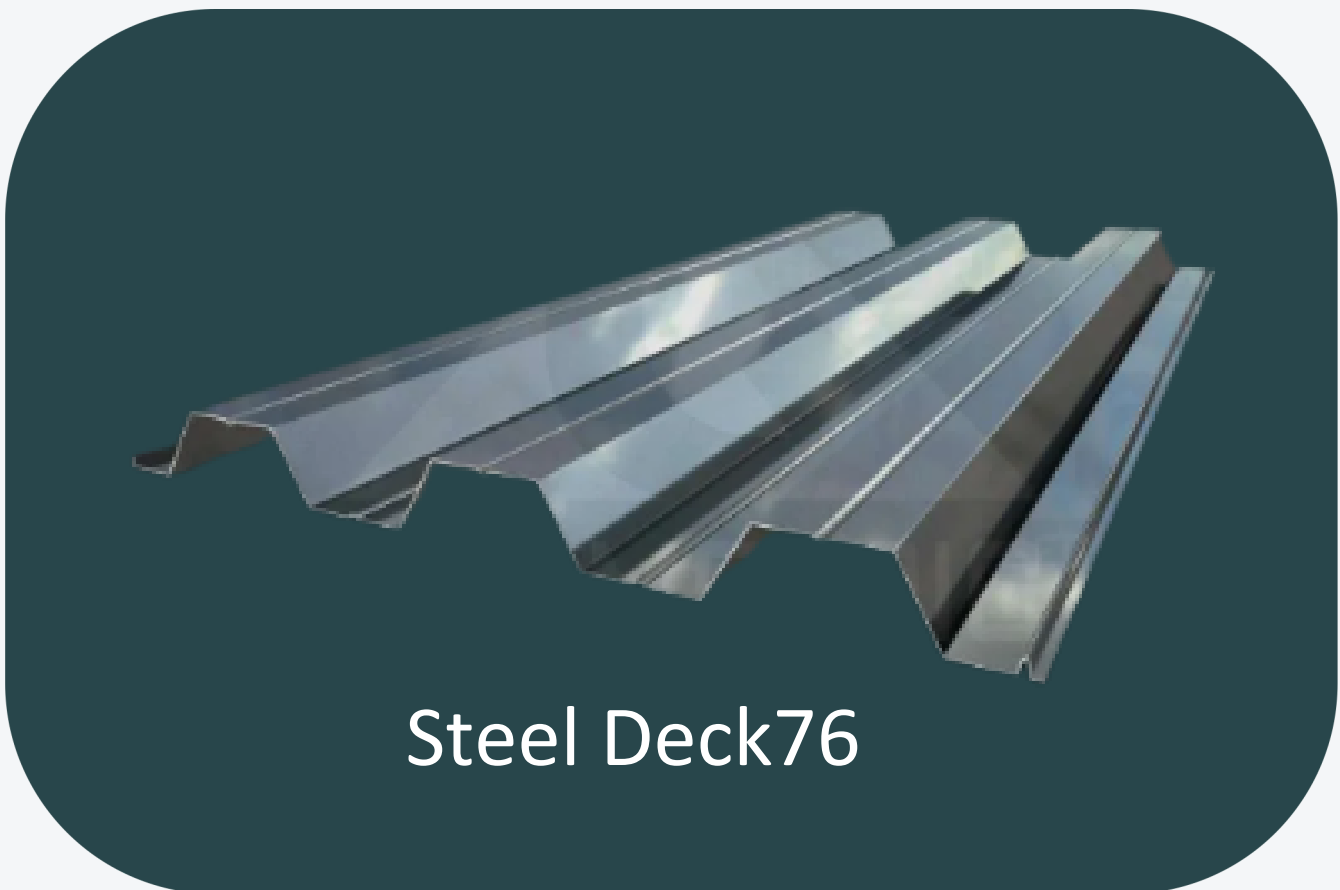
PRODUCT 03

Steel Decking Sheets for Composite Flooring

Roll-formedgalvanizedsteeldeckingprofilesforcomposite concourse, platform and roof flooring.



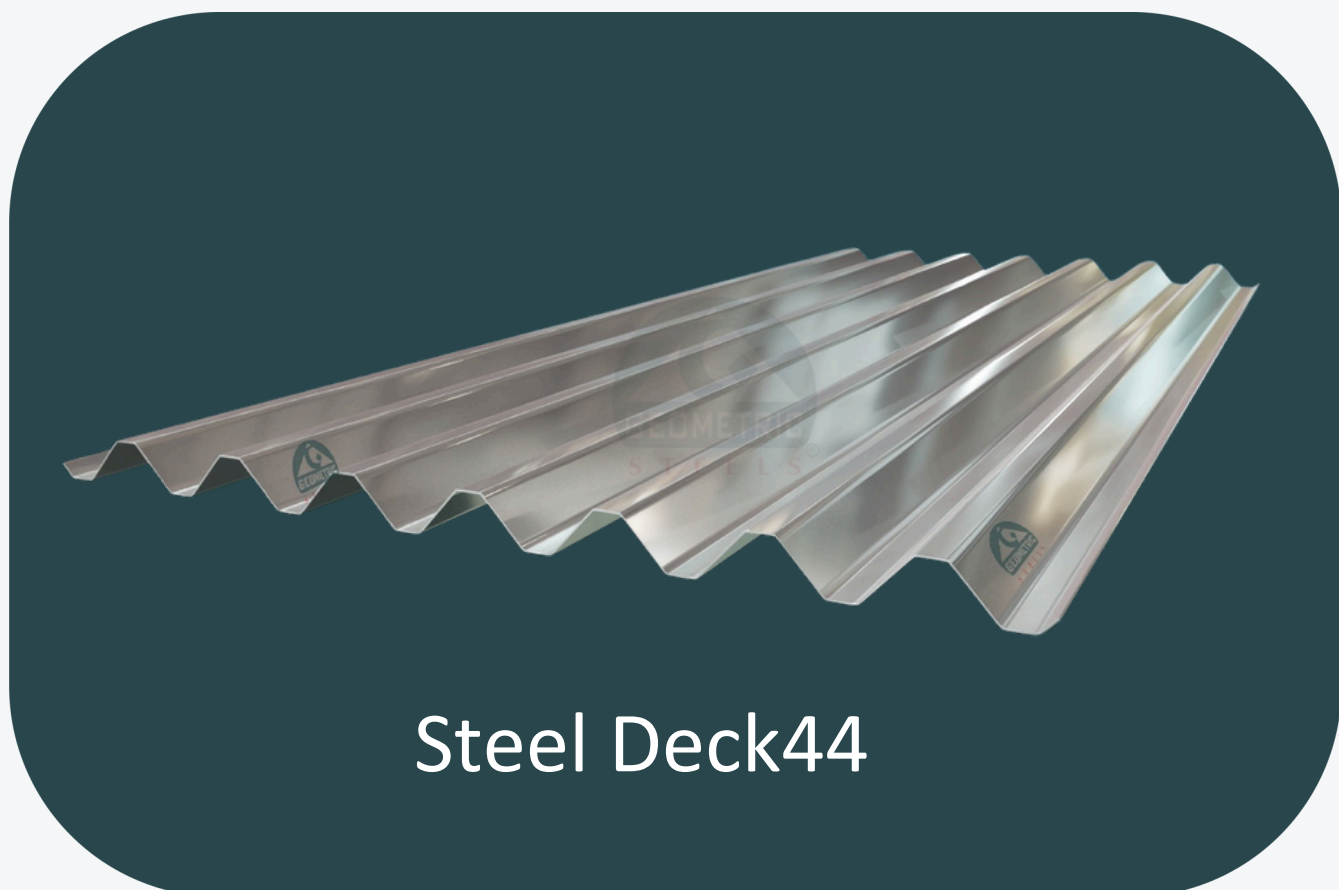
Steel Deck52



Steel Deck76



Steel Deck102



Steel Deck44

PROFILE RANGE

SteelDECK 44	Crest height 44mm, cover width 910mm, 0.80 – 0.10mm
SteelDECK 52	Crest height 52mm, cover width 1030mm, 0.80 – 1.20mm
SteelDECK 76	Crest height 76mm, cover width 1030mm, 0.80mm
SteelDECK 102	Crest height 102mm, cover width 1030mm, 0.80mm
Yield strength	245 MPa / 350 MPa (design dependent)
Coating	Zinc-coated to IS 277 for corrosion protection

WHY IT MATTERS FOR METRO PROJECTS

- High load-bearing composite decking for concourse and platform slabs under sustained public footfall.
- Installs significantly faster than conventional shuttering critical on fast-track metro construction schedules.
- Factory-rolled profile consistency removes the variability of site-fabricated formwork.
- Also specified as structural roof decking over plant rooms, depots and workshop buildings.

Built to Documented Specification, Not Guesswork

Every Geometric Steels product ships with a documented material and coating specification the same rigor metro rail QA/QC and PMC teams expect at vendor technical submittal.

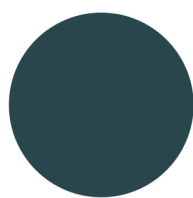
Standard / Spec	Applies To
IS 513	Base CRCA / GI steel sheet quality
IS 277	Zinc / Galvalume coating specification
245–550 MPa yield	Louver, hatch & decking base steel (grade dependent)
60–80 micron powder coat	Corrosion protection on all steel/aluminium components
SS 304 fasteners	Long-term corrosion-resistant fixing on louvers & hatches
EPDM weather seals	Air/water-tight closure on insulated hatch variants



Documentation on Request

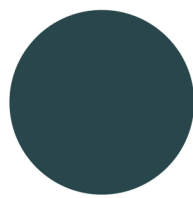
Mill test certificates, coating-thickness reports and product datasheets are available for technical submittal and vendor approval processes.

One Vendor, Three Critical Systems, Zero Overhead



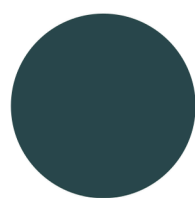
Single Source, Fewer Interfaces

Ventilation, access and flooring systems from one vendor fewer coordination points on an already MEP-heavy project.



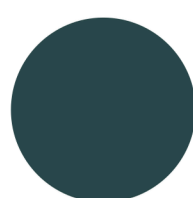
In-House Roll Forming

Full control over lead time and profile consistency, with no dependency on imported components.



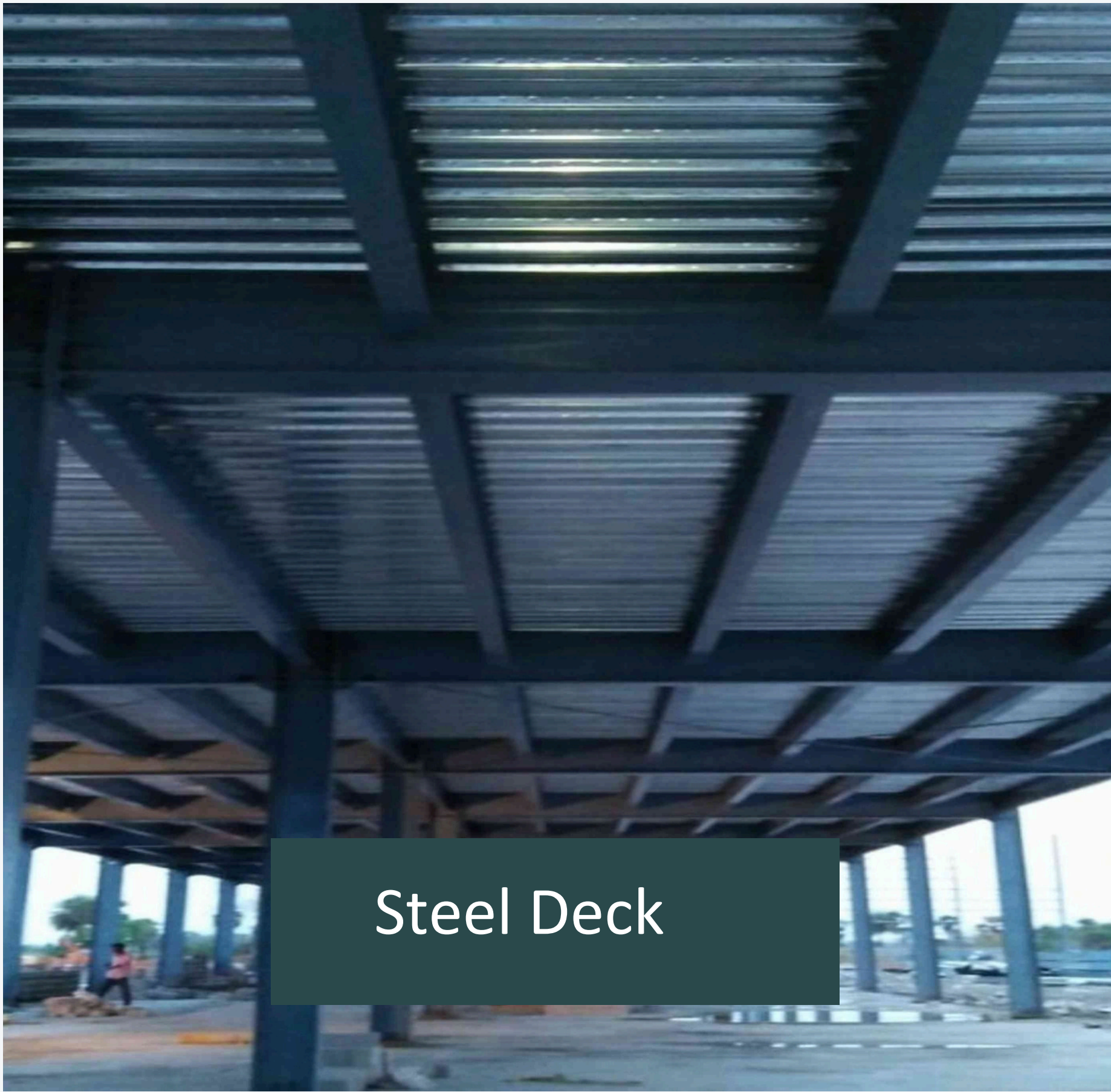
Custom Fabrication to GA Drawing

Louver, hatch and decking dimensions configured to exact station geometry not off-the-shelf sizing.



Direct Engineering Support

BOQ preparation, technical submittals and site mock-up coordination with your design team / PMC.



Steel Deck



Steel Deck



Louvers



Louvers



Roof Acess Hatch



Roof Acess Hatch

REFERENCE APPLICATIONS

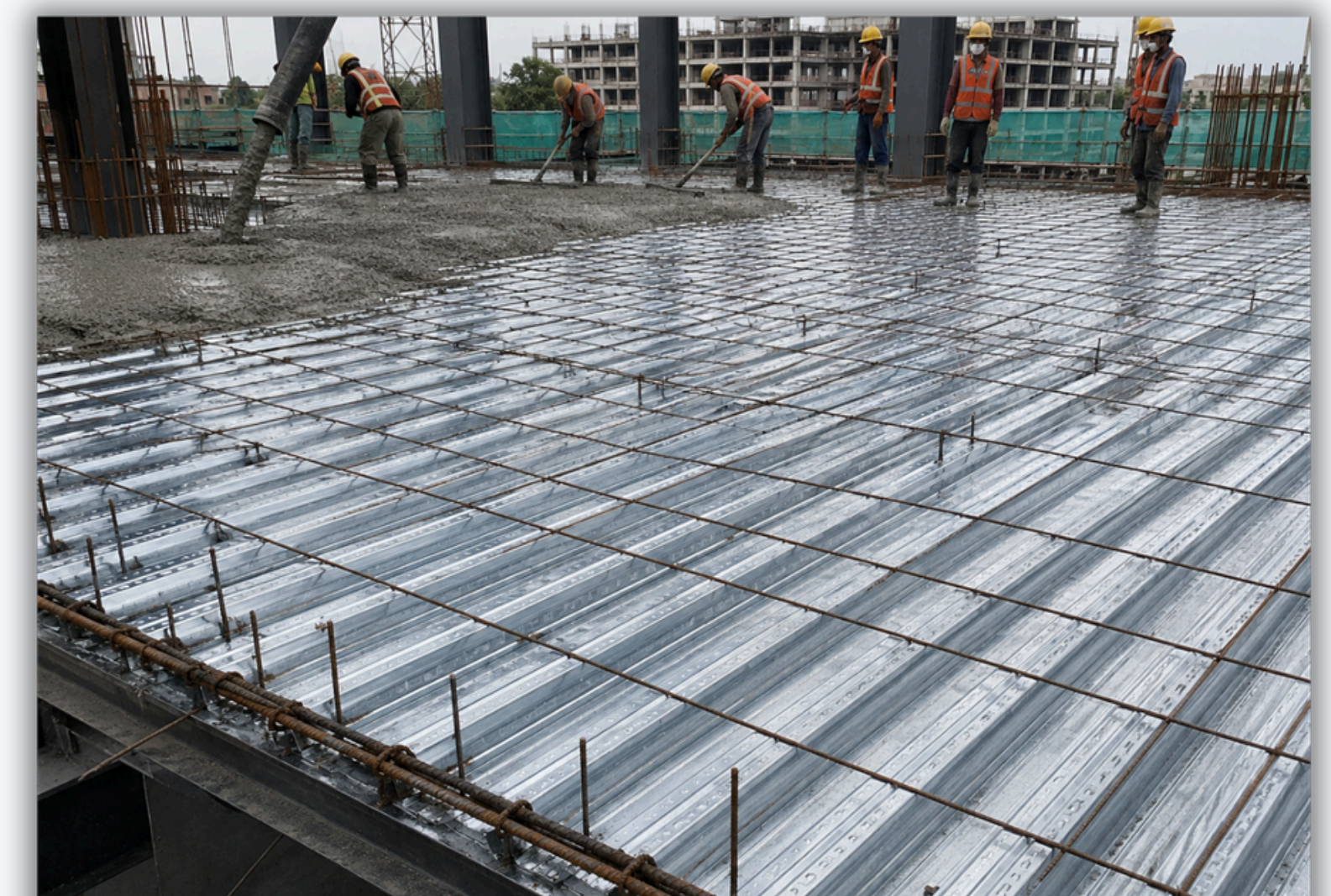
Products in the Field



Aluminium louvers — industrial facade installation



Roof access hatch — plant-room roof, installed



Steel decking sheet — composite slab under construction



Purlins & structural accessories — support framework

Project photography to be inserted from GS site references / [geometricsteels.com](https://www.geometricsteels.com) gallery — final images to be placed via Canva or directly in PowerPoint before client delivery.

NEXT STEPS

Let's Engineer Your Metro Station Infrastructure

1

Share Station GA Drawings & BOQ

Send station GA drawings and estimated quantities for louvers, hatches and decking.

2

Technical Specification & Submittal

GS proposes product specification, datasheets and technical submittal for approval.

3

Site Mock-Up & Final BOQ

Mock-up coordination and final bill of quantities ahead of manufacturing.

GET IN TOUCH

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