

0554P MODDEX STEEL HANDRAILS, GUARDRAILS, BALUSTRADES AND OTHER BARRIERS**Branded worksection**

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Worksection abstract

This branded worksection *Template* is applicable to the design, specification, installation and maintenance of stairs, ladders, fixed platforms and walkways for commercial and industrial applications as supplied by MODDEX.

Guidance text

All text within these boxes is provided as guidance for developing this worksection and should not form part of the final specification. This *Guidance* text may be hidden or deleted from the document using the hidden text *Hide* and *Delete* functions of your word processing system. For additional information visit FAQs at www.natspec.com.au.

Optional style text

Text in this font (blue with a grey background) covers items specified less frequently. It is provided for incorporation into *Normal* style text where it is applicable to a project.

Related material located elsewhere in NATSPEC

If a listed worksection is not part of your subscription package and you wish to purchase it, contact NATSPEC.

Related material for stair structures may be found in other worksections. See for example:

- 0311 *Concrete formwork.*
- 0312 *Concrete reinforcement.*
- 0314 *Concrete in situ.*
- 0321 *Precast concrete.*
- 0341 *Structural steelwork.*
- 0381 *Structural timber* for external and large timber stairs.
- 0421 *Roofing – combined.*
- 0467 *Glass components* for glass balustrades.
- 0551 *Joinery.*
- 0552 *Metalwork – fabricated.*

Related material for stair finishes may be found in other worksections. See for example:

- 0344 *Steel – hot-dip galvanized coatings.*
- 0345 *Steel – protective paint coatings* for external applications.
- 0552 *Metalwork – fabricated* (for stainless steel finishes).
- 0612 *Cementitious toppings* for granolithic finish.
- 0631 *Ceramic tiling.*
- 0632 *Stone and terrazzo tiling.*
- 0651 *Resilient finishes.*
- 0652 *Carpets.*
- 0656 *Floor sanding and finishing.*
- 0671 *Painting.*

Documenting this and related work

You may document this and related work as follows:

- Provide a general arrangement of all stairs, ladders and walkways to your office documentation policy.

- Provide a general arrangement of all guardrails, handrails and balustrades to your office documentation policy. Contact MODDEX for design assistance if required.
- Coordinate this worksection with the project roofing worksection.

The *Normal* style text of this worksection may refer to items as being documented elsewhere in the contract documentation. Make sure they are documented.

Search acumen.architecture.com.au, the Australian Institute of Architects' practice advisory subscription service, for notes on the following:

- Warranties and guarantees.

Specifying ESD

The following may be specified by including additional text:

- Recycled material content.
- Recycling of off-cuts or scraps.

Refer to the NATSPEC TECHreport TR 01 on specifying ESD.

1 GENERAL

MODDEX GROUP is Australia's leading developer and manufacturer of an extensive range of modular steel handrails, guardrails, balustrades and other barrier solutions that ensure the safety of people and the protection of property. Moddex innovation is specified and sold throughout Australia and New Zealand.

Moddex is recognised for its flexible, robust, cost effective and easy to install systems that simplify the installation of handrails and balustrades in all environments and for a broad range of applications within the Defence, Construction, Mining, Transport and Education industries, as well as the Public Utilities sectors.

1.1 RESPONSIBILITIES

General

Requirement: Provide MODDEX steel handrails, guardrails, balustrades and other barriers, as documented.

Documented is defined in 0171 General requirements as meaning contained in the contract documents.

Extent: [complete/delete]

Refer to general arrangement drawings. Include estimated quantity/ linear metres of the roof access safety system if requested.

Supply

Inclusions: Supply, installation and certification of MODDEX designed system and layout by MODDEX recommended installers.

MODDEX provide a complete system design, layout and specification service including CAD drawings, detailed scope of works and estimated cost breakdown.

1.2 DESIGN

This worksection can be used to document the contractor's design and documentation responsibilities. If the design, or completion of the design, is not the responsibility of the contractor, delete this clause and associated requirements.

Refer to NATSPEC TECHreport TR 03 on specifying design and construct for mechanical services. It discusses some of the issues and presents a range of approaches for preparing design and construct specifications that can be applied more generally.

General

Designer: [complete/delete]

Nominate the designer e.g. Registered architect, Professional engineer, Equipment supplier.

Requirements

Responsibility: [complete/delete]

For example, responsibility for design coordination.

Performance requirements: To MODDEX specification sheets

For example, an industry organisation's acceptance criteria.

Define verifiable outcomes relating to the overall worksection or system. Use design schedules here, as appropriate, and delete from **SELECTIONS**, if duplicated.

Authority requirements: [complete/delete]

In particular, draw attention to any specific requirements of the DA and other regulatory bodies. Consider attaching DA conditions, if appropriate. Nominate if any part of the design is a NCC performance solution.

Access criteria:[complete/delete]

Select from the following:

- All gutters or service edges
- Roof lights or skylights.
- Roof mounted mechanical plant.
- Roof areas within 2.0 m of a fall hazard not otherwise protected by parapets or guardrails.
- (For MODDEX guardrails) Stairs and ramps, and areas where the change in level exceeds 1.0 m. e.g. retaining walls.

Edit as appropriate. Delete if fully documented in the drawings.

Document fall protection to these areas in the *0193 Building access safety systems* worksection.

1.3 COMPANY CONTACTS

MODDEX technical contacts

Website: www.moddex.com/contact-us.

1.4 CROSS REFERENCES

General

Requirement: Conform to the following:

- *0171 General requirements*.

0171 General requirements contains umbrella requirements for all building and services worksections.

List the worksections cross referenced by this worksection. *0171 General requirements* references the *018 Common requirements* subgroup of worksections. It is not necessary to repeat them here. However, you may also wish to direct the contractor to other worksections where there may be work that is closely associated with this work.

NATSPEC uses generic worksection titles, whether or not there are branded equivalents. If you use a branded worksection, change the cross reference here.

1.5 STANDARDS

General

Access for maintenance: To AS 1657.

Access for people with a disability: To AS 1428.1.

For barriers to prevent falls including balustrades for Class 1 and Class 10 buildings, see BCA 3.9.2, for Class 2 to 9 buildings, see BCA D2.16. For handrails for Class 2 to 9 buildings, see BCA D2.17.

Structural design action: To AS/NZS 1170.1.

Tactile indicators: To AS/NZS 1428.4.1.

1.6 MANUFACTURER'S DOCUMENTS

MODDEX technical manuals

Products: www.moddex.com/products.

Specification sheet downloads: moddex.com/resources/downloads/

1.7 SUBMISSIONS

Certification

Requirement: Submit installation compliance certification from a MODDEX recommended installer.

Operation and maintenance manuals

General: Submit manufacturer's published recommendations for service use.

Records

Requirement: Submit as-built documentation from a MODDEX recommended installer.

Shop drawings

General: Submit shop drawings to a scale that best describes the detail, showing the following information:

- Overall and detail dimensions.
- Details of fabrication and components.
- Details of fabrication involving other trades or components.

e.g. stairs, platforms, walkways.

- Information necessary for site assembly.
- Proposals for the break-up of large items as required for delivery to the site.
- Proposed method of joining the modules of large items.

If delivery involves a goods lift, nominate the car size and capacity.

These shop drawing requirements assume the installation is fully detailed. Edit as required.

Subcontractors

Requirement: Submit evidence of MODDEX approved installer.

Warranties

Requirement: Submit warranties as follows:

Describe the requirements of warranties in **PRODUCTS** or **EXECUTION**, as appropriate, and list the submissions required here.

- Product warranty by MODDEX.
- Installed system warranty by a MODDEX recommended installer.

2 PRODUCTS

Edit, by deletion, the following list of products as appropriate for the project. Make sure the project critical dimensions, number of items and their locations are documented.

2.1 GENERAL

Product substitution

Other products: Conform to PRODUCTS, **GENERAL, Substitutions** in *0171 General requirements*.

The *0171 General requirements* clause sets out the submissions required if the contractor proposes alternative products. Refer also to NATSPEC TECHnote GEN 006 for more information on proprietary specification.

Storage and handling

General: Store and handle to the manufacturer's recommendations and as follows:

- Protect materials from damage.

Product identification

General: Marked to show the following:

- Manufacturer's identification.
- Product brand name.
- Product type.
- Quantity.
- Product reference code and batch number.
- Date of manufacture.

Edit the list to suit the project or delete if not required.

2.2 MODDEX BARRIER SYSTEMS**General**

Description: Heavy duty no-weld pedestrian and property protection barrier systems comprising posts, rails, balustrades and connectors for ground level protection of workplace and public thoroughfares including disabled assistance and bikeway protection.

Access for maintenance: To AS 1657.

Balustrading: To BCA D2.16.

Handrails: To BCA D2.17.

Balustrading and handrails for people with a disability: To AS 1428.1 and AS 1428.2.

Bikeway barriers: To Austroads AGRD06A.

Galvanized coating: To AS/NZS 4680.

Structural design: To AS/NZS 1170.1.

Contact MODDEX for evidence of conformance for the product documented.

Assistrail® disability handrails

Assistrail® handrail systems: moddex.com/products/assistrail-disability-handrails/

Description: Engineered for ramps, stairs and walkways, with smooth connections for a safer finish. Standard and fire stair configurations available.

Material - Tubular sections: G390 hot-dip galvanized steel.

Material - Connector/clamps: Cast iron, steel or aluminium with stainless steel clamp locking screws.

Product: [complete/delete]

Select from:

- Assistrail® AR10 Single inline handrail for level and stairs. AS 1428 compliant.
- Assistrail® AR20 Single inline handrail with kerbrail for level and ramp. AS 1428 compliant.
- Assistrail® AR30 Single inline handrail with midrail for level and stair. AS 1428 compliant.
- Assistrail® AR40 Single inline handrail with midrail and kerbrail for level and ramp. AS 1428 compliant.
- Assistrail® AR45 Single inline handrail with mid and bottom rail for level and stair. AS 1428 compliant.

- Assistrail® AR50 Single offset handrail / On Hob for level and stair. AS 1428 compliant.
- Assistrail® AR60 Single offset handrail with kerbrail for level and ramp. AS 1428 compliant.
- Assistrail® AR70 Single offset handrail with midrail for level and stair. AS 1428 compliant.
- Assistrail® AR80 Single offset handrail with midrail and kerbrail for level and ramp. AS 1428 compliant.
- Assistrail® AR110 Double offset handrails / On Hob for level and stair. AS 1428 compliant.
- Assistrail® AR120 Double offset handrails with kerbrail for level and ramp. AS 1428 compliant.
- Assistrail® AR130 Twin offset handrails for stair. AS 1428 compliant.
- Assistrail® AR140 Twin double offset handrails for stair. AS 1428 compliant.
- Assistrail® AR150 Single offset handrail / Wall Mounted for level, ramp and stair. AS 1428 compliant.
- Assistrail® AR160 Double offset handrails / Wall Mounted for level, ramp and stair. AS 1428 compliant.

Mount type: [complete/delete]

Select from the following:

- T: Top mount, Concrete using M12 x 120 stud anchors/Steel using M16 hi-tensile galvanized bolts.
- F: Face mount, Concrete using M12 x 120 stud anchors/Steel using M16 hi-tensile galvanized bolts.
- C11/13: Channel mount, Steel using M16 hi-tensile galvanized bolts.
- GD: In-ground mount, as per engineer's specifications.
- CD: Cored mount, cored and grouted as per engineer's specifications.
- AM: Angle mount. Concrete using M12 x 100 galvanized screwbolts/Steel using M16 hi-tensile galvanized bolts.

Kerbrail: [complete/delete]

Select from G390 hot-dip galvanized steel, Marine grade stainless steel or Marine grade structural aluminium.

Select galvanized finish (as supplied) or nominate powder coating and colour.

Bikesafe® bikeway barriers

Bikesafe® barrier systems: moddex.com/products/bikesafe-bikeway-barriers/

Description: Engineered for bikeway and footpath safety, providing the ultimate protection for pedestrians and cyclists travelling at speed.

Material – Tubular sections: G390 hot-dip galvanized steel.

Material – Connector/clamps: Cast iron, steel or aluminium with stainless steel clamp locking screws.

Product: [complete/delete]

Select from:

- Bikesafe® BS20 Bikeway barrier with offset top rail and midrail for level and rake. Austroads compliant.
- Bikesafe® BS25 Bikeway barrier with offset top rail and handrail for level and rake. Austroads compliant.
- Bikesafe® BS30 Bikeway barrier with offset top rail, mid and bottom rail for level and rake. Austroads compliant.
- Bikesafe® BS35 Bikeway barrier with offset top rail, handrail and bottom rail for level and rake. Austroads compliant.
- Bikesafe® BS40 Bikeway barrier with offset top rail and balustrade infill for level and rake. Austroads compliant.
- Bikesafe® BS45 Bikeway barrier with offset top rail, handrail and balustrade infill for level and rake. Austroads compliant.

Mount type: [complete/delete]

Select from the following:

- T: Top mount, Concrete using M12 x 120 stud anchors/Steel using M16 hi-tensile galvanized bolts.
- F: Face mount, Concrete using M12 x 120 stud anchors/Steel using M16 hi-tensile galvanized bolts.
- C11/13: Channel mount, Steel using M16 hi-tensile galvanized bolts.
- GD: In-ground mount, to engineer's specifications.
- CD: Cored mount, cored and grouted to engineer's specifications.

Finish: [complete/delete]

Select galvanized finish (as supplied) or nominate powder coating and colour.

Conectabal® commercial balustrades

Conectabal® balustrade systems: moddex.com/products/conectabal-commercial-balustrades/

Description: Prevents injuries or falls from retaining walls, elevated areas, ramps and stairs. Standard and fire stair configurations available.

Material – Tubular sections: G390 hot-dip galvanized steel and/or marine grade aluminium.

Material – Connector/clamps: Cast iron, steel or aluminium with stainless steel clamp locking screws.

Material - Kerbrail (where documented): Marine grade structural aluminium.

Product: [complete/delete]

Select from:

- Conectabal® CB10 Standard Balustrade for level and rake. NCC compliant.
- Conectabal® CB10 Wave Balustrade for level and rake. NCC compliant.
- Conectabal® CB20 Balustrade with kerbrail for level and rake. NCC compliant.
- Conectabal® CB30 Balustrade with single inline handrail for level and stair. NCC compliant.
- Conectabal® CB35 Balustrade with single inline handrail and kerbrail for level and rake. NCC compliant.
- Conectabal® CB40 Balustrade with single offset handrail for level and stair. NCC compliant.
- Conectabal® CB45 Balustrade with single offset handrail and kerbrail for level and rake. NCC compliant.
- Conectabal® CB50 Balustrade with double offset handrails for level and rake. NCC compliant.
- Conectabal® CB55 Balustrade with double offset handrails and kerbrail for level and rake. NCC compliant.

Mount type: [complete/delete]

Select from the following:

- T: Top mount, Concrete using M12 x 120 stud anchors/Steel using M16 hi-tensile galvanized bolts.
- F: Face mount, Concrete using M12 x 120 stud anchors/Steel using M16 hi-tensile galvanized bolts.
- C11/13: Channel mount, Steel using M16 hi-tensile galvanized bolts.
- GD: In-ground mount, to engineer's specifications.
- CD: Cored mount, cored and grouted to engineer's specifications.
- AM: Angle mount. Concrete using M12 x 100 galvanized screwbolts/Steel using M16 Hi-tensile galvanized bolts.

Finish: [complete/delete]

Select galvanized finish (as supplied), or nominate powder coating and colour.

Tuffrail® industrial handrails-guardrails

Tuffrail® industrial handrail-guardrail systems: moddex.com/products/tuffrail-industrial-handrails/

Description: Robust handrail-guardrail protection for workers across mezzanines, service platforms, pedestrian walkways and fall edges. Safety yellow options available.

Material – Tubular sections: G390 hot-dip galvanized steel or marine grade aluminium.

Material selection is dependent on the documented product selection.

Material – Connector/clamps: Cast iron, steel or aluminium with stainless steel clamp locking screws.

Material selection is dependent on the documented product selection.

Material – Toeboard (where documented): G390 hot-dip galvanized steel, marine grade stainless steel or marine grade structural aluminium.

Product: [complete/delete]

Select from:

- Tuffrail® TR10 Single top rail for level and rake. AS 1657 compliant.
- Tuffrail® TR20 Top and midrail for level, rake and stair. AS 1657 compliant.
- Tuffrail TR25 Top and midrail with toeboard for level and rake. AS 1657 compliant.
- Tuffrail® TR30 Top, mid and bottom rail for level, rake and stair. AS 1657 compliant.
- Tuffrail® TR10.Y Yellow, single top rail for level and rake. AS 1657 compliant.
- Tuffrail® TR20.Y Yellow, top and midrail for level, rake and stair AS 1657 compliant.
- Tuffrail® TR25.Y Yellow, top and midrail with toeboard for level and rake. AS 1657 compliant.
- Tuffrail® TR30.Y Yellow, top, mid and bottom rail for level, rake and stair. AS 1657 compliant.
- Tuffrail® TR10.A Aluminium, single top rail for level and rake. AS 1657 compliant.
- Tuffrail® TR20.A Aluminium, top and midrail for level, rake and stair AS 1657 compliant.
- Tuffrail® TR25.A Aluminium, top and midrail with toeboard for level and rake. AS 1657 compliant.
- Tuffrail® TR30.A Aluminium, top, mid and bottom rail for level, rake and stair. AS 1657 compliant.

Mount type: [complete/delete]

Select from the following:

- T: Top mount, Concrete using M12 x 120 stud anchors/Steel using M16 hi-tensile galvanized bolts.
- F: Face mount, Concrete using M12 x 120 stud anchors/Steel using M16 hi-tensile galvanized bolts.
- C11/13: Channel mount, Steel using M16 hi-tensile galvanized bolts.
- GD: In-ground mount, to engineer's specifications.
- CD: Cored mount, cored and grouted to engineer's specifications.
- AM: Angle mount, Concrete using M12 x 100 galvanized screwbolts/Steel using M16 hi-tensile galvanized bolts.

Toeboard: [complete/delete]

Select from G390 hot-dip galvanized steel, Marine grade stainless steel or Marine grade structural aluminium.

Finish: [complete/delete]

Select galvanized finish (as supplied), or nominate powder coating and colour.

Ezibilt® trolley bays

Ezibilt® modular trolley bays: moddex.com/products/ezibilt-trolley-bays/

Description: Secure storage for trolleys at shopping complexes and airports.

Material – Tubular sections: G390 hot-dip galvanized steel.

Material – Connector/clamps: Cast iron, steel or aluminium with stainless steel clamp locking screws.

Trolley bay: [complete/delete]

Select from:

- Ezibilt® EB10 Trolley bay – Single.
- Ezibilt® EB10.W Trolley bay – Single - wide.
- Ezibilt® EB15 Trolley bay - Single - back to back.
- Ezibilt® EB15.W Trolley bay - Single - back to back - wide.
- Ezibilt® EB20 Trolley bay - Double.
- Ezibilt® EB20.W Trolley bay – Double - wide.

- Ezibilt® EB25 Trolley bay – Double - back to back.
- Ezibilt® EB25.W Trolley bay – Double - back to back - wide.
- Ezibilt® EB30 Trolley bay - Triple.
- Ezibilt® EB30.W Trolley bay – Triple - wide.
- Ezibilt® EB35 Trolley bay – Triple - back to back.
- Ezibilt® EB35.W Trolley bay – Triple - back to back - wide.
- Ezibilt® EB40 Trolley bay – Four corral.
- Ezibilt® EB40.W Trolley bay – Four corral - wide.
- Ezibilt® EB60 Trolley bay – Six corral.
- Ezibilt® EB60.W Trolley bay – Six corral - wide.
- Ezibilt® EB80 Trolley bay – Eight corral.
- Ezibilt® EB80.W Trolley bay – Eight corral - wide.
- Ezibilt® EB01 Single sided signboard kit.
- Ezibilt® EB02 Double sided signboard kit.

Mount type: [complete/delete]

Select from the following:

- T: Top mount, Concrete using M12 x 120 stud anchors/Steel using M16 hi-tensile galvanized bolts.
- F: Face mount, Concrete using M12 x 120 stud anchors/Steel using M16 hi-tensile galvanized bolts.
- C11/13 CL: Channel mount, Steel using M16 hi-tensile galvanized bolts.
- GD: In-ground mount, to engineer's specifications.
- CD: Cored mount, cored and grouted to engineer's specifications.
- AM: Angle mount, Concrete using M12 x 100 galvanized screwbolts/Steel using M16 hi-tensile galvanized bolts.

Finish: [complete/delete]

Select galvanized finish (as supplied) or nominate powder coating and colour.

Tuffstop® safety bollards

Tuffstop® modular security/builders bollards: moddex.com/products/tuffstop-safety-bollards/

Description: Industrial safety bollards for pedestrian and equipment protection. Safety yellow options available for bollards.

Material – Tubular steel and flat plate sections: G390 hot-dip galvanized steel.

Bollards: [complete/delete]

Select from:

- Tuffstop® TS530.0900.GD – HDG, 90NB in-ground mount bollard, 900 mm.
- Tuffstop® TS530.0900.T4 – HDG, 90NB top mount bollard, 900 mm.
- Tuffstop® TS530Y.0900.GD – Yellow, 90NB in-ground mount bollard, 900 mm.
- Tuffstop® TS530Y.0900.T4 – Yellow, 90NB top mount bollard, 900 mm.
- Tuffstop® TS550.1050.GD – HDG, 125NB in-ground mount bollard, 1050 mm.
- Tuffstop® TS550.1050.T4 – HDG, 125NB top mount bollard, 1050 mm.
- Tuffstop® TS550Y.1050.GD – Yellow, 125NB in-ground mount bollard, 1050 mm.
- Tuffstop® TS550Y.1050.T4 – Yellow, 125NB top mount bollard, 1050 mm.
- Tuffstop® TS550.1200.GD – HDG, 125NB in-ground mount bollard, 1200 mm.
- Tuffstop® TS550.1200.T4 – HDG, 125NB top mount bollard, 1200 mm.
- Tuffstop® TS550Y.1200.T4 – Yellow, 125NB top mount bollard, 1200 mm.
- Tuffstop® TS550.1300.T4 – HDG, 125NB top mount bollard, 1300 mm.
- Tuffstop® TS550Y.1300.GD – Yellow, 125NB in-ground mount bollard, 1300 mm.

- Tuffstop® TS550Y.1300.T4 – Yellow, 125NB top mount bollard, 1300 mm.
- Tuffstop® TS560.1050.GD – HDG, 150NB in-ground mount bollard, 1050 mm.
- Tuffstop® TS560.1050.T4 – HDG, 150NB top mount bollard, 1050 mm.
- Tuffstop® TS560Y.1050.GD – Yellow, 150NB in-ground mount bollard, 1050 mm.
- Tuffstop® TS560Y.1050.T4 – Yellow, 150NB top mount bollard, 1050 mm.

Mount type: [complete/delete]

Select from the following:

- T: Top mount, Concrete using M12 x 120 stud anchors/Steel using M16 hi-tensile galvanized bolts.
- GD: In-ground mount, to engineer's specifications.
- CD: Cored mount, cored and grouted to engineer's specifications.

Finish: [complete/delete]

Finish selection is dependent on the documented product selection.

2.3 MODDEX SAFETY ACCESSORIES

General

Description: Surface products used for pedestrian safety in all public locations such as stairways, ramps, escalators and platforms.

Tactile indicators: To AS/NZS 1428.4.1.

Slip resistance: To AS 4586.

Intac® tactile indicators

Intac® surface tactile indicators: moddex.com/products/intac-tactile-indicators/

Description: Tactile indicators for ramps, stairs and walkways for the blind or visually impaired. Ceramic tile or self-adhesive PVC options available.

Material: PVC-U or ceramic.

Product: [complete/delete]

Select from:

- Intac® IN100 PVC fastile hazard tactile 300 x 300 mm – silver. AS 1428 compliant.
- Intac® IN101 PVC fastile hazard tactile 300 x 300 mm – black. AS 1428 compliant.
- Intac® IN102 PVC fastile hazard tactile 300 x 300 mm – white. AS 1428 compliant.
- Intac® IN103 PVC fastile hazard tactile 300 x 300 mm – yellow. AS 1428 compliant.
- Intac® IN104 PVC fastile hazard tactile 300 x 300 mm – blue. AS 1428 compliant.
- Intac® IN105 PVC fastile hazard tactile 300 x 300 mm – red. AS 1428 compliant.
- Intac® IN106 PVC fastile hazard tactile 300 x 300 mm – beige. AS 1428 compliant.
- Intac® IN107 PVC fastile hazard tactile 300 x 300 mm – grey. AS 1428 compliant.
- Intac® IN108 PVC fastile hazard tactile 300 x 300 mm – green. AS 1428 compliant.
- Intac® IN110 PVC fastile hazard tactile 300 x 300 mm – terracotta. AS 1428 compliant.
- Intac® IN111 PVC fastile hazard tactile 300 x 300 mm – orange. AS 1428 compliant.
- Intac® IN112 PVC fastile hazard tactile 300 x 300 mm – silver, premium. AS 1428 compliant.
- Intac® IN150 PVC fastile directional tactile 300 x 150 mm – silver. AS 1428 compliant.
- Intac® IN151 PVC fastile directional tactile 300 x 150 mm – black. AS 1428 compliant.
- Intac® IN152 PVC fastile directional tactile 300 x 150 mm – white. AS 1428 compliant.
- Intac® IN153 PVC fastile directional tactile 300 x 150 mm – yellow. AS 1428 compliant.
- Intac® IN154 PVC fastile directional tactile 300 x 150 mm – blue. AS 1428 compliant.

- Intac® IN155 PVC fastile directional tactile 300 x 150 mm – red. AS 1428 compliant.
- Intac® IN156 PVC fastile directional tactile 300 x 150 mm – beige. AS 1428 compliant.
- Intac® IN157 PVC fastile directional tactile 300 x 150 mm – grey. AS 1428 compliant.
- Intac® IN158 PVC fastile directional tactile 300 x 150 mm – green. AS 1428 compliant.
- Intac® IN160 PVC fastile hazard tactile 300 x 300 mm – terracotta. AS 1428 compliant.
- Intac® IN161 PVC fastile hazard tactile 300 x 300 mm – orange. AS 1428 compliant.
- Intac® IN162 PVC fastile hazard tactile 300 x 300 mm – silver, premium. AS 1428 compliant.

Tredmaxx® non-slip safety

Tredmaxx® stair nosings: moddex.com/products/tredmaxx-non-slip-safety/

Description: Non-slip surfacing and stair nosing for internal or external stairs, walkways and platforms. Available in a range of profiles and grits.

Material – Marine grade aluminium or reinforced fibreglass reinforced resin (FRP).

Material selection is dependent on the documented product selection.

Product: [complete/delete]

Select from:

- Tredmaxx® GLA110 Heavy duty marine grade aluminium (clear anodised) stair nosing with 4 bars of carborundum infill for hard substrate stairs. AS 4586 compliant.
- Tredmaxx® GLA111 Heavy duty marine grade aluminium (clear anodised) stair nosing with 4 bars of carborundum infill for stairs with vinyl/rubber coverings. AS 4586 compliant.
- Tredmaxx® GLA112 Heavy duty marine grade aluminium (clear anodised) stair nosing with 4 bars of carborundum infill for hard substrate stairs. AS 1428.1/AS 4586 compliant.
- Tredmaxx® GLA113 Heavy duty marine grade aluminium (clear anodised) stair nosing with 4 bars of carborundum infill for stairs with tiles/rubber coverings. AS 1428.1/AS 4586 compliant. Carborundum infill colours available in black, grey, yellow, white and luminescent.
- Tredmaxx® GLA210 Heavy duty marine grade aluminium (clear anodised) stair nosing with carborundum infill for hard substrate stairs. AS 4586 compliant.
- Tredmaxx® GLA211 Heavy duty marine grade aluminium (clear anodised) stair nosing with carborundum infill for stairs with vinyl/rubber coverings. AS 4586 compliant.
- Tredmaxx® GLA212 Heavy duty marine grade aluminium (clear anodised) stair nosing with carborundum infill for hard substrate stairs. AS 1428.1/AS 4586 compliant.
- Tredmaxx® GLA213 Heavy duty marine grade aluminium (clear anodised) stair nosing with carborundum infill for stairs with tiles/rubber coverings. AS 1428.1/AS 4586 compliant. Santoprene infill colours available in black, grey, yellow and white.
- Tredmaxx® GLA310 Multi-purpose marine grade aluminium (clear anodised) stair nosing with slip-resistant santoprene infill for hard substrate stairs. AS 4586 compliant.
- Tredmaxx® GLA311 Multi-purpose marine grade aluminium (clear anodised) stair nosing with slip-resistant santoprene infill for stairs with vinyl/rubber coverings. AS 4586 compliant.
- Tredmaxx® GLA312 Multi-purpose marine grade aluminium (clear anodised) stair nosing with slip-resistant santoprene infill for hard substrate stairs. AS 1428.1/AS 4586 compliant.
- Tredmaxx® GLA313 Multi-purpose marine grade aluminium (clear anodised) stair nosing with slip-resistant santoprene infill for stairs with tiles/rubber coverings. AS 1428.1/AS 4586 compliant. Carborundum infill colours available in black, grey, yellow, white and luminescent.
- Tredmaxx® GLA510 Heavy duty marine grade aluminium (clear anodised) tread insert with 4 bars of carborundum infill for rebated applications. Carborundum infill colours available in black, grey, yellow, white and luminescent. AS 4586 compliant.
- Tredmaxx® GLA511 Heavy duty marine grade aluminium (clear anodised) tread insert with carborundum infill for rebated applications. AS 4586 compliant.
- Tredmaxx® GLA512 Heavy duty marine grade aluminium (clear anodised) tread insert with carborundum infill for rebated applications. Carborundum infill colours available in black, grey, yellow, white and luminescent. AS 4586 compliant.
- Tredmaxx® GLI070 Heavy duty reinforced fibreglass (FRP) stair nosing with carborundum coating for hard substrate stairs. AS 4586 compliant.

- Tredmaxx® GLI150 Heavy duty reinforced fiberglass (FRP) stair nosing with carborundum coating for hard substrate stairs. AS 4586 compliant.
- Tredmaxx® GLI230 Heavy duty reinforced fiberglass (FRP) stair nosing with carborundum coating for hard substrate stairs. AS 4586 compliant.

Non-slip infill colour: [complete/delete]

Select infill colours for santoprene or carborundum as available in black, grey, yellow, white and luminescent.

3 EXECUTION

3.1 INSTALLATION

General

Installation: To MODDEX's recommendations.

Fixing

Requirement: Fix to the structure with documented mounts and/or brackets.

Confirm with the structural engineer.

3.2 TRAINING

General

Requirement: Provide training in the safe use and maintenance of the system to all users.

3.3 COMPLETION

Cleaning

Temporary coatings: Before completion, or before joining up to other surfaces, remove all temporary coatings used for protection.

4 SELECTIONS

Schedules are a way of documenting a selection of proprietary or generic products or systems by their properties. Indicate their locations here and/or on the drawings. Refer to NATSPEC TECHnote GEN 024 for guidance on using and editing schedules.

4.1 MODDEX ACCESS SYSTEMS

MODDEX access systems schedule

Property	A	B	C
Assistrail® Disability Handrails			
Bikesafe® Bikeway Barriers			
Conectabal® Commercial Balustrades			
Tuffrail® Industrial Guardrails			
Ezibilt® Trolley Bays			
Tuffstop® Safety Bollards			
Intac® Tactile Indicators			
Tredmaxx® Non-Slip Safety			

A, B, C: These designate each instance or type or location of the item scheduled.

Edit codes in the **Schedule** to match those on drawings.

Design

The requirements for handrails and grab rails in AS 1428.1 could be used for general application (e.g. diameter between 30 and 50 mm). AS 1428.1 is widely cited in the NCC including for braille and tactile signage.

AS 1657 should be used for design, construction and installation of fixed platforms, walkways, stairways and ladders normally used by operating and maintenance personnel. Compliance, in certain situations, is a NCC deemed-to-satisfy requirement.

Such products designed to be attached to and supported by profiled roof sheeting may be specified in the *0421 Roofing – combined* worksection if this is preferred.

Tests for welding: It is assumed fabricated metal stairs have been documented by the Structural Consultant and *0341 Structural steelwork* would be included. If this is not the case, import tests for welding requirements from *0341 Structural steelwork*.

Metalwork standards

It is unlikely that in any architectural metalwork strict compliance with Australian standard specifications will be needed. Indeed the major metal producers have their own proprietary specifications which do not always meet Australian standard specifications in some respects but may be superior in others. Specifiers should endeavour to establish availability of products in the dimensions, grades and quantities required when specifying.

REFERENCED DOCUMENTS

The following documents are incorporated into this worksection by reference:

AS/NZS 1170		Structural design actions
AS/NZS 1170.1	2002	Permanent, imposed and other actions
AS 1428		Design for access and mobility
AS 1428.1	2009	General requirements for access - New building work
AS 1428.2	1992	Enhanced and additional requirements - Buildings and facilities
AS/NZS 1428.4.1	2009	Means to assist the orientation of people with vision impairment - Tactile ground surface indicators
AS 1657	2018	Fixed platforms, walkways, stairways and ladders - Design, construction and installation
AS 4586	2013	Slip resistance classification of new pedestrian surface materials
AS/NZS 4680	2006	Hot-dip galvanized (zinc) coatings on fabricated ferrous articles
Austrroads AGRD		Guide to road design
Austrroads AGRD06A	2017	Paths for walking and cycling
BCA D2.16	2019	Access and egress- Construction of exits - Barriers to prevent falls
BCA D2.17	2019	Access and egress- Construction of exits - Handrails

The following documents are mentioned only in the *Guidance* text:

AS 1428		Design for access and mobility
BCA 3.9.2	2019	Acceptable construction - Safe movement and access - Barriers and handrails
NATSPEC GEN 006	2007	Product specifying and substitution
NATSPEC GEN 024	2015	Using NATSPEC selections schedules
NATSPEC TR 01	2019	Specifying ESD
NATSPEC TR 03	2018	Specifying design and construct for mechanical services