THE UNIVERSITY OF SYDNEY

CIS DDA and Access Standard

The University of Sydney

Planning Team

Document Control

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Contents

1 PURPOSE

The CIS Design Standard – DDA and Access – sets out the University's requirements for the design, construction and maintenance to meet the physical requirements for an accessible campus for persons with disabilities.

The object of this standard is to ensure the built environments for the University have no barriers and cater for all persons so that in effect disability is not an issue.

This standard is to be read in conjunction with the Building Code of Australia and Australian Standard AS 1428 Part 1 and 2. It should be noted that these codes do not provide prescribed solutions for all teaching and learning situations and that the Standard requires an Access Strategy for each project to be prepared to be signed off at each design stage (10 Quality Control).

The University has a **Disability Action Plan 2013 to 2018** and an **Accessible Environment Plan**. Each faculty and School and Business Unit is required to develop their own local **Disability Action Plan** during 2013 - 2014. These documents provide the overall guide for architects, engineers, project managers, contractors, facilities managers and faculty managers for design, construction and operation of the built environment to achieve the goal of the University to have an accessible campus.

2 SCOPE

This design standard sets out the process by which a project is to be designed and constructed to be comply with the access standards and requirement of the University that all new buildings and fitouts will be barrier free.

The standard applies to planners, project managers, consultants, contractors, sub-contractors, tenants, managing agents, University staff and others involved in the design, construction and maintenance of existing, new and proposed University buildings and facilities.

3 GLOSSARY OF TERMS

a. **Path of Travel.** Path of travel must be barrier free from entry to building to all the publicly accessible areas. Auto sliding doors are the required option.

b. Compliance with AS 1428 Part 2 and 4 and the Access to Premises Standard AS1428 part 1 is mandatory.

c. **DDA**: Disability and Discrimination Act, 1993 (Federal).

d. **Project Access Strategy Plan** is to be prepared for every project. For each project an Access Strategy plan is to be prepared for approval by CIS. This plan is to identify the important features of the physical access (path of travel POT) plus the proposed management for staff and students with disabilities and their accommodation of their needs and plan of action for the addressing of unforseen barriers to study or work. The POT needs to identify the route from the entry of the building through to the subject space.

e. **Accessibility Plans:** The Consultant shall include separate Accessibility Plans in the project drawings that clearly indicate the project features of accessibility. At a minimum this shall include site logistics plan, site plan and floor plans for each level.

4 AUTHORITIES & RESPONSIBILITIES

This standard is issued by CIS. It is approved and signed-off by the Director, CIS. The CIS Planning Unit is responsible for maintaining the standard and keeping it up-to-date. The Standard must be reviewed biennially.

5 DESIGN AND CONSTRUCTION REQUIREMENTS

5.1 STAIRS AND NOSINGS.

Stair finishes to be four types of finishes (stone (sandstone or trachyte, quarry tile, vinyl or carpet) with Latham Asbra ST Series Surface Mounted for existing stairs, S Series Recessed flush with the finish or Asbrabronze solid brass. Carpet should only be used in low traffic areas.

Figure 5.1 Stair nosing in large lecture theatre – Charles Perkins Centre Lecture Theatre

5.2 TACTILE INSTALLATIONS FOR STAIRS, RAMPS, SIGNAGE, EXTERNAL WAYFINDING AND KERB CROSSINGS.

They need to have 30% colour contrast. Where stainless steel tactiles are used in concrete or granite surfaces these need to have a black colour insert.

5.3 LIFT INSTALLATIONS.

Lifts to be minimum 1,600 by 1,400mm car dimension. Lift car to be controls with raised number and Braille floor buttons and floor lift buttons. All lifts to be fitted with audio announcement irrespective of the number of floors travelled.

5.4 TOILETS TO APS AND ENHANCED WITH AUTODOORS

Unisex toilets are to be best practice design. One unisex accessible toilet in each building is to be provided with an auto sliding or swing door. All accessible toilets are to be provided with a duress button to the University Security and a shelf for a bag or A4 size notebook.

Inclusions for all accessible toilets:

a. Sensor or flick mixer tap.
b. Automatic electric hand dryer.
c. Duress alarm button to CIS Security Control Room and strobe light: refer to University Security design Standard.

Figure 5.2 Auto door for accessible toilet - CPC

Figure 5.3 Accessible toilet - CPC

5.5 RAMPS

All ramps are to be provided with glass balustrade, steel balustrade and sandstone or painted steel balusters. Provide a lighting detail with an under mount fluorescent light at handrail level to direct light on to paved surface of the ramp. Lighting to be recessed LED or equal with balustrade mounted reflector or wall mounted brick light or similar.

Figure 5.4 Example: Ramp (concrete) with painted steel balustrade Edward Ford Building.

Figure 5.5 Example: Ramp with painted steel balustrade. Edward Ford Building

Figure 5.6 Example: Ramp (concrete) with toughened glass balustrade. Chemical Engineering.

5.6 LECTURE THEATRE SEATING FOR WHEELCHAIRS

Provide locations for wheelchair users and their carer in each lecture space as per table below:

TABLE 5.1

Size of lecture theatre	No of double width spaces	Location
50	1	Front
100	2	Front
200	4	Front and back
300	6	Front and back
Plus 300	8	Front and back

Figure 5.7 Space for wheelchair in CPC main lecture theatre.

Figure 5.8 Adjustable table. Seminar and Tutorial rooms to be provided with at least 2 per room.

5.7 LECTERN DESIGN

To cater for persons with wheelchairs. Lecterns must be height adjustable or have suitable designed lectern with side mounted desk for laptop or notes.

Figure 5.9 Lecturn in large lecture theatre – Charles Perkins Centre.

Lecturns are to be provided with an electric operated height adjustable tablet for presentation notes or laptops. 1060mm wide by 570mm deep height adjustable 800 to 1020mm.

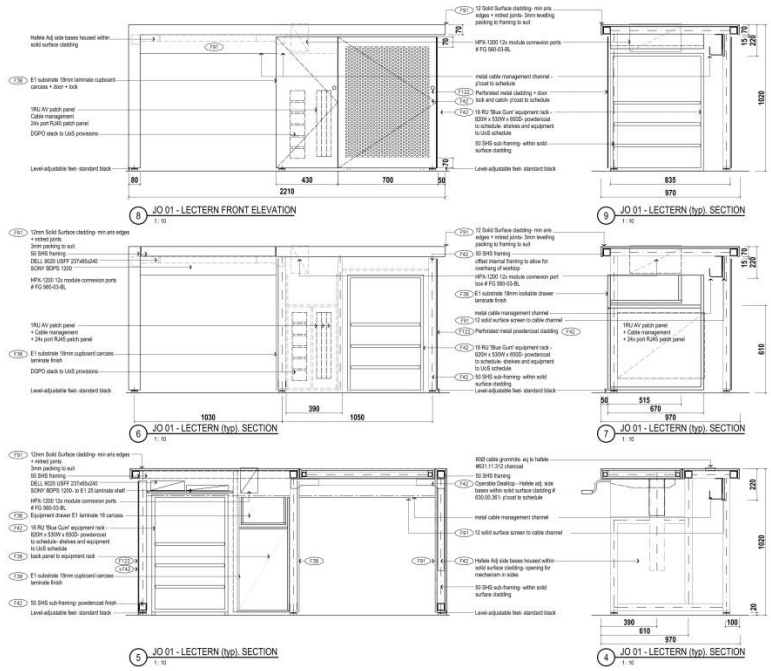

Figure 5.10 Example lectern in new Business Building. Architect: Kahn Finch and Lend Lease.

5.8 LAB BENCHES AND FUME CUPBOARD GUIDELINES

TABLE 5.2

Size/type of laboratory	Capacity	Provision
Teaching	24	5% adjustable bench and services, 1 fume cupboard.
Teaching	48	5% adjustable height bench and services, 1 fume cupboard.
Anatomy		5% adjustable benches.
Research		Determined on requirement.

Figure 5.11 Adjustable height lab bench in Super Lab – Charles Perkins Centre.

5.9 RECEPTION COUNTERS

Provide reception counter at 700mm height for a 1/3 length with leg space underneath. Provide fully adjustable workstations for each reception staff position. Refer to Figure 5.10 and 5.11 for example designs.

5.10 OFFICES AND WORKSTATIONS

TABLE 5.3

Element	Description	Number or percentage
Workstation	Adjustment=adjustable facility requires technician. Fixed.	100% adjustment facility 5% adjustable

	Adjustable=can be adjusted by winder mechanism.	
Task chairs	Adjustable without arms	100%
Desks	Adjustment=adjustable facility requires technician. Fixed.	100%
Meeting tables	700mm high 30mm thick surface.	

5.11 DOOR ARRANGEMENTS

TABLE 5.4

Door type	Description	Minimum Width
Main entry	Auto sliding glass with contrasting edge stripping and visual strip. Where airlock is included the distance between doors to be at least 3 metres.	1800mm clear. Refer to 'Circulation space at doorways on a continuous path of travel' in AS 1428 Part 1 and 2. Refer to 'Clear opening of doorways' in AS1428 Part 1 and 2.
Secondary or secure entry with swipe card access in public area	Auto sliding glass with contrasting edge strip and visual strip	1000mm clear. Refer to 'Circulation space at doorways on a continuous path of travel' in AS 1428 Part 1 and 2. Refer to 'Clear opening of doorways' in AS1428 Part 1 and 2.
Secondary or secure entry with swipe card access	Swing door fully glazed aluminium framed with closer.	900mm clear. Refer to 'Circulation space at doorways on a continuous path of travel' in AS 1428 Part 1 and 2. Refer to 'Clear opening of doorways' in AS1428 Part 1 and 2.
Meeting room	Swing door	900mm clear. Refer to 'Circulation space at doorways on a continuous path of travel' in AS 1428 Part 1 and 2. Refer to 'Clear opening of doorways' in AS1428 Part 1 and 2.
Office	Swing door	900mm clear. Refer to 'Circulation space at doorways on a continuous

Door type	Description	Minimum Width
		path of travel' in AS 1428 Part 1 and 2. Refer to 'Clear opening of doorways' in AS1428 Part 1 and 2.

5.12 CAR SPACES

Car parking spaces for persons with disabilities should be as close as possible to main entries and within 100m, on grade and generally level marked by signage on the pavement and vertical sign.

TABLE 5.5

Description	Size and standard	Signage
Single	5.4m by 4.8m including a shared side space 2.4m wide. AS 2890 Part 6 Parking facilities for off-street parking for people with disabilities.	Paving and sign post

Figure 5.12 Double shared space – Maze Crescent.

5.13 EXTERNAL KERB RAMPS IN CONCRETE AND STONE

TABLE 5.6

Application	Tactile indicators	Additional details
Kerb crossing, stairs, ramps,	Stikcrete	30% colour contrast -yellow

Application	Tactile indicators	Additional details
landings and hazards.	Tactile Indicators Pty Ltd	
Wayfinding directional signs, bus stops, taxi stands.	TT – SD Stainless steel directional with spigot.	30% colour contrast
Kerb crossing, stairs, ramps, landings and hazards.	TT – SC with spigot and carborundum insert.	30% colour contrast

5.14 STUDENT ACCOMMODATION

TABLE 5.7

Facility	Requirement	Percentage
Main entry	Fully accessible with fully glazed double auto door.	100%
Secondary entry	Fully glazed doors with width and number as required but not less than 900mm clear.	100%
Internal security doors	Fully accessible with fully glazed auto door.	100%
All other doors including bedroom doors	900mm clearance and compliance with AS1428 Part 1 and 2.	100%
Bedrooms	Accessible bedroom	5%
Bathrooms	Accessible	5%
Food preparation in common area	Accessible	5%
Other common areas	Accessible across entire floor space	100%
Parking	Space for persons with a disability	5% with minimum 1 car space.

5.15 HEARING LOOP

All lecture theatres and other teaching spaces with audio-visual facilities are to be provided with hearing augmentation. The University utilises an infra – red system. Persons using the system need to be notified and if required to either Student Services or their Staff Accessibility Manager to obtain a receiver. Refer to AS 1428 Part 4 for the specific requirement.

TABLE 5.8

Facility	Requirement	Percentage
All teaching and learning spaces with audio visual facilities	Provide hearing loop. Refer to ICT Audio Visual Design Guidelines.	100%
Signage	Provide signage notifying users of the hearing loop in braille and tactile. AS1428.5	

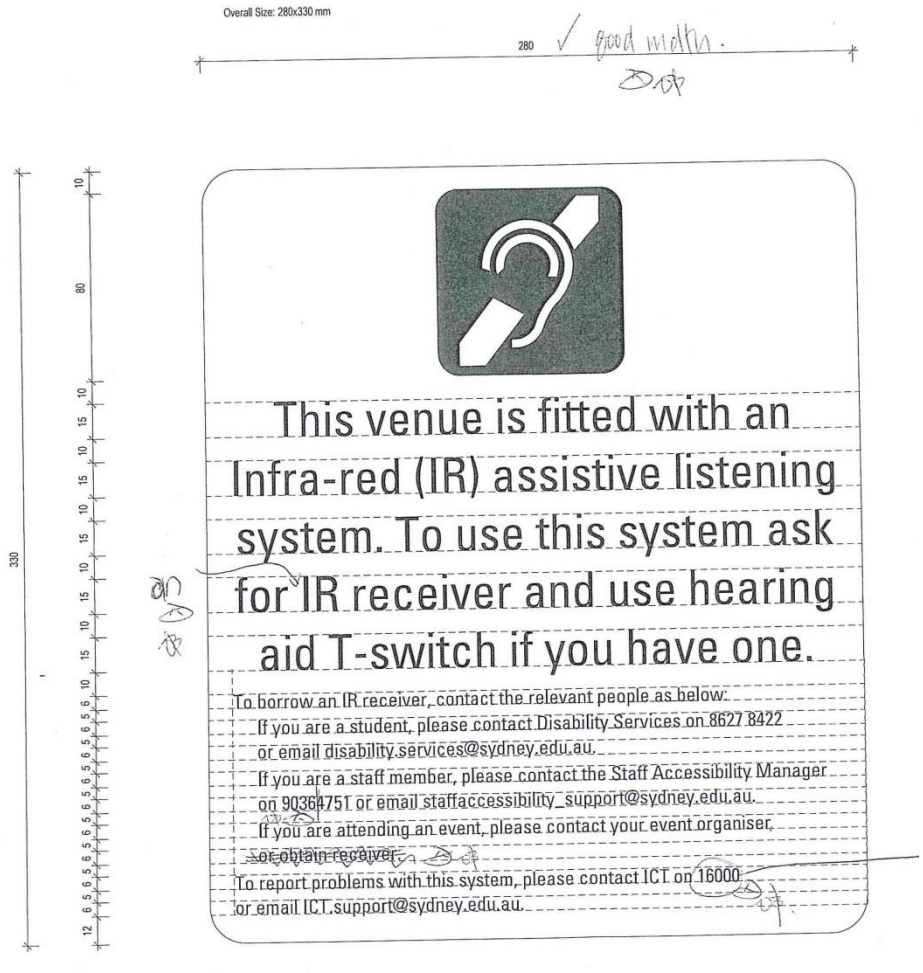

Figure 5.13 Hearing augmentation sign for lecture spaces.

5.16 INTERNAL AND EXTERNAL SIGNAGE

TABLE 5.9

Facility	Requirement	Percentage
Campus and grounds	External Signage Manual	100%
Buildings	External and Internal Signage Manuals.	100%
Internal Fitouts	Internal Signage Manual.	100%

6 COMMISSIONING

Construction Certifier and consultant architect to inspect completed project and report that the project has been completed and complies with the BCA Access to Premises Standards and the approved university requirements as agreed by the Disability Consultative Committee and CIS planning. Refer to Section 10 Quality Control.

7 DOCUMENTATION & RECORDS

a. Project Brief
b. Consultant Project Quality Plan
c. Design documentation
d. Tender Documentation
e. Documentation at completion – as built drawings and specifications

8 OPERATIONS

Not applicable.

9 AUTHORISATION OF VARIATIONS

CIS Planning Unit must authorise any proposed variations or departures from this standard.

10 QUALITY CONTROL

10.1 DESIGN STANDARD COMPLIANCE

Compliance with requirements of this standard must be checked throughout the design, construction and commissioning phases of projects by CIS' services consultant. Any issues or deviations from this standard must be reviewed and approved in writing by the issuer of this standard.

Competent CIS consultants and representatives must check compliance with this standard during design reviews and formal site inspections. Any non-conformances with requirements of this standard must be documented and provided to the CIS Project Manager for issue to contractors and their consultants.

Project Managers must maintain a formal register of non-conformances and manage close out of outstanding non-conformances. Contractors and their consultants issued with non-conformances must take appropriate corrective actions. The CIS Project Manager must ensure:

a. proposed corrective actions are implemented
b. close out of non-conformances in relation to this standard is formally approved and signed off by the author of the standard or their delegate

10.2 DESIGN STANDARD CERTIFICATION

Contractors and their consultants must certify compliance to the design standard by completing and submitting the CIS Project Design Certification Form, CIS-PROJ-F001 to the CIS Project Manager at each of the following project phases:

f. Design and Documentation
g. Tender
h. Construction

Notwithstanding CIS' internal quality control processes, contractors and their consultants must implement their own robust quality assurance and control procedures to ensure compliance with requirements of this standard.

11 REFERENCES

a. AS 1428 Part 1 (Access to Premises Standard) AS1428 Part 2 and Part 4
b. University Disability Action Plan 2013 to 2018
c. University Accessible Environments Plan
d. Kahn Finch and John Holland – examples new Business School Building.
e. FJMT and Brookfields Multiplex – examples Charles Perkins Centre.
f. Tanner Kibble Denton

12 NOTES

N/A

13 ATTACHMENTS

Attachment 1 – Design Standard Compliance Checklist

ATTACHMENT 1 DESIGN STANDARD COMPLIANCE CHECKLIST

PHASE 2 – APPROVED PROJECT INITIATION

Project Phase	Required action	Compliance achieved	Consultant Comments
Planning	a. Determine accessibility requirement. b. Refer to Accessible Environment Plan. c. Refer to Access Audit (if project within existing building)	Yes / No or N/A	
Planning	Determine if project located within heritage building or landscape. Refer to conservation management plan.	Yes / No or N/A	
Planning	Housing: Determine requirements set by local authority for access for persons with disabilities. Confirm requirements to be included within brief with Student Services.	Yes / No or N/A	
Planning	Prepare project brief: identify project components as new, addition and/or refurbishment or fitout.	Yes / No or N/A	
Planning	Determine path of travel to the project site. Confirm findings with Grounds, Traffic, the Disability Liaison Officer at Student Services and the Equal Opportunity Unit within Human Resources.	Yes / No or N/A	
Planning	Prepare Project Brief including Disability Action Plan.	Yes / No or N/A	
Project initiation	Budget and scope confirmation: confirm that the cost estimate includes for the required access components.	Yes / No or N/A	
Project initiation	Review existing documentation to confirm if site survey is sufficient for project.	Yes / No or N/A	
Project initiation	Identify if the project has any specific requirements and include appropriate language in the Request for Tender and Project Brief. Specific requirements may include Accessibility Consultant to review and advise on design and compliance.	Yes / No or N/A	
Project initiation	Identify the acceptable standards for the Consultant for accessible components of the project. Consultant to be required to include accessibility section in their project plan and design reports.	Yes / No or N/A	

PHASE 3 DESIGN AND DOCUMENTATION

Project Phase	Required action	Compliance achieved	Consultant Comments
Programming	Consultant to implement accessibility component of their Project Plan.	Yes / No or N/A	
Programming	Confirm BCA and AS 1428 Part 1 and 2 requirements and project specific access requirements. Identify project review hold points and add to project program.	Yes / No or N/A	
Schematic design	Refine and confirm project accessibility goals. Consultant to take charge of project Disability Action Plan and incorporate into project design documentations for the life of project.	Yes / No or N/A	
Schematic design	Prepare and submit sketch plans with project access requirements and path of travel from the project boundary and within the building for review to CIS Planning, faculty/school/unit, Student Services and Staff Equal Opportunity Unit.	Yes / No or N/A	
Design development	Refine and confirm project accessibility goals.	Yes / No or N/A	
Design development	Where 'path of travel' improvements are required, identify options necessary to satisfy regulatory requirements.	Yes / No or N/A	
Design development	Identify all accessibility objectives considered to be 'not feasible'. Review with CIS Planning and local authorities (pre DA).	Yes / No or N/A	
Design development	Prepare and submit developed design plans with project access requirements and path of travel from the project boundary and within the building for review to CIS Planning, faculty/school/unit, Student Services and Staff Equal Opportunity Unit.	Yes / No or N/A	
Construction Documentation	Refine and confirm project accessibility goals.	Yes / No or N/A	
Construction Documentation	Prepare and submit construction documentation with project access requirements and path of travel from	Yes / No or N/A	

	the project boundary and within the building for review to CIS Planning, faculty/school/unit, Student Services and Staff Equal Opportunity Unit.		
Construction Documentation	Consultant to provide statement of compliance in the documentation set. This statement to include all statutory accessibility requirements. The statement shall include the signature and Architects Registration Board Number of the nominated architect.	Yes / No or N/A	
Construction Documentation	Provide quality assurance requirements for Contractor regarding accessibility in the construction Contract Documents. Contractor to attest to familiarity with applicable Building Code of Australia, AS 1428 Part 1 and 2 and local authority requirements. Contractor shall include an accessibility component in their QA/QC program for verification and measurement.	Yes / No or N/A	

PHASE 4 TENDER

Project Phase	Required action	Compliance achieved	Consultant Comments
Tender/Quotation	Compulsory Tender meeting: Include accessibility requirements and expectations to all tenderers.	Yes / No or N/A	
Tender/Quotation	Update and submit Project Disability Action Plan with development application and construction permit. Submit Project Disability Action Plan to CIS Planning, faculty/school/unit, Student Services and Staff Equal Opportunity Unit.	Yes / No or N/A	
Tender/Quotation	All tenderers shall include review and acknowledgement of existing site conditions relative to requirements of project contract documents and accessibility objectives.	Yes / No or N/A	

PHASE 5 CONSTRUCTION

Project Phase	Required action	Compliance achieved	Consultant Comments
Construction	Contractor shall identify the accessibility requirement in the QA/QC program for construction management and verification.	Yes / No or N/A	
Construction	Contractor shall ensure compliance by sub-contractors with QA/QC program.	Yes / No or N/A	
Construction	Contractor shall provide all necessary temporary pedestrian access including access for persons with disabilities for the duration of the project. Contractor shall identify all temporary routes with traffic management and construction communication plans.	Yes / No or N/A	
Construction	Project team: CIS project manager, consultants, contractor and sub-contractor shall monitor changes for potential conflict with the accessibility requirements.	Yes / No or N/A	
Construction	Contractor is expected to be proactive in support of accessibility requirements and shall accessibility conformance in site meeting agenda item.	Yes / No or N/A	
Construction	Contractor shall ensure that temporary pedestrian routes are removed when no longer required and that all existing planned pedestrian routes are provide in accordance with project objectives and standards.	Yes / No or N/A	
Construction	Contractor shall verify and measure compliance with accessibility objectives and requirements and shall indicate these on copies of the plans and Project Disability Action Plan. Reference to recognised industry standards, BCS, AS 1428 Part and 2 and local authority standards shall be included. a. Any non-compliances to brought to the attention of the Consultant and CIS project manager. b. All non-compliant items that exceed industry tolerances shall be corrected by the Contractor.	Yes / No or N/A	

	c. All non-compliant items that are within industry tolerances shall be brought to the attention of the CIS project manager and are to be subject to review by the CIS Standards Group.		
Construction	The Contractor shall submit. a. Statement of compliance to the accessibility requirements of the Contract Documents and applicable local and state regulatory requirements. b. This shall be signed by the Contractor and submitted prior to the granting of Practical Completion.	Yes / No or N/A	

PHASE 6 POST CONSTRUCTION AND DLP

Project Phase	Required action	Compliance achieved	Consultant Comments
Post practical completion	Documentation for submission prior to the issue of the Final certificate shall include. a. As built Accessibility Plans and final project Disability Action Plan. b. This documentation to be filed with CIS building files. c. This documentation to be reviewed by CIS Planning and Facilities Management prior to issue of Final Certificate.	Yes / No or N/A	
Post practical completion	CIS project manager and client to conduct a post practical completion of the accessibility objectives at 6 months.	Yes / No or N/A	
Post practical completion	An inspection of the accessibility components will be conducted as part of the final inspection prior to the completion of the defects liability period and issuing of the Final Certificate.	Yes / No or N/A	