



METRON ENGINEERING SERVICES PTY LTD

CAPABILITY STATEMENT

Engineering | Design | BIM | Drafting | Fabrication Support

✓ Perth Based

✓ Australia-wide Support

Perth, Western Australia

www.metronengineering.com.au

ABOUT US

COMPANY OVERVIEW

Metron Engineering Services Pty Ltd is a Perth-based engineering business providing engineering design, drafting, analysis, BIM, architectural documentation, structural design support and fabrication documentation to industrial and commercial clients.

We work across the full documentation path of a project — from early concept development, through detailed design and 3D modelling, into fabrication documentation, procurement support and as-built completion. Our work is used by teams who need engineering intent translated into documentation that can actually be built.

WHAT WE PROVIDE

Engineering design and project engineering support. Drafting and 3D CAD. BIM modelling and multidiscipline coordination. Architectural documentation. Structural analysis, design support and detailing. Finite element analysis. Fabrication and workshop documentation. Engineered products.

WHERE WE WORK

Based in Perth, Western Australia, supporting projects Australia-wide. Design and documentation are delivered digitally, allowing us to work with clients, fabricators and site teams across multiple states and remote locations.

WHO WE WORK WITH

Mining and resources. Industrial and manufacturing. Fabricators and OEMs. Contractors and construction companies. Consultants, developers and architects. Asset owners, procurement and engineering teams.



OUR VALUE PROPOSITION

Metron Engineering bridges the gap between engineering requirements and practical project delivery.

We produce clear, coordinated, buildable documentation — and we stay engaged through fabrication and installation when the project needs us to.

OUR CAPABILITIES

Eight connected capability areas, delivered by one engineering team.



Engineering Design

Concept through detailed design, with engineering calculations and design reviews.



Mechanical Engineering

Equipment and component design, mechanical systems, design for manufacture.



Structural Engineering

Analysis, steel and concrete design support, assessment and detailing.



Drafting & CAD

GA, fabrication, assembly, installation and as-built documentation.



BIM

Revit modelling, multidiscipline coordination, model-based documentation.



Architectural Services

Architectural drafting, 3D modelling, design development, documentation.



Engineering Analysis

Finite element analysis, load assessment, design verification, optimisation.



Fabrication Support

Steel detailing, workshop documentation, vendor coordination, delivery support.

Our BIM and architectural services are delivered by Metron Engineering’s own team. They are not outsourced.

ENGINEERING DESIGN & PROJECT SUPPORT

We take a requirement — a specification, a sketch, an operational problem, an existing asset — and develop it into a design that can be reviewed, approved, procured and built.



DESIGN SERVICES

- Concept design and feasibility
- Design development and option assessment
- Detailed mechanical and equipment design
- Design for manufacture and fabrication
- Engineering calculations and sizing
- Design reviews and third-party checks
- Reverse engineering of legacy equipment



PROJECT ENGINEERING SUPPORT

- Engineering coordination across disciplines
- Technical review of supplier documentation
- Resolution of design queries in procurement
- Management of design change
- Extension of client engineering teams
- Short-duration and single-package scopes



ENGINEERING STANDARDS

Applicable design standards, project specifications and client requirements are identified and addressed as part of the agreed engineering scope.

Where a design requires certification or independent verification, this is defined and resourced at the outset of the engagement.

This model suits clients with capacity constraints, short-duration scopes, or projects needing specific technical input without the overhead of a full consultancy engagement.

DRAFTING, CAD & DETAILED DESIGN

Documentation quality determines how a project is built. Ambiguous drawings generate RFIs, rework, fabrication errors and schedule loss. Our drafting is produced to be read on a workshop floor and on site — not only on a screen.



DRAWING & MODEL DELIVERABLES

- 3D CAD and assembly modelling
- General arrangement drawings
- Fabrication and workshop drawings
- Assembly and weldment drawings
- Installation and erection drawings
- Bills of materials and parts lists
- As-built drawings and redline incorporation



CAD SERVICES

- CAD conversion and format migration
- 2D to 3D model development
- Reverse engineering from measurement or scan
- Drawing standardisation and templates
- Legacy drawing recovery and re-issue
- Revision management and drawing registers



HOW WE APPROACH DETAILING

Every drawing set is developed with a defined design intent, checked against the model, and reviewed for constructability and manufacturability before issue.

Drawings are detailed for the fabrication method actually being used, and interface points are called out explicitly rather than left to interpretation.

Where a client has established drafting standards, title blocks or documentation systems, we work within them.

BIM & DIGITAL ENGINEERING

Metron Engineering's BIM team develops coordinated 3D models used for design coordination, construction documentation and project communication. BIM work is delivered in-house by our own modellers and engineers.



BIM SERVICES

- Revit modelling — architectural and structural
- Model development from concept to construction stage
- Multidiscipline model coordination
- Clash detection support and interference resolution
- Model-based coordination with consultants and contractors
- Drawing and schedule extraction from models
- Construction documentation packages

CLIENT BIM ENVIRONMENTS

We work to client BIM execution requirements, naming conventions, shared coordinates and level-of-development definitions.

Where no BIM framework exists, we establish a practical modelling and file structure suited to the project's scale.



WHAT THIS DELIVERS

- Fewer interface conflicts found late
- Drawing sets that stay consistent with the model through revisions
- One coordinated model for engineers, fabricators, contractors and clients

Modelling in a coordinated environment allows design conflicts to be resolved before they reach the workshop or site, and allows drawing sets to be extracted from a single source of truth rather than maintained as separate documents.

ARCHITECTURAL SERVICES

Our architectural team provides drafting, 3D modelling, design development and construction documentation. This capability is delivered in-house and coordinated directly with our engineering and BIM teams.



ARCHITECTURAL SERVICES

- Concept development and design development
- Architectural drafting and documentation
- 3D architectural and presentation modelling
- Residential and commercial building design
- Hospitality and mixed-use projects
- Additions, alterations and adaptive reuse
- Construction documentation packages
- Coordination with structural, mechanical and electrical

REPRESENTATIVE ARCHITECTURAL & BIM EXPERIENCE

The following represent architectural and BIM design experience brought into Metron Engineering by our team. They were completed prior to, and outside of, Metron Engineering Services Pty Ltd.

- Hotel at Kandalama — hospitality
- Luxury villa at Hanthana — residential
- Four-storeyed commercial building for Softlogic Life, Kadawatha — commercial
- Private villa at Ruwanwella — residential
- Traditional clay house at Dambulla — heritage-influenced construction
- Addition and alteration, Methodist Church Moratuwa — alteration and extension
- Proposed fuel station at Anuradhapura — light commercial and services coordination

Presented to demonstrate the team's documentation and modelling capability across building typologies — not as Metron Engineering corporate project history.

STRUCTURAL ENGINEERING

Metron Engineering provides structural analysis, design support, assessment and detailing across building, industrial and equipment structures — in steel, composite and reinforced concrete.



STRUCTURAL CAPABILITY

- Structural analysis and design
- Structural steel and composite
- Reinforced concrete structures
- Foundation design
- Structural and steel detailing
- Assessment of existing structures
- Structural inspections
- Alterations, extensions, strengthening
- Design review and independent check
- Technical consultancy



SCOPE & CERTIFICATION

Structural design and documentation are developed with consideration of the applicable project specifications, client requirements and relevant standards.

Where statutory certification, independent structural review or a practising certificate is required for a jurisdiction or building class, the requirement is identified at the outset and the appropriate certifying arrangement is confirmed as part of the engagement.

ANALYSIS & VERIFICATION

Where a design requires it, we carry out finite element analysis, load path assessment and design verification. Analysis is scoped to the engineering question being answered rather than run as a default deliverable.

TEAM EXPERIENCE

Our structural capability is supported by professional experience across building structures, industrial structures, assessment and detailing — gained by team members prior to joining Metron Engineering, and presented as team capability rather than corporate project history.

FABRICATION SUPPORT & DOCUMENTATION

A design is only useful if it can be built. We produce documentation for fabrication and manufacture, and stay available through the build to resolve the questions documentation alone cannot answer.



FABRICATION DOCUMENTATION

- Design for fabrication and manufacture
- Structural steel detailing
- Workshop and shop detail drawings
- Weldment and assembly drawings
- Cutting lists, BOMs and mark plans
- Surface treatment and finishing notes
- Installation and erection documentation



SUPPORT THROUGH DELIVERY

- Fabricator and vendor technical queries
- Vendor documentation review
- Design changes raised during fabrication
- Dimensional and interface resolution
- Site modification documentation
- As-built documentation and final issue



WHY THIS MATTERS COMMERCIALY

Most fabrication delays are documentation problems: a missing dimension, an unstated tolerance, an interface that two drawings describe differently.

We remain contactable during the build so queries are answered in hours rather than weeks.

Clients engage us specifically to reduce the ambiguity between engineering and fabrication — the part of the project where documentation quality has the most direct commercial effect.

ENGINEERED PRODUCTS

Metron Engineering designs and supplies a range of engineered products for mining and industrial applications. Each is engineered rather than catalogued.



MINE ACCESS & SECURITY

- Substation gates
- Underground magazine gates
- Personnel access doors



VENTILATION

- Airlock chambers
- Mine ventilation doors
- Drop board regulators



EQUIPMENT & ACCESS

- Transformer skids
- Underground ladderways



CUSTOM FABRICATION

- Project-specific fabricated steelwork
- Equipment frames and skids
- Platforms and access structures
- Guards, brackets and supports

ENGINEERED TO SUIT THE APPLICATION

Products are engineered to suit project-specific dimensions, site conditions, operating requirements and interfaces. Design duty, materials, finishes and applicable requirements are confirmed with the client as part of the enquiry, and documentation is issued for review before manufacture.

INDUSTRIES WE SUPPORT

Capability applied across resources, industrial, manufacturing and building sectors.

Mining & Resources

Fixed plant and equipment design, structural steelwork, access and ventilation infrastructure, fabrication documentation, engineered products.

Industrial Facilities

Equipment design, plant modifications, structural assessment, mechanical systems, documentation for brownfield works.

Electrical Infrastructure

Substation access and security products, equipment skids and frames, structural support design, layout coordination.

Manufacturing

Design for manufacture, product development support, jigs and fixtures, fabrication documentation, reverse engineering.

Commercial Buildings

Architectural documentation, structural design support, BIM coordination, construction documentation.

Residential Development

Architectural design development, 3D modelling, documentation and coordination with engineering disciplines.

Hospitality

Architectural design development, 3D modelling and presentation, construction documentation.

Infrastructure & Specialised Fabrication

Support structures, platforms, frames, custom fabricated steelwork and one-off engineered assemblies.

MINING & INDUSTRIAL



Mining and industrial work is where our engineering, documentation and product capability overlap most directly. Underground and surface operations need access, ventilation and equipment infrastructure that fits the site as it actually is.

Existing structures, measured openings and operating constraints are treated as design inputs — not as assumptions to be confirmed after fabrication.

BROWNFIELD AND OPERATING SITES

Much of this work is on live or partially built assets, where access, shutdown windows and interface tolerances shape the design as much as the duty requirement does.

APPLICABLE CAPABILITY

- Access and security infrastructure design
- Ventilation equipment design and documentation
- Equipment skids, frames and support structures
- Fixed plant structural steelwork
- Plant modifications and brownfield documentation
- Structural assessment of existing structures
- Fabrication and workshop documentation
- Site modification and as-built documentation

TYPICAL INFORMATION WE WORK FROM

- Site measurements and existing drawings
- Opening sizes and structural interfaces
- Operating and duty requirements
- Access, handling and installation constraints

HOW WE WORK

Projects arrive at different stages of definition. Our engagement adapts to where a project actually is, rather than forcing every job through the same sequence.

01

Understand the Requirement

We review available scope, drawings, specifications, operating requirements and site constraints, and confirm what is known, what is assumed and what must be resolved before design proceeds.

02

Develop the Design

The concept is progressed through engineering review, modelling, calculation and coordination. Options are assessed where the design is not yet fixed, and design decisions are recorded.

03

Detail and Document

We produce the engineering, BIM, architectural, fabrication or construction documentation appropriate to the project, checked for consistency, constructability and manufacturability before issue.

04

Support Delivery

We respond to vendor and fabricator queries, resolve fabrication and interface issues, and document design revisions as the build progresses.

05

Finalise Documentation

Approved changes are incorporated and final project documentation or as-built information is prepared where required.

Not every project needs all five stages. We scope the engagement to the stages the project actually requires.

QUALITY & TECHNICAL CONTROL

Documentation control is not administrative overhead — it is what prevents the wrong revision reaching a workshop.

OUR PRACTICES

-  Design review at defined stages
-  Independent drawing checks before issue
-  Controlled revision management and drawing registers
-  Clearly recorded design intent and assumptions
-  Verification against project specifications and applicable standards
-  Review for constructability and fabrication requirements



QUALITY MANAGEMENT

Metron Engineering does not currently hold third-party certification of its quality management system.

Our document control and review practices are applied as standard and can be aligned to client or project quality requirements where specified.

WHY METRON ENGINEERING

Why clients engage us, and what changes when they do.



Practical engineering

We design for how things are actually built, procured and installed. Documentation reflects fabrication method, site access and interface reality.



Multidiscipline under one roof

Mechanical, structural, BIM and architectural work delivered by one coordinated team. Interfaces resolved internally, not negotiated between consultants.



Documentation built for fabrication

Drawing sets prepared for the workshop floor. Dimensions, interfaces, materials and finishes stated explicitly to reduce query volume and rework.



Responsive engineering support

Clients engage us because we answer. Queries during procurement and fabrication are addressed promptly, and we stay available through the build.



Flexible project resourcing

Short-duration scopes, single packages, overflow capacity and defined technical inputs — as well as full design and documentation engagements.



Engineering and products together

Where a project needs both engineering documentation and fabricated equipment, design intent and supplied product come from the same team.



GET IN TOUCH

CONTACT

Metron Engineering Services Pty Ltd



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www.metronengineering.com.au

ENQUIRIES

For design, drafting, BIM, architectural or structural documentation enquiries, or for engineered product enquiries, please contact us with the available scope information — drawings, specifications, site constraints, or a description of the requirement.

We will confirm what we can deliver, the information we need, and an indicative approach.

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