

WIRE AND METAL FABRICATION

abilityworks
AUSTRALIA



ABOUT US

Our creativity knows no bounds when it comes to designing a solution for your metal and wire fabrication needs. Inventive use of our own 3D printers and the practical skills of our in-house tool maker means we can design jigs and tools for our employees to produce high quality, short run products that meet technically challenging requirements.

Services include:

- Collaborating on design solutions that are high quality and cost effective.
- Delivering a broad range of manufacturing capabilities including MIG and resistance welding, robotic welding machines, bending, drilling and cutting lines, and spray-painting booths



Client benefits include:

- Local manufacturing
- Social Procurement compliance with a Certified Social Enterprise
- Inventive and design-led thinking
- Manufacturing high-quality products with a proven track record
- Cost competitive and short run solutions
- Flexibility to subcontract basic repetitive tasks
- Reassigning time-consuming tasks away from building sites
- Over 500 hours of purposeful employment opportunities for every \$10,000 spent with us

CONTENTS



Guards & Fencing



Concrete Reinforcing



Construction Site Fabrication



Supporting Construction



Railway Construction



Custom Fabrication



Post Construction

*Coming
Soon*



Laser cut signage

- Electrical Switchboards
- Door signs
- Amenities signage
- General labels
- Laser etching

GUARDS & FENCING

Prefabricated metal stanchions

The prefabricated metal stanchions used as posts to support these barriers are mass-produced in large numbers.

Current Capacity:

- Saw cut from 6m length stock
- Drilling of holes (maximum 12mm)
- Punching of slots
- Mig weld on plates and parts coated as required. Note coating is done by a third party.

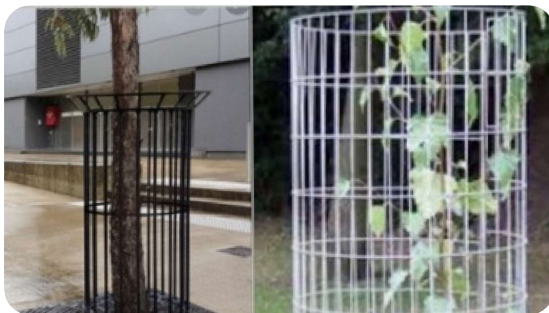


Wire cages for lighting guards

Wire guards pictured are 1020mm long (maximum length 1050mm), folded to shape and use 2.5 or 3.15mm round wire. Single or double tube designs currently made.



Protective tree cages and guards



Temporary and permanent protective tree cages. Painting of metal parts would be by an AWA approved coater.

Current product:

- Galvanised wire 5mm dia.
- Cut to specified size
- Resistance welded cross bars
- Bent to specification
- Packaged or bundled

GUARDS & FENCING



Steel Fencing Components

AWA can cut and weld the steel poles with fencing mesh material supplied by AWA approved ringlock fencing manufacturer.

Platform screens/screens

Ability Works is equipped to manufacture mesh panels. Additionally, posts can be custom cut and welded according to specific requirements.

The painting of metal components will be conducted by an AWA-approved coater, ensuring adherence to quality standards



Railway protection / marker post

Barriers and posts can be cut and welded in metal.

The finishing of metal parts is carried out by an AWA-certified coater to ensure quality. Additionally, plastic components can be precisely cut and assembled using screws, glue, or other suitable adhesives.

Steel handrails



Posts can be cut and welded as required. Handrailing types will require investigation. Painting of metal parts would be by an AWA approved coater.

Confirmation post receipt of design specifications.

CONCRETE REINFORCING

Reinforcing steel for precast concrete rail sleepers

Based on specifications Ability Works would be capable of producing most of the small reinforcing steel components used inside.

Current Capacity:

1. Small bent rods up to 10mm round bar to use in repeated segments
2. Butt welding for an even finish
3. Also simple 3D shapes.

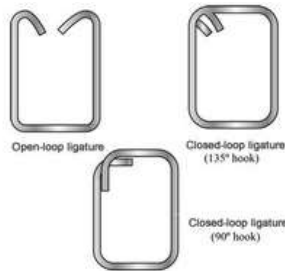


Precast Items

All of these precast items contain reinforcing steel. Ability Works would be capable of producing most of the small reinforcing steel components used in such items.

Current Capacity:

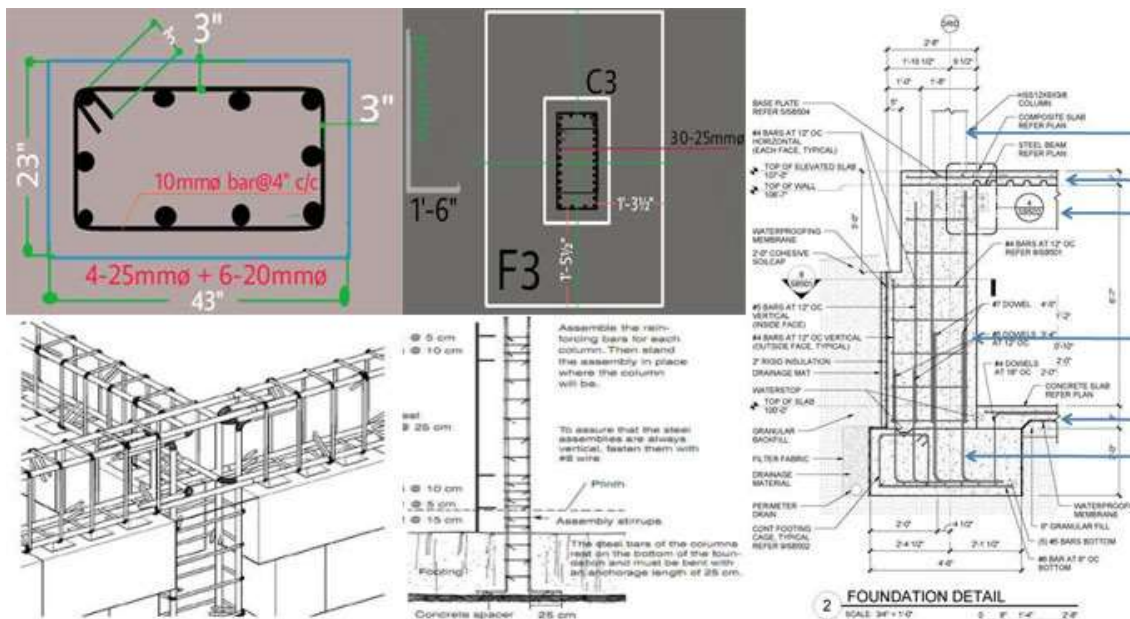
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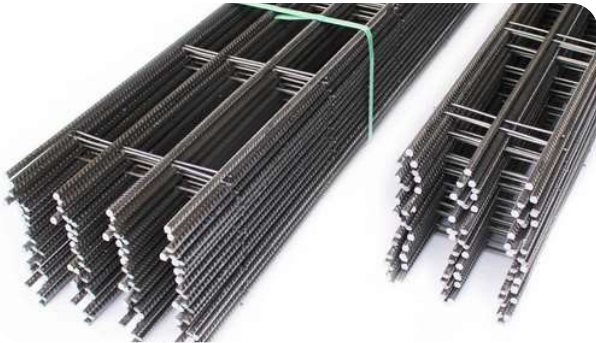
Reinforcing steel for precast concrete segments

Current Capacity:

- Small bent ligatures up to 10mm round bar to use in repeated segments.
- Maximum 500x500mm square.



CONCRETE REINFORCING



Steel reinforcement for concrete

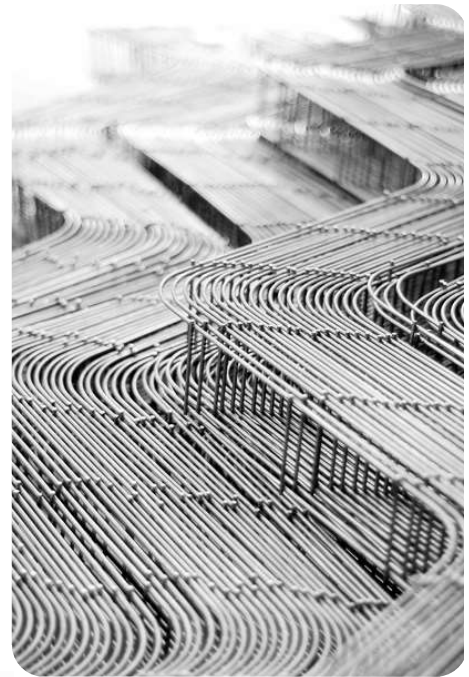
Special trench mesh can be made to provide concrete reinforcement.

Wire Snake Mesh

Snake Mesh is a quick and simple way to support a second layer of reinforcing on slab on ground and precast applications. Snake Mesh is more stable and eliminates the need to use tall bar chairs to support the second layer of reinforcing.

Current Capacity Snake Mesh:

1. Snake mesh is non-structural, made from 3.7mm dia wire
2. Spacing sizes in range 40mm to 180mm
3. The bent product is 2m long and packed in bundles of 25



Metal plastic dipped bar chairs

Current Capacity bar chair:

1. Special sizes made
2. Wire diameter up to 10mm
3. Part is resistance welded
4. Plastic dip by 3rd party



CONSTRUCTION SITE FABRICATION

Temporary Fencing Repairs

Damaged fence mesh removal and re-application using MIG welding and galvanized spray painting (Capacity: over 20 full mesh removal fences per day).

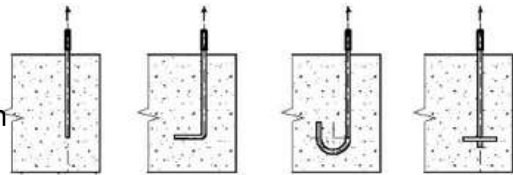


Holding bolts

Holding bolts for light poles, structural steel and other mechanical equipment. Large bolts which are partially cast into concrete to hold other items in place. Some have a crank (90 degree bend) at the unthreaded end, whilst others have a large steel washer welded on, or a U shaped bend.

Current Capacity:

1. Can bend up to 10mm diameter round bar
2. Mig welding and resistance welding up to 10mm bar with larger diameter bar possible.



Grout Tubes (PVC or spiral wound metal)

Current Capacity:

- Tubes supplied cut to length (Maximum 3m long).
- Taped or capped at each end.
- Diameters 50mm, 70mm & 90mm regularly available. Other larger diameters available on request.

Ferrules

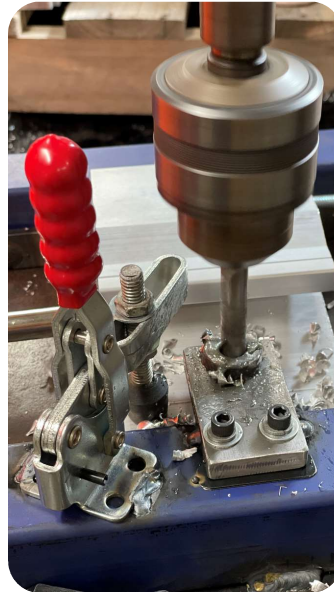
Elephant Foot Ferrules are a premium grade, medium to heavy duty. Ferrules come pre-threaded with an internal thread suitable for standard metric course threaded fasteners



SUPPORTING CONSTRUCTION

Industrial Fixing Brackets

Milling/drilling of precision holes in structural brackets. We custom manufacture placement jigs to ensure the highest repetitive quality.



Ducting assembly

Assembling Airconditioning ducting for building completion.

Air Conditioning breather units

Working with Pacific Ventilation to assemble their air-conditioning topper units.



3D Printing - Special parts printing

Current Capacity:

1. Printing space 280x280x300mm
2. Material used ABS
3. Drawing program used AUTODECK FUSION360



SUPPORTING CONSTRUCTION

Small Scale Fabrication

Current Capacity:

1. Saw Cutting from 6m stock of angle iron, plate, square tube and bar
2. Resistance welding up to 10mm wire. Wire types HDLC, Galvanised and Stainless
3. Mig welding of small components including angle iron, plate, square tube and bar
4. Drilling of holes up to 12mm
5. Galvanising or powder coating of parts by a 3rd party.



Settlement monitoring pins/markers

Pre-assembly and some manufacture of components.

Special components can be sourced from AWA approved suppliers.



RAILWAY CONSTRUCTION



Level crossing assembly

Pre-assembly and some manufacture of components is possible.

Confirmation post receipt of design specifications.

Mesh panels

Subject to the dimensions of the mesh, panels may be bent using AWA's specialized equipment. Posts will be cut and welded to meet specific requirements.

The painting of metal components will be executed by an AWA-certified coater to ensure quality and durability. Final confirmation will follow upon receipt of detailed design specifications.



Signalling & Communications conduits

Conduit can be precisely cut to the desired size using our existing equipment. For plastic conduits, a suitable heat bending technique can be employed to achieve the required shape.

Confirmation post receipt of design specifications.

GST (galvanized steel troughing)

Troughing can be cut to size on current equipment and collated to run requirements with labelling.

Confirmation post receipt of design specifications.



RAILWAY CONSTRUCTION

Light rail tie bars

Light rail tie bars can be fabricated leveraging our existing capabilities in steel cutting, drilling, and assembly.

Final confirmation will proceed upon the receipt of detailed design specifications.



Overhead wiring bridge screen / cover

Pre-assembly and certain manufacturing processes for components are feasible.

Confirmation of capability post receiving detailed design specifications

Signal Mast/Gantry

Pre-assembly and some manufacture of components based on design specifications.



CUSTOM FABRICATION

Electrical Cabinet

this unit was completed for Stowe Electrical with pole assembly



Table frames

Custom designs can be tailored to meet specific requirements.



Hand Rails, Anchored poles

Hand Rails – anchor plates welded to poles using welding robot.

This was completed for Clifton Formwork/ McConnell Dowell



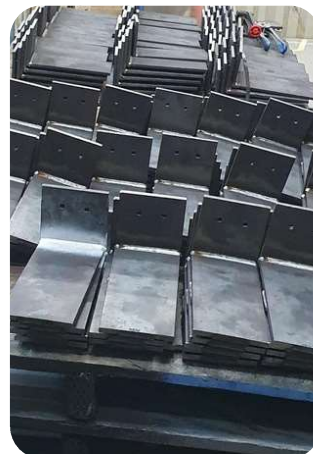
Custom columns

Bespoke columns for IND Windows/ Kane Construction for Melbourne Uni project



Custom Brackets

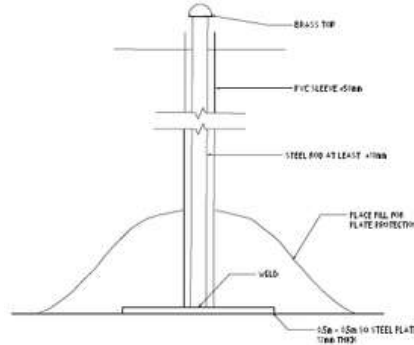
Robot welded brackets



CUSTOM FABRICATION

Settlement plates

for McConnell Dowell /
Decmil Joint Venture



Hairpin leg (welded frame)

Legs made onsite using current AWA equipment.

Painting of metal parts would be by an AWA approved coater.

Resistance welding - mesh

Custom made to requirements.



Welding pins to secure cement matting

Custom made to requirements.

CUSTOM FABRICATION

Wire forming- coil holders

Custom made to requirements.



Wire forming – brush stem handles

Custom made to requirements.



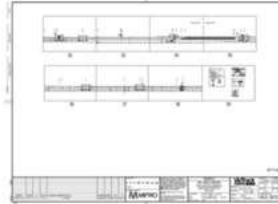
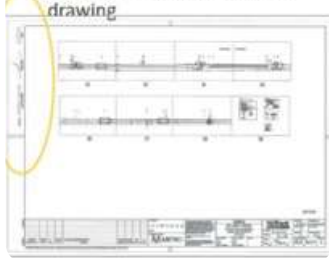
Industrial Stillages

Custom made to requirements. These can be manufactured in galvanised steel and painting/powder coating can be arranged through an approved supplier.



POST CONSTRUCTION

Sheet 2 WLD_G0121A.pdf –
Scan of ‘wet signed’ printed
drawing



Sheet 1 WLD_G0121A.pdf –
‘Clean’ PDF from software

Scanning/compilation of “As Built” drawings

Current capability as Digital Scanning task.
Requires scoping to determine process and costs.

Fabric or Material cutting

Current Process:

1. Cut shade cloth to spec from 1.8m wide roll
2. Trim edges with special tool to prevent fraying
3. Fold or roll up and packaged for delivery



Promotional merchandise

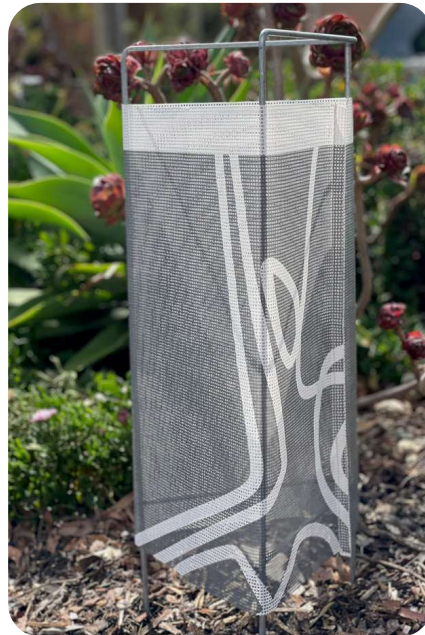
We can package and assemble show
bags, event material and construct bags
& document wallets from construction
Shade Mesh.



POST CONSTRUCTION

Tree Guards

Can be made to requirements and these were made using recycled mesh from Major Projects.



Wire Baskets

We can manufacture wire baskets for inclusion in cupboards, workshops, factories.



Rubbish Bins



AWA can manufacture the metal components and source the plastic parts. Painting of metal parts would be by an AWA approved coater.

Also the arrangement could be pre-assembly for site installation with all parts provided. A combination of the two ideas above also.





Transforming lives through Social Procurement

Our Accreditations and Certifications



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