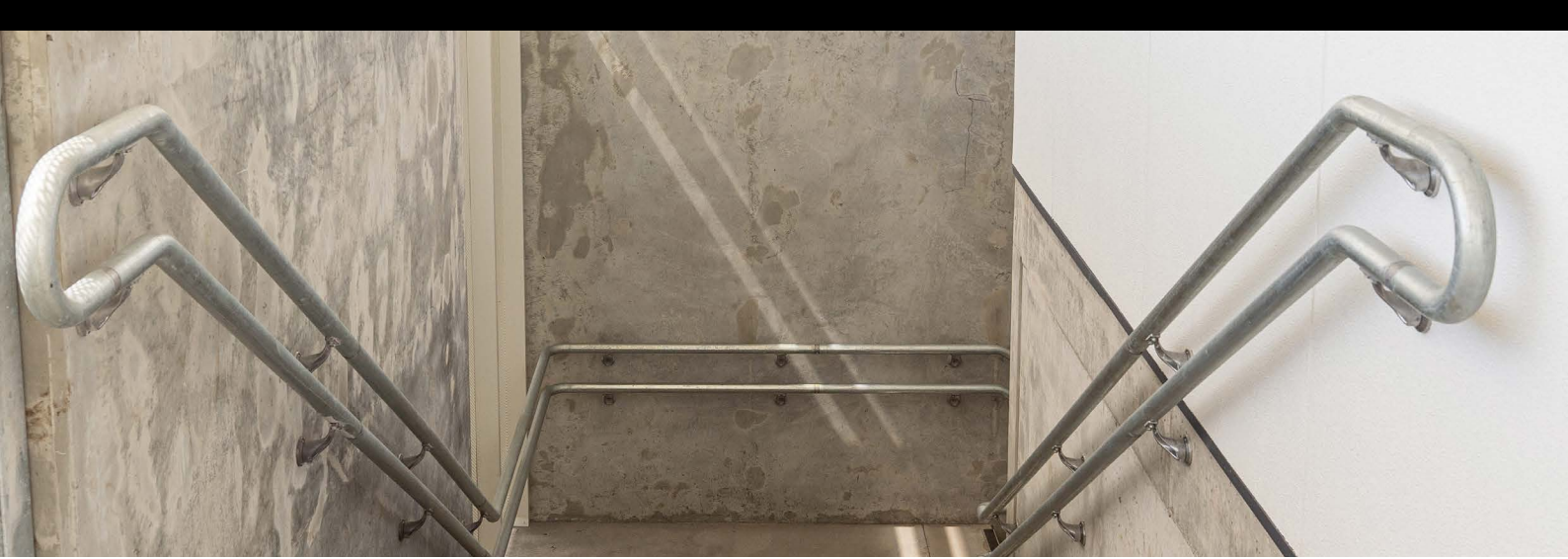




SCHOOLS & EDUCATION

Industry Mini Guide Series

moddex[®]
EVERYTHING FITS



INTRODUCTION

Australia's world-class education system is widely regarded as a vital resource for society, both locally and internationally. As of 2023, Australia has approximately 9,629 schools, encompassing primary, secondary, combined, and special schools. We are also home to 42 universities, with at least one university main campus based in each state or territory¹.

As our population grows and demographics change, the demand for school spaces is expected to rise, especially in urban areas. Estimates suggest that an additional 400 to 750 new schools are needed by 2026 to accommodate increasing student numbers, as well as many existing schools needing facility upgrades to cater to a diverse range of student needs.

From early learning through to higher education, organisations are looking to deliver exceptional student experiences through design. The focus is on creating purposeful, custom architectural spaces that embody the school's culture, bring the community together and enhance teaching and learning. One thing is clear, modern, safe and properly-maintained facilities equate to better education.

A school's design and construction represents a significant undertaking. Complying with council

regulations, building codes and Australian standards are non-negotiable to ensure the school is safe and fit for purpose through all stages of the project. Evidence suggests that poor design ultimately results in higher building and maintenance costs over the life of a school, while good design is more cost-effective and creates a valuable, long-lasting community asset.

At Moddex, we understand how crucial it is for every element—from design to construction—to meet the needs of administrators, teachers, students, parents, and boards of trustees, while also adhering to all applicable codes and standards. Thanks to the many years of research, development, design and engineering behind every pre-designed modular configuration, Moddex handrail and balustrade systems are 100% compliant and built to last.

In order to provide customers with a seamless and hassle-free experience, Moddex's end-to-end solution is a carefully-designed procedure that starts with well thought out plans and continues through construction. This results in more efficient project delivery, increased end-user flexibility, and the best learning environments for primary, secondary, and tertiary students.

¹ [Australian Bureau of Statistics](#)



DESIGNING FOR ACCESS & MOBILITY

The Australian Institute of Health and Welfare estimates that 1 in 10 (10% or 380,000) school students in Australia have disability, and almost 1 in 18 (5.4% or 206,000) have severe or profound disability¹. In light of these figures, every school should be designed with students of varying abilities in mind.

All education providers have a responsibility under the Disability Standards for Education 2005, which is Australian law under the Disability Discrimination Act (DDA) 1992, to make sure that every student can participate in the curriculum on an equal basis with their peers. One aspect of meeting this goal is making reasonable modifications to the physical environment of the school to help every student reach their full potential.

According to the National Construction Code (NCC), new buildings must provide access for people with disabilities via an “accessible” continuous path of travel (without steps or thresholds). In order to make the built environment more accessible to people with disabilities, the AS 1428 “Design for access and mobility” series provides specific information about buildings, such as circulation space, ramp gradients, construction, and many other practical features. Other requirements cover the provision of appropriate handrails.



HANDRAIL REQUIREMENTS UNDER AS1428.1-2021

Under AS1428.1 Clause 12, handrails shall be designed to comply with the following:

- The cross-section of the handrail must be circular or elliptical, with a height and width of not less than 30mm or greater than 52mm for 270° around the uppermost surface. The horizontal axis on elliptical handrail must be the axis with the greater dimension.
- The top of the handrail must be not less than 865mm or greater than 1000mm from the nosing of a stair or the plane of the finished floor level on a ramp, walkway or landing.
- The height of the top of the handrail must be consistent throughout the ramp, stair and landings.
- A clearspace between a handrail and an adjacent wall or other obstruction must not be less than 50mm. A clearspace of 600mm is also required above the top of the handrail.
- Handrails are to have no obstruction to the passage of a hand along the rail. Further reference should be made to Clause 12 for the full AS1428 requirement.

HANDRAIL COMPLIANCE IN A CLASS 9B BUILDING USED AS A PRIMARY SCHOOL

Clause D2.17 of the NCC provides that in a Class 9b building used as a primary school handrails must have one handrail fixed at a height of not less than 865 mm, and have a second handrail fixed at a height between 665 mm and 750 mm, measured above the nosings of stair treads and the floor surface of the ramp, landing or the like.

Handrails complying with NCC Clause D2.17 must be installed on a substrate that allows a minimum of 1000mm between handrails as stated in AS1428.1 Clause 6.3 and NCC Clause D1.6(B)(i).

¹ [Australian Institute of Health & Welfare](https://www.aihw.gov.au/reports/1-in-10/1-in-10)



PROJECT SPOTLIGHT

MINERS REST PRIMARY SCHOOL

Location: Miners Rest, VIC

Client: Victorian Schools Building Authority (VSBA), Victorian Government Agency

Products: Assistrail® AR110, AR120; Conectabal® CB55

A trusted and compliant supplier to the VSBA, Moddex was selected for the expansion and upgrade of Miners Rest Primary School because their systems are easy to specify, quick to install and guaranteed to meet compliance for Class 9B buildings.



PALMVIEW STATE PRIMARY SCHOOL & SPECIAL SCHOOL

Location: Palmview, QLD

Client: FK Gardner and Sons

Products: Assistrail® AR110, AR130; Conectabal® CB10

The Palmview Schools project was completed in compliance with the Disability Discrimination Act and AS1428 using Moddex's durable pre-engineered systems.

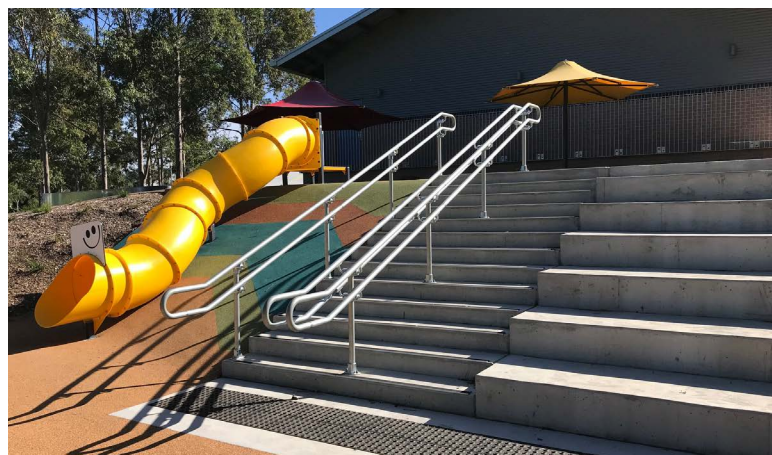


WESTERN SYDNEY SCHOOLS PROJECTS

Location: Various, NSW

Client: Hansen Yuncken

Moddex was selected as the contractor for the Western Sydney Schools Projects to install the handrail and balustrade systems for the landscape packages throughout several schools, including external stairs, ramps and retaining walls.



HANDRAIL & BALUSTRADE COMPLIANCE FOR VICTORIAN SCHOOLS

While Moddex takes pride in offering flexible solutions, they leave no room for error when it comes to compliance and safety. This includes the Victorian School Building Authority (VSBA) standards for handrails and balustrades.

The VSBA, a division of the Department of Education and Training, is your reference point for ensuring the safety of new school designs and construction, as well as the modernisation and improvement of existing sites. In general, public schools must comply with standards issued by the VSBA. It is crucial for architects, access consultants, and builders to work together to make sure these standards are followed.

WHAT REQUIREMENTS APPLY?

All schools built must comply with the National Construction Code (NCC) and the Disability Discrimination Act (DDA). Any school under the VSBA must comply with the NCC and the DDA as well as additional design standards enforced by VSBA, which are found in the Building Quality Standards Handbook.

Below, we discuss some of the notable must-haves to ensure compliance. In some cases, the VSBA includes requirements in excess of the NCC. The NCC serves as the benchmark whenever the VSBA Handbook does not provide precise answers.

WHAT YOU NEED TO KNOW

- **Placement.** Balustrades, also referred to as barriers, must be provided, in addition to handrails, on stairs and ramps. Notably, all required internal and external balustrades/barriers lacking purchase points (handrails or baseboards) must have a minimum height of 1500mm (1.5m) above the finished floor level (FFL). This is in excess of the requirements of the NCC to ensure the safety of all students, staff and visitors. Where an internal or external balustrade/barrier on a new or refurbished site has a handrail or base board it must be 1800mm high above the FFL. In the future, the minimum balustrade height, with or without purchase points, will become 1800mm. Further requirements are found in Clause 5.3.11 of the VSBA Handbook.

- **Finishes and materials.** Under Clause 5.4.3, metal safety rails and barriers, bollards, and columns for external covered ways must be painted in high visibility luminance contrast colours, and handrails should be galvanised. The VSBA Handbook also requires the use of 316 stainless steel to limit corrosion on sites located near salt water, and non-combustible handrails when decking is required for egress from a shelter-in-place.
- **Stairs and ramps.** All stairs and ramps must comply with and be installed in accordance with AS1428. Further requirements are found in Clause 5.3.11 of the VSBA Handbook.
- **Pathways.** Path width should suit the anticipated use. They should comply with the DDA access requirements and be free of obstructions. Where bleachers are used in buildings or landscapes beside a one metre or greater drop, handrailing must be installed at all stair interfaces/access ways.
- **Pedestrian footpaths.** All pedestrian footpaths must comply and be installed in accordance with AS1428. Project consultants must select and satisfy that pedestrian footpaths with gradients greater than 1:14 must be provided with handrails.
- **Timber flooring and external decking.** Where paving, decking or another design feature creates a significant elevation change, an agreed Safety in Design measure must be put in place to mitigate the risk of falls.





MODDEX SYSTEM RANGE



Assistrail® – Disability Handrails. Ensures that the public and mobility impaired or vision impaired can traverse your site safely and with ease.



Bridgerail™ – Bridge Barriers. Ensures balustrades on bridges can be specified and fitted effortlessly, with compliance guaranteed.



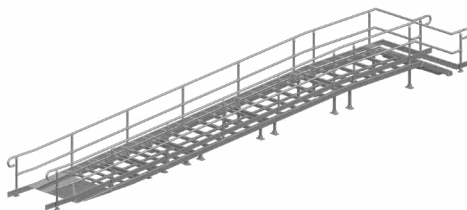
Conectabal® – Commercial Balustrades. Mitigates risk and prevent falls from height.



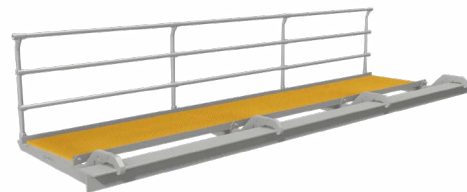
Tuffrail® – Industrial Handrails. Tough, corrosion-resistant handrails for use in areas where chemical fumes or sea spray could cause corrosion.



Bikesafe® – Disability Handrails. Ensures that the public and mobility impaired or vision impaired can traverse your site safely and with ease.



Ezibilt™ – Modular Ramp, Deck & Stair Solution. The ultimate pre-engineered modular solution for fast-tracked construction of accessibility stairs, ramps and decks.



KlipTread™ – Clip-On Walkway & Handrail System. A pre-engineered, clip-on walkway and handrail system specially designed for bridge infrastructure.

ABOUT MODDEX

Moddex is Australasia's leading manufacturer of pre-fabricated, no-weld, hot dip galvanised barrier systems for industrial, commercial and non-residential construction projects.

Pre-engineered for structural integrity, all proprietary systems by Moddex are load tested and configured to Australian and New Zealand Standards (AS/NZS), Workplace Health and Safety guidelines (WHS/OSH), Australia's National Construction Code (NCC/BCA) and the New Zealand Building Code (NZBC).

