

99D272I

Project # 00-JRB9903 FPE

LRN: 99D272I

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**Review of Implementation Processes to Comply
with the Disability Discrimination Act**

1 May, 1999

This project is submitted in partial fulfillment of degree requirements of Worcester Polytechnic Institute. The opinions expressed in this report are those of the authors and not the views of the Capital Management Branch, the Department of Human Services, or Worcester Polytechnic Institute.

This report is part of an educational program, and is to be viewed as partial documentation for the evaluation of academic achievement.

**Review of Implementation Processes to Comply with
the Disability Discrimination Act**

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Executive Summary

This project was motivated by the need of the Department of Human Services (DHS) in Victoria to comply with the Disability Discrimination Act (DDA) of Australia. DHS is a government agency that provides varied services to the Victorian public. The nature of the services provided requires that all facilities are accessible to every member of the Victorian society. This project aims to provide the tools necessary for assessing levels of DDA compliance in the form of an educational manual and audit tool. These tools are the preliminary steps in the process of making facilities accessible to the disabled community and eliminating discrimination.

The daily activities that many of us take for granted can be more strenuous for the disabled. In a perfect world, every member of society would have an equal opportunity to benefit from all community activities and services. The purpose of the DDA is to protect citizens against discrimination on the grounds of a disability. To comply with the DDA, every service offered to the Victorian community must be available to the disabled in a manner that ensures equality and dignity.

To begin the compliance process, the project team designed a manual and auditing tool. The auditing tool will be used by the DHS to gather the information necessary to assess their facilities. The audit will be distributed to regional managers and managers of facilities. For this reason, the audit was created in the form of a practical, easy to use checklist.

The manual is meant to compliment the audit, as an educational tool. The goal of the manual is to provide solutions to problems within a facility and to teach the reader how to undergo a thought process that aids in spotting and eliminating discrimination.

The manual and the audit tool were designed by incorporating many types of research, in order to represent every aspect of the issue. Legislation that relates to disability discrimination has existed in Australia and the United States since the early nineties. The research results permitted the comparison of existing audit checklists, new technologies, and compliance strategies. The most innovative methods of complying and providing equal access to services were compiled to form the manual and the audit in way appropriate for use by the Department of Human Services.

In order to comply with the DDA, all DHS facilities must be physically constructed in a manner that makes services accessible. To learn about accessible design features, the project team contacted experts who possess first hand knowledge and experience with the disabled and with the DDA. Interviewing architects, project managers, facility managers and disability service staff members afforded the project team with insight into how effective modifications are made. The interviewees were chosen because of their ability to educate the project team about design features that best serve the disabled community.

Site visits were combined with interviews so the entire design process could be studied. Speaking with staff members and facility managers, and seeing directly how architectural plans served the clients and staff, provided special insight into the process of providing accessible structures and services. Most site visits involved services with disabled clientele. The severity of the disability and type of facility varied. For instance, facilities such as institutional care and independent living services for the disabled illustrated many types of innovative technologies. Interviews and the corresponding site visits successfully provided the project team with an understanding of the issues that affect practical, useful, and lawful design.

Common sense indicates that consulting those affected by the changes motivated by DDA is important. All interviewees that contributed to this project have experience with the disabled, but some organisations directly represent the disabled community. Organisations such as the Human Rights and Equal Opportunities Commission (HREOC) and advocacy groups defend and protect the rights of the disabled community, while working to enforce and improve the DDA.

The data collected from these various sources allowed the project team to make recommendations in the form of a manual of ideas and auditing tool. The project group has many recommendations, as outlined in the report. For example, it is recommended that the DHS take an active role in compliance. Often, discriminatory practices are investigated only after complaint is filed. Defending against a complaint is a costly process, and waiting until a complaint is filed to remedy problems does not provide the best environment for the disabled community. In addition to taking a pro-active role in

compliance, the project team recommends that the Department of Human Services develop a long-term co-operative relationship with advocacy groups. Offering strategic remedial plans for public and private review is a crucial part of an effective DDA implementation process. These actions show that an organisation is committed to providing access and equality.

The project team is pleased with the methods created to aid the Department of Human Services in beginning the DDA implementation process. The design of a manual for education and an auditing tool to assess current levels of compliance in the Department of Human Services are complete. These are the beginning steps in formulating a working action plan to eliminate discrimination. It is recommended that the findings of the audit are carefully scrutinised, so that the results are accurately evaluated. The action plan will result in legal and social implications that will best serve the disabled community if the auditing process is completed in a thorough and comprehensive manner.

The Department of Human Services has the potential to benefit from many WPI projects in the future. The project team would like to take this opportunity to recommend how this project can be continued. Possible extensions of the project include:

- auditing and evaluating all DHS facilities;
- forming a cost-analysis that describes the relative costs of making the modifications outlined in the manual;
- establishing long-term consultation relationships with the appropriate internal and external contacts;
- creating and conducting staff surveys which assess employee sensitivity and awareness of people with disabilities;
- designing DDA awareness training and education about changing company policies; and
- producing a method for evaluating the progress of the action plan at regular intervals and for verifying that the disabled community is best served.

The key to creating an accessible environment is to provide a friendly environment, where equal respect and equal dignity are provided to all individuals. This involves periodic monitoring and evaluating procedures that will follow the use of the tools this project team created.

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Authorship

All members of the group contributed to all sections of this report equally. Benjamin Kennedy, Laura Orlandi and Crystal Robert all made equal and significant contributions to the outcome of this report.

Abstract

This IQP was completed in Melbourne, Australia, and contains an analysis of the Disability Discrimination Act (DDA) of Australia and a checklist to determine the compliance of Victoria's Department of Human Services' facilities. In addition to the checklist, an ideas manual that contains a number of potential problems and possible solutions, as well as general considerations involved in disability access, was developed to aid the Department in becoming DDA compliant.

Acknowledgments

The project team would like to thank the Capital Management Branch for its generosity in providing various resources to the project group. The group would also like to thank Megan Broome for providing the project, and offering assistance and guidance as necessary throughout the project. We would also like to express our gratitude to Leonie Ryall for her assistance in arranging site visits and providing valuable information and contacts throughout the project. The project team would also like to thank the various staff members working in disability services and the architects that have been involved in renovations for the Department of Human Services for their time and insight into our project.

**Review of Implementation Processes to Comply with
the Disability Discrimination Act**

1.0 Introduction

The Disability Discrimination Act (DDA) of Australia was enacted in 1993 to create an environment of equal accessibility and equal dignity for all people. The DDA makes it unlawful to discriminate against a person on the grounds of a physical or mental disability in areas including employment, transportation, education, residence and public access to buildings.

The Department of Human Services (DHS) in Victoria provides a wide variety of services to the residents of Victoria. All DHS facilities must be accessible to the entire community.

The main objective of the project is to establish a method by which the level of compliance under the DDA of all the DHS facilities can be determined. A manual was created to educate the DHS employees who operate departmental facilities and services. The manual outlines current technology that is available to aid the disabled, and offers solutions to compliance challenges. The manual contains ways to improve accessibility via the form of problem statements with suggested solutions.

An auditing process that is meant to be used in conjunction with the manual was also designed. The audit is not technical in nature, so a broad audience can find it useful. It is in the form of a checklist which will help determine the shortcomings in the facilities run by the DHS. The checklist contains a list of specific criteria that all of the buildings must meet, with a scoring system for evaluating the audit. The audit was designed so that any discriminatory practices within the DHS's facilities and services can be easily identified. The project group will perform sample audits to determine insure that the process gathers correct and practical information.

It is the primary goal of the DHS is to make sure that all people in Victoria receive the services that they need. To provide access to all facilities, the Department of Human Services will eliminate the possibility of denying people services on the basis of disability. The manual and auditing process will help the DHS improve their facilities to meet the standard that is dictated by the DDA. By providing this access, the DHS will be better able to serve the Victorian public.

The manual and auditing checklist could be helpful to building operators, as it not only contains suggestions specific to certain types of facilities, but also general principles that could be applied to any public place.

The Interdisciplinary Qualifying Project (IQP) is one of three projects required to obtain an undergraduate degree at WPI. The IQP examines social and technological issues that society faces and calls upon the student to investigate these issues and develop recommendations for a solution. The evaluation of disability acts and the present state of disability affairs in Australia meets the standards for the IQP requirements.

2.0 Literature Review

2.1 Background of Disability Discrimination Legislation

In the states and territories of Australia, there have been a number of forms of disability discrimination legislation. In 1981, New South Wales added impairment to its Anti-Discrimination Act and Victoria, Western Australia and South Australia made discriminating against the disabled illegal. The Disability Discrimination Act of Australia (DDA) was enacted in 1993 to protect all Australians from being discriminated against on the grounds of a disability.

“The primary reason for instituting a Commonwealth-wide law was to ensure a national basis for the elimination of disability discrimination” (FMA Australia).

Recent medical advances have resulted in a longer life span and a higher quality of life for the disabled. Many groups, public and private, are searching for ways to combat the detrimental effects that physical and social barriers have on the disabled. These barriers impede the disabled community in their ability to benefit from the activities and services the general population takes for granted. Changes in public policy are inducing a response from many professionals. Engineers, architects, psychiatrists, medical doctors, rehabilitative specialists, and others are searching for feasible ways to help modify societal barriers in order to provide equal dignity and equal rights for all Australians.

The DDA makes it unlawful to discriminate against a disabled person in these areas of life:

- employment
- education
- access to premises used by the public
- provision of goods, services and facilities
- accommodation
- buying land
- clubs and associations
- sport
- administration of Commonwealth government laws and programs (The HREOC Website, Feb 1999)

2.1.1 Disability

A disabled person is an individual who has an impairment that impedes visual, hearing, mobility, and intellectual activity or other

human functions. The impairment can exist at the time of birth from the effects of cerebral palsy, mental retardation, or physical birth defects. Damage can also occur from prenatal irradiation, viral and bacterial infection, physical trauma, chemical toxins, maternal smoking and alcohol abuse, neonatal asphyxia, seizure disorders, and autism. Heart disease and diabetes are disabilities. Accidents or abuse resulting in paralysis or physical limitation has impaired other members of the disabled community. Most often disabilities are chronic impairments that will persist over the course of a lifetime.

Impairment refers to the “limitations in functioning or output at the organ system level” (Van Hasselt, 1988). A person is likely to suffer a “disability” as a result of the interaction of an impairment with a specific context (Van Hasselt, 1988). The term is most often used for legal reasons. For instance, a person who has heart disease and as a result cannot walk up the stairs has a disability. If elevators replaced all stairways, the individual is no longer legally disabled in that building or in that context. “A disability is what a person does not do, a handicap is what a person cannot do” (Van Hasselt, 1988). A person who has a physical or mental impairment that inhibits their activities such as seeing, hearing, speaking, walking, breathing, learning, or working has a disability. In the U.S., the law discourages using the term “handicapped”. Those with the types of impairments mentioned should be referred to as “disabled” or as “persons with disabilities” (BOMA, 1992).

Under the DDA, disabilities can be categorised by type. There are physical, intellectual, psychiatric, sensory, and neurological disabilities. The DDA’s scope also includes learning disabilities, physical disfigurement and the presence in the body of disease carrying organisms (eg. carrying the AIDS virus). The definition of disability under the DDA encompasses a wide range of impairments, including some that one wouldn’t necessarily expect. The definition of a disability is broad under the DDA so that all forms of discrimination can be eliminated. Proving that an individual is disabled doesn’t remedy a problem. Discrimination under the Act must also be proved.

Disability is defined as:

- total or partial loss of a person’s bodily or mental function
- total or partial loss of a body part
- the presence in the body of organisms capable of causing disease or illness (eg. a person with allergies or a person carrying HIV)

- the presence of a disease or illness (eg. AIDS or hepatitis)
- the malfunction, malformation, or disfigurement of the person's body (eg. diabetes, asthma, birthmarks, or scars)
- a disorder or malfunction of learning ability (eg. autism or dyslexia)
- a disorder that affects thought processes, emotions, and behaviour (eg. mental illness, neurosis, or personality disorder) (FMA Australia)

The definition also includes disabilities that:

- presently exist
- previously existed (eg. a back injury, a heart attack, or an episode of mental illness)
- may exist in the future (eg. genetic predisposition to disease such as Huntington's Disease or heart disease)
- is implied to a person (eg. assuming that a person who is living with someone with an infectious disease also has the disease) (FMA Australia)

2.1.2 Hearing Impairment

The need for humans to communicate with other humans is primary to an individual's daily function. Hearing impairment is a one of the most significant communication impairments. There are different degrees of hearing impairment, and not everyone who is hearing impaired is completely deaf. Therefore, there are different levels of services necessary to help the hearing impaired effectively communicate. Often, speech therapy will also be necessary, as irreversible hearing loss reduces the ability to speak understandably. In the United States, hearing loss is often considered to be the most prevalent disability. It affects more Americans than cancer, heart disease, tuberculosis, blindness, multiple sclerosis, venereal disease, and kidney disease combined (Van Hasselt, 1988). It is also estimated that nearly 40% of the United States population over 75 years old will experience hearing impairment.

2.1.3 Visual Impairment

Characteristic of other types of disabilities, visual impairment can occur at birth or manifests itself later in life. Visual impairment, as one would expect, requires that the individual rely on other senses such as hearing and touch. It is critical for a blind individual to make spatial relationships in changing environments. Blind children are encouraged at a young age to function in the mainstream population.

The blind are “travel trained” which helps them navigate in strange environments (Van Hasselt, 1988). When reading, the visually impaired use aids such as reading machines. Signs with raised letters and directions given in Braille help visually impaired people navigate. Although the blind are trained to orient themselves, there are guidelines for facilities that aid in the process and add a level of safety. The visually impaired don’t respond to visual indications of danger, which raises the risk of injury in emergency situations. During an accident or fire emergency, the visually impaired are particularly disadvantaged (Van Hasselt, 1988).

There are ways to improve the ability of a visually impaired person to navigate in unfamiliar environments. Ground surface indicators are tactile indicators that can be detected by a person, either by walking on or touching with a cane. Raised circle indicators are used to warn of a hazard, while elongated ovals in the direction of travel are used to indicate travel routes. Colour contrasts are helpful because the majority of the visually impaired are not completely blind. Tactile indicators should be of contrasting colour to the surface they are placed on, and should be placed at stairways, escalators, ramps and other areas where there is a hazard. It can also be helpful to change colours when a change in elevation or a break in plane occurs.

2.1.4 Discrimination

In countries such as Australia, the United Kingdom, and the United States legislation has impacted the civil rights of the disabled. The rights of minorities are included under the law, and the disabled community is a minority group. Even though some improvements have been made in the way those with disabilities are treated, problems still exist. Discrimination exists in areas of employment, housing, transportation, public accommodations, education, communication, recreation, institutionalisation, health services, voting, and access to public services. Individuals who experience other types of discrimination, such as racial or sex discrimination have had a legal medium to induce societal changes. For example, prior to the existence of the Americans with Disabilities Act (ADA), Americans who experienced discrimination because of a disability had no legal way to stop it (Harrison, 1992). The DDA is similar to the ADA in that it is not building code; rather it is civil rights law that is enforced as such.

There are different forms of discrimination. Unlawful discrimination does not have to be a blatant and purposeful attempt to exclude the disabled. Architectural barriers, communication barriers, failure to modify facilities and failure to change outdated policies are all forms of discrimination. An architectural barrier is any physical object that impedes the access of a disabled individual. Communications barriers are those barriers that are an integral part of an individual's ability to navigate through a facility. Examples are permanent signs and fire alarms (BOMA, 1992).

These types of barriers can segregate and exclude the disabled, whether or not that was the intent. The end result is that the disabled community is at a disadvantage. These disadvantages can cause economic and social hardships (Harrison, 1992).

The goal of the disability legislation is to provide equal opportunity and self-sufficiency for the disabled. It is not only socially just, but also economical to pursue ways to free the disabled from dependence. The expenses incurred by non-productive disabled individuals, who are dependent on outside resources, are more costly than making the adjustments necessary to help the disabled live an independent life when possible (Harrison, 1992). The DDA and ADA were therefore created to ensure that specific guidelines exist which require that discrimination be investigated. The intent was also that laws would be enforced (Harrison, 1992). The combination helps guarantee that the disabled will not be isolated from society, physically or socially.

2.1.5 Direct and Indirect Discrimination

Indirect discrimination impacts those with a disability even if the discrimination is not intentional. The act may not be purposeful, but could be deemed discriminatory. For example, a person who cannot use stairs in a building without lifts is not able to comply with the physical standards of that premise. The following are three basic things to consider when determining whether or not indirect discrimination is occurring. Indirect discrimination occurs if a person is required to comply with a "requirement or condition" that:

- a substantially higher proportion of persons without a disability comply with;
- is not reasonable in terms of the case at hand; or
- the aggrieved person cannot comply with (FMA).

Even though the legal terms grow more complex, it is essential that building owners understand the laws pertaining to indirect discrimination because this form occurs most often in relation to facility access. The words “requirement and condition” have been interpreted broadly by the courts. For more information see the cases of *Waters v Public Transport Corp* (1992) EOC 92-390 and *Byham v Preston City Council*.

Direct discrimination occurs when a person treats or proposes to treat a person less favourably than another person. This treatment is “on its face discriminatory” (FMA). For example, an employer who refuses to consider a disabled prospective employee without considering reasonable job accommodations is discriminating.

2.1.6 Less Favourable Treatment

A person is treated less favourably when their access to the same opportunities, services, or activities is not equal to those accessible to the rest of the population. Legally, the “actual treatment must be compared to the actual or hypothetical treatment of a person with a disability” (FMA). The discrimination must be proved for a person to file a complaint.

2.1.7 Intention

Similar to indirect discrimination, an act can be unlawful whether it was intended or not. Discriminatory actions include making assumptions or conducting activities based on prejudices.

2.1.8 Reasonableness

The DDA establishes a difference between disability discrimination and other types such as race or sex discrimination. The terms “as far as possible” and “as far as practicable (FMA),” imply that under certain circumstances discrimination will exist. Reasonable discrimination must be proved in terms of the disabled individual’s situation and the circumstances of the case. A reasonable modification to a building must be made, considering efficiency, effectiveness, and cost.

2.1.9 The Unjustifiable Hardship Exemption

The purpose of the unjustifiable exemption is to ensure that all aspects of a circumstance are considered. The following are issues to

be considered:

- the benefit or detriment to be suffered by an individual;
- the effect on the disabled person;
- the financial situation and cost of modification to the building owner; and
- the existence of an action plan (DDA, 1992).

2.1.10 Systematic Discrimination

Legislation such as the DDA, which is based on individual complaints, excludes systematic discrimination such as that presented in *Cocks v Queensland* (see 2.2.3). To deal with systematic discrimination, the DDA relies on the Human Rights and Equal Opportunity Commission (HREOC), Disability Standards, and Action Plans. These elements are included to reduce the level of uncertainty associated with legislation that is broad in nature.

2.1.11 Avoiding Disability Discrimination in Relation to Building Access

It's unlawful to discriminate against a person because of a disability by refusing to allow an individual access to use any premises that the public is allowed to use. Anybody accompanying a person with a disability must also be allowed access.

2.1.12 Overview of Considerations

The following is a summary of some important things to consider when providing accessible facilities.

- Public accommodations must provide aids and services that will allow for effective communication with those with disabilities, as long as unjustifiable hardship isn't caused.
- Architectural and communication barriers must be removed if it is easily achievable.
- Renovations or additions to public buildings must be fully accessible.
- New construction to existing buildings is not necessarily required.
- Technical non-compliance is allowed where equivalent access has been provided, under specific circumstances.
- Additional costs will not be charged to the disabled.

A public accommodation is a private entity that owns or leases or operates a private facility (which can be residential) whose

operations affect commerce (BOMA, 1992). A commercial facility, on the other hand, is a building that is intended for non-residential use by a private entity, whose operations affect commerce. Buildings where people are employed are examples of commercial facilities. In certain circumstances, a commercial facility can contain places of public accommodation.

Determining whether or not a modification will cause unjustifiable hardship is difficult. There are many issues to consider. For example, the financial capabilities, the size of the organisation, and the type of operations conducted are factors that should be considered in deciding the burden imposed.

2.1.13 Examples of Accommodations

There are many examples of modifications that are easy to implement, relatively low in cost, that create improvements in accessibility and communication. The following is a list of examples:

- Installing ramps
- Making curb cuts in sidewalks
- Repositioning shelves
- Rearranging tables, chairs, vending machines, and other furniture
- Repositioning telephones
- Adding raised markers to buttons on an elevator
- Installing flashing alarm lights
- Installing offset hinges to widen doors
- Eliminating turnstiles or providing an alternative path
- Installing accessible door hardware
- Installing grab bars in toilet stalls
- Rearranging toilet partitions
- Insulating lavatory pipes under sinks to prevent burns
- Installing a raised toilet seat
- Installing a full length bathroom mirror
- Repositioning a paper towel dispenser in a bathroom
- Creating accessible parking spaces
- Installing an accessible paper cup dispenser at an existing inaccessible water fountain
- Removing high pile, low density carpeting

Removing barriers can be prioritised. For example, the entrance to a building is important, and should be one of the first items to be improved. The existence of an accessible path to the entrance to the

building is the primary objective. Areas that are frequently used by clients of the building should be modified next. This could entail removing barriers to areas where goods and services are available. Another priority is the availability of accessible restrooms (BOMA, 1992).

Alternatives to barrier removal can be employed when it is impossible to remove a physical barrier. In such cases, a little creativity may solve the problem. For example, certain activities could be moved to accessible facilities or accessible areas of a facility.

2.1.14 Emergency Access

During emergency situations, disabled people experience more challenges in responding to the emergency and safely avoiding the related hazards than do non-disabled people. For this reason, special care should be taken to design a building that accounts for the safety of disabled individuals that may be using it.

Most methods for exiting a building during an emergency require the use of stairs - which is impossible for many disabled people. There has been a debate about the safety of using lifts to exit building in an emergency. The risk of smoke on the lift, stopping on a floor where fire is present, the effect of water on the lift, and the reliability of the power source are dangers faced during a fire (Australian Building Codes Board, 1998). There are many theories about how these problems should be dealt with, but no conclusion has definitely been made. One possible solution is the use of emergency evacuation refuges. In the United States, these areas are required to be smoke and fire proof in buildings without sprinklers, and smoke proof in buildings with sprinklers. There are certain dimension requirements depending on the building size and number of people that use it. The smoke barriers must also have a 1-hour fire resistance rating (Fire Australia Conference Paper, April 31, 1999). Regardless of this debate, it is vital that there are accessible means of egress, and a system is developed to ensure the safety of all disabled persons. Making as many entrances and pathways accessible and making alarm systems that have both visual and auditory warnings can maximise safety. In addition to saving property, installing sprinkler systems can save lives. There have never been multiple fatalities in a building with sprinklers besides those involved in ignition of the fire (Barnett, March 1999).

It is important to develop an evacuation plan, and to practice evacuation procedures. Careful organisation and preparation can lead to a safe evacuation, while disorganisation can lead to a longer egress time and can endanger lives (Capital Management Branch, 1997).

2.2 Legal Issues

2.2.1 Action Plans

Action Plans provide a step by step and strategic way to solve discrimination problems. The DDA specifies what an action plan should include. Compliance with an action plan doesn't protect a service provider from complaints, but action plans can aid in proving the existence of an unjustifiable hardship to the HREOC.

Moreover, action plans provide an explanation when a complaint is filed. It is difficult for a company to move resources and strategic plans into effect quickly for the benefit of one individual. Careful planning in action plans can minimise potential wasted resources. If a successful complaint is filed, the action plan can reduce the amount of damages awarded as it shows that reasonable steps have been taken (Sheriff).

The action plan should contain certain elements:

- A review of the organisation policies that provides for implementation and compliance
- A policy should be accepted and in practice by all employees
- A way to identify discrimination
- Goals and target timetables
- A classification of the parts of the building such as size, age, level of patronage, surrounding environment, car parking, nature of usage and building occupiers
- Special access and facility needs so that no needs are missed
- Involvement of those with experience with using or working in the facilities
- Guidelines and checklists that can form a standardised auditing process
- Timetable for audits
- Data analysis
- Priority of remedies
- Realisation of remedies

2.2.2 Legal Actions

Building owners and occupiers have begun to feel the effects of disability legislation. The situation is becoming more complex as disabled persons and interest groups begin to push strongly for their rights (Sheriff). Unfortunately there have not been many cases to set a precedent that could be consulted when planning an implementation process. Few complaints relating to violation of the DDA have been filed and there are no complaints that have been filed in relation to access to premises or gaining entry to a facility (Sheriff).

Some guidance is provided in the cases that have been heard by State Anti-Discrimination Commissions and Tribunals. It is important to understand that the scope of the DDA is wider than building codes and state variations on them. In particular, building codes relate only to the design of new buildings. The DDA, on the other hand, also refers to existing buildings (Sheriff). The complexity of the legal issues is therefore illustrated in the fact that older buildings are clearly more difficult and expensive to modify.

2.2.3 Legislation and Premises Access

The legal case, *Cocks v Queensland*, is an example of how legislation has worked in practice in other states, which will be compared to Victorian provisions. The case, under the Queensland Anti-Discrimination Act concerned the access of the disabled to the front entrance of the Brisbane Exhibition Center. The building developers built the Center according to Building Codes of Australia (BCA) and Australian Standard 1428.1 and 1428.2.

The front entrance consisted of 27 steps, so a side entrance accommodated the mobility disabled with lifts to all levels of the Center. The side entrance would appear to be a reasonable accommodation, but the Queensland Anti-Discrimination Tribunal ruled that the lack of access to the front entrance was indirect discrimination. To determine whether or not providing access to the front entrance was an unjustifiable hardship, the Tribunal estimated that it would cost A\$300,000 to build a lift at the front. A lift at the front entrance was deemed to be a "significant benefit" to the disabled. The lift also would provide the mobility disabled with a sense of "equal dignity." The Tribunal estimated that 10.2% of Queensland's population is unable to use stairs, which means that

front access would benefit a large proportion of citizens. It was held that providing front access was not an unjustifiable hardship.

This case is interesting and illustrative of the growing need for facility designers to find a degree of clarification when handling building codes and the DDA. Designers have made the mistake of relying solely on building codes. The developers of the Exhibition Centre failed to form an acceptable mutually beneficial solution to the disabled entrance issue when it was brought up by organisations representing those with mobility impairments. Evidence suggests that the issue had been introduced early in the development process. Observers suggest that the lack of an agreement was the greatest mistake the developers made. An agreement or action plan in the early stages of development of a new building or modification of existing premises can help ward off complaints and provide mutually beneficial solutions. As a result of such rulings, developers are stressing the necessity for the scope of the building codes to be as broad as that of anti-discrimination law.

2.2.4 Liability of Local Governments

Decisions like *Cocks v Queensland* make the issue of building approvals a concern for local governments. Local governments are worried they could be subject to liability by approving permit applications within building codes of their respective territories. The FMA has issued an opinion which they feel is consistent with the opinion of the Queensland Anti-Discrimination Tribunal. Discrimination results are in relation to a service provided, which in the FMA's opinion would protect local governments from successful complaints.

Specifically, local governments are in the service of providing permit application within building codes specifications, but are not in the service of assuring compliance with the DDA. On the other hand, if councils reject a project proposal on the basis of disability non-compliance, they could be found liable. Therefore, builders or developers wonder whether it is sensible to rely on building and planning approval to ward off successful complaints. One method of assuring compliance is to take responsibility and enact a pro-active policy towards compliance. FMA recommends that local governments form information sheets that detail the developer's responsibility regarding building codes (AS 1428.1).

2.2.5 Vicarious Liability

Building owners must be aware that they are responsible for the actions of their employees. All staff and hired contractors must be aware of a company anti-discrimination policy. Employees should be able to identify discrimination and remedy problems.

2.3 Case Studies

Complying with ADA guidelines can be challenging with regards to most businesses and buildings requiring public access. Cost and convenience can make it difficult to comply with the standards set forth by the ADA, and other factors such as historic preservation can require more creativity in the method of compliance. Sometimes, when a business is small, or when adaptation of the property would be financially devastating, alternative means of meeting needs can be used (Ault, 1999).

Several small businesses have changed the way services are delivered rather than changing the physical property on which business is done, and filled compliance requirements. An example is as follows: A small flower shop and gourmet food store located in a heritage building could not alter the narrow doors and stairs leading to its entrance. While the store was not required by law to comply, its owners felt that they would benefit by serving disabled customers. By calling ahead, customers could receive kerbside service, mail order catalogues, and free delivery. Another example: a restaurant that offered the option of reading menus to vision impaired persons, as an alternative to having menus printed in Braille (Morrison). Although these may not be options for every business trying to comply with the ADA, it shows that compliance does not always have to be financially devastating. Proactive effort is beneficial to everyone involved.

2.3.1 Government Buildings

The Great Hall at the United States Department of Justice underwent renovation in 1991 in order to make it handicapped accessible. Previously, the Great Hall was not accessible to people in wheelchairs except through an office, down a chair lift into the antechamber of the Great Hall. To get to the stage of the Great Hall, a person in a wheelchair had to use a “rickety, noisy, and shaky” chair lift. Several proposals were submitted for renovating the Great Hall. The final plan that was implemented required workers to move

out of the office that was previously used for access, and the office was used exclusively for the entrance to the great hall. The path of that route was not widened, because the walls were load bearing, but did meet the Uniform Federal Accessibility Standards for width. The chair lift was replaced by a ramp, and automatic doors from the antechamber allowed access to the Great Hall. The stairs and chair lift leading to the stage were replaced by two ramps with low walls and handrails. Although experts contended that stairs should be added on the grounds that it is easier for some people with other disabilities to walk up stairs, this idea was not actualised because it would reduce the number of seats. The plan would also contradict Attorney General Thornburgh's (who had special interest in the ADA) ideas that equal access means one approach for all people (Lebovich, 1993).

The U.S. Capitol Building began its renovations long before the ADA was enacted, beginning with a survey of accessibility in 1973. Since then, slow but constant renovations have been performed, gradually making the Capitol accessible to all disabled people. Ramps and chair lifts were added, and bathrooms, water fountains, telephones, and door openings were modified, making them more accessible. One major component of the Capitol renovation was creating an office to directly serve the disabled. The Special Services for the Disabled Office provides tours specially designed for any impairment. Adaptive techniques are used such as tour descriptions in Braille text and sign language, freedom to touch anything along the tour (ex. statues), tactile models of the Capitol and the buildings in the mall, as well as tactile maps (Lebovich, 1993).

The facility housing the Equal Opportunity Employment Commission (EEOC) is an excellent example of a premise that meets the needs of employees with disabilities. The building is accessible from both the front and back by ramps. The guard desks at the entrance have both high and low countertops, making it accessible to people regardless of confinement to a wheelchair. Workstations for employees are modified to meet the needs of employees, whether the modification requires a special station designed for persons in wheel chairs, or a special technology to assist those with vision or hearing impairments.

2.3.2 Further Considerations and Applications

Space considerations are important when accommodating certain disabilities. Occasionally a person cannot access a facility because it is too difficult to manoeuvre in the small spaces that serve as passageways to the public. Sometimes, overcoming this inability to manoeuvre is as simple as changing the floor plan. Making aisles wider and rearranging furniture may seem simple, but it can be an inexpensive way to gain accessibility. Sometimes rearranging can reduce space efficiency, but it's necessary to increase accessibility and productivity (Cunningham, 1997).

2.4 The DDA

2.4.1 Objectives of the DDA

There are several objectives to the DDA. These include:

- to eliminate, as far as possible, discrimination against persons on the ground of disability;
- to ensure, as far as practicable, that persons with disabilities have the same rights to equality before the law as the rest of the community; and
- to promote recognition and acceptance within the community of the principle that persons with disabilities have the same fundamental rights as the rest of the community (FMA Australia).

2.4.2 Strategies Employed by the DDA

The DDA employs a number of strategies for achieving its objectives. They are as follows:

- Discrimination on the basis of disability is made unlawful;
- Independent investigation and resolution of complaints about discrimination;
- Community education; and
- Review of discriminatory laws by the HREOC (FMA Australia).

The rest of this section will focus on giving an overview of the DDA and Australian Standard. The Australian Standard contains the building codes that are suggested, but don't ensure compliance.

2.4.3 Sections of the DDA

The following is an overview of the sections of the DDA.

2.4.3.1 Part 1 – Preliminary

The first section of the DDA deals with the formalities associated with passing a new law. The title, Disability Discrimination Act of 1992, is made official. The objective of the act is stated:

“To give people with disabilities the same rights and opportunities as people without (DDA, 1992).”

Many legal, disability, and discrimination related terms are defined in Part 1. This section also specifies that when a local or territorial law addresses the same issue as the DDA, a complaint may be filed under both the local law and the DDA, but only one penalty may be assigned (DDA, 1992).

2.4.3.2 Part 2 – Prohibition of Disability Discrimination

An employer or potential employer cannot discriminate against an employee or applicant, and partners cannot be denied equal partnership because of a disability. Discrimination is also made unlawful in other areas, such as educational facilities, places with public access and membership in clubs. Harassment against a person with a disability is illegal (DDA, 1992).

Division 1 – Discrimination at Work

An employer or a person acting on behalf of the employer cannot discriminate against a person on the grounds of his or her disability when determining who should be offered employment, and under what terms employment is offered. Also, a person can not be denied opportunities for promotions, transfer or training, or be subjected to dismissal or detriment on the grounds of disability, as long as the employee is capable and qualified to perform assigned duties. A person's application cannot be refused on the grounds of disability, nor can membership in a club be denied on these grounds (DDA, 1992).

Division 2 – Other Discrimination

In education, a student cannot be denied access, admission or benefit offered by the organisation based on the students' disability. A person cannot be denied access to public premises, and can not be subjected to terms or conditions in these areas, unless the premises are constructed so that they are inaccessible to the disability and alteration to the premises would cause

unjustifiable hardship. Also, a person cannot be denied goods or services, accommodations, purchase of land, membership or application to a club, or activity in a sport on the basis of their disability, unless the person is incapable of performing required actions in the case of sport (DDA, 1992).

Division 3 – Harassment

It is unlawful to harass a potential employee, an employee or the employee's associates regarding their disability. Students and staff members also cannot be harassed in relation to their disabilities. A person who provides goods or services or makes facilities available cannot harass a person in regards to their disability (DDA, 1992).

Division 4 – Offences

Victimisation, including threats or detriment to a person, cannot be performed against anyone who has taken action against a person or organisation (DDA, 1992).

Division 5 – Exemptions

This section gives exceptions to discrimination on the basis of a disability. In cases where compliance in areas of accessibility or providing service would cause undue hardship, it is acceptable to not provide the service, benefit, or accessibility. Also, any act done in accordance with a decision made by the Commission, or a court with the proper authority cannot be deemed unlawful. If a person disability poses a risk to the general public (such as an infectious organism) the person can be discriminated against on the basis of protecting the health of the public. Charitable organisations are exempt from the Act. The Defence Force can discriminate against a person on the basis of disability in regards to employment, appointment, or engagement. The Commission may grant exceptions on an individual basis, and this exception may be extended for up to a period not exceeding 5 years (DDA, 1992).

2.4.3.3 Part 3 – Action Plans

Every service provider must come up with an action plan that sets goals pertaining to how facilities will become compliant. This includes a review of current practices, the time-line in which the goals are expected to be achieved and the appointment of people within the service provider implement the changes (DDA, 1992).

2.4.3.4 Part 4 – Inquires and Civil Proceedings

All inquires are to be handled by the Human Rights and Equal Opportunities Commission. Filing a written complaint with the Commission starts an inquiry. If the inquiry is determined to be of reasonable worth, any number of steps, including third-party consul, Commission Hearings, or Federal Hearings may be taken.

Division 1 – Preliminary

The Human Rights and Equal Opportunity Commission (HREOC) is responsible for investigating any reported infringements. The HREOC is also responsible for all publicity related to the DDA, which includes promoting acceptance, compliance and understanding of the act, as well as performing research and creating educational programs. There are numerous methods to bring about an inquiry. The HREOC must provide all available assistance to somebody wishing to make a complaint (DDA, 1992).

Division 2 – Inquiries by Commissioner

The Commissioner makes the decision whether or not to investigate the reason that the complaint was filed. If an inquiry will not occur, the Commissioner must then justify the reasoning for not investigating. The Commissioner has the authority to request that a person either gives a personal or written description of the case that is currently being investigated. Any individual who is required to attend any investigation conference is entitled to a reasonable amount of money for his or her time. If the Commissioner has not been successful in settling a matter, it is then referred to the HREOC (DDA, 1992).

Division 3 – Inquires by the HREOC

If the Commissioner is not able to perform the duties required of them at that time, the Minister may appoint someone to take the place of the Commissioner for a limited amount of time.

The following are reasons for the HREOC to dismiss a complaint in the middle of an inquiry:

- The complaint is thought to be trivial
- The alleged infringement is found to be within the bounds of the law
- The subject has been dealt with before and the Commissioner thinks that matter had been taken care of
- After the inquiry, the HREOC can then make a

determination whether or not to judge in favour of the defendant or those who filed the complaint. (DDA, 1992).

2.4.3.5 Part 5 – Other Offences

Other offences stated by the DDA concern withholding or giving false information the Commission, or failure to attend a conference held by the Commission (DDA, 1992).

2.4.3.6 Part 6 – Disability Discrimination Commissioner

Part 6 details all parts of the Commissioner's job, including appointment, leave-of-absence, resignation, and other issues (DDA, 1992).

2.4.3.7 Part 7 – Miscellaneous

Part 7 outlines the remaining details of the DDA. It describes how the DDA interacts with other laws, to whom the Commissioner may delegate power, what information is public and private, and how amendments may be made to the law (DDA, 1992).

2.5 Australian Standards

The Australian Standards were developed by the Standards Australia Committee to provide building owners and designers with the minimum design requirements to enable access for people with disabilities (AS 1428.1, 1998). It is important to realise that following these standards alone does not necessarily ensure compliance.

These standards are based on the American with Disabilities Act. Their purpose is to provide certainty about citizens' rights and obligations under the DDA. Some hope that this new concept will provide some detail about how the DDA should be applied. Activists argue that the process should be more pro-active and less complaint based. The Attorney General established a DDA Standards Working Group. To draft standards, the group was divided into sections of employment, transport, and access to premises, education, and Commonwealth communication. The draft of public transport standards may be useful in relation to access of buildings (FMA).

The Australian Building Codes Board (ABCB) and Attorney General's Office are reviewing building code standards. Designers feel that it would be extremely helpful if complying with building codes would ensure compliance with the DDA. The goal of the

process is to find a balance where the highest percentage of the disabled population are accommodated in public buildings and those who are accommodating them aren't subjected to undue hardship.

2.5.1 Facility Entrance

2.5.1.1 Entrance Paths

There should be a travel route from all entry points of the property to the entrance of the facility that accommodates the needs of all people. All paths leading to a facility must have a height (2 m) and width (1 m). The path should have smooth transitions between ramps, kerbs, and landings (AS 1428.2, 1998).

2.5.1.2 Entrance Ramps

There are certain requirements regarding the incline of the ramps, kerbs, walkways and landings (AS 1428.1, 1998). There are also standards about how wide a space is needed so that a wheelchair can turn a corner or complete 360 degree turns, as well as the width necessary for passing space. Materials used to construct this path should be slip resistant, with a texture that is appropriate for people using wheelchairs. All ramps must have circular handrails, which must be between 865 mm and 1000 mm in height to be useful for the majority of people. In addition, where a high proportion of users are short, such as children, a second handrail should be provided (AS 1428.2, 1998). An example of a ramp is given in Figure 2.1.

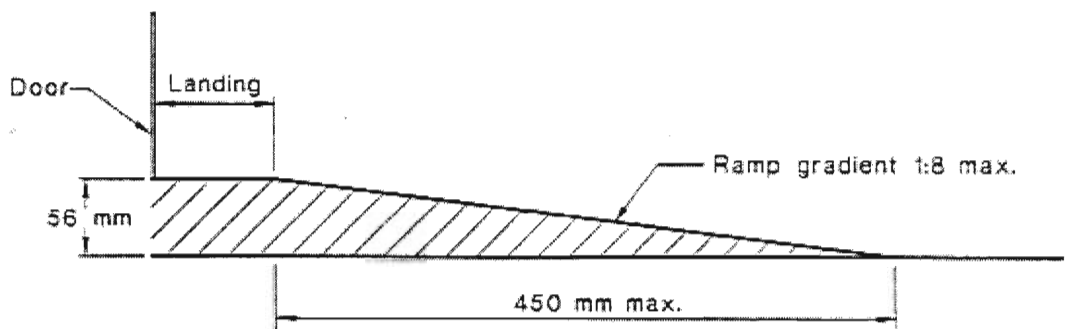


Figure 2.1: A ramp (Adapted from AS 1428.1, 1998)

2.5.1.3 Entrance Doorways

The entrance doors to a facility must be easy to operate, requiring that the handles can be manipulated with one hand. Levers are preferable. In some situations, automated doors may be needed for compliance (AS 1428.2, 1998).

2.5.1.4 Surface

The surface of the outer entrance should provide traction, regardless of whether it's wet or dry (AS 1428.2).

2.5.2 Inside the Building

2.5.2.1 Paths Throughout the Building

Inside the facility, there must be an unobstructed path that leads to office and administration areas, toilets, telephones, meeting rooms, and other facilities and activities. This path has the same requirements as the outdoor route, but the interior materials constructing the path can also be non-slip tiles, or low-pile carpet. The path must be at least 1200 mm wide, which is the width required to comfortably manoeuvre a wheelchair. Every 6 m, there must be a widening of the path to provide enough room (1800 mm) for two wheelchairs to pass each other (AS 1428.2, 1998).

2.5.2.2 Signs

All signs should be positioned so that the bottom is at least 1.2 m above the ground and the top is no more than 1.6 m above the ground. The internationally recognised symbols should be used whenever possible and the background that the sign is up against must contrast the sign in order to make it easier to read (AS 1428.2, 1998).

2.5.2.3 Surfaces

Inside, short-piled carpet is satisfactory for most indoor locations. If it is not near an entrance, smooth flooring material can be used, provided it doesn't have a high gloss or slippery finish. It is possible for water to be deposited onto interior surfaces on rainy days, so smooth flooring is not recommended near entrances. In addition, anti-static carpet can help stop the build-up of static electricity, which can interfere with or damage hearing aids (AS 1428.2, 1998).

2.5.3 Sanitary Facilities

2.5.3.1 Toilet Area

To make the toilet area accessible to all users, it should be specifically designed for a person confined to a wheelchair. The location of the flushing mechanism and the toilet paper is to allow a wheelchair bound individual to operate the toilet with ease (AS 1428.2, 1998).

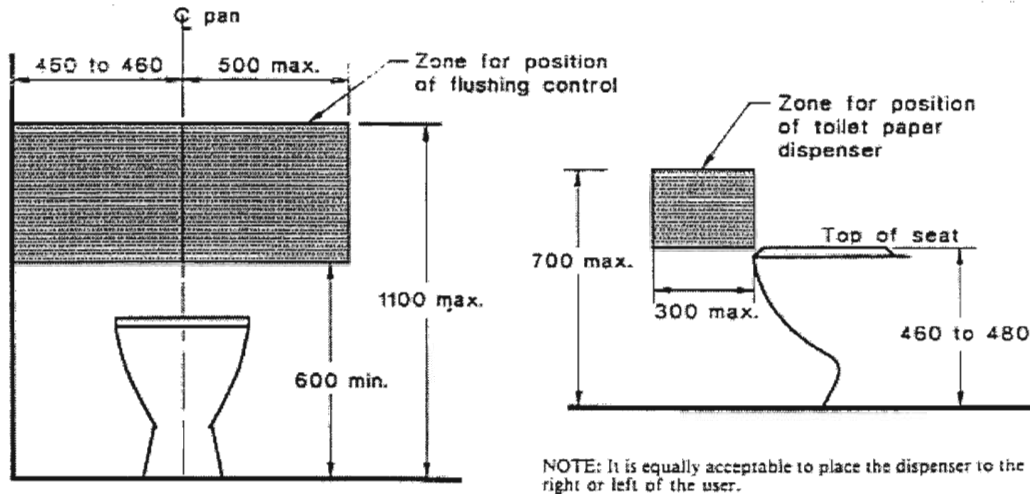


Figure 2.2: Location of Flushing control and Toilet Paper Dispenser (adapted from AS 1428.2, 1998)

2.5.3.2 Washbasins

Accessible sinks should be provided for all potential users. The sinks have to be operable with only one hand and be used by somebody with limited dexterity. This is diagrammed in Figure 2.3 (AS 1428.1, 1998)

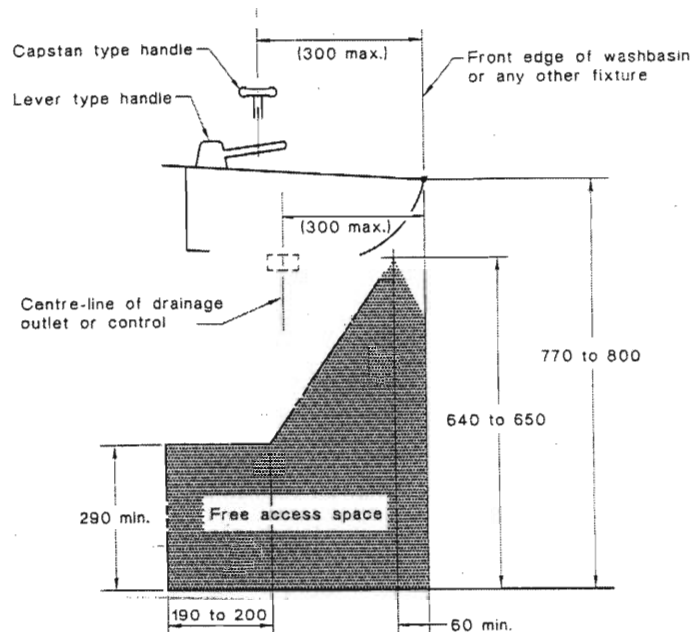
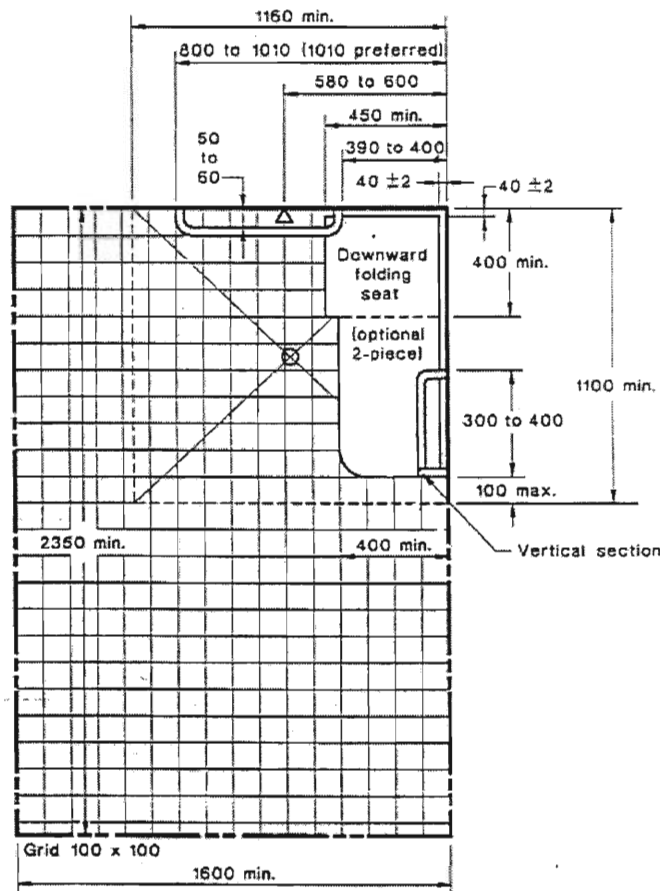


Figure 2.3: Clearance Under a Sink (adapted from AS 1428.1, 1998)

2.5.3.3 Showering Areas

Detachable showerheads are preferable because they allow the user to shower either standing or sitting. Most showers tend to favour one hand over the other, so if two or more showers are installed in the facility, at least one of them must be designed for the opposite hand (AS 1428.1, 1998).



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2.5.4 Work Area

2.5.4.1 Furniture

A table must have proper wheelchair clearance underneath it. This is shown in Figure 2.5. The distance between two desks (back facing each other) has to be at least 1.6 m to allow easy access to the workspace (AS 1428.2, 1998).

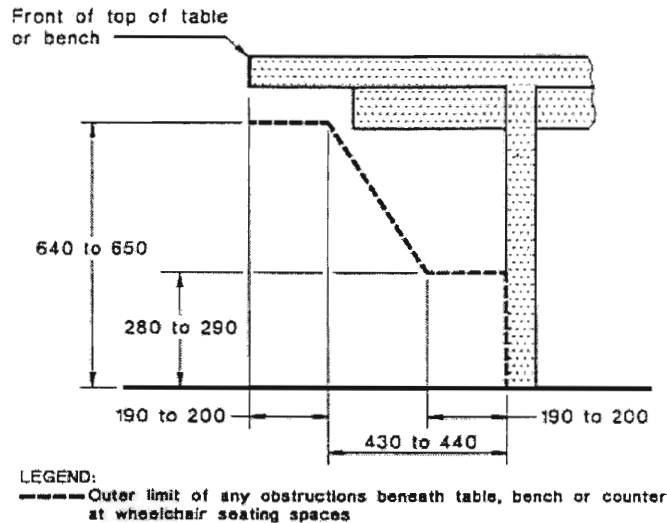


Figure 2.5: Clearance Under a Table (adapted from AS 1428.1, 1998)

2.5.4.2 Storage

Shelves should be between 380 mm and 1 m off the ground for wheelchair users and between 550 and 1.3 m for an ambulant person with a disability. The zone of common reach is between 550 mm and 1000 mm from the ground level. The depth of the common zone is 400 mm (AS 1428.2, 1998).

2.5.4.3 Water Dispensers

Water fountains have to be provided near any toilet facility, and at least one must match the dimensions in Figure 2.6. The controls should be located in the front, or on the sides, no more than 180 mm from the front (AS 1428.1, 1998).

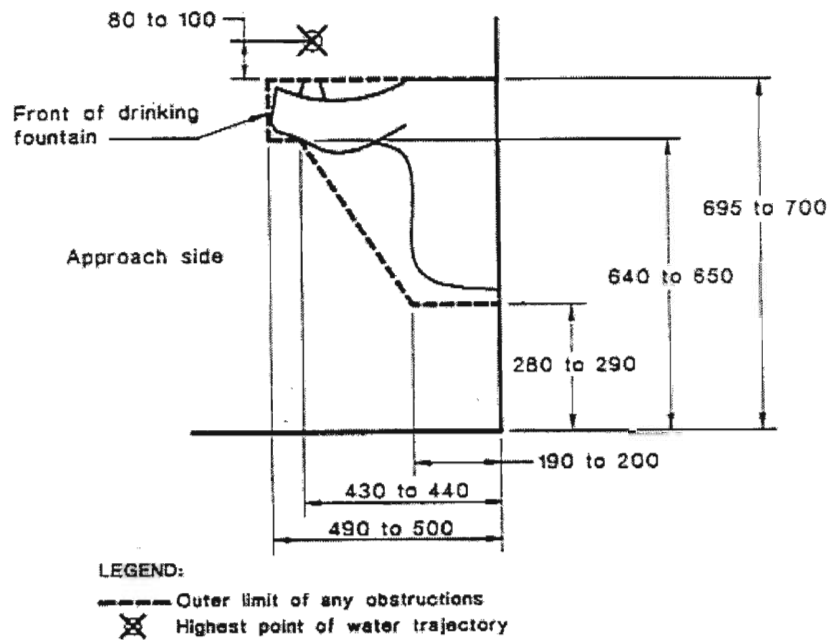


Figure 2.6: Water fountain dimensions (adapted from AS 1428.1, 1998)

2.5.4.4 Payphones

Anywhere that payphones are provided, at least one accessible telephone needs to be available. The area in front of the telephone has to be clear, and the telephone cord needs to be at a minimum of 735 mm in length. The dialling mechanism must have push-button controls, and when there is multiple telephones, the first one shall have a volume control and a built-in coupler to connect to hearing aids (AS 1428.1, 1998).

3.0 Objectives and Methodology

The project team performed research to learn about the different discrimination acts that exist, and how agencies have been affected by disability legislation. Exploration of this topic provided insight into how organisations with various resource limitations face the challenge of compliance. A variety of experts in disability accessibility were consulted for advice, in addition to researching published materials.

Researching existing auditing processes was necessary to develop a process for use in determining if facilities comply with the DDA. Experts in other countries with legislation similar to the DDA have handled the challenges associated with compliance and with providing equal dignity. Researching the actions taken by other countries gave the project group a number of strategies for rectifying gaps in compliance, based on the experiences of experts worldwide.

3.1 Interviews

Interviews took several forms during the project. The primary rationale was to extract information that experts have gained first hand. The experts that were contacted before arriving in Melbourne were chosen for several reasons. First, they had experience with working closely with disabled persons, and appreciate the complaints of disabled people. Second, the experts understood the challenges that disability legislation can impose on those required to make changes. These professionals had worked on adaptive technologies that are used to aid specific disabilities, so their knowledge of aiding the disabled perform and enjoy the same activities as those without impairments is extensive. Different professionals were chosen according to their individual talents. Subsequently, a list of questions was developed so that the responses could be compared. For example, each interviewee was asked open-ended questions, such as, “What modifications are most important to make first, especially in a situation where resources are limited?”

Asking these questions resulted in varied responses. These responses were compared so that strategies for compliance implementation were thorough, taking into account all the aspects of the issue.

Once in Australia, architects, building managers, advocacy groups, staff of facilities, and specialists in disability services were contacted. The architects interviewed had experience in designing disability accessible facilities. These architects had previously been, and were currently involved in, renovating older buildings and designing new buildings that comply with disability access requirements. There is great importance in eliciting feedback from staff, building managers and users. The staff and building

managers were able to provide useful information when the facility served special purposes, such as a residential facility.

Advocacy groups were important to contact because they defend, protect, and provide for the disabled. They have first hand experience aiding the disabled and represent those with a wide range of impairments. Input from those affected by decisions is valuable to architects and project managers (and students compiling an ideas manual) who are making recommendations that concern the welfare of disabled.

All the sources provided useful information concerning what design features are helpful, practical, and useful for the users and the staff. In addition, those involved in disability services were able to give a perspective on the financial limitations associated with designing buildings, as well as give a bigger picture of how to meet the needs of clients while providing a dignified atmosphere.

The method for interviewing in Melbourne was less structured, due to the variety and number of people talked to. Most interviews started by determining the interviewee's background and specialties. The source's involvement in the project or role in the facility was determined, and questions specific to their involvement were asked. Similar questions were asked to people who served similar roles. The general comments of staff members that were recorded were valuable because they have directly experienced how their disabled clients have been affected before and after building modifications.

3.2 Auditing

The auditing process was developed using information obtained from research of various guidelines for disability access and auditing processes in existence. The auditing process underwent a series of adaptations, to make it better suited for the target users. The auditing process was adapted to make elements of the Australian Standard less technical and appropriate for a broader audience. For specific questions, users are instructed to refer directly to the Australian Standard. The process was simplified to stress general concepts, and to emphasise important ideas, such as access and dignity.

Once the auditing process was completed, it was tested to determine its usefulness and ability to extract the appropriate information. The test arenas were an aged care centre and an office building. In areas where the process did not produce the desired results, it was amended as necessary.

3.3 Ideas Manual

Developing an ideas manual was critical in fulfilling the objectives of this project. The manual was based on research of current technologies, building codes, DDA requirements, suggestions from disability advocacy groups and methods for dealing with disability compliance laws currently used. To educate those using the manual about these topics, the project group compiled concepts from this research with observations made while visiting facilities and with information obtained from interviews. The manual consists of a collection of these ideas and an explanation of them. The manual also offers technological suggestions, but more importantly, it offers concepts for designing buildings and addressing issues involving the human component of disability access.

The manual was structured to correspond to the auditing process, so that the two can be used in conjunction with each other. It was divided into three main sections that the team felt were main issues to address. The first section gives a history of the DDA, and background information about disabilities and disability legislation. This section was included to inform the readers of the history, and give them information about why the manual is important. The second section corresponded to the audit and gave detailed information about the physical requirements of an accessible building, with references to documents (such as the Australian Standard) as necessary. This section stated potential problems and provided solutions to these problems, as well as alternative solutions that could work. The third section involved employee training, communication issues, and other ideas the team felt was important that was not already mentioned. The three sections together created a complete idea of what is involved in improving disability access.

This manual contains information that can be applied to all buildings. Gaps in disability access were addressed, and the project team offered suggestions on how to fill these gaps to provide better services to clients. Building managers and regional managers will use the manual and auditing process, so neither the manual or the audit is overly technical in nature. The manual offers suggestions about how to improve facilities, about essential elements in designing a new building, and how to determine what the needs of a facility are. It will not offer engineering suggestions, as the project group does not have the technical knowledge to make these recommendations, and the target audience is more concerned with determining the facility's needs and developing an action plan to improve accessibility.

4.0 Data Presentation and Analysis

4.1 Design Process

The site visits to DHS facilities were planned in conjunction with disability services. The facilities that were viewed serve various needs of the disabled population that are less independent. These site visits provided knowledge, background and guidance in the general topic of designing for the disabled. The manual and auditing process were aimed at less specialised facilities. However, site visits were valuable in that the entire design process, from beginning to end, was studied.

The architects that were consulted are specialists in designing facilities for the disabled. . They have expertise in renovating older facilities and designing new ones. Their expertise gave the project team insight into the design planning process. For example, it was emphasized that close and constant communication between the project manager and staff of old and new facilities is crucial. Architects and project managers provided anecdotal evidence that illustrates the folly in neglecting to carefully plan a project. In addition, the communication process shouldn't stop after the renovation is completed. The architect and staff can learn from mistakes in design.

It is important to prioritise the modifications and changes that will be done. Financial constraints were existent in every design process studied. Certain choices have to be made, and therefore some features are not attainable. It is a difficult to avoid compromising dignity and safety when planning with a limited budget. Those planning to modify a facility for the general public have less freedom because they are designing for a broad range of users and must comply with the DDA. Those designing new facilities have even less freedom, as new facilities must meet all DDA requirements. Those modifying heritage facilities have the difficult task of preserving historic structures while accommodating for the disabled.

Many parties have expressed legal difficulties in regards to the application of the DDA. The intention of the law is clear, but how to comply with the law is not. Complying with building codes does not ensure compliance with the DDA. This is troublesome for those trying to improve accessibility because the law prescribes an interpretation that includes more discrimination issues than the building codes support. To further complicate the issues, it is known among developers and architects that exemptions to building codes can be granted by building surveyors. Approvals that contain

exemptions to building codes allow the construction of a facility that is less compliant to continue.

The complexities of the enforcement of the law are currently under review. Representatives from different sides of the issue seem to agree that the methods for compliance need clarification. A possible remedy is the amendment of the DDA so that building codes become the standard for compliance.

4.2 Australian Standard

The Australian Standard that deals with disability access is 1428.1-1428.4. It describes what criteria buildings must have to be considered accessible, although following the guidelines in the Australian Standard do not guarantee that the building complies with the DDA. For example, according to the Australian Standard, a doorway must be at least 800 mm wide, but this width is not large enough to give access to everybody in a wheelchair. Such a doorway is not DDA compliant. These standards, therefore, should not be seen as a minimum. Regardless, any building that complies with the details of the Australian Standards is well on the way to DDA compliance. The Australian Standard is not imposed on existing buildings, and applies only to newly designed buildings.

4.3 Results from Help Sheets and Checklists

Many of the document sources that were consulted have some general ideas on disabilities. Help sheets from various disability groups and from government agencies offer very specific ideas on the different types of barriers that can exist in a building or service. The three types of barriers (physical, communicational and attitudinal) are described within these documents. Included in these descriptions are lists of areas that are most problematic, and some remedies. The solution to many problems is simple, and expensive renovations can be avoided.

Other Australian organisations have dealt with the same problems that are addressed by this project, so examining those ideas was helpful. For example, the Western Australia Disability Services Commission formed a checklist that is useful to the understanding of disability access. Many concepts in the checklists that were studied are very similar. In addition, several of the checklists have a list of recommendations. Each of the checklists is different in terms of presentation, but the ideas contained are mostly drawn from the Australian Standard. The help sheets pointed out where the Australian Standards are lacking in DDA compliance, which should be taken into account.

4.4 Interviews

The following section contains summaries of discussions, opinions, and interviews that aided the research.

4.4.1 HREOC

The Human Rights and Equal Opportunities Commission handles discrimination complaints. The DDA is complaints based legislation, and there is no other way to enforce the law. After a complaint is filed, a conciliation process follows. During this time, the parties can agree on a strategy that will eliminate the discrimination that is occurring. Typically, the defendant will be required to organise the strategy in the form of an action plan. An action plan is a detailed strategic timeline that describes how discrimination will be eliminated.

An HREOC representative stressed the usefulness of action plans. Action plans can be submitted to the HREOC voluntarily, although some organisations are required to, such as Commonwealth organisations. Some groups that aren't required to submit action plans, develop one anyway, but choose not to submit them for various reasons. For example, if an action plan includes innovative ideas, organisers fear that the public can steal those ideas. Those that have already developed an action plan can submit it in the event that a complaint is filed. Still it is encouraged that organisations register action plans. There are approximately 150 action plans registered with the HREOC. The public can review these for comment and spot potential problems.

The HREOC insists that "effective consultation" with those that represent the disabled community is essential in addition to the audit process, which identifies physical barriers. It is difficult to define what effective consultation is. An HREOC representative said that the responsibility is on the shoulders of the developer. HREOC has their own network of consultation, and developers must formulate the same. It is difficult to imagine that developers will take on this responsibility. For guidance with appropriate contacts, the HREOC can provide a list of regional contacts. In relation to the DHS, the HREOC representative expressed that DHS will have to publicly register their action plan. The HREOC representative suggested an auditing process called "Right of Access" which can be obtained through Villament Publishing. They can be phoned at 03 5229 2029.

4.4.2 Paraplegic and Quadriplegic Association of Victoria

Representatives at ParaQuad were very helpful in providing personal and professional opinions about the DDA and its implementation. Both contacts use wheelchairs so they have directly experienced societal barriers. One employee described the problems associated with the process of filing complaints. She has been involved in the complaint process, and expressed concern that the only way to enforce the law is to file a complaint. Another concern was the privatisation of building surveyors. The government has been undergoing a privatisation process in the building approval industry. The Council handles about 30% of approvals. This means that there is no one to watch those issuing building approvals to make sure that discrimination is not occurring. For example, a complaint is in process against a cinema in Carlton who built 4 steps into the front entrance. They were able to do so because a building approval was granted. Organisations like ParaQuad must take it upon themselves to watch approval processes and construction to alert the Council of problems. Clearly, this isn't the most effective and productive way to enforce the law. Suggestions for improvement to the process include enforcement at the Council level, tax incentives for those that comply, and increased awareness of the issue. Those complying with the law should be aware of the current problems with the law, and stay informed of changes that are made. The attorney general's office is currently reviewing procedures and working groups are proposing changes.

Another concern is that the timeline is ambiguous. Many times, organisations aren't pinned to a timeline until a complaint is filed. Exemptions also increase the amount of time an organisation has to comply. The transit authority has been granted an exemption in relation to the tram system. The entire fleet of about 400 trams must comply by the year 2035. Those at ParaQuad expressed dissatisfaction that it will take so long to modify the tram system. It is not expected that DHS would be granted any exemptions. The HREOC states that organisations like government agencies will have to provide full equality. It is not acceptable for DHS to modify services at a lower level than full access and equality.

One of the sources at ParaQuad designs and conducts audits for organisations. He emphasised the importance of a careful and accurate auditing process. Aggravation, wasted resources, and legal repercussions can ensue when auditing isn't done correctly. Doing an audit internally, without outside expertise, could impose the risk that certain issues are missed. According to the HREOC, an action plan that is based on an audit done internally is less effective in providing a defense against a complaint.

This contact also examined the auditing process that the project team wrote. He commented that certain specifics should be included so that it is easy for the auditor to use. Even though the auditor should be responsible for understanding and using the Australian Standard, having more items directly in the audit makes it easy to go through the audit checking "Yes" and "No" for each item. He also suggested the project team take a look at the checklists done in Western Australia, which has been done. Deakin University formed a checklist that the project team hadn't seen. Deakin University also prepared a Disability Awareness Kit which is available, at state libraries.

4.4.3 Discussion with Jon Bentivoglio, DHS rural project manager

Mr. Bentivoglio discussed with the project group, a devastating fire that occurred at Kew Residential Services. The fire resulted in seven deaths. As a result, an investigation was done to determine the causes of the fire and fire codes and guidelines were rewritten. All DHS facilities in Victoria were audited to determine the level of fire safety.

A resident, whose illness made the patient prone to staring fires, started the fire at Kew. The fire happened at night, when fewer staff were scheduled to be on site. The type of disability the Kew residents suffered from required that doors be locked electronically. The doors didn't unlock when the alarm system was triggered, which reduced the efficiency of egress.

The stringent guidelines that were written by the DHS were intended to reduce the number of injuries caused by such tragic fires. It is inherently more difficult for the disabled to escape a premises in an emergency. The greater the level of disability, the more complex the issue becomes. For example, in buildings that are multi-story, the lifts can't be used during a fire. This makes it problematic for those in wheelchairs to escape. Evacuation of those that are disabled and in beds (and also the number of those people) can make evacuation difficult

4.5 Site Visits

The project team visited many DHS facilities to gather ideas for the manual and the audits.

4.5.1 Kew Residential Services

In the past, living accommodations and care for the disabled was provided in unsatisfactory institutional type facilities. As aging, out of date facilities are redeveloped, the quality of care for residents is improved through careful design processes.

Kew Residential Services is a residential facility designed to provide care for a less independent disabled population. Many of Kew's residents have lived there for the duration of their lives and will continue living there until they are moved out into the community or another facility. Kew accommodates more than 500 residents, most between the ages of 30 and 50.

Two examples of buildings at Kew are discussed here. The first is an older unsatisfactory structure and the second is a recently redeveloped accommodation. The older structure is inadequate for a variety of reasons. Bathrooms don't have updated equipment and are too small. Rooms are separated by partitions that continue about 3/4 of the distance to the ceiling. The opening left by the partitions allows noise to travel throughout the building, and as a result, residents are disturbed by the noise of other residents throughout the day and night. The primary inadequacy is that the building has two levels. Two levels are undesirable because the staff is unable to supervise residents on both levels at once. Therefore, residents do not have the freedom to retreat upstairs, where the clients' bedrooms are located, during the day. More importantly, because the second level contains the bedrooms, greater danger is placed on residents during fire emergency because it slows egress times. Additionally, only ambulant people can be housed in this facility because there is only stair access between the two floors.

The redeveloped buildings were originally an "H" based structure format. The wings contained beds, space for staff, and living areas. This design was unsatisfactory because it was based solely on the speed of care and practicality. These are important issues to consider, but the personal dignity of residents is also vital. The centre of the "H" consisted of a unisex toilet area. The general toilet area included of a row of open toilets that provided no privacy. The toilet area was open at either end, so to reach visiting areas visitors could not avoid having to go through the toilet area. Residents were crowded in sleeping areas with as many as twenty beds in a row, which afforded

no privacy. Disruptive residents that needed care during the night woke other residents.

To improve the quality of life and increase the sense of personal dignity for the residents, this facility needed to be renovated. Graham Ball is an architect who specialises in designing for the disabled. His firm worked with the DHS on the redevelopment. First, the designers decided it would be feasible and affordable to renovate, rather than rebuild. Only the shell of the building remained after renovation. Additions were added to create "flats" to house 8 residents. The flats were created to give residents the feeling that they lived in a home as opposed to a hospital. There is a kitchen in every flat, where staff prepare meals. Mealtime is therefore an opportunity for the residents to participate in the preparation process. The addition of spa rooms provided a calming and therapeutic space for staff to care for the residents. Improvements were made to bathrooms to ensure that those residents who could use toilets independently were not injured while doing so. Soothing colours were used to make the flats comfortable. Carpets weren't practical, so coloured linoleum was used to avoid creating a hospital atmosphere. The walls were lined with high traffic coloured panels that reduce the damage that wheelchairs can cause to walls. A quiet comfortable room was also provided for guests to visit with residents.

The final structure provided single and double bedrooms, with the intention that eventually, as space constraints decreased on the Kew campus, every resident would have a single bedroom. Parents commented that their 40-year-old children had shared a room with 20 people for their entire lives, so moving to a single room was a significant change. Residents responded well. Staff noticed that residents slept better because there was less nightly disruption. The improved living conditions reduced the need for some patients to be heavily medicated at night. In addition, there were less patients per staff member which allowed staff to spend more time with each resident.

Attention to the staff's input was valuable in many instances. For example, the staff noted that expensive ceiling mounted electric lifts weren't being used. The lifts were extremely slow in traversing the residents across the toilet room. When the lifts were used, residents waiting for the attention of the staff member could become agitated. To resolve this problem, new lifts were installed that were helpful in vertically lifting the resident. Designers realised it was easy and more practical for staff to manually push lifted residents horizontally. Once the patient is lifted, it takes little effort to slide the lift across the room. Funding was used to provide trolleys that bring

a resident from the bedroom to the bathroom, which means that a client only needs to be lifted once.

In conclusion, the renovation to Kew was successful in improving the quality of life for Kew residents a great deal. It cost about AU\$38,000 per bed to renovate, whereas building a brand new building would have cost about AU\$60,000 per bed. The money to renovate Kew was well spent, as the staff is happy with the design and notice improvements in their residents' behaviour and well being.

4.5.2 Plenty Residential Services

The facilities at Plenty Residential Services (PRS) are newly built. PRS consists of groups of individual houses, accommodating between three and six residents. Residents who are able attend day services that provide varied activities for clients while not at home.

Each house has single bedrooms, two living spaces, a kitchen and bathroom. The space is large to assure safety for those moving about the house with multiple disabilities. Tasteful furnishings are placed carefully to avoid obstruction to those moving through the house. The kitchens are designed to allow residents to help with the cooking and cleaning. Staff members are on hand at all times to care for the residents.



Figure 4.1: Plenty Residential Services

4.5.3 Community Residential Units

The Department of Human Services provides residential services for the disabled that is based on small community houses. These houses are typically new or renovated and are designed to fit into neighbourhoods where the general population of Victoria resides. Most residents are disabled but are highly skilled. The houses are near public transportation for the convenience of the residents. Residents attend day services and activities that suit their particular interests.

One facility we visited is used for the purpose of respite care for children that are disabled. The service provides rest for families that are taking care of a disabled child. It also can be used to house a disabled child in emergencies. The new facility had the capacity to safely house children with different impairments. The staff and family members of the users of the facility were able to give input into the design process. For example, a warm yellow shade was painted over the dull grey shade that was originally chosen to cover the walls.

Another CRU provided a residential service for severely disabled adults. Most of the clients could not speak and are confined to wheelchairs. The clients attend a day service and stay at this CRU at night. The facility included technology to aid the staff, such as lifts in the bathing rooms, to help care for clients with multiple impairments. For the safety of one client, a bed had cushioned railings around it.

4.5.4 Day Centres

Disability Services runs many day services that provide activities during the day for the disabled. The level of intellectual, mobility, and visual impairment varies among the clients. Allen Mortin is the architect that ran a recent construction of a community day service. To design the best facility possible, inputs from DHS representatives and staff members of the service were important. The final design involved five major areas of activity, a kitchen, a hub area for general circulation, an administrative area, four activity rooms, and toilet area. The plans for this are shown in the figure below. The plans of the building show that wide circulation spaces were designed to simplify the task of moving many wheelchairs. In addition, the number of corridors was reduced.

The day service has been in operation long enough for staff members to provide feedback to Capital Management Branch. The new facility has served the needs of the day service well. Staff members were pleased with the vinyl flooring that was chosen in

case clients are incontinent. Sliding doors were a good idea because swinging doors are more cumbersome and dangerous, and create less space for manoeuvring. The doors that were installed had to be repaired because they had come off the tracks, so in the future, more attention should be paid to installing doors appropriate for high traffic areas. Another improvement was made to the entrance doors. From the outside, the doors open automatically. For the safety of those clients that have a tendency to wander, the entrance is opened on the inside by the push of a button. In general, the design is very functional and satisfactory. The staff finds that the activity rooms are spacious and circulation space is large enough for many wheelchairs to be moved easily. The hub area provides an additional space for activities if necessary.

The staff did note that a few improvements to the design could be made. For example, the facility was designed with the needs of current clientele in mind. The number of visually impaired clients was small. After the facility was opened, staff realised that the wide circulation space of the hub area is more difficult for the visually impaired to move through than corridors would have been. Velcro patches were installed on the walls to provide some tactile guidance for the visually impaired, but the patches don't guide the clients through the open space of the hub area. Consequently, the patches were not used. The staff feels that tactile floor tiles would have been a better choice. The tiles provide spatial information that can be felt underfoot. The installation of tiles is especially appropriate in this facility which has few corridors. The tiles could aid the visually impaired when moving through the wide-open space of the hub. In one instance, attention was not paid to the location where the end of a handrail is. The handrails, and the wall it is fixed to, end prematurely, which can cause visually impaired clients to lose their bearings.

4.6 Audit Testing

4.6.1 Rosebud Rehabilitation Centre

Rosebud Rehabilitation Centre was used as a test facility to perform the audit created by the project team. The facility is in excellent condition in terms of DDA compliance, which is a result of accommodating the client population. The facility is used to rehabilitate aged people who suffer from stroke, knee or hip replacement, osteoporosis, and other medical conditions. The facility has the features necessary that permit a mobility-impaired individual to safely manoeuvre with ease. The facility could use improvements such as tactile floor marking or raised lettering on signs to aid the vision impaired, but the overall accessibility for the disabled is

excellent. The contact person kept a copy of the audit, to perform herself, for verification that the wording is understandable, and the information collected is useful in determining accessibility.

4.6.2 555 Collins St.

The office where the project team was based was the other facility tested. This building is used as an office for all of the separate divisions in the Department of Human Services. It also contains a small reference library, a café and a bank. The audit was improved after the first test run because some of the audit questions were difficult to understand. A brief visual inspection revealed that the office building wasn't compliant in a couple areas, and the score of the facility reflected that.

4.7 Summary

Performing site visits allowed the project team to identify the problems most often faced by disabled individuals, as well as the most frequent design problems in a facility. These observations were assembled to help form the audit and the ideas manual. The information obtained was useful in making the project team aware of the physical and social issues faced by the disabled community. The time spent by managers, staff members, architects and advocacy groups providing the project team with information and first hand experience is valuable, helpful, and appreciated. The input and guidance gained through site visits assisted the team in delivering a manual that addresses many important issues about disability access.

5.0 Conclusions and Recommendations

The Disability Discrimination Act is legislation that intends to eliminate discrimination on the grounds of a disability. Disability discrimination is a complex issue, and there are many aspects of the problem that need consideration. Discrimination must first be identified in order to be eliminated. There is currently no minimum construction standard to follow that ensures complete compliance within a facility. The Department of Human Services is a government department that provides a variety of services offered to the public. Therefore, the DHS is responsible for employing the Australian Standard and understanding what the DDA prescribes in terms of dignity and equality.

The Australian Standard provides specific guidelines that help with constructing a facility. However, the standard does not specify that equal dignity must be provided. For example, the Australian Standard supplies a design of an accessible entrance. To comply with the DDA, the *front* entrance should be accessible to everyone. No one should have to use a less dignified entrance at the side or back of a facility.

Those planning construction (on new buildings or existing structures) should take into account the possibility that people with every type of disability will be using the facility. The primary goal for all designers should be to provide accessibility for everyone. Some facilities may serve a specific purpose that requires the addition of special features (such as in a residential facility for disabled people). This not only makes the services provided lawful under the DDA; it benefits the disabled and the general population by adding a level of safety and useability.

To avoid finding mistakes after construction is completed, designers should plan carefully during the design stages, and consult with disabled advocacy groups about the best design. The disability day service that was constructed with the current clientele in mind illustrates the folly in not accommodating all types of disabilities. The facility was designed with large open areas to accommodate wheelchairs, but when visually impaired clients later used the facility, they had difficulty moving about. Another example involved a nightclub that did not provide any non-smoking areas. Second-hand cigarette smoke caused a customer with cystic fibrosis great discomfort. The nightclub's designers could have planned to include a non-smoking area during design stages and would have avoided any complications. The manual was created in order to teach users that a lack of equality, lawsuits, awarded damages, and

costs of modifying the facilities, can be avoided with careful planning.

The HREOC handles every case individually, so what constitutes compliance differs in terms of the circumstances surrounding a situation. For example, The Department of Human Services is a government agency that serves everybody in Victoria, which means that it is unlikely that the HREOC would grant the DHS compliance exemptions. A rare instance where an exemption was granted to a public agency was with Melbourne's trams, which will not have to be accessible until the year 2035. The DHS is likely to be required to comply with the fullest extent of the law. Under specific circumstances backed by the DDA, the HREOC allows organisations and businesses with fewer resources to run parallel or special services. As an example, setting up a special area that is accessible in the event that an entire facility is not accessible is not appropriate for an organisation of the size and type of the Department of Human Services. The DHS has to provide equality in all services.

The audit's target audience may not have experience with individuals with disabilities and the legislation that protects their rights. The audit provides a comprehensive guide to checking and reviewing the current state of any facility. The Commonwealth Office of Disability describes an appropriate philosophy:

"It's often not enough to just check whether a ramp is present. You will need to consider how steep it is; check that it is smooth, check that you don't have to go up stairs to get to the ramp and that the door at the end of the ramp can be opened (Commonwealth Office of Disability, 1999)."

The auditing tool should be used carefully by those operating the Department's facilities in conjunction with the manual. The process is designed to help facility managers recognise specific areas within the facility that need improvement. Each section is individually scored to accentuate which areas are most in need of improvement. The project team recommends that the audit results be carefully scrutinised in order to formulate an appropriate action plan.

There are many recommendations included in the manual that outline what is physically preferable and lawful in terms of accessibility. Some recommendations are very specific. For instance, the physical specifications for buildings and accessible bathrooms are certain and exact with reference to the Australian Standard. The manual is meant to teach the reader how to employ the appropriate thought process for recognising and avoiding discrimination when auditing facilities.

Action plans are another way to avoid discrimination. The HREOC encourages those making modifications to submit action plans to the Commission where they can be reviewed. Action plans provide detailed descriptions indicating what services and facilities need change, potential costs, and general timelines stating when the changes will be completed. There is some flexibility provided in the process. If necessary, the action plan can be resubmitted if further changes are required. Action plans are beneficial because they not only provide an organised manner in which to resolve discriminatory access problems, but also aid in the legal process, should any complaints arise.

There are approximately 150 action plans registered with the HREOC, that the public can review for comment (registered action plans can be reviewed on the World Wide Web at <<http://www.hreoc.gov.au>>). Any government agencies, such as the DHS, must register an action plan, allowing the public an opportunity to spot potential problems with the plan. If problems exist in a plan that has been implemented, a complaint could be lodged and a conciliation process follows. Defending against a complaint can be a costly endeavour. If the complaint is resolved during the conciliation process, changes to the action plan are made to remedy the problem. The project team recommends that the DHS carefully scrutinise the results of the audit with the HREOC emphasis on the value of organised, comprehensive action plans in mind.

In addition to the audit process, which identifies physical barriers, the HREOC insists that “effective consultation” with those that represent the disabled community is essential. Effective consultation includes:

- informing those interested and affected by changes;
- inviting criticism and critique; and
- creating a formal structure that encourages participation.

Effective consultation is necessary because it assists in identifying barriers and shows that the Department of Human Services is committed to avoiding discrimination. In addition, it lends credibility to the action plan.

Stakeholders are those that will be affected by the changes outlined in the action plan. Internal stakeholders include staff, section managers, senior management, and employees. External stakeholders are affiliated bodies, funding bodies, clients, organisations that may have complaints, national peak disability organisations, those with expertise in disability issues, and disability advocacy organisations. Since the Department of Human Services

will register the action plan publicly, the disabled community will be able to review it. The project team recommends that the DHS should take this responsibility a step further and consider establishing strong relationship with the disabled community during the action plan process. A long term, constructive relationship can be established with external stakeholders, which includes regular team meetings and a working group with feedback mechanisms. For instance, a national disability advocacy organisation should be allowed at least 3 months to organise their own resources to aid the Department in their process. The HREOC states:

“An action plan developed internally with no reference to the people who experience discrimination or those who will be affected by its implementation is not likely successful in contributing towards a defence [against a complaint] (HREOC website).”

Therefore, it is recommended that the involvement of external and internal contacts with the necessary technical skills and background is included in the audit and action plan process. It is customary to pay a consultant's fee and to pay for possible travel and other related expenses incurred by those consulting.

The project team has performed extensive research to collect the ideas and data contained in this report. The concepts presented in this report, as well as the concepts presented in the auditing checklist and ideas manual, are an amalgamation of research. The research took several forms, including documents produced in Australia and the United States where disability discrimination legislation is similar. Other sources include interviews with architects, engineers, disability services staff members, project managers, advocacy groups, and disabled individuals. These sources provided valuable insight into understanding problems faced by disabled individuals, and provided information concerning the best ways to provide equality for the disabled community.

The products developed by the project team can be useful tools for the DHS to diagnose potential problems within its facilities. In addition to providing an easy way to determine possible access problems within a facility, the team provides possible solutions to those problems within the manual. The manual contains an explanation of disabilities, and a list of the most frequently encountered problems faced by disabled individuals. Possible solutions to the problems, along with alternatives to those solutions are contained within the manual. The manual includes education regarding human interaction and employee awareness issues.

The team is pleased with the products that have been created. The

design of the ideas manual and at auditing tool to assess current levels of compliance in the Department of Human Services is now completed. These are the beginning steps in formulating a working action plan to eliminate disability discrimination. The next step of the project is the auditing and evaluation of all facilities. Using the auditing process that was developed, future project teams could perform audits and determine the level of compliance within DHS facilities. The teams could also verify the usefulness of the audit, and alter the audit as necessary to make it most beneficial to the Department of Human Services. A cost-analysis that describes the relative costs of making the modifications outlined in the manual is a possible continuation of the project. Another future project could entail establishing long-term relationships with the appropriate internal and external stakeholders for effective consultation.

The project team recommends that the Department of Human Services DDA Working Party periodically monitor and evaluate the action plan. Staff surveys that assess the attitudes and knowledge of employees about people with disabilities are necessary. DDA awareness training and education about changing company policies are recommended to provide the best service to disabled clients. A method for evaluating the progress of the action plan at regular intervals is important in verifying that the disabled community is being provided accessible service in a timely manner. The key to creating an accessible environment is providing a friendly environment, where equal respect and equal dignity are provided to all individuals.

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7.0 Glossary

Audio Loop - A long cable and amplifier that transmits sound from a public address system directly into hearing aids of people who are positioned inside the cable loop.

Braille - The translation of text into raised dots on a page for people with a vision disorder.

Captions - Captions show the soundtrack of a TV or video program as text on the screen.

Circulation Space - The unobstructed space required for a person in a wheel chair to move around freely.

Continuous Accessible Path of Travel - an uninterrupted path of travel to or within a building, providing access to all activities. Obstructions include steps, turnstiles, revolving doors, escalators, and other impediments.

Grabrail - A rail used to aid a person become stabilised or steadied.

Handrail - A rail used in areas such as corridors, ramps, and stairways, which helps steady an individual in continuous movement.

International Symbol of Access - An internationally recognised symbol consisting of a figure in a wheelchair on a plain background. The colour of the figure is either blue on white or white on blue.

Landings - a flat surface with a gradient not steeper than 1 in 40. They are usually positioned at the top and bottom of ramps and along the ramp as rest stops.

Non-Reflective Surface - Any surface that doesn't produce glare or reflect light. Materials that are reflective include chrome, glass, mirrors, metallic finishes and any highly polished surface.

Ramp - an inclined path with a gradient steeper than 1 in 20 but not steeper than 1 in 14.

Slip-Resistant - Any surface that provides traction in both wet and dry conditions for both a wheelchair and a person walking.

Stair Nosing - The front edge of the step along the full length.

Stair Riser - The vertical part of the stairs.

Stair Tread - The part of the step that is walked on.

Tactile Ground Indicator - A tile with raised projections to indicate either danger, a change in level, or to act as a directional guide to people with a visual impairment.

Telephone Typewriter (TTY) - Essentially a keyboard that plugs into a standard phone outlet to enable people who are deaf to send or receive messages over phone lines.

Turning Circle - The minimum area required for a standard wheelchair to do a full turn (360 degrees). The minimum area required is a 1500 mm diameter circle.

Walkway - Any path with a gradient not steeper than 1 in 20.

8.0 Appendix A: The Department of Human Services

The Department of Human Services was created in April of 1996 by the merging of the Department of Health and Community Services, the Office of Youth Affairs and the Office of Housing. The DHS mission statement is:

“To ensure that the people of Victoria have access to services that protect and enhance their health and social well-being and to best allocate available resources to meet their needs (DHS Website, Jan 1999).”

The DHS supplies public money and contracts to many service agencies, both public and private. The most important tasks of the DHS include providing:

- health care and housing assistance to residents of Victoria;
- residential and rehabilitation services to the elderly;
- programs to promote social and economic development of the Aboriginal communities; and
- support to low-income groups so they are given access to all state services.

The DHS has facilities located all across Victoria, with the main office in downtown Melbourne.

8.1 The Capital Management Branch

The Capital Management Branch (CMB) manages assets valued at A\$4.6 billion excluding housing. The branch has many responsibilities, including advising on capital plans and budgets for the DHS, implementing reforms and plans for the DHS, purchasing building consulting and construction services, and assuring that the projects and services provided are based on the needs of the community. One major responsibility of the CMB is to assist in the design and development of facilities used to deliver services. This project deals with that aspect of the CMB's responsibilities.

Project managers at Capital Management Branch are available to offer negotiations for all parts of a building project. Technical advice is provided throughout the building development with specialised knowledge in areas such as planning the financial details, industry codes, and contract negotiations. These resources are available to the different divisions of the DHS.

8.2 Other Divisions of the DHS

The Aboriginal Affairs division works closely with aboriginal organisations to learn what matters affect the aboriginal people. The division consults with Victorian government and aboriginal organisations to develop programs that benefit the aboriginal people.

The Acute Health Division is the largest division of the DHS, with a planned expenditure of about A\$3 billion a year. The mission statement of the division is:

“to enhance health outcomes by purchasing effective, high quality acute health services which are accessible and relevant to the needs of individuals and local communities.”

It is the division’s responsibility to provide efficient, high quality, accessible health care in Victoria.

The Aged, Community and Mental Health Branch is responsible for providing primary care that improves the mental, physical, and social health of Victorians. This division is further divided into three divisions:

- The Primary Health group which develops and monitors the primary health systems of Victoria;
- The Mental Health Division, which establishes and improves specialised mental health services for use by children, adults, and elderly people who have or are at risk of developing mental illness; and
- The Aged Care Division, which provides a range of health and support services to older people.

The Corporate Resources Division works towards improving services and outcome for the public through better use of resources and better business practices. It also provides a framework for handling private information by the department and its agencies.

The Disability Services Division funds services for physically, intellectually, neurological, and sensory impaired people. The division works with families, caregivers and service providers to give the disabled person a higher quality of life and improved well being.

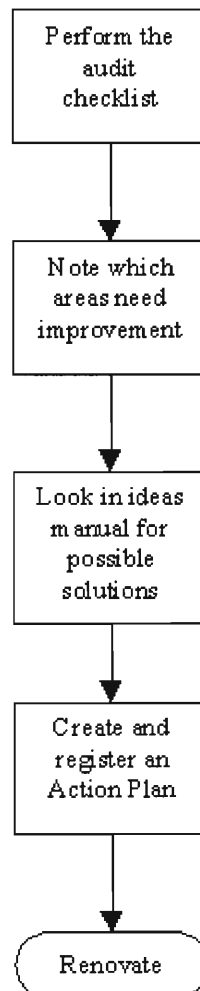
The Public Health and Development Division focuses on preventative strategies for maintaining health. It studies whole populations, not individuals, and investigates the underlying causes of ill health. The division emphasises scientific and statistical basis in its investigations and recommendations.

The Youth and Family Services Division provides a broad range of services to youth of Victoria. The division also provides services supporting and maintaining the functioning of a family as a united entity. Community well being is also a concern of the division.

The principle concern of the Housing Division is to provide affordable housing and adequate housing assistance to the members of the community who need it.

This project aligns with the DHS mission statement in that it involves making the facilities accessible to those with disabilities. The services that are provided by the Department necessitate readily accessible facilities. This insures that the entire Victorian community will be best served by the Department of Human Services.

9.0 Appendix B: Steps for Improving Disability Access



10.0 Appendix C: Resources and Contacts

Ken Ravensdale

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2a Station St. Coburg, VIC 3058

Ph: (03) 9386 5100

Fax: (03) 9386 5111

ACROD Victoria

75-77 Buckhurst St.

South Melbourne VIC 3205

Ph: (03) 9690 2266

<http://www.acrod.org.au>

HREOC, Victoria Office

380 Lonsdale Street

Melbourne VIC 3000

Ph: (03) 9281 7111

Toll free: 1800 134 142

Paraplegic and Quadriplegic Association

208 Wellington

Collingwood, Victoria

Ph: (03) 9415 1200

Deakin University

<http://www.deakin.edu>

Commonwealth Office of Disability

<http://www.health.gov.au/hfs/ood/>

V.A.L.I.D. Victorian Advocacy League for Individuals with a Disability

Ph: (03) 9427 8299

Deaf Infolink

Ph: 1 300 30 2335

11.0 Appendix D: The Americans with Disabilities Act

11.1 Background

With the great strides made in science and technology, modern medicine allows many individuals to survive conditions that have left them with significant disabilities. These people should be happy productive members of the community, but the chance to do this could be consistently overshadowed by being denied access to facilities that most people take for granted. Many disabled individuals felt that their civil rights were being violated, some individuals fought for years to get the ADA into legislation (Evan Terry Associates, 1992).

There were a few notable laws that existed to aid the disabled, and the laws are classified into one of two categories, facility accessibility legislation and program accessibility legislation. In 1961, the American National Standards Institute (ANSI) created a document entitled “American National Standards Specifications for Making Buildings and Facilities Accessible to and Useable by the Physically Handicapped” (hereafter referred to as ANSI A117.1), which documented the first barrier free research in America. Many state and local governments began adopting the ANSI A117.1 standards. This paved the way for the Federal government to pass the Architectural Barriers Act (ABA) in 1969. It required that all Federally funded buildings that are constructed be accessible to and useable by persons with disabilities. This ABA legislation is an example of the facility accessibility legislation (Evan Terry Associates, 1992).

Before the ADA, the most important program accessibility legislation passed was the Rehabilitation Act of 1973. One section of the Rehabilitation Act states that if any Federal money that went to an organization, all programs offered by that organization must be accessible to individuals with disabilities (Evan Terry Associates, 1992).

Before the ADA, the only means for securing the rights of the disabled came from organizations that somehow were receiving Federal support. The National Council on Disabilities reviewed all laws, programs and policies that affected the disabled. In 1986, the Council made a recommendation, called “Toward Independence,” that suggested the private sector be included in the laws and policies that were currently only affecting the government facilities and programs. The framework for the ADA began as early as 1988. During his presidential campaign, George Bush became an advocate of the current bill. The bill was first introduced into Congress in 1989 and after many debates, both the House and the Senate passed the bill. On July 26, 1990, the American with Disabilities Act became law. The ADA covers, with few exceptions, all companies and organizations, whether they receive tax dollars or not, and was the biggest milestone in the fight for the rights of the disabled. (Clouart, 1995)

11.2 Sections of the ADA

The ADA is divided into five sections, including employment, public service and transportation, public accommodations, telecommunications, and miscellaneous provisions.

11.2.1 Title I: Employment

Discrimination in employment against people with disabilities is made unlawful under Title I of the ADA. Unless it would provide undue hardship to the employer, the employer must provide reasonable accommodations to the known physical and mental limitations of the applicant or employee. Disabled individuals experience difficulty in obtaining employment. The disabled population is one of the poorest and least educated minorities in America. Those who are out of work must depend on the government for economic assistance. Sadly, most of the disabled unemployed would rather be earning a living independently. The following is a list of reasons that the disabled are discriminated against when searching for employment:

- Use of standards that deny opportunity;
- Failure to make reasonable accommodations;
- Refusal based on prejudices and stereotypes;
- Safety;
- Insurance costs;
- Lack of acceptance among co-workers;
- Placement in dead-end jobs; and
- Job applications that focus on the disability rather than ability to perform (Harrison, 1992).

In addition, Harold Russell, chairperson of the President's committee on Employment of People with Disabilities, states that many times job accommodations are either not necessary or can be made for under \$50. Examples include a timer with an indicator light for a deaf medical lab technician, a light probe for a receptionist with visual impairments to aid in telephone use, and a headset for a phone which allows those with cerebral palsy to write and speak on the telephone (Harrison, 1992).

More expensive job accommodations can also be made, but they don't have to be as costly as some expect. Readers for the blind and interpreters for the deaf are examples. To reduce cost these employees could have other responsibilities like secretarial duties or other duties on staff. Most of the time the deaf only need the help of an interpreter at certain meetings or workshops.

While employers are not required to hire someone who is less than qualified for a position, those that are qualified with reasonable accommodation should be considered. Even though the employer cannot ask a prospective employee if he or she has a disability, they can ask if the prospective employee is able to perform the tasks necessary. In addition, the employer or potential employer cannot administer any sort of test to determine if the employee or applicant has a

disability, unless the test results give information on whether or not the applicant is qualified for the job (The ADA Information Center, Jan 1999).

A qualified individual with a disability is a person who can meet a level of skill, education, or experience necessary to fulfill the task required of a job. A person should not be wholly judged on one specific characteristic, such as a disability. These individuals can complete the job with or without reasonable accommodations (Harrison, 1992). It is discriminatory to not hire a disabled person because they can't complete minimal or occasional parts of the job. It is also discrimination to assume that a disabled person is also mentally disabled or intellectually disabled.

The following is a list of ways to reasonably accommodate a prospective employee:

- Make facilities readily accessible;
- Restructuring a job;
- Changing work schedules;
- Acquiring or modifying equipment;
- Providing readers and interpreters; or
- Modifying examinations, training and other programs (Harrison, 1992).

Workers with disabilities must have equal access to the benefits and privileges that other employees enjoy. For example, fitness centers, employee lounges, auditoriums and other non-work facilities provided by a company must be accessible to the disabled. If modifying existing facilities is an undue hardship, a similar facility must be provided that allows the disabled to enjoy the same benefit.

11.2.2 Title II: Public Service and Transportation

All non-Federal government facilities, including all local and state offices, must be readily accessible by individuals with disabilities. Physical barriers, such as stairs need not be removed, but any service must be useable by any person.

In addition, all new public transportation services, whether it be new buses or new routes, must be accessible by an individual with a disability or the public transit department must provide a means of transportation along major transit routes, unless this is beyond the public transit department's means (The ADA Information Center, Jan 1999).

11.2.3 Title III: Public Accommodations

Places of public accommodation that are not accessible limit the disabled severely. Fear and embarrassment of architectural or communication barriers that will be encountered cause hesitance for the disabled. The most prominent cause of discrimination in public places is a lack of physical access to facilities (Harrison, 1992). The experts agree that existing facilities, in most instances, can't be completely redone. What is expected though, is that moderate changes will be made.

Public accommodations include the large number of entities that include sales, rental, services, private educational institutes, recreational facilities and social service centers. A public accommodation may not exclude individuals with disabilities unless their exclusion is necessary for the operation of the public accommodation. For sensory impaired individuals, auxiliary aids may be used to allow the individual to be accommodated, unless the aid places an undue burden on the business. The auxiliary aids are flexible, and anything can work, as long as the end result is effectively communicating with the individual.

No one with a disability should be excluded from services or segregated because of a lack of auxiliary aids. Examples include “interpreters, listening devices, telephone handset amplifiers, note takers, written materials for those with hearing impairments, telecommunication devices for deaf persons (TDDs), videotext displays, qualified readers, taped texts, Braille or large typed materials” (BOMA, 1992).

Unless undue hardship is proved, all physical barriers must be removed. Tax write-offs are available to lessen the cost of the changes that are made to the existing building, but any new building or any new renovations to a building must be ADA compliant (The ADA Information Center, Jan 1999).

11.2.4 Title IV: Telecommunications

Telephones are a great communication barrier for the hearing impaired. Title IV requires that all telephone companies provide services for the use of Tele-type devices (or other aid for the hearing and speech-impaired) at the same level that they provide service to other customers (The ADA Information Center, Jan 1999).

11.2.5 Title V: Miscellaneous Provisions

Title V addresses the other laws that are related to the same issues as the ADA. It also assigns different federal agencies to produce guidelines and propose methods for dealing with the situation, should any provision in the ADA be found unconstitutional (Evan Terry Associates, 1992).

12.0 Appendix E: Auditing Checklist

Auditing Checklist

This checklist is submitted in partial fulfilment of project requirements, and expresses the opinions of the project group. The list is not expert advice, and other sources should be used in conjunction with the list to achieve complete compliance.

Benjamin Kennedy

Laura Orlandi

Crystal M. Robert

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Auditing Process

This audit is derived from concepts contained in the Disability Discrimination Act, the Australian Standard 1428, the ADA Compliance Guidebook, observations of buildings where the design of the building stresses accessibility to all people, and common sense. The purpose of this survey is to evaluate the accessibility of facilities that are used by the Department of Human Services. The survey can be used for a variety of facilities by regional organizations to determine what areas of the facility may need improvement to provide accessibility. Not all parts of this survey apply to all facilities. For more detailed information regarding disability compliance see the Disability Discrimination Act and Australian Standard 1428.1-1428.4.

The Good Ideas Manual was written in conjunction with this checklist, and is intended to be used with it. The manual contains a more complete explanation of concepts discussed in the audit. The manual should be consulted prior to using the audit tool, as well as during the audit if needed.

1.0 Evaluation of the Audit

This auditing process was created to help building managers determine how compliant their facility is with DDA guidelines, and to determine what areas of the facility need improvement. The evaluation set forth here is only meant to give a general idea of what areas of the facility need improvement. The model uses a system to grade the facility on individual aspects that can cause frequent problems for disabled persons. The facility will not be judged on an "average" result because some aspects that may need improvement could be ignored. Instead, the trouble areas that most owners and operators of facilities will face will be graded individually, so specific problems can be identified. Each set of questions should be scored as outlined below, and the results should be interpreted according to the minimum value being the best compliance outcome. This system is not complex, and for simplification does not allow for a broad range of results. However, it is useful, because points are still being assigned for non-compliance. An audit of a facility may record low scores on this evaluation and still require renovation to improve access. It is important for managers to recognise

possible problems, and not rely specifically on the numbers presented at the end of this process.

The “facility information” section will not be scored. It is only meant to provide information about the facility that may be helpful in determining what areas require attention.

All facilities start out with zero points. Each section that is highlighted indicates that scoring should start from zero again. Each section is scored individually.

Each question or part of a question, that can be answered “yes” or “no” will be awarded 1 point for each “no” answer. Any question that asks a number answer should be answered with the appropriate number. An explanation of that number will be provided with the appropriate question.

2.0 Tools Required

- metric tape measure
- AS 1428.1 and AS 1428.2
- camera (not required, but recommended)
- calculator (can be useful in calculating the slope of ramps)

3.0. Facility Information

Name of facility:

Date audit was performed:

Who uses this facility?

What services does this facility offer?

Are there any special features to this facility that may require accommodations for a certain disability?

How old is this facility?

When was the last renovation?

Comments on the Facility:

4.0 Checklist and Scoring

4.1 Entrances

	Yes	No
--	-----	----

Do signs directing the disabled to accessible entrances exist?	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------

Is the use of turnstiles, steps, or revolving doors avoided?	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------

If there is a revolving door or turnstile, is an alternative hinged or sliding door provided?	<input type="checkbox"/>	<input type="checkbox"/>
---	--------------------------	--------------------------

Indicate number of questions answered "no": _____ out of 3 possible answers.

Comments on Building Entrances:

4.1.1 Doorways

Yes No

Is the doorway wide enough for a wheelchair to fit through it (at least 1200 mm)?

☐☐

If swinging doors exist, is there enough space on either side of the entrance for manoeuvring objects as large as a wheelchair (AS 1428.1 – Clause 7.3.1, Figure 12)?

☐☐

For sliding doors, is the circulation space inside the door large enough to fit a wheelchair through (AS 1428.1 – Clause 7.3.1, Figure 13)?

☐☐

Indicate number of questions answered “no”: _____ out of 3 possible answers.

4.1.2 Door Controls

Yes No

Can door handles be unlocked and opened with one hand?

☐☐

Do the doors have an easy to grip handle?

☐☐

Is the door easy to open for a person with strength impairment?

☐☐

Are the door handles of non-reflective material and have a contrasting color to the background?

☐☐

If the door is glass and the walls around the door are also glass, is it clearly marked for ease of identification?

☐☐

Is the threshold of the door level (AS 1428.1 - Clause 5.6, Figure 5)?

☐☐

Indicate number of questions answered "no": _____ out of 6 possible answers.

Comments on Doorways:

4.2 Paths of Travel

4.2.1 Inside the General Building

Yes **No**

Is there direct access to the reception area or is there suitable signage providing clear directions for people with a variety of impairments?

☐☐

At any area where there is a counter or table, is one provided that is wheel chair accessible (i.e. has lowered top, leg clearance underneath)?

☐☐

Are staff members available at entrance areas to assist with providing information?

☐☐

Is seating provided in the entrance area?

☐☐

Are all pathways well lit and even?

☐☐

Indicate number of questions answered "no": _____ out of 5 possible answers.

4.2.2 Walkways, Ramps, and Landings

Yes **No**

Is the height of the path at least 2 m?

☐☐

Is the horizontal width of the path at least 1 m?

☐☐

If an incline exists, is it gradual enough to climb in a wheelchair? (AS 1428.1 specifies 1:14 as the steepest)

☐☐

Is there a color contrast and a tactile ground indicator where there is an elevation or incline change (such as at the beginning and end of ramps)?

☐☐

Is there a color contrast between the edge of the pathway and the ground surface?	<input type="checkbox"/>	<input type="checkbox"/>
Are handrails provided along the path continuously?	<input type="checkbox"/>	<input type="checkbox"/>
Are there enough landings and are the landings 1200 mm long? (See Ideas Manual)	<input type="checkbox"/>	<input type="checkbox"/>
Is seating provided along paths?	<input type="checkbox"/>	<input type="checkbox"/>
Are there accessible pathways leading from the entrance of the property (and parking area if applicable) to the entrance of the building?	<input type="checkbox"/>	<input type="checkbox"/>
Does the accessible pathway avoid vehicle traffic areas?	<input type="checkbox"/>	<input type="checkbox"/>
Is there a path of travel that is accessible to all facilities, including:		
• Reception area	<input type="checkbox"/>	<input type="checkbox"/>
• Lifts	<input type="checkbox"/>	<input type="checkbox"/>
• Dining/Cooking areas	<input type="checkbox"/>	<input type="checkbox"/>
• Laundry facilities	<input type="checkbox"/>	<input type="checkbox"/>
• Sleeping areas	<input type="checkbox"/>	<input type="checkbox"/>
• Bathing/Toilet areas	<input type="checkbox"/>	<input type="checkbox"/>
• Any other relevant areas:		
If a path is used at night, is there proper lighting?	<input type="checkbox"/>	<input type="checkbox"/>

Are all landings and rest areas level, having no incline (AS 1428.1 - Clause 5.6, Figure 5)?

☐☐

Are there underfoot-tactile indicators or other equipment to aid the visually impaired?

☐☐

Indicate number of questions answered "no": _____ out of 19 possible answers.

Comments on Paths of Travel:

4.3 Flooring

Is the flooring slip-resistant?

Yes

☐

No

☐

Is the flooring slip-resistant when wet?

☐☐

Is the use of surfaces such as high pile carpet or tiles with deep grooves in between (that could impede a wheelchair) avoided?

☐☐

If carpeting is used, is it anti-static to prevent the build-up of static electricity?

☐☐

Indicate number of questions answered "no": _____ out of 4 possible answers.

Comments on Flooring:

4.4 Handrails and Grabrails

Yes **No**

Are the cross-sections of handrails/grabrails circular?

☐☐

Is the handrail/grabrail thickness appropriate for someone who has trouble grasping things (AS 1428.1 - Clause 6.1-6.2)?

☐☐

Is the handrail/grabrail at a consistent height that is useable by everybody (see Good Ideas Manual) (AS 1428.1 - Clause 6.1-6.2)?

☐☐

Is the handrail strong enough at all points to support a person's body weight?

☐☐

Can you fit a hand between the grabrail and the surface it is fixed to without obstruction?

☐☐

Are the handrails/grabrails made out of non-reflective material and do they have a contrasting colour to the background?

☐☐

Indicate number of questions answered "no": _____ out of 6 possible answers.

Comments on Handrails and Grabrails:

4.5 Stairways

Yes **No**

Is excessive steepness (AS 1428.2 - Clause 13.2, Figure 8) avoided in the design of the stairs?

☐☐

Are the steps long enough to move comfortably from step to step?

☐☐

Is the handrail properly positioned (i.e. at a convenient height) (AS 1428.2 - Clause 13.4, Figure 5)?

☐☐

Is the nosing of the stairs non-slip and a contrasting colour to the background?

☐☐

Are there landings at regularly spaced intervals?

☐☐

Is there either a ramp or lift that can be used as an alternative to the stairs?

☐☐

Indicate number of questions answered "no": _____ out of 6 possible answers.

Comments on Stairways:

4.6 Parking Facilities

Yes No

Is there a continuous path of travel from the public transportation drop off area or parking facility to the facility entrance?

☐☐

Are accessible parking spaces provided?

☐☐

Is there an appropriate number of parking bays designated for people with disabilities?

☐☐

Are the designated bays:

- located as close as possible to the accessible entrance?

☐☐

- easily located with both a blue international symbol of access sign and markings on the ground that locate the parking bay?

☐☐

Do the designated bays have:

- enough room around them to manoeuvre a wheelchair?

☐☐

- A high enough ceiling to permit a car or van with a wheelchair rack to be able to park there?

☐☐

Is the car park well lit and is the lighting even?

☐☐

Indicate number of questions answered "no": _____ out of 8 possible answers.

Comments on Parking Facilities:

4.7 Auditoriums

Yes **No**

Are there available spaces for wheelchair users (AS 1428.1 - Clause 15.3, Figure 36-37)?

☐☐

Are positions provided in various locations for people using wheelchairs?

☐☐

Are the positions located in a way to allow comparable lines of sight to the general viewing area?

☐☐

If there is a stage, is there wheelchair access to the stage?

☐☐

Is there an audio loop available covering at least 10% of the total area (AS 1428.2 - Clause 21)?

☐☐

If an audio loop is available, is there a clearly visible sign indicating its presence?

☐☐

Indicate number of questions answered "no": _____ out of 6 possible answers.

Comments on Auditoriums:

4.8 Waiting Areas

Yes **No**

Is there seating available for wheelchair users?

☐☐

Is the furniture useable by all persons?

☐☐

Is the arrangement of furniture convenient to those moving around it?

☐☐

If there is available entertainment (magazines, television), is useable by all people?

☐☐

Indicate number of questions answered "no": _____ out of 4 possible answers.

Comments on Waiting Areas:

4.9 Signs

Yes **No**

Are there signs located at the following that give directions to the disabled entrances from:

- car parks?

☐☐

- drop off locations?

☐☐

- non-disabled entrances?

☐☐

Are there signs that give directions to the different building facilities (eg. toilets and lifts) and services?

☐☐

Throughout the building, is there sufficient signage to allow a person to move independently?

☐☐

Are the colours of the letters non-reflective and in contrast with the background colour?

☐☐

Are signs visible to people in both the standing and sitting position?

☐☐

Where the international symbol for access is used, does it comply with the international standard in style, colour and layout (AS 1428.1 - Clause 14, Figures 32-34)?

☐☐

Do the signs have enough lighting for both day and night, where appropriate?

☐☐

Are tactile floor maps or audio directions for the visually impaired available at the entrance of a building?

☐☐

Indicate number of questions answered "no": _____ out of 10 possible answers.

Comments on Signs:

4.10 Sanitary Facilities

4.10.1 Toilets

How many cubicles are in the bathroom?

How many accessible cubicles are in the bathroom?

Divide the number of accessible toilets by the number in total toilets. Multiply by 100. This gives you the percentage of accessible toilets. Any number over 5% is acceptable, less requires renovations.

	Yes	No
Is there enough circulation space outside the cubicle?	<input type="checkbox"/>	<input type="checkbox"/>
Is there enough circulation space inside the cubicle (AS 1428.2 - Clause 15.1, Figure 11)?	<input type="checkbox"/>	<input type="checkbox"/>
Do cubicle doors open outward?	<input type="checkbox"/>	<input type="checkbox"/>
If cubicle doors open inward, is there enough clear floor space inside the cubicle without counting the swinging door area (AS 1428.2 - Clause 15.1, Figure 11)?	<input type="checkbox"/>	<input type="checkbox"/>
Are the grabrails properly positioned (AS 1428.2 - Clause 15.2, Figure 12)?	<input type="checkbox"/>	<input type="checkbox"/>
Is the door handle/latch a colour that contrasts the background?	<input type="checkbox"/>	<input type="checkbox"/>
Does the door have an occupied/unoccupied indicator and can it be opened from the outside in an emergency?	<input type="checkbox"/>	<input type="checkbox"/>
Is there an emergency call button located inside the sanitary facility?	<input type="checkbox"/>	<input type="checkbox"/>
Is the toilet in the proper dimensions (AS 1428.1 - Clause 10.2.2-10.2.5, Figure 18)?	<input type="checkbox"/>	<input type="checkbox"/>

Are the toilet paper dispensers in an accessible location (AS 1428.1 – Clause 10.2.7, Figure 20)?

☐ ☐

Are the flush controls either automatic or in an accessible location (AS 1428.1 – Clause 10.2.6, Figure 19)?

☐ ☐

Can the dispensers be used by those with limited dexterity?

☐ ☐

Indicate number of questions answered “no”: _____ out of 12 possible answers.

4.10.2 Washbasins

How many sinks are in the bathroom?

How many accessible sinks are in the bathroom?

Divide the number of accessible washbasins by the number of inaccessible washbasins, and multiply that number by 100. This gives the percent of accessible washbasins. This number should be above 5%.

Yes No

Is there enough clear floor space around the sink (AS 1428.1 - Clause 10.3, Figure 24 and AS 1428.2 - Clause 15.7, Figure 18)?

☐ ☐

Is the basin in the proper dimensions (AS 1428.1 - Clause 10.3, Figure 23)?

☐ ☐

Is/ Are the tap handles lever-style?

☐ ☐

Is there a mirror at an accessible height (AS 1428.1 - Clause 10.4.1)?

☐ ☐

If there are any medicine cabinets, is there a useable shelf at an accessible height (AS 1428.1 – Clause 10.4.2)?

☐☐

Indicate number of questions answered “no” : _____ out of 5 possible answers.

4.10.3 Showers and Baths

Yes

No

Where showers or baths are provided, are they disabled accessible (AS 1428.1 – Clause 10.5, Figures 25-27 and AS 1428.2 – Clause 15.4, Figures 13-15 and 17)?

☐☐

Indicate number of questions answered “no”: _____ out of 1 possible answer.

4.10.4 Water Fountains

Yes

No

Are drinking fountains the proper dimensions (AS 1428.2 - Clause 27.3.1, Figure 33)?

☐☐

Are the controls operable by one hand?

☐☐

Indicate number of questions answered “no” : _____ out of 2 possible answers.

Comments on Sanitary Facilities:

4.11 Emergency Systems

See the [Good Ideas Manual](#) or [Fire Risk Management Series](#) (Capital Development Guidelines) for additional information on emergency safety.

	Yes	No
Are alarms both audible and visible?	<input type="checkbox"/>	<input type="checkbox"/>
Do the audible alarms have appropriate intensity and frequency to attract the attention of those with partial hearing loss (AS 1428.2 - Clause 18.2.2)?	<input type="checkbox"/>	<input type="checkbox"/>
Are the visible alarms arranged such that they spread light in a way to attract attention?	<input type="checkbox"/>	<input type="checkbox"/>
Are the changes in light adequate to wake a person?	<input type="checkbox"/>	<input type="checkbox"/>
Are the auxiliary alarm systems connected to the alarm system of the building, so that the alarm will go off in conjunction with the building's system?	<input type="checkbox"/>	<input type="checkbox"/>
Are safe havens provided for people with mobility difficulty on levels above the main entrance level?	<input type="checkbox"/>	<input type="checkbox"/>
Is there a sprinkler system installed in the building?	<input type="checkbox"/>	<input type="checkbox"/>

Indicate number of questions answered "no": _____ out of 7 possible answers.

Comments on Emergency Systems:

4.12 Telephones

Yes No

Is there a continuously accessible path of travel to the telephone?

☐☐

Is there enough circulation space in front of the payphone (AS 1428.2 – Clause 30.1.2)?

☐☐

Are the useable parts of the phone at a height easily accessed by all people (AS 1428.2 - Clause 30.1.3, Figure 35)?

☐☐

Does the payphone have TTY (telephone typewriter) capabilities?

☐☐

Is there a phone with volume control and a built in coupler?

☐☐

Is the phone indicated with the proper hearing-impaired labeling?

☐☐

Do all phones have push button dialing?

☐☐

Do the buttons have large print numbers?

☐☐

Is the lighting around the telephone sufficient?

☐☐

If a directory is provided, is it located in an accessible area?

☐☐

Are the phone cords long enough to be used by individuals of varying height whether sitting or standing?

☐☐

Indicate number of questions answered "no": _____ out of 11 possible answers.

Comments on Telephones:

4.13 Lifts

	Yes	No
--	-----	----

If lifts are not considered the primary travel route between floors, is at least one lift available for those with mobility impairments?	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------

Is there a lift available to all floors?	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------

Are the lifts compliant with AS 1735.12?	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------

Indicate number of questions answered "no": _____ out of 3 possible answers.

Comments on Lifts:

13.0 Appendix F: Ideas Manual

Ideas Manual

This manual is submitted in partial fulfilment of project requirements, and expresses the opinions of the project group. The manual is not expert advice, and other sources should be used in conjunction with the manual to achieve complete compliance.

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1.0 Preface

People with disabilities experience obstacles that affect their quality of life. Many of the activities that affect our daily lives are potentially more difficult for the disabled to access and enjoy. Every member of society should have equal opportunity to benefit from all community activities and services. The importance of educating society about the disabled community and their rights cannot be understated.

This manual attempts to address the more important issues of providing full access to the disabled. A person's ability to safely access a building and make use of it without difficulty is essential. Every user of a facility should have an equal opportunity to access a facility in a dignified manner.

The Disability Discrimination Act (DDA) is Australian legislation that identifies the rights of the disabled. The DDA's purpose is to protect Australians against discrimination on the grounds of a disability and to provide the maximum amount of dignity and equality for everyone. Department of Human Services facility managers and employees are responsible for understanding DDA legislation and its purpose. In addition to educating readers about the issue, this manual provides insight into avoiding the occurrence of discrimination.

The manual is not technical in nature, and is meant to supply facility managers with the necessary information concerning how accessibility can be assessed and achieved. An auditing process that includes a list of general questions and considerations has been created to compliment this manual. This auditing process is a tool assessing a facility's level of accessibility. When the status of a facility is established, facility managers must make appropriate improvements including:

- changes to physical construction
- changes to services
- changes to ensure compliance with the law

An auditing process can help in the creation of an action plan. Action plans contain specific strategies outlining where discrimination exists and methods for remediation of the situation. It is important to carry out all renovations and modifications in a

timely manner. The action plan specifies where limited resources restrict the improvement process.

Eliminating Discrimination

The following is a list of examples of modifications that are easy to implement and relatively low in cost. These simple changes increase accessibility and communication.

- Installing ramps in addition to steps
- Lowering countertops
- Making curb cuts in sidewalks
- Repositioning shelves to allow everyone to reach them
- Rearranging tables, chairs, vending machines, and other furniture
- Repositioning telephones
- Adding raised markers to buttons on a lift
- Installing flashing alarm lights
- Installing offset hinges to widen doors
- Eliminating turnstiles
- Installing accessible door hardware (i.e. lever handles)
- Installing grab bars in toilet stalls
- Rearranging toilet partitions
- Insulating lavatory pipes under sinks to prevent burns
- Installing a raised toilet seat
- Installing a full length bathroom mirror
- Repositioning a paper towel dispenser in a bathroom
- Creating accessible parking spaces
- Installing an accessible paper cup dispenser at an existing inaccessible water fountain
- Removing high pile, low density carpeting

Under certain circumstances, alternatives to barrier removal can be employed when it is impossible to remove a physical barrier. In such cases, a little creativity may solve the problem. For example, certain activities could be moved to accessible facilities or accessible areas of a facility.

Building codes such as the Australian Standard for disability access are a helpful and necessary resource, but it is important to recognise that following building codes and standards does not ensure full compliance with the DDA. Compliance with the DDA not only requires a physical adaptation to a building, but a thought adaptation by society. Common sense must be applied to all action taken, so that every disabled individual is treated with the same respect and dignity. When making modifications, one should always consider how the disabled are affected. Consider how safety, accessibility, and dignity can be improved.

It is helpful to use common sense when considering how to make improvements. It is most important to:

- provide equal dignity
- ensure equal opportunity
- maintain respectful atmosphere
- accommodate all possible users
- provide a safe atmosphere
- provide services in the best manner possible rather than meeting the minimum standard

The ideas in this manual are an amalgamation of research done in both Australia and the United States. Additional information about disability access, information about how the research was performed, and a list of sources is available in the final report by Benjamin Kennedy, Laura Orlandi, and Crystal Robert, titled Review of Implementation Processes to Comply with the Disability Discrimination Act.

The Australian Standard 1428 and Disability Discrimination Act are the major legal documents that the manual is based upon. Architects, project managers, disability advocacy groups, disabled people, caretakers of the disabled, and managers of disability services are other valuable resources that were consulted. For more information on this topic, the Australian Standard and the Building Codes of Australia should be consulted. Questions about the DDA should be directed to the HREOC.

2.0 Nature of Disability

There are many types of disabilities that restrict a person's ability to participate in normal human activities such as seeing, hearing, communicating, learning, breathing, moving, or speaking. Impairments can exist at birth, be manifested later in life, or be the result of an accident or disease. Disabilities can be specific to certain contexts. For example, a person who has trouble breathing may not be able to use stairways. In buildings where lifts are provided, the disability becomes immaterial.

The Disability Services Commission of Western Australia defines the different types of disabilities in the following list:

- **Sensory:** affects senses such as vision or hearing
- **Neurological:** affects a person's ability to control movements as a result of a nervous systems disorder (i.e. epilepsy or stroke)
- **Physical:** affects mobility of the upper and lower body, for example, paralysis, or low strength and dexterity limitations
- **Intellectual:** affects a person's judgement, ability to learn and communicate
- **Cognitive:** affects a person's thought processes, personality and memory, i.e. Alzheimer's disease, dementia, or injury to the brain
- **Psychiatric:** affects a person's emotions, thought processes and behaviour, i.e. Schizophrenia and depression. (Disability Services Commission, 1996)

These disabilities affect a person's ability to participate in daily activities that many of us take for granted. The severity of impairments differs. For example, a person who forgot their glasses and a person who is completely blind are both visually impaired. At times, the disabled are limited by more than one impairment. Providing services that are accessible to a person with any type of disability is important. Planning for people with disabilities can help other members of the community (Disability Services Commission, 1996). Examples include:

- caretakers of the elderly, who move slowly and are less steady on their feet
- people who have a temporary disability through disease or accident
- tourists or people from backgrounds with different cultures and languages
- small children

- people in an unfamiliar environment such as a building that's new to them
- people in a crowded atmosphere
- building occupants searching for egress during an emergency
- clients trying to access information or services

3.0 Facility Access

The purpose of the DDA is to ensure that all community services and activities are accessible to every member of the community. The manner in which a facility is physically constructed and organised directly affects how services are provided. Features that obstruct the easy access of services must be eliminated. These barriers can segregate and exclude the disabled, placing the disabled community at a disadvantage:

- **Architectural barrier:** any physical object that impedes the access of a disabled individual (examples include steps, narrow doorways, or objects that block a path such as clutter or furniture)
- **Communication barrier:** any barrier that limits the availability or interaction of information or directions necessary for navigating through a premise and accessing services (examples include fire alarms, signs, and receptionists) to a disabled person.

Unlawful discrimination does not have to be a blatant and purposeful attempt to exclude the disabled. Failure to modify facilities or to change outdated policies constitutes indirect discrimination. This form of discrimination is most relevant to older or existing facilities. Implementation of disability access is a fairly new concept, which makes the modification of services provided in older buildings more complicated. Those designing new construction have the luxury of starting from scratch, whereas modifying existing structures can be more challenging.

The Department of Human Services is a government department, which is required to comply with the highest prescription of the law. The Department must ensure that complete equality is provided to every public citizen. Providing equal access to public services is vital. All clients should access services in the same way.

Occasionally, facilities may be used for more specific purposes, which makes identifying the client population useful. Understanding the type of services and who uses the services provides insight into how to improve accessibility. For instance, a public service such as an information service or payment office needs to be fully accessible. It is unsatisfactory to provide parallel or special services to those that are disabled. For example, having to go to a special, designated area is less dignified than acquiring services in the same, independent manner as all other users. The optimal means is to provide the services in the same way for everyone.

An office building caters to a different user population, resulting in less specialised assistive technology for the disabled. However,

there may be employees at the facility that require special accommodations. The DDA forbids discrimination in areas of employment, as well as physical access, so it is also important to make sure the needs of all employees are met.

In this way, an overview of the services provided by the facility to its users is helpful for planning remedies. In addition, forecasting the possible future of a facility can eliminate wasted resources. A facility should be designed with some versatility, so it remains functional as the client population changes or grows.

It is beneficial for clients, staff, and architects to collaborate during the design process. Oftentimes, staff and clients know through experience whether a certain design is practical and helpful. Those designing facilitates are not at the receiving end of the process. The people who use or work in facilities can share invaluable knowledge. Careful planning and thinking saves resources and increases productivity.

It is important to consult with advocacy groups, as well as disabled individuals. The disabled population is directly affected by decisions that are made regarding facility design, which makes them attuned to flaws in design and to possible barriers in the facility. It is far less expensive to redesign a building or inadequate building modification during the planning stage. The Commonwealth Office of Disability states,

“It’s often not enough to just check whether a ramp is present. You will need to consider how steep it is; check that it is smooth, check that you don’t have to go up stairs to get to the ramp and that the door at the end of the ramp can be opened (Commonwealth Office of Disability, 1999).”

While access is the primary goal in designing for the disabled, preserving dignity is just as important. A building can be made accessible by adding a ramp to a side entrance, or worse, carrying a client up the stairs to a meeting room. These options are unsatisfactory because the disabled individual would not be afforded the same level of dignity as others. Many remedies to accessibility problems can be solved with a little creativity (such as moving a service that is offered on an inaccessible upper floor to the ground floor of a building), but providing dignity is the principal goal. In addition, all employees should treat disabled clients and co-workers with equal respect and dignity as non-disabled individuals are treated.

It is not necessarily expensive to provide access for the disabled. The planning process can minimise cost. For instance, when booking a venue for a meeting, make sure ahead of time that it is accessible. It would be much more difficult to change plans later if it is discovered that a disabled individual will be in attendance. In the United States, it is estimated that the average cost of accommodating a disabled individual is about \$160 Australian. Making modifications to the design process of new buildings is estimated to cost less than 1% of the total cost (Commonwealth Office of Disability, 1999).

Resources

The Commonwealth Disability Discrimination Act (1992) was enacted for the purpose of providing uniform regulations that protect all Australians against discrimination on the basis of a disability. Disability standards in relation to transport, education, accommodation, employment, and Commonwealth programs are provided under the Act (Disability Services Commission, 1996).

The Building Code of Australia (BCA) and Australian Standards 1428 Part 1 are the two documents that outline mandatory minimum provisions. The Australian Standard consists of four parts:

- *Part 1*: General requirements for Access - Buildings;
- *Part 2*: Enhanced and Additional Requirements - Buildings and Facilities;
- *Part 3*: Requirements for Children and Adolescents with Physical Disabilities; and
- *Part 4*: Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment.

Part 1 outlines minimum requirements for the general use of buildings and is referenced in the BCA. Part 1 should accommodate the needs of 80% of those in wheelchairs. When feasible, Part 2 should be followed in conjunction with Part 1 because it prescribes a higher level of access. Part 2 covers more everyday items and aims to accommodate 90% of those with disabilities. It contains more information about the needs of those with ambulatory and sensory impairments.

Abiding by the Australian Standard prescribes a high degree of compliance, but doesn't provide a defence against a complaint. The DDA is enforced when a complaint is filed against an organisation. A complaint can be filed to the HREOC when a person or group feels that a building or service is inaccessible. This results in an investigation and possible renovation to the service or building in question. The intent of the law should always be considered, as the

DDA is civil rights legislation and enforced as such. An attempt to make building codes consistent with law is being pursued by government. Until the reviews and changes are completed, the Australian Standard should be applied with an understanding of the DDA.

Fortunately, AS 1428 is somewhat complete. Problems associated with the gap between the DDA and building codes are rare and can be avoided with careful planning. Many times, consulting a person with a disability is appropriate. It is helpful to put yourself and others in the situation of persons with different disabilities and then test the facility. The Building Surveyor at the Local Government Authority can also be consulted.

To obtain the Australian Standard, contact:
Standards Australia
380 Lonsdale St.
Melbourne, VIC 3000
Ph: (03) 9281-711

4.0 Problems and Solutions

This section of the manual addresses certain problems frequently encountered by the disabled community. Within each section, the law, as interpreted by the project group, is explained. Following each problem, solutions and alternatives are proposed. These are the most useful solutions the project group could acquire or develop, but other acceptable solutions may exist.

4.1 Entrance Guideline Interpretation

Law: It is mandatory to have at least one accessible entrance. However, it is preferable to provide complete access at the front entrance and all entrances if possible. This ensures equal dignity for all, and also adds a level of safety.

Problem: Entrances can be difficult for the disabled to move through. They are high traffic areas that can involve changes in surfaces, and obstacles such as steps, revolving doors, or turnstiles.

Solution: Eliminate any steps, curbs, turnstiles, revolving doors and other barriers from all entrances. This may require installing ramps where steps or curbs are found, replacing doors, and other modifications.

Alternative: Remove the above barriers from at least one entrance, preferably the main entrance. (This is less preferred because entrances also act as exits in case of emergency.)

Problem: Door controls can be sources of problems for people with strength or dexterity limitations. Certain handles require less strength and coordination and thus provide better access to the user.

Solution: Install automatic door openers, with either motion sensor or push button style opening mechanisms.

Alternative: Remove knob-type door controls (which require tight grasping or twisting) and replace them with lever or latch-type openers. Note: All handles should be operable with one hand.

Problem: Door entrances may not be wide enough for people in wheelchairs to comfortably move through, or move through at all.

Solution: Widen the entrance to at least 900 mm, but larger widths provides more comfort.

Alternative: There are no alternatives. Any publicly accessible doorway must be at least 900 mm wide.

Problem: Door closers are unsatisfactory under certain circumstances. Door closers could shut the door prematurely on a disabled person. They can also make a door excessively heavy, which adds difficulty for those with strength limitations.

Solution: Remove closers or use lightweight closers with time delays or motion sensors to eliminate the risk of a door closing on a person.

Alternative: Keep the door open if the door open during hours of use, except in the case of fire doors, where doors should always remain closed.

Problem: Certain doorways provide easier access for those with different types of disabilities.

Solution: Doors that slide into wall spaces, or other non-swinging doors, should be installed. These doors do not eliminate any circulation space around the door, often are wider than swinging doors, and are especially useful when there are space limitations.

Alternative: Swinging doors can be installed, but only if there is enough clearance space on both sides of the door for a person to maneuver and the doors are not too heavy (appropriate circulation spaces are described in AS 1428.1). It should be noted that more circulation space is required if the door swings toward the user than if it swings away from the user.

4.2 Path of Travel Guideline Interpretation

Law: A path of travel is a route from the entrance of the property (or the parking area for the facility) to the entrance of the building. This path must be appropriate for travel by all people. The routes should be designed to accommodate people with any impairments. There must also be an accessible path to all public facilities (e.g. reception area, lifts, dining/cooking areas, toilets, meeting rooms, etc.) from the entrance of the building.

Problem: Items such as baby carriages, walking canes, and wheelchairs require more space when being maneuvered along a path. Narrow pathways with low clearance can cause difficulties, especially when traveling around corners.

Solution: The path should be at least 1200 mm wide, and should be at least 2000 mm high, and there should be no obstructions along the path (such as bushes or protrusions from the wall).

Alternative: The only alternative is to make the path larger in either dimension, or to embed the object (for example, a fire extinguisher in a cabinet) in the wall.

Problem: During travel along a pathway, one often encounters changes in elevations that can be difficult to traverse.

Solution: Ramps or lifts (whichever is most appropriate) should be installed wherever there is a change in elevation.

Problem: Ramps and inclines can be especially troublesome when the gradient (the change in height divided by the distance traveled) is too large. The slope can make a path inaccessible.

Solutions: All ramps and inclines should meet the requirements set forth by the Australian Standard 1428.2. These specifications contain acceptable slopes for those using wheelchairs, or with strength and mobility impairments.

Alternative: To change gradients, more space (in the length dimension) may be necessary (i.e. winding ramps instead of straight).

Problem: Transitions between changes in flooring material, inclines, or outdoor ground cover (i.e. bricks, sand, gravel, grass) can be challenging, and create an unstable surface for people to traverse.

Solution: Smooth transitions are necessary. There should be no large gaps between types of flooring, and changes in incline should not be abrupt. When changing between very different flooring materials (such as between carpet and tile flooring), a median material should smooth out the transition (such as a metal covering to smooth the edge where the carpet meets the tile floor). Certain floor materials can be easier to traverse than others (see problems in flooring guideline section, pg. 15)

Alternative: Flooring could be made of the same material throughout the path of travel. Tactile indicators or color strips warning change could occur at elevation change. Also, handrails can add extra safety to the path.

Problem: Pathways and ramps can be long and difficult for people to traverse - people with certain impairments may need to rest.

Solution: Landings should be installed at regular intervals along the pathway, according to the recommendations found in AS 1428.2

Problem: The slope of the walkway (both in the direction of travel and perpendicular to the direction of travel) can be too steep, and may cause a wheelchair to tip over.

Solution: Eliminate any slope along the path that is perpendicular to the path of travel. Verify that slope in the path of travel is in accordance with AS 1428.2.

Problem: People with visual impairments may have difficulty seeing changes in slope or elevation.

Solution: Tactile ground indicators should be installed, and contrasting color markers should be placed at changes of elevation.

Alternative: Tactile markers along a wall or handrail could be used to indicate changes in elevation. Color contrast at elevation changes is relatively inexpensive and should be used.

Problem: Dangers are hidden pathways that are used at night without proper lighting.

Solution: Provide adequate lighting along a path that is used at night, and remove from the path any obstructions that may be hidden at night.

Additional Accommodations

- audio recordings can be played repeatedly along a pathway to give direction
- use of signs with raised lettering or Braille
- station guides along the path to direct or help people
- tactile ground markings in the direction of travel or markings warning of potential danger
- tactile maps of the facility and surrounding pathways (maps using different textures for distinguishing various parts of a facility)

4.3 Flooring Guideline Interpretation

Law: Safe flooring surface is important for a pathway to be accessible. The surface should be slip-resistant and able to be traversed by a wheelchair.

Problem: On rainy days flooring can become wet, and can be slippery.

Solution: Install slip-resistant flooring. The preferred surfaces for wet conditions are concrete with abrasive or textured finish, concrete with exposed or aggregate finish, bituminous concrete, natural stone with rough finish, paving bricks with special abrasive finish, slip-resistant tiles.

Alternative: Install water absorbing mats at all entrances, and use caution signs to warn of slippery surfaces.

Problem: Some surfaces can be difficult to maneuver in a wheelchair, because they are slippery, have deep groves, or because (in the case of carpet) the pile is too high.

Solution: Remove all inappropriate surfaces, and install slip-resistant flooring or low-pile carpet. All material listed as appropriate for wet surfaces can be used for dry surfaces.

4.4 Handrail and Grabrail Guideline Interpretation

Law: Handrails should exist continuously along paths for safety. These handrails should be able to support a person's body weight at all points of the handrail.

Problem: People with mobility impairments often need extra support for strength and balance when in continuous motion.

Solution: Install continuous handrails along all pathways.

Problem: Mobility and strength impairments can make it difficult to raise and lower oneself when using a toilet.

Solution: Install grabrails in the toilet area, in positions usable by disabled individuals (See AS 1428.1). Additional railings may be placed in the toilet area, and can be useful, providing that they do not inhibit the use of a toilet.

Problem: Handrails and grabrails may be difficult to grasp and keep hold of if a person suffers from strength and dexterity impairments.

Solution: Install appropriately shaped handrails and grabrails. It is important that the handrails and grabrails be of a shape and size that is easy for a person to grab onto and keep hold. AS 1428.1 recommends handrails with a circular cross-section, with a diameter of 30-50 mm and grabrails of a circular cross-section with a diameter of 30-40 mm.

Alternative: A handrail that has sections of this diameter, or has at least 270° in its uppermost surface and still maintains this diameter can be installed. All grabrails should meet the above recommendations.

Problem: Various people, including children use the path. The handrail may be too high to be useful in some circumstances.

Solution: The handrail should have a lower and upper rail, if it is anticipated that shorter people or children will be using the facility. The height of the upper rail should be between 865-1000 mm above the floor, and the lower rail should be between 665-700 mm above the floor.

Problem: The handrail is not continuous along the path, there are breaks in the railing.

Solution: Install continuous railings along all pathways.

Alternative: Placing a tactile marker (a raised dome) before a break in the railing to warn of the ending of the railing or installing an underfoot tactile warning can aid the visually impaired.

Additional Accommodations

- There should be no exposed edges on the rail that could injure a person.
- The rails should be a constant height from ground to rail.
- If there is a rail on either side of the path, at least 1000 mm should exist between the two handrails.
- A person should be able to fit his or her hand between the rail and the wall with no obstruction.

4.5 Stairway Guideline Interpretation

Law: Although stairways are a barrier to those in wheelchairs, those with other mobility impairments can safely use stairways if they are properly constructed. There should always be an alternative route to the staircase if there are services or facilities that are available on another level of the building.

Problem: Staircases can be steep and narrow, which makes users more prone to losing their footing or falling.

Solution: All staircases should have handrails as described in the previous section.

Problem: People with sight impairments may have trouble differentiating between steps.

Solution: Strips of contrasting color applied to the step can help the visually impaired differentiate between steps.

Problem: Although a disabled person may be able to use the stairs, they may not have the strength to travel long distances on the staircase without resting.

Solution: The number of steps between two destinations (such as two floors) can impede the disabled. It is recommended that there be a landing every ten steps to allow people to rest.

Additional Accommodation

- Stairs should not have openings under each step
- Stairs should not protrude at the ends of the stairwell
- Stairs should not spiral.
- Stair surfaces should be constructed of non-slip materials.

4.6 Parking Guideline Interpretation

Law: There should be an accessible route from the entrance of the property to the entrance of the facility. Also, there should be a continuous accessible path of travel from the nearest public transportation area to the facility. When parking is available, accessible parking spaces should be provided.

Problem: Disabled persons may have difficulty traveling from the parking or public transport area to the facility entrance.

Solution: An accessible route should exist from these areas to the entrance. Appropriate signs should be posted to indicate the location of these paths. Parking designed for disabled individuals should be located near the entrance of the facility, and should be designated with the appropriate signs.

Problem: The facility does not have accessible parking spaces, but does offer public parking areas.

Solution: At least one parking space should be made accessible, but in cases where the facility has a large parking area, several spaces should be made accessible. See AS 2890 for additional parking information.

Problem: Disabled persons using wheelchairs may have special vehicles that hold the wheelchair on the roof or that contain a wheelchair lift that is accessed either on the side or rear of the vehicle.

Solution: Parking bays should be extra wide to accommodate for these lifts, and to allow adequate circulation space around the vehicle to maneuver a wheelchair. If the bay is enclosed (such as in a garage) the ceiling should be high enough to accommodate tall vans and vehicles carrying wheelchairs on the roof. See Australian Standard 2890.1 for more information on car parking facilities.

4.7 Auditorium Guideline Interpretation

Law: In areas of public seating, (such as lobbies, auditoriums, and waiting rooms) it is important to provide accessible seating areas. The facility should provide an accommodation for hearing impaired individuals if an audio presentation may occur. Any areas that accommodate disabled individuals should be clearly marked with the appropriate universal signs.

Problem: Auditoriums offer shows that may be of interest to disabled people, but wheelchair confinement restricts the availability of preferable seat locations.

Solution: There must be seating for people in wheelchairs that provides a view comparable to other seats. A variety of options should be available. One option for making this accommodation is to provide sections of seating throughout the auditorium that can be removed to accommodate a wheelchair. This way, the seats can remain if there are no wheelchair users in attendance.

Alternative: Designate certain areas for wheelchair users, and permanently remove seats from those areas. The areas should have a variety of comparable views.

Problem: Those with hearing impairments may have difficulty hearing a presentation because of a hearing loss or inadequate hearing aid.

Solution: To accommodate those with hearing impairments, an audio loop must cover at least 10% of the seating. An audio loop is a transmitter that uses radio signals or infrared technology to amplify the sounds being produced by the feature presentation in the auditorium. Radio signals are transmitted to the hearing aid and are amplified for the listener. Infrared technology requires an additional transmitter (provided by the facility) that will relay the signals to a hearing aid for the listener. The presence of this technology should be indicated clearly by signs.

Alternative: An interpreter can translate the message in sign language, or the presentation can be captioned on a monitor for view by the hearing impaired individual.

Additional Accommodations

- A television or movie should use captions to aid the hearing impaired.

4.8 Waiting Room Guideline Interpretation

Problem: In waiting areas, the arrangement of furniture can make moving about the area difficult for those in wheelchairs, or those using walking aids such as crutches or canes.

Solution: Furniture should be arranged with large spaces between pieces, and should have areas where a person in a wheelchair can rest without having to move out of a path of travel. All clutter should be removed from the area.

Problem: People with mobility or strength impairments may experience difficulty using certain types of furniture.

Solution: Certain types of furniture may be easier for people with mobility impairments to use. The movement from the sitting position to the standing position can be difficult. For example, low, soft couches are harder to get out of than higher, more firm couches. Firm furniture that is slightly higher off the ground should be helpful.

Alternative: A variety of furniture that includes different heights and firmness can be used.

Additional Accommodations

- A television or movie should use captions to aid the hearing impaired.
- Forms of entertainment that are useable by people with various impairments should be available.

4.9 Sign Guideline Interpretation

Law: Signs are important for navigating safely and easily through a facility. They direct the general public and those with various impairments to general destinations and also accessible facilities. Signs should be present to direct people to car parks, entrances, exits, toilets, and drop-off and pick-up areas. Any other location that needs to be used should be marked as well. In addition, facilities that are accessible to the disabled should be identified with the use of international symbols. The location of these facilities should be indicated using the appropriate symbols and arrows. A directory should be placed at the entrance of the building to instruct the location of facilities. There should be enough signage within a building to allow a person to move about independently. Signs should be frequent and clear, as everyone can be confused by unclear signs, not just the disabled.

Problem: People with limited vision may still be able to use signs, but cannot read them because of the format used.

Solution: All signs should use lettering that is clear and large enough to read easily. Adding texture to the signs to create more contrast between lettering and background is helpful. An attempt to use non-reflective colors for signs should be made. The

background and lettering should be of contrasting colors. Lighting should be adequate for reading signs both during the day and at night, if applicable.

Problem: Signs may be read by people both sitting and standing, and should be visible to those whose range of vision is lower.

Solutions: Install signs at a height readable by people in both sitting and standing positions, between 1200 mm and 1600 mm above ground level.

Problem: People with severe vision impairment or complete blindness may need information provided by signs, but may not be able to use conventional signs.

Solution: The signs should be constructed using raised lettering and Braille, and directories at the entrance should have raised lettering and Braille.

Alternative: In addition to the installation of signs, tactile floor maps (maps that use texture to describe various areas of the facility) or audio directions should be made available to visually impaired individuals. These should be available at the entrance or as near to it as possible.

4.10 Sanitary Facility Guideline Interpretation

Law: The availability and accessibility of sanitary facilities is necessary in any public building. All facilities should provide accessible toilets and washbasins for the disabled. At least one emergency call button must be positioned inside the toilet area. This should be within reach of all equipment (washbasins and toilets) but more than one is recommended. It should be connected to reception, security, or a place occupied by somebody who can provide help.

Problem: Disabled persons require larger circulation spaces around toilets, and grabrails for raising and lowering themselves from the toilets.

Solution: At least one toilet per bathroom should be accessible, and at least 5% of all sanitary facilities in a building should be accessible. There must be enough circulation space both inside and outside the stall for a person to move around with ease (See Australian Standard 1428). The Australian Standard 1428.1 and 1428.2 use diagrams that are helpful in showing the dimensions of the toilet and the location of different structures inside the washroom, such as the sink or toilet paper dispensers.

Alternative: Another option is to have a separate facility (not far away from the other facility) designated specifically for those with disabilities, following the Australian Standard guidelines for accessible toilets.

Problem: Doors that open inward can eliminate important circulation space.

Solution: Doors should open outward to conserve space within the stall.

Alternative: If doors open inward, there should be enough clearance space inside the stall, excluding the area where the door swings.

Problem: Sinks may be inaccessible due to inadequate space underneath the basin, and can pose burn hazards.

Solution: Preferably, all sinks should be accessible to the disabled. If this isn't feasible, at least one washbasin in each toilet area must be accessible. There should be enough space under the washbasin for a person in wheelchair to approach the sink and reach the faucet. The pipes should also be insulated to prevent burns. AS 1428.1 describes the required spaces underneath the sink. The dimensions for the washbasin are diagrammed in AS 1428.

Problem: People with limited dexterity may not be able use faucet or flush controls.

Solution: The controls should be easy to operate by a person with limited finger dexterity. A single lever style control is optimal for faucet controls. Another option is to have long levers for the hot and cold water controls. The water should mix into one faucet and the control for the hot water must be on the left. The toilet control would be best if it was a large push button style, or a lever that could be pushed easily.

Problem: People in wheelchairs may require lower mirrors because they are seated rather than standing.

Solution: Mirrors should be useable by somebody that is either standing or seated. The simplest way to do this is to install a larger mirror.

Alternative: Install a mirror that is tilted downward, or a second lower mirror.

Problem: Showers may not have adequate circulation space for those in wheelchairs to move around.

Solution: There is a minimum size dictated by the Australian standard for an accessible shower that should be employed. This standard is the minimum size requirement, but a larger shower space would be helpful to those maneuvering with a wheelchair, or to those with other ambulant disabilities. AS 1428 dictates the dimensions of an accessible shower.

Problem: Showers and baths can have slippery floors which increases the risk for dangerous falls.

Solution: Showers and baths should have grabrails that are in accordance with previously stated standards. The floor should be slip proof, and textured shower mats or other stick-on anti-slip devices (available at any bedroom and bathroom supply store for just a few dollars) can be added to floors to improve traction.

Additional Accommodations

- Install a fold-down seat in the shower stall, or place a seat that will not slip in the stall.
- The shower should have a removable head, for convenience to those that may have to sit in the shower.
- Faucet controls should be useable by those with limited strength and dexterity.
- There should be enough circulation space around the bath and shower area.

4.11 Emergency System Guideline Interpretation

Law: All buildings must have an alarm that signals emergencies both in an audio and visual manner.

Problem: Safely avoiding danger during emergency situations is challenging for the disabled.

Solution: Special care should be taken to design a building that accounts for the safety of disabled individuals that may be using it. Alarms should be both audio and visual in nature, and appropriate universal signs should clearly mark all exits, and signs should direct the disabled to accessible exits. Egress routes that are accessible should be well marked, and many routes of egress should be available.

Problem: Most methods for exiting a building during an emergency often require the use of stairs, which is impossible for many disabled people.

Solution: Lifts are usually used by the disabled to overcome the obstacles posed by stairs. They are not always available during an emergency, so alternatives must be examined.

Alternative: One possible solution is the use of emergency evacuation refuges. These areas should be smoke and fire proof in buildings without sprinklers, and smoke proof in buildings with sprinklers. There are certain dimension requirements depending on the building size, and number of people that use it. The smoke

barriers must also have a 1-hour fire resistance rating (Fire Australia Conference Paper, April 31, 1999).

Alternative : Where applicable and sensible, a “buddy system” can be worked out in which designated staff members help disabled persons evacuate a building.

Problem: Not all entrances are accessible, limiting a disabled person’s opportunity to evacuate a building.

Solution: As discussed earlier, all entrances should be accessible. All entrances can act as emergency exits during emergencies. Having as many accessible entrances as possible increases safety. Accessible exits and entrances should be clearly marked in all circumstances.

Problem: People may have disabilities that limit their ability to recognize an alarm that is being used.

Solution: Alarm systems must have both audio and visual warnings, and should be within the specifications set in AS 1428.2. All auxiliary alarm systems should be integrated with the building’s main alarm system, so that those alarms will be set off when there is an emergency in any part of the building. Note: When a visual alarm is used in areas where people may be sleeping, the light change should be adequate to wake a person.

Problem: Not all people may be able to safely evacuate a building immediately.

Solution: Sprinkler systems are not required in all buildings, but are highly recommended. There are fewer deaths and injuries and less damage to property when a sprinkler system is installed in a building. When the response time of the fire brigade is low, or when the egress time of a building population is high, sprinkler systems can be crucial to saving lives.

4.12 Telephone Guideline Interpretation

Law: When public telephones are available, they should be made accessible to all individuals.

Problem: Accommodations should be made to phones to make them accessible to hearing impaired individuals.

Solution: If phones are offered for public use, a facility must have a phone with Teletype capabilities for hearing impaired individuals. Phones that do not have Telephone typewriter capabilities must be offered with a volume control on the phone, and a built in coupler for those with hearing aids. This coupler amplifies the sound from the receiver through the hearing aid. There should be appropriate signs indicating accessible phones.

Problem: People using wheelchairs may not be able to reach all parts of the phone.

Solution: There should be an accessible path of travel to the phone, and enough circulation space in front of the payphone so it can be used by individuals who may be using wheelchairs, walkers, or by those who require more space for movement (AS 1428.2). The heights of the usable parts of the phone (receiver, keypad, volume control, money-slot) should be at a height where they are accessible from a seated or standing position.

Problem: People with vision impairments may not be able to use certain types of dialing mechanisms.

Solution: The dialing mechanism should be a push button type, and have large print numbers. Raised numbers and Braille should be used to mark the buttons.

Additional Accommodations

- The area should be well lit.
- The directory should be located in a convenient area, so that all users can reach it.
- Phone cords should be long enough to reach individuals in seating and standing positions.

4.13 Lifts

Law: Lifts should be made available when a change in elevation that cannot be accommodated by a reasonable ramp exists.

Problem: People using lifts may not be able to see signs that give the location of the lift or numbers written on buttons.

Solution: Various types of signs should indicate the location of the lifts. Also, lift control panels should have raised lettering and Braille, and a panel in the threshold of each floor stop should indicate the floor number in raised lettering or Braille. Detailed lift requirements are available in AS 1735.12.

5.0 Communication

Communication is a key concept when making facilities or services accessible to all people. It is important that information about a facility, such as the location of exits or disabled toilets, is communicated clearly. In addition, adjustments to services should be made so that the disabled are able to communicate their needs. There are many ways to make communication easier for all clients and employees, which are explored in this section of the manual.

5.1 Employee training

All employees should be aware of the agency's anti-discrimination policy, and should be prepared to follow and enforce it. In addition, it is important that employees are able to recognize when discrimination is taking place.

- Employees should have training to develop an understanding of the disabilities people may experience, and to have the tools to help a person with such disabilities.
- Awareness of DDA regulations is important. It should be realized that discrimination based on a disability is unlawful and violation of these laws makes a person subject to legal complaints.
- To make a person aware of the law is not enough. Employees need to be educated well enough to be able to spot discriminatory practices and remedy problems.

5.2 Hearing Impairment

In situations where clients that have a hearing impairment require services, there are a number of solutions.

- Train employees in communication skills with hearing impaired individuals.
- At least one employee should be trained to understand and use sign language.

Hearing impairment does not necessarily mean a person is completely deaf, and simple solutions can often be helpful.

- Employees should:
- Speak clearly, and at a comfortably loud level.
- Be attentive to individuals when they are speaking.
- Face the person to whom you are speaking.
- Avoiding eating while talking.
- Avoiding obstructing the view of your mouth (hearing impaired individuals can often read lips).

5.3 Vision Impairment

People with vision impairments are not able to identify some visual cues that other individuals can. Thus, it is important for the vision-impaired person to navigate through both familiar and unfamiliar areas to find the services and facilities they are seeking. Things to remember include:

- Most people with visual impairment are not completely blind. Some individuals can see, but not clearly enough to perform certain tasks.
- Visually impaired people often have been "travel trained" to navigate through their surroundings while living life independently.
- Visually impaired persons can be identified if they are using canes, guide dogs, or corrective glasses.
- People should offer assistance in locating services or facilities and relaying information that is found on signs, and should be helpful but not overbearing.
- The proper physical design of a facility reduces the need for the disabled to search for help.

5.4 Mobility Impairment

Mobility impairments are broad in range, so a variety of circumstances may arise where a person needs special considerations due to their impairment.

- The use of a wheelchair, cane, or crutches may require a person to make use of a lift or accessible toilet.
- A person may have medical conditions that inhibit their control or strength of movement.
- Facilities should be designed so that movement is safe and easy, and signs clearly indicate the layout of the facility.
- Staff should be ready and able to help by directing the disabled to appropriate facilities or assistive technologies that meet their needs.

5.5 Information Delivery

- It is important to offer information in a variety of formats. Certain forms of communication are inappropriate for clientele with impairments.
- All permanent communication, such as signs and oral communication should be made available to people in the most convenient and understandable way.
- Limited human and financial resources may make it impossible to have employees devoted to relaying information to individuals

who are physically unable to use the available resource, so making information available in as many forms as possible, as well as limiting the need for human intervention, is important.

- The disabled, as well as the general public, prefer independence. Varied and complete methods of communicating information provide a higher level of independence.

There are a variety of technologies, simple and complex, that are available to deliver information to the user.

- Brochures and pamphlets that are usually offered to the public can be printed in large print for the elderly and people with milder forms of vision impairment.
- These same brochures can also be made available in Braille for those with complete vision impairment.
- Materials can be made available on an audiotape or compact disc. These practices are often carried out in libraries, where a wide variety of books, periodicals, and other materials are available on an audio system.
- In circumstances where signs are an integral part of a facility, headsets that contain information for navigating through an area should be made available at the entrance.

To accommodate hearing-impaired individuals, there are several options for communication of information.

- All information that is relayed verbally should also be made available in a written form.
- The international symbol for hearing impaired should be used to designate facilities that are designed especially for hearing impaired individuals, such as Teletype phones, or phones that have hearing aid couplers.
- Information that is being relayed through a video should also be captioned, so that the hearing impaired individual can acquire the information.
- Telephone typewriters should be made available in places where public phones are available.

6.0 Renovation of Facilities

When renovating a facility, it is important to develop a plan of action. There are necessary steps in renovating a building, and certain items within the building have a priority for renovation. The following sections will set up a timeline and description of what steps need to be taken, the order in which they should be taken, and the priorities assigned to certain developments.

There are certain guidelines for organising a project within the Department of Human Services, and this procedure must be followed. The CMB guidelines define the appropriate steps to be taken to initiate any project, including the auditing and renovation of buildings. Once the problem is identified, a service and business plan should be developed. The service plan defines the service needs for the proposed project, and the business plan identifies the best method for providing those services. At this point, the following steps should be taken.

6.1 Organizing a Responsible Committee

A coordinator or committee that will be responsible for the implementation of the renovation plan should be appointed. This body will be responsible for:

- overseeing the renovation process;
- planning the determination of the access issues of the building;
- coordinating resources to be used in the renovation;
- determining the actions to be taken;
- developing a service plan; and
- notifying employees and public of the plan.

Each of the responsibilities of this committee will be discussed below.

6.2 Developing an Action Plan

The first step in organising an access project plan is to determine all the services provided to the public by the organisation. All services, whether on site or contracted out, must be made accessible. Including them in an action plan will help determine the actions that need to be taken in order to ensure that a facility and its services are continuously available to the public. Listing the services and ranking them in order of public involvement will be helpful in determining the priority with which certain facilities should be renovated.

The next step in developing an action plan is to organise a list of all the resources available within the organisation, whether it is financial or staff. Any groups that have a relationship with the agency should be

in this list. This includes architects, groups or individuals with specialised knowledge of disability access or services, and engineering and construction firms that may be used regularly by the agency.

6.3 Assessing the Facility

The committee should organise a plan for assessing the building, using the auditing process developed in conjunction with this plan. The committee can perform the audit themselves, assign program managers or building managers to the audit, or assign an independent person or group to the project. The audit can be performed on the whole facility, or on specific programs or services within the facility. In certain facilities (such as residential facilities) there may be certain details that are not included in the audit that may be necessary to make a building accessible.

The assessment of the facility should be carried out next. The audit should be used, and all relevant aspects of the facility should be examined in reference to the audit. The audit evaluation scores each aspect of the building individually. The audit score should be calculated, and from this score, the committee should be able to determine what areas are in most need of renovation. In addition to auditing the physical state of the building, one should verify that the services provided by the facility are accessible. Occasionally, an unknowledgeable employee can have an attitude that discriminates against disabled people. By verifying that employees are aware of the policies of the organisation and the policies of the DDA, and confirming that the employee know how to treat and help the disabled clients of the facility, one can confirm the accessibility of services.

Next, one should summarise the access issues found while auditing the facility. To do this, the audit should be performed on every section of the facility, and the results compiled. When summarizing the issues found, one should list them in order of priority according to use by public. In the following section is a list of suggested priorities, which may vary depending on the services offered by the facility. The committee should use common sense when deciding what to modify first, and use the most reasonable accommodation.

6.4 Timeline of Renovations

There are no renovations that should not be performed, given that they provide improved access for disabled individuals. This section

will describe actions that should be taken sooner rather than later, but this does not mean that any one provision can be overlooked.

Costs and time and space limitations can make renovations difficult, but a sincere effort must be put forth by the organization to perform audits and complete all renovations in a timely manner. Timelines for a \$3m to \$5m renovation of a facility that is funded by Human Services is as follows:

- Proposal: 4-6 months
- Approval: 0-2 months
- Planning and Evaluation Phase: 6 months
- Documentation Phase: 6 months
- Approval (of new works): 4-5 months
- Implementation Phase:
- Tender/Award: 4 months
- Construction: 9-15 months
- Commission: 0-2 months

6.5 Top Priorities

The most important feature in making a building accessible is creating a path from the property entrance or car park to the doorway that is accessible to all people. From there, the doorways should be made accessible. Doorways to enter the building act as emergency exits, so as many of the entrances should be made accessible as possible. The reasoning for the entrance being a first priority is that if a disabled person cannot access the building, they cannot use the services offered, so it is wise to make the entry to the building accessible. All emergency alarms should also be made accessible, by using both audio and visual warning systems.

Once the building entrance is accessible, one should verify that all the services provided to the public are accessible. If a service is not accessible amendments should be made, either to the service or the location where the service is offered, to make the services available to all people.

Other important aspects are:

- Making accessible toilets and sanitary facilities.
- Door controls that are useable.
- Faucet and toilet controls that are useable.
- All levels of the building are made accessible for all people (either by installing lifts or ramps).
- Grabrails and handrails that are appropriately sized and located.
- Making car park facilities accessible.

6.6 Other Priorities

Other priorities that must be considered are:

- slip-resistant flooring
- accessible phones (if applicable) including Teletype phones
- signs directing people to accessible facilities
- signs made with raised lettering, Braille, and contrasting colors
- tactile floor maps
- tactile ground markers
- use of low-pile carpet in areas where carpet is used
- accessible water fountains
- color markers signifying changes in elevation

6.7 After the Audit

Once the audit has been completed, and the results are organized, a report should be prepared and presented to management. At this point, management should review the recommendations, and approve actions as appropriate. Management should also make recommendations about available funds and resources, possible barriers to the plan, strategy timelines, and appoint a person responsible for the renovation process. Amendments should be made to the original report according to recommendations by management.

Once the final report about the state of the facility has been made, and recommendations have been approved, the process of hiring engineers, construction companies, and architects can begin, and the renovation process can be carried out.

At this time, staff members, interested individuals and other organizations should be informed of the changes that will be made, and a copy of the report should be made available.

In summary, an organization should use the audit to determine the amount of renovation they will need, and develop a detailed plan (including timeline) of how the facility will be renovated. The plan should be carried out in the fastest manner possible, with priority on the most necessary improvements, but all renovations should be performed.

Glossary

Audio Loop - A long cable and amplifier that transmits sound from a public address system directly into hearing aids of people who are positioned inside the cable loop.

Braille - The translation of text into raised dots on a page for people with a vision disorder.

Captions - Captions show the soundtrack of a TV or video program as text on the screen.

Circulation Space - The unobstructed space required for a person in a wheel chair to move around freely.

Continuous Accessible Path of Travel - an uninterrupted path of travel to or within a building, providing access to all activities. Obstructions include steps, turnstiles, revolving doors, escalators, and other impediments.

Grabrail - A rail used to aid a person become stabilised or steadied.

Handrail - A rail used in areas such as corridors, ramps, and stairways, which helps steady an individual in continuous movement.

International Symbol of Access - An internationally recognised symbol consisting of a figure in a wheelchair on a plain background. The colour of the figure is either blue on white or white on blue.

Landings - a flat surface with a gradient not steeper than 1 in 40. They are usually positioned at the top and bottom of ramps and along the ramp as rest stops.

Non-Reflective Surface - Any surface that doesn't produce glare or reflect light. Materials that are reflective include chrome, glass, mirrors, metallic finishes and any highly polished surface.

Ramp - an inclined path with a gradient steeper than 1 in 20 but not steeper than 1 in 14.

Slip-Resistant - Any surface that provides traction in both wet and dry conditions for both a wheelchair and a person walking.

Stair Nosing - The front edge of the step along the full length.

Stair Riser - The vertical part of the stairs.

Stair Tread - The part of the step that is walked on.

Tactile Ground Indicator - A tile with raised projections to indicate either danger, a change in level, or to act as a directional guide to people with a visual impairment.

Telephone Typewriter (TTY) - Essentially a keyboard that plugs into a standard phone outlet to enable people who are deaf to send or receive messages over phone lines.

Turning Circle - The minimum area required for a standard wheelchair to do a full turn (360 degrees). The minimum area required is a 1500 mm diameter circle.

Walkway - Any path with a gradient not steeper than 1 in 20.

14.0 Appendix G - Test of the Auditing Checklist at Rosebud Rehabilitation Center

Testing the auditing process that was developed is essential in determining if it is actually a useful item for the Department. In order to determine its usefulness and to determine how user friendly it is, the project group brought the audit checklist to Rosebud Rehabilitation Center, and performed the audit. Nurse manager Jan Olver also performed the audit and provided feedback on the ease of use and usability of the audit.

The facility had a client population that consisted of mostly aged patients who had experienced recent knee or hip replacement surgeries, cerebrovascular accidents (i.e. stroke), as well as other incidents that require rehabilitation. The patient population is evenly divided between patients who suffer neurological injuries and patients who suffer orthopedic injuries. Approximately 30 patients are cared for at this facility, and the average stay of a patient is 28 days.

The facility is approximately 8 years old, and will be undergoing renovations next year. When the facility was designed, the staff and managers had frequent contact with the designers. The concerns of the staff were heard, and often they were met. As was learned in earlier interviews, this frequent interaction produced an excellent facility that met the needs of clients and staff.

In addition to benefiting the staff and clients, the facility is an excellent example in disability access. There appears to be no mobility barriers in the facility. The largest problem in the facility had to do with accommodations for hearing and vision impaired individuals. There is room for improvement in these areas. Installing tactile markings (either on the floor or wall) would benefit the facility. Also, the facility had no parking bays designated for disabled individuals. Ms Olver indicated that when the facility is renovated next year, parking would be provided. Although public phones were available, no phones with volume control, hearing aid couplers, or TTY capabilities were available. The handrails were good because they were located continuously along all paths of travel, but some indoors did not have an unobstructed space

between the wall and the rail. These were the most obvious problems with the facilities, but the overall accessibility was excellent.

The emergency plans for the facility were also in good condition. There were visual and audio alarms. The fire brigade had a quick response time, and there were several accessible exits per wing of the facility. In addition, there were smoke detectors and sprinklers in every room, which provides extra safety for the clients.

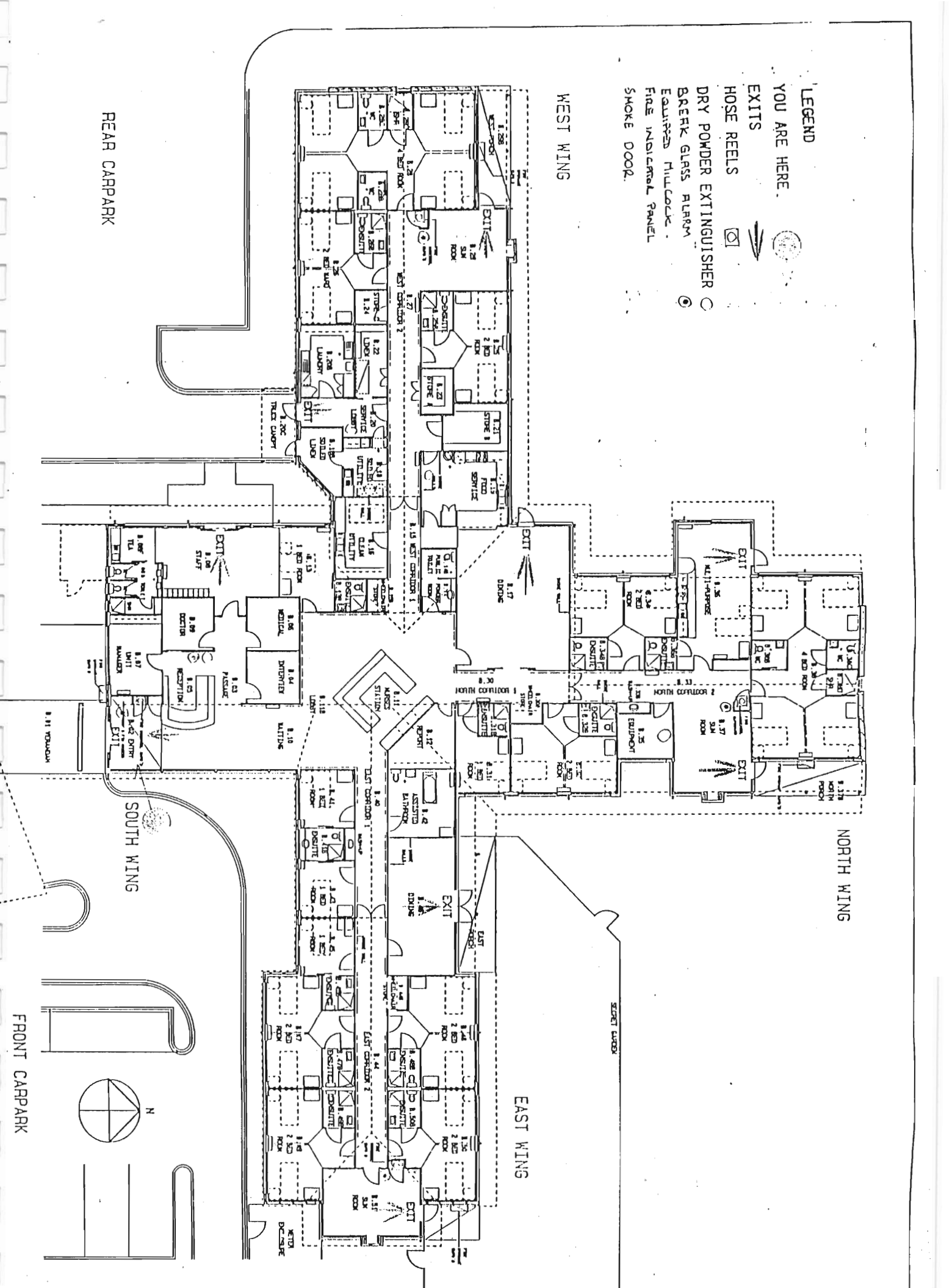
Attached to this appendix are the results of the audit performed by Ms Olver. A member of the project team performed the evaluation of the audit, but Ms Olver answered all the questions within the audit.

SMOKE DOOR.

EAST WING

SOUTH WING

FRONT CARPARK



I. Facility Information

Name of facility:

ROSEBUD REHABILITATION
288 EASTBOURNE RD.
ROSEBUD 3939
PHONE (059) 811 2166

Date audit was performed:

21.4.99

Who uses this facility?

Aged / Disabled residents on
Mornington Peninsula

What services does this facility offer?

Medical, nursing, occupational therapy, physiotherapy, dietetics, speech pathology, social work, Audiology, diabetic education, domiciliary, Are there any special features to this facility that may require accommodations for a certain disability? Drawing Assessment inpatient rehab.

To accommodate the above requirements.

How old is this facility?

8 years

When was the last renovation? — to be redeveloped & extended next year.

Comments on the Facility:

The facility was designed for the aged/disabled, it therefore complies with the guidelines

Goodluck — hope you enjoyed your visit and had a safe drive back.

Enjoy the rest of your stay

Best wishes,

Jan

III. Building Entrances

Do signs directing the disabled to accessible entrances exist?

☒ ☐

Are there turnstiles, steps, or revolving doors for the entrance?

☐ ☒

If there is a revolving door or turnstile, is an alternative hinged or sliding door provided?

☐ ☐ N/A

Comments on Building Entrances:

Easy access — no gutter —
no edges. Slight incline on
ramp approaching front doors,
but very slight.

Easy accessible parking area
for cars — drop off area
covered for shelter from the
weather.

III.a. Doorways

Is the doorway wide enough for a wheelchair to fit through it (at least 1200 mm)?

Yes No

☒ ☐

If swinging doors exist, is there enough space on either side of the entrance for manoeuvring objects as large as a wheelchair (AS 1428.1 - Clause 7.3.1, Figure 12)?

☐ N/A ☐

For sliding doors, is the circulation space inside the door large enough to fit a wheelchair through (AS 1428.1 - Clause 7.3.1, Figure 13)?

☒ ☐

III.b. Door Control

Can door handles be unlocked and opened with one hand?

Yes No

☒ ☐

Do the doors have an easy to grip handle?

☒ ☐

Is the door easy to open for a person with strength impairment?

☒ ☐

Are the door handles of non-reflective material and have a contrasting color to the background?

☒ ☐

If the door is glass and the walls around the door are also glass, is it clearly marked for ease of identification?

☒ ☐

Is the threshold of the door level (AS 1428.1 - Clause 5.6, Figure 5)?

☐ ☐

Comments on Entrances and Doorways:

Doors designed as required
by building regulations
for health institutions.

IV. Inside the General Building

Is there direct access to the reception area or is there suitable signage providing clear directions for people with a variety of impairments?

☒ ☐

At any area where there is a counter or table, is one provided that is wheel chair accessible (i.e. has lowered top, leg clearance underneath)?

☒ ☐

Are staff members available at entrance areas to assist with providing information?

☒ ☐

Is seating provided in the entrance area?

☒ ☐

Are all pathways well lit and even?

☒ ☐

IV.a. Walkways, Ramps, and Landings

Is the height of the path at least 2 m?

Yes No

☒ ☐

Is the horizontal width of the path at least 1 m?

☒ ☐

If an incline exists, is it gradual enough to climb in a wheelchair (AS 1428 recommends 1:14 as the steepest)?

☒ ☐

Is there a color contrast and a tactile ground indicator where there is an elevation or incline change (such as at the beginning and end of ramps)?

☐ N/A ☐

Is there a color contrast between the edge of the pathway and the ground surface?

☐ ☒

Are handrails provided along the path continuously?

☒ ☐

Are there enough landings and are the landings 1200 mm long (See good Ideas Manual)?

☐ N/A ☐

Is seating provided along paths?

☒ ☐

Are there accessible pathways leading from the entrance of the property (and parking area if applicable) to the entrance of the building?

☒ ☐

Does the accessible pathway avoid vehicle traffic areas?

☒ ☐

Is there a path of travel that is accessible to all facilities, including:

➤ Reception area

☒ ☐

➤ Lifts

☐ N/A ☐

➤ Dining/Cooking areas

☒ ☐

➤ Laundry facilities

☐ N/A ☐

➤ Sleeping areas

☒ ☐

➤ Bathing/Toilet areas

☒ ☐

➤ Any other relevant areas:

If a path is used at night, is there proper lighting?

☒ ☐

Are all landings and rest areas level, having no incline (AS 1428.1 - Clause 5.6, Figure 5)?

☒ ☐

Are there underfoot tactile indicators or other equipment to aid the visually impaired?

☒ ☐

IV.b. Surfaces on any Path of Travel

Is the flooring slip-resistant?

Yes ☒ No ☐

Is the flooring slip-resistant when wet?

☒ ☐

Is the use of surfaces such as high carpet or tiles with deep grooves in between (that could impede a wheelchair) avoided?

☐ ☒

If carpeting is used, is it anti-static to prevent the build-up of static electricity?

☒ ☐

Comments on surfaces:

V. Handrails and Grabrails

Are the cross-sections of handrails/grabrails circular?

Yes ☐ No ☒

Is the handrail/grabrail thickness appropriate for someone who has trouble grasping things (AS 1428.1 - Clause 6.1-6.2)?

☒ ☐

Is the handrail/grabrail at a consistent height that is usable by everybody (see Good Ideas Manual) (AS 1428.1 - Clause 6.1-6.2)?

☒ ☐

Is the handrail strong enough at all points to support a person's body weight?

☒ ☐

Can you fit a hand between the grabrail and the surface it is fixed to without obstruction?

☐ ☒

Are the handrails/grabrails made out of non-reflective material and do they have a contrasting colour to the background?

☒ ☐

Comments on handrails/grabrails:

VI. Stairways

Yes No

Are the steps too steep (AS 1428.2 - Clause 13.2, Figure 8)?

☐ N/A ☐

Are the steps long enough to move comfortably from step to step?

☐ N/A ☐

Is the handrail properly positioned (i.e. at a convenient height) (AS 1428.2 - Clause 13.4, Figure 5)?

☐ N/A ☐

Is the nosing of the stairs non-slip and a contrasting colour to the background?

☐ N/A ☐

Are there landings at regularly spaced intervals?

☐ N/A ☐

Is there either a ramp or lift that can be used as an alternative to the stairs?

☐ ☐

Comments on Stairways:

Buildings are on one level only.

VI. Car Park Facilities

Is there a continuous path of travel from the public transportation drop off area or parking facility to the facility entrance?

☒ ☐

Are accessible parking spaces provided?

☒ ☐

Is there an appropriate number of parking bays designated for people with disabilities?

☐ ☒

Are the designated bays:

➤ located as close as possible to the accessible entrance?

☒ ☐

➤ easily located with both a blue international symbol of access sign and markings on the ground that locate the parking bay?

☐ ☒

Do the designated bays have:

➤ enough room around them to manoeuvre a wheelchair?

☒ ☐

➤ A high enough ceiling to permit a car or van with a wheelchair rack to be able to park there?

☒ ☐

Is the car park well lit and is the lighting even?

☒ ☐

Comments on car parks:

More spaces are required —
when the extensions are built
next year, further car
spaces are to be provided for
both patients/visitors and
staff.

VII. Public Seating

Are there available spaces for wheelchair users (AS 1428.1 - Clause 15.3, Figure 36-37)?

Yes No

☒ ☐

Are positions provided in various locations for people using wheelchairs?

☒ ☐

Are the positions located in a way to allow comparable lines of sight to the general viewing area?

☒ ☐

If there is a stage, is there wheelchair access to the stage?

☐ N/A ☐

Is there an audio loop available covering at least 10% of the total area (AS 1428.2 - Clause 21)?

☐ ☒

If an audio loop is available, is there a clearly visible sign indicating its presence?

☐ ☒

Comments on public seating:

Public seating areas are for visitors only, so this section is not really applicable to this institution

VIII. Waiting Areas

Is there seating available for wheelchair users?

☒ ☐

Is the furniture useable by all persons?

☒ ☐

Is the arrangement of furniture convenient to those moving around it?

☒ ☐

Is there entertainment that is useable by all people?

☐ N/A ☐

Comments on waiting areas:

IX. Signs

Are there signs located at the following that give directions to the disabled entrances:

➤ car parks?

Yes No

☒ ☐

➤ drop off locations?

☒ ☐

➤ non-disabled entrances?

multi-functional

☐ ☐

Are there signs that give directions to the different building facilities (eg. toilets and lifts) and services?

☒ ☐

Throughout the building, is there sufficient signage to allow a person to move independently?

☒ ☐

Are the colours of the letters non-reflective and in contrast with the background colour?

☒ ☐

Are signs visible to people in both the standing and sitting position?

☒ ☐

Where the international symbol for access is used, does it comply with the international standard in style, colour and layout (AS 1428.1 - Clause 14, Figures 32-34)?

☒ ☐

Do the signs have enough lighting for both day and night, where appropriate?

☒ ☐

Are tactile floor maps or audio directions for the visually impaired available at the entrance of a building?

☐ ☒

Comments on signs:

X.1. Toilets

How many stalls are in the bathroom?

Yes	No
ONE	

How many accessible stalls are in the bathroom?

ONE	
-----	--

Is there enough circulation space outside the stalls?

<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------

Is there enough circulation space inside the stalls (AS 1428.2 - Clause 15.1, Figure 11)?

<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------

Do stall doors open outward?

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-------------------------------------	-------------------------------------

If stall doors open inward, is there enough clear floor space inside the stall without counting the swinging door area (AS 1428.2 - Clause 15.1, Figure 11)?

<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------

Are the grabrails properly positioned (AS 1428.2 - Clause 15.2, Figure 12)?

<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------

Is the door handle/latch a colour that contrasts the background?

<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------

Does the door have an occupied/unoccupied indicator and can it be opened from the outside in an emergency?

<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------

Is there an emergency call button located inside the sanitary facility?

<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------

Is the toilet in the proper dimensions (AS 1428.1 - Clause 10.2.2-10.2.5, Figure 18)?

<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------

Are the flush controls either automatic or in an accessible location (AS 1428.1 - Clause 10.2.6, Figure 19)?

<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------

Are the toilet paper dispensers in an accessible location (AS 1428.1 - Clause 10.2.7, Figure 20)?

<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------

Can the dispensers be used by those with limited dexterity?

<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------

X.2. Washbasins

How many sinks are in the bathroom?

Yes No

One

How many accessible sinks are in the bathroom?

One

Is there enough clear floor space around the sink (AS 1428.1 - Clause 10.3, Figure 24 and AS 1428.2 - Clause 15.7, Figure 18)?

☒ ☐

Is the basin in the proper dimensions (AS 1428.1 - Clause 10.3, Figure 23)?

☒ ☐

Are the tap handles lever style?

☐ ☒

Is there a mirror at an accessible height (AS 1428.1 - Clause 10.4.1)?

☒ ☐

If there are any medicine cabinets, is there a useable shelf at an accessible height (AS 1428.1 - Clause 10.4.2)?

☐ N/A ☐

X.3. Showers and Baths

Where showers or baths are provided, are they disabled accessible (AS 1428.1 - Clause 10.5, Figures 25-27 and AS 1428.2 - Clause 15.4, Figures 13-15 and 17)?

☒ ☐

X.4. Water Fountains

Are drinking fountains the proper dimensions (AS 1428.2 - Clause 27.3.1, Figure 33)?

☒ ☐

Are the controls operable by one hand?

☒ ☐

Comments on Sanitary Facilities:

XI. Emergency Systems

See the Good Ideas Manual or Fire Risk Management Series (Capital Development Guidelines) for additional information on emergency safety.

	Yes	No
Are alarms both audible and visible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Do the audible alarms have appropriate intensity and frequency to attract the attention of those with partial hearing loss (AS 1428.2 - Clause 18.2.2)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are the visible alarms arranged such that they spread light in a way to attract attention?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are the changes in light adequate to wake a person?	<input type="checkbox"/> N/A	<input type="checkbox"/>
Are the auxiliary alarm systems connected to the alarm system of the building, so that the alarm will go off in conjunction with the building's system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are safe havens provided for people with mobility difficulty on levels above the main entrance level?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is there a sprinkler system installed in the building?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Comments on Alarm Systems:

XII. Telephones

Yes No

Is there a continuously accessible path of travel to the telephone?

☒ ☐

Is there enough circulation space in front of the payphone (AS 1428.2 - Clause 30.1.2)?

☒ ☐

Are the useable parts of the phone at a height easily accessed by all people (AS 1428.2 - Clause 30.1.3, Figure 35)?

☒ ☐

Does the payphone have TTY (telephone typewriter) capabilities?

☐ ☒

Is there a phone with volume control and a built in coupler?

☐ ☒

Is the phone indicated with the proper hearing-impaired labeling?

☐ ☒

Do all phones have push button dialing?

☒ ☐

Do the buttons have large print numbers?

☒ ☐

Is the lighting around the telephone sufficient?

☒ ☐

If a directory is provided, is it located in an accessible area?

☒ ☐

Are the phone cords long enough to be used by individuals of varying height whether sitting or standing?

☒ ☐

Comments on telephones:

XIII. Lifts

If lifts are not considered the primary travel route between floors, is at least on lift available for those with mobility impairments?

Yes No

☐☐

Are the lifts compliant with AS 1735.12?

☐☐

Comments on lifts:

N/A

15.0 Appendix H - Test of the Auditing Checklist at 555 Collins St.

To see the complete usefulness of the audit, it was tested in the office building that the project group is based in. The office building was tested in addition to the previous tested facility to determine if the audit could be used for more than one type of facility.

The building housed the central offices of all the DHS divisions. Most users of the building are employed somewhere in the building, although there are conference and meeting rooms that outside people use.

The age and last renovation of the facility were unknown at the time of the audit, and the project team could not locate any information on the subject since then. Most parts of the building are generally accessible but there is a lot of room for improvement. There are not enough disabled parking spaces, and the one that are there are much too far away from the building. Some of the doorways inside the building are not wide enough, and the doors are too heavy. There are not enough disabled toilets for the amount of people using the facility.

3.0. Facility Information

Name of facility: 555 Collins St.

Date audit was performed: 23/8/99

Who uses this facility? Executive officers
Project Managers
wpi Project Teams

What services does this facility offer?

Resource Room (Library) Conference Rooms
Bank
Cafe

Are there any special features to this facility that may require accommodations for a certain disability?

How old is this facility? Unknown

When was the last renovation? Unknown

Comments on the Facility:

4.0 Checklist and Scoring

4.1 Entrances

Yes **No**

Do signs directing the disabled to accessible entrances exist?

☐☒

Is the use of turnstiles, steps, or revolving doors avoided?

☒☐

If there is a revolving door or turnstile, is an alternative hinged or sliding door provided? *NA*

☐☐

Indicate number of questions answered "no": 1 out of 3 possible answers.

Comments on Building Entrances:

Well marked

Automatic Sliding Doors

4.1.1 Doorways

Yes No

Is the doorway wide enough for a wheelchair to fit through it (at least 1200 mm)?



All major doorways are - Some minor ones don't
If swinging doors exist, is there enough space on either side of the entrance for manoeuvring objects as large as a wheelchair (AS 1428.1 - Clause 7.3.1, Figure 12)?



For sliding doors, is the circulation space inside the door large enough to fit a wheelchair through (AS 1428.1 - Clause 7.3.1, Figure 13)?



Indicate number of questions answered "no": 0 out of 3 possible answers.

4.1.2 Door Controls

Yes No

Can door handles be unlocked and opened with one hand?

NA



Do the doors have an easy to grip handle?



Is the door easy to open for a person with strength impairment?



Are the door handles of non-reflective material and have a contrasting color to the background?



If the door is glass and the walls around the door are also glass, is it clearly marked for ease of identification?



Is the threshold of the door level (AS 1428.1 - Clause 5.6, Figure 5)?



Indicate number of questions answered "no": 0 out of 6 possible answers.

Comments on Entrances and Doorways:

Some doors could be improved, but most are fine

4.2 Path of Travel

4.2.1 Inside the General Building

Is there direct access to the reception area or is there suitable signage providing clear directions for people with a variety of impairments?

Yes **No**

☐ ☒

At any area where there is a counter or table, is one provided that is wheel chair accessible (i.e. has lowered top, leg clearance underneath)?

☒ ☐

Are staff members available at entrance areas to assist with providing information?

☒ ☐

Is seating provided in the entrance area?

☒ ☐

Are all pathways well lit and even?

☒ ☐

Indicate number of questions answered "no": 1 out of 5 possible answers.

4.2.2 Walkways, Ramps, and Landings

Yes **No**

Is the height of the path at least 2 m?

☒ ☐

Is the horizontal width of the path at least 1 m?

☒ ☐

If an incline exists, is it gradual enough to climb in a wheelchair? (AS 1428.1 specifies 1:14 as the steepest) *MA*

☐ ☐

Is there a color contrast and a tactile ground indicator where there is an elevation or incline change (such as at the beginning and end of ramps)?

☐ ☒

Is there a color contrast between the edge of the pathway and the ground surface?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are handrails provided along the path continuously?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are there enough landings and are the landings 1200 mm long? (See Ideas Manual)	NA	<input type="checkbox"/>	<input type="checkbox"/>
Is seating provided along paths?		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are there accessible pathways leading from the entrance of the property (and parking area if applicable) to the entrance of the building?		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Does the accessible pathway avoid vehicle traffic areas?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is there a path of travel that is accessible to all facilities, including:		<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Reception area		<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Lifts		<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Dining/Cooking areas	NA	<input type="checkbox"/>	<input type="checkbox"/>
• Laundry facilities	NA	<input type="checkbox"/>	<input type="checkbox"/>
• Sleeping areas	NA	<input type="checkbox"/>	<input type="checkbox"/>
• Bathing/Toilet areas		<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Any other relevant areas:	Library	<input checked="" type="checkbox"/>	
	Bank	<input checked="" type="checkbox"/>	
If a path is used at night, is there proper lighting?		<input checked="" type="checkbox"/>	<input type="checkbox"/>

Are all landings and rest areas level, having no incline (AS 1428.1 - Clause 5.6, Figure 5)?



Are there underfoot-tactile indicators or other equipment to aid the visually impaired?



Indicate number of questions answered "no": 4 out of 19 possible answers.

Comments on Paths of Travel:

All paths are accessible, but some could use some improvement.

4.3 Flooring

Is the flooring slip-resistant?

Yes

☒

No

☐

Is the flooring slip-resistant when wet?

☒☐

Is the use of surfaces such as high pile carpet or tiles with deep grooves in between (that could impede a wheelchair) avoided?

☒☐

If carpeting is used, is it anti-static to prevent the build-up of static electricity? *Unknown*

☐☐

Indicate number of questions answered "no": _____ out of 4 possible answers.

Comments on the Inside of the Building:

4.4 Handrails and Grabrails

Yes No

Are the cross-sections of handrails/ grabrails circular?



Is the handrail/ grabrail thickness appropriate for someone who has trouble grasping things (AS 1428.1 - Clause 6.1-6.2)?



Is the handrail/ grabrail at a consistent height that is useable by everybody (see Good Ideas Manual) (AS 1428.1 - Clause 6.1-6.2)?



Is the handrail strong enough at all points to support a person's body weight?



Can you fit a hand between the grabrail and the surface it is fixed to without obstruction?



Are the handrails/ grabrails made out of non-reflective material and do they have a contrasting colour to the background?



Indicate number of questions answered "no": 0 out of 6 possible answers.

Comments on Handrails and Grabrails:

Not in as many places as ~~it~~ there could be though

4.5 Stairways

Yes No

Is excessive steepness (AS 1428.2 - Clause 13.2, Figure 8) avoided in the design of the stairs?



Are the steps long enough to move comfortably from step to step?



Is the handrail properly positioned (i.e. at a convenient height) (AS 1428.2 - Clause 13.4, Figure 5)?



Is the nosing of the stairs non-slip and a contrasting colour to the background?



Are there landings at regularly spaced intervals?



Is there either a ramp or lift that can be used as an alternative to the stairs?



Indicate number of questions answered "no": 1 out of 6 possible answers.

Comments on Stairways:

There aren't any colour contrasts on the stairs

4.6 Parking Facilities

Yes No

Is there a continuous path of travel from the public transportation drop off area or parking facility to the facility entrance?



Are accessible parking spaces provided?



Is there an appropriate number of parking bays designated for people with disabilities?



Are the designated bays:

- located as close as possible to the accessible entrance?



- easily located with both a blue international symbol of access sign and markings on the ground that locate the parking bay?



Do the designated bays have:

- enough room around them to manoeuvre a wheelchair?



- A high enough ceiling to permit a car or van with a wheelchair rack to be able to park there?



Is the car park well lit and is the lighting even?



Indicate number of questions answered "no": 6 out of 8 possible answers.

Comments on car parks:

Parking facilities should be improved

4.7 Auditorium

NA

Yes No

Are there available spaces for wheelchair users (AS 1428.1 - Clause 15.3, Figure 36-37)?

☐☐

Are positions provided in various locations for people using wheelchairs?

☐☐

Are the positions located in a way to allow comparable lines of sight to the general viewing area?

☐☐

If there is a stage, is there wheelchair access to the stage?

☐☐

Is there an audio loop available covering at least 10% of the total area (AS 1428.2 - Clause 21)?

☐☐

If an audio loop is available, is there a clearly visible sign indicating its presence?

☐☐

Indicate number of questions answered "no": _____ out of 6 possible answers.

Comments on public seating:

4.8 Waiting Areas

Yes No

Is there seating available for wheelchair users?



Is the furniture useable by all persons?



Is the arrangement of furniture convenient to those moving around it?



If there is available entertainment (magazines, television), is useable by all people?

NA



Indicate number of questions answered "no": 1 out of 4 possible answers.

Comments on waiting areas:

Furniture is a bit low and could be too soft.

4.9 Signs

Are there signs located at the following that give directions to the disabled entrances from:

- car parks?

Yes

No

☐
☒

- drop off locations?

☐
☒

- non-disabled entrances?

☐
☒

Are there signs that give directions to the different building facilities (eg. toilets and lifts) and services?

☒
☐

Throughout the building, is there sufficient signage to allow a person to move independently?

☐
☒

Are the colours of the letters non-reflective and in contrast with the background colour?

☒
☐

Are signs visible to people in both the standing and sitting position?

☒
☐

Where the international symbol for access is used, does it comply with the international standard in style, colour and layout (AS 1428.1 - Clause 14, Figures 32-34)?

☒
☐

Do the signs have enough lighting for both day and night, where appropriate?

☒
☐

Are tactile floor maps or audio directions for the visually impaired available at the entrance of a building?

☐
☒

Indicate number of questions answered "no": 5 out of 10 possible answers.

Comments on signs:

Increase the # of signs

4.10 Sanitary Facilities

4.10.1 Toilets

How many cubicles are in the bathroom?

How many accessible cubicles are in the bathroom?

Divide the number of accessible toilets by the number in total toilets. Multiply by 100. This gives you the percentage of accessible toilets. Any number over 5% is acceptable, less requires renovations.

1 accessible
toilet in the
building

	Yes	No
Is there enough circulation space outside the cubicle?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is there enough circulation space inside the cubicle (AS 1428.2 - Clause 15.1, Figure 11)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Do cubicle doors open outward? NA	<input type="checkbox"/>	<input type="checkbox"/>
If cubicle doors open inward, is there enough clear floor space inside the cubicle without counting the swinging door area (AS 1428.2 - Clause 15.1, Figure 11)? NA	<input type="checkbox"/>	<input type="checkbox"/>
Are the grabrails properly positioned (AS 1428.2 - Clause 15.2, Figure 12)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is the door handle/latch a colour that contrasts the background?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Does the door have an occupied/unoccupied indicator and can it be opened from the outside in an emergency?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is there an emergency call button located inside the sanitary facility?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is the toilet in the proper dimensions (AS 1428.1 - Clause 10.2.2-10.2.5, Figure 18)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Are the toilet paper dispensers in an accessible location (AS 1428.1 - Clause 10.2.7, Figure 20)?

☒ ☐

Are the flush controls either automatic or in an accessible location (AS 1428.1 - Clause 10.2.6, Figure 19)?

☒ ☐

Can the dispensers be used by those with limited dexterity?

☒ ☐

Indicate number of questions answered "no": 1 out of 12 possible answers.

4.10.2 Washbasins

How many sinks are in the bathroom?

How many accessible sinks are in the bathroom?

Divide the number of accessible washbasins by the number of inaccessible washbasins, and multiply that number by 100. This gives the percent of accessible washbasins. This number should be above 5%.

Yes No

Is there enough clear floor space around the sink (AS 1428.1 - Clause 10.3, Figure 24 and AS 1428.2 - Clause 15.7, Figure 18)?

☒ ☐

Is the basin in the proper dimensions (AS 1428.1 - Clause 10.3, Figure 23)?

☒ ☐

Is/ Are the tap handles lever-style?

☒ ☐

Is there a mirror at an accessible height (AS 1428.1 - Clause 10.4.1)?

☒ ☐

If there are any medicine cabinets, is there a useable shelf at an accessible height (AS 1428.1 - Clause 10.4.2)?

NA

☐☐

Indicate number of questions answered "no" : 0 out of 5 possible answers.

4.10.3 Showers and Baths

Yes

No

Where showers or baths are provided, are they disabled accessible (AS 1428.1 - Clause 10.5, Figures 25-27 and AS 1428.2 - Clause 15.4, Figures 13-15 and 17)?

NA

☐☐

Indicate number of questions answered "no": 0 out of 1 possible answer.

4.10.4 Water Fountains

Yes

No

Are drinking fountains the proper dimensions (AS 1428.2 - Clause 27.3.1, Figure 33)?

NA

☐☐

Are the controls operable by one hand?

NA

☐☐

Indicate number of questions answered "no" : 0 out of 2 possible answers.

Comments on Sanitary Facilities:

4.11 Emergency Systems

See the Good Ideas Manual or Fire Risk Management Series (Capital Development Guidelines) for additional information on emergency safety.

	Yes	No
Are alarms both audible and visible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Do the audible alarms have appropriate intensity and frequency to attract the attention of those with partial hearing loss (AS 1428.2 - Clause 18.2.2)? <i>Unknown</i>	<input type="checkbox"/>	<input type="checkbox"/>
Are the visible alarms arranged such that they spread light in a way to attract attention? <i>Unknown</i>	<input type="checkbox"/>	<input type="checkbox"/>
Are the changes in light adequate to wake a person? <i>Unknown</i>	<input type="checkbox"/>	<input type="checkbox"/>
Are the auxiliary alarm systems connected to the alarm system of the building, so that the alarm will go off in conjunction with the building's system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are safe havens provided for people with mobility difficulty on levels above the main entrance level? <i>Unknown</i>	<input type="checkbox"/>	<input type="checkbox"/>
Is there a sprinkler system installed in the building?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Indicate number of questions answered "no": 0 out of 7 possible answers.

Comments on Alarm Systems:

Many Unknowns

4.12 Telephones

NA

Yes No

Is there a continuously accessible path of travel to the telephone?

☐
☐

Is there enough circulation space in front of the payphone (AS 1428.2 - Clause 30.1.2)?

☐
☐

Are the useable parts of the phone at a height easily accessed by all people (AS 1428.2 - Clause 30.1.3, Figure 35)?

☐
☐

Does the payphone have TTY (telephone typewriter) capabilities?

☐
☐

Is there a phone with volume control and a built in coupler?

☐
☐

Is the phone indicated with the proper hearing-impaired labeling?

☐
☐

Do all phones have push button dialing?

☐
☐

Do the buttons have large print numbers?

☐
☐

Is the lighting around the telephone sufficient?

☐
☐

If a directory is provided, is it located in an accessible area?

☐
☐

Are the phone cords long enough to be used by individuals of varying height whether sitting or standing?

☐
☐

Indicate number of questions answered "no": _____ out of 11 possible answers.

Comments on telephones:

4.13 Lifts

Yes No

If lifts are not considered the primary travel route between floors, is at least on lift available for those with mobility impairments?

N/A

☐☐

Is there a lift available to all floors?

☒☐

Are the lifts compliant with AS 1735.12?

Unknown

☐☐

Indicate number of questions answered "no": 0 out of 3 possible answers.

Comments on lifts:

16.0 Appendix I- Professional Audit

The following is a sample of an audit designed by Access Design and Inspection Consultants Pty Ltd (ADI). Our project group was very fortunate to have the help of Ken Ravensdale, who is extremely experienced in conducting professional audits and meeting the needs of disabled individuals. ADI's sample audit was compared with the audit tool designed by the project team in terms of format, content, and usability. To acquire more information about ADI's services, see the contact information on page 55 of the report.

ACCESS AUDIT EXISTING CONDITIONS SURVEY	FACILITY: ADDRESS:	DATE:
--	-----------------------	-------

UTILITIES	Yes	No	Comments
Telephones			
1. Is a public telephone available?			
2. Is there a continuous accessible path of travel to the telephone?			
3. Does the public telephone have a telephone typewriter (TTY) facility?			
4. Is the telephone and surrounding area on a level surface?			
5. Is there clear circulation space in front of the telephone of 800 - 1300mm?			
6. If the telephone is in a booth, is there sufficient width to enter in a wheelchair? (760mm or greater)			
7. Are the highest operable parts of the telephone 1100mm or lower?			
8. Does the telephone have push button controls?			
9. Does the telephone have large print numbers?			
10. Are telephone directories available?			
11. Is there a bench area to set down and use the telephone directory?			
12. Is the ground around the telephone well lit and is the lighting even?			
13. Is the handset cord length 737mm or greater?			
14. Does telephone have volume control?			
15. Does the telephone have phone card facilities?			
16. Is a seat available for telephone users?			

ACCESS AUDIT EXISTING CONDITIONS SURVEY	FACILITY: ADDRESS:	DATE:
--	-----------------------	-------

TOILETS cont.	Yes	No	Comments
18. Is the flushing control: a) within easy reach? (maximum height 1100mm) b) easy to operate?			
19. Is there a basin in the toilet cubicle? (preferred)			
20. Is basin located not closer than 1100mm to the front lip of pan?			
21. Does the basin have knee clearance of 640 - 650mm underneath?			
22. Are tap handles lever or capstan style? (lever style preferred)			
23. Are taps clearly identified as hot and cold? (colour/tactile)			
24. If a mirror is provided above the basin, is it 900mm maximum above floor?			
25. Are light switches, hand dryers, soap dispensers, coat hooks etc. provided at a height between 900 - 1100mm? (1000mm preferred)			
26. Is there an emergency call button within reach of a person seated on the toilet?			
27. Is there shelving provided at a height between 900 - 1100mm?			
28. Does the cubicle have a minimum internal dimension of 1600 x 2000mm?			

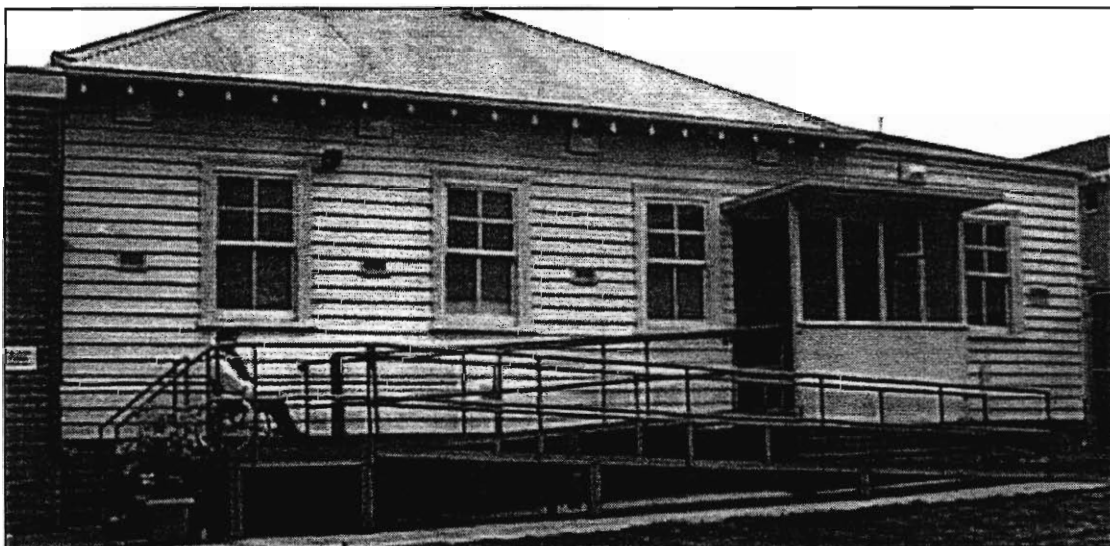
ACCESS AUDIT EXISTING CONDITIONS SURVEY	FACILITY: ADDRESS:	DATE:
--	-----------------------	-------

TOILETS	Yes	No	Comments
1. Is there a unisex toilet designated as wheelchair accessible, available in the building?			
2. If so: a) is facility identified with the international symbol of access? and; b) are there symbols indicating use by both males and females?			
3. Is there a continuous accessible path of travel from the front entry?			
4. If there is an airlock, is there 1340mm between the doors?			
5. Is the door width 760mm or greater when open?			
6. Does door have an occupied indicator and can it be opened from the outside in an emergency?			
7. Can the door be unlocked and opened with one hand?			
8. Are all door handles between 900 - 1100mm high?			
9. Are door/s colour contrasted to the surrounding wall?			
10. If the door opens inwards, is the space large enough so that a person in a wheelchair can shut the door once inside?			
11. Is there a 1200mm space in front of the pan? (this allows front transfers from a wheelchair)			
12. Is there 950mm at one side of the pan? (this allows side transfers from a wheelchair)			
13. Is the seat height between 460 - 480mm?			
14. Is the front of the pan 800mm from the rear wall?			
15. Is there a grab-rail next to the toilet at 800 - 810mm high?			
16. Is there a grab-rail behind the toilet at 800 - 810mm high?			
17. Can toilet paper be easily reached? (forward of pan, 700mm maximum height)			

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ACCESS AUDIT EXISTING CONDITIONS SURVEY	FACILITY: ADDRESS:	DATE:
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UTILITIES	Yes	No	Comments
Telephones			
1. Is a public telephone available?			
2. Is there a continuous accessible path of travel to the telephone?			
3. Does the public telephone have a telephone typewriter (TTY) facility?			
4. Is the telephone and surrounding area on a level surface?			
5. Is there clear circulation space in front of the telephone of 800 - 1300mm?			
6. If the telephone is in a booth, is there sufficient width to enter in a wheelchair? (760mm or greater)			
7. Are the highest operable parts of the telephone 1100mm or lower?			
8. Does the telephone have push button controls?			
9. Does the telephone have large print numbers?			
10. Are telephone directories available?			
11. Is there a bench area to set down and use the telephone directory?			
12. Is the ground around the telephone well lit and is the lighting even?			
13. Is the handset cord length 737mm or greater?			
14. Does telephone have volume control?			
15. Does the telephone have phone card facilities?			
16. Is a seat available for telephone users?			

ACCESS AUDIT EXISTING CONDITIONS SURVEY	FACILITY: ADDRESS:	DATE:
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TOILETS cont.	Yes	No	Comments
18. Is the flushing control: a) within easy reach? (maximum height 1100mm) b) easy to operate?			
19. Is there a basin in the toilet cubicle? (preferred)			
20. Is basin located not closer than 1100mm to the front lip of pan?			
21. Does the basin have knee clearance of 640 - 650mm underneath?			
22. Are tap handles lever or capstan style? (lever style preferred)			
23. Are taps clearly identified as hot and cold? (colour/tactile)			
24. If a mirror is provided above the basin, is it 900mm maximum above floor?			
25. Are light switches, hand dryers, soap dispensers, coat hooks etc. provided at a height between 900 - 1100mm? (1000mm preferred)			
26. Is there an emergency call button within reach of a person seated on the toilet?			
27. Is there shelving provided at a height between 900 - 1100mm?			
28. Does the cubicle have a minimum internal dimension of 1600 x 2000mm?			

ACCESS AUDIT EXISTING CONDITIONS SURVEY	FACILITY: ADDRESS:	DATE:
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TOILETS	Yes	No	Comments
1. Is there a unisex toilet designated as wheelchair accessible, available in the building?			
2. If so: a) is facility identified with the international symbol of access? and; b) are there symbols indicating use by both males and females?			
3. Is there a continuous accessible path of travel from the front entry?			
4. If there is an airlock, is there 1340mm between the doors?			
5. Is the door width 760mm or greater when open?			
6. Does door have an occupied indicator and can it be opened from the outside in an emergency?			
7. Can the door be unlocked and opened with one hand?			
8. Are all door handles between 900 - 1100mm high?			
9. Are door/s colour contrasted to the surrounding wall?			
10. If the door opens inwards, is the space large enough so that a person in a wheelchair can shut the door once inside?			
11. Is there a 1200mm space in front of the pan? (this allows front transfers from a wheelchair)			
12. Is there 950mm at one side of the pan? (this allows side transfers from a wheelchair)			
13. Is the seat height between 460 - 480mm?			
14. Is the front of the pan 800mm from the rear wall?			
15. Is there a grab-rail next to the toilet at 800 - 810mm high?			
16. Is there a grab-rail behind the toilet at 800 - 810mm high?			
17. Can toilet paper be easily reached? (forward of pan, 700mm maximum height)			



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