Contents

Chapter 7 – Taxi Facilities

7.1 Introduction

The *Taxi facilities chapter* is a referenced component of the overarching *Public Transport Infrastructure Chapter (PTIM).*

This *Taxi facilities chapter* is to be used in conjunction with:

- ***PTIM, Background and application***, which establishes the rules for application of the entire *Public Transport Infrastructure Manual*
- ***PTIM, Planning and design***, which provides the overarching design guidelines and principles for public transport infrastructure across Queensland
- ***PTIM, Supporting access and infrastructure***, which details the supporting access infrastructure required to support public transport stops, stations and related facilities
- ***PTIM, Branding, theming and signage***, which provides branding, theming and signage that should be used for identifying coherent public transport infrastructure throughout Queensland.
- For information on further resources to support the planning and design of bus stations, please refer to the *PTIM, References and resources*.

7.1.1 Purpose and objectives

The Taxi facilities chapter will inform the design of taxi facilities by providing a clear and consistent set of principles and guidelines.

The objectives of this chapter are to:

- establish guiding principles for the planning and design of taxi infrastructure
- ensure a consistent approach to provide high quality customer access, convenience, safety and comfort
- provide an overview of available standards for taxi facilities design.

7.2 Application of the Taxi facilities chapter

7.2.1 Intended audience

This chapter is intended for use by professionals in the transport planning and delivery industry. This generally involves, but is not limited to, designers, planners, engineers, architects and other professionals involved in the planning, design and delivery of public transport infrastructure in Queensland.

7.2.2 Application of this chapter

This chapter must be used in conjunction with overarching applications of the *PTIM*.

This chapter details TransLink requirements for planning and design, and should be referred to before starting to plan new taxi facilities.

It is important that taxi facilities are integral to the design of a development or planning precinct.

TransLink, in partnership with Local Government and in collaboration with relevant stakeholders and delivery partners, shall be consulted on the final design for new infrastructure and upgrade of existing facilities.

7.3 Principles of taxi facility planning

As a key part of a balanced transport network, taxi facilities need to be integral to other transport nodes such as rail, bus and busway stations, transport terminals, and sea and air ports. The primary integration issue is to ensure passengers can transfer easily between transport modes and readily identify the taxi facility location upon exiting public transport facilities.

7.3.1 What is a taxi facility?

The term 'taxi facility' refers to either 'taxi ranks' or 'taxi bays'. For the purposes of this chapter these are defined as follows:

- **Taxi ranks** are designated pick up and drop off locations for passengers using a licensed[1] taxi service provider, and are exclusively for use by taxis. Taxi ranks are located at specific points on public road networks where demand warrants. They provide a safe and identifiable origin and destination location for passengers, and they provide a designated location where taxi operators can service patron needs.
- **Taxi bays** are designated bays and/or drop-off/pick-up areas (for example, outside hospital entrances, clubs and other large public or private facilities) rather than an actual rank that is located on the public road network. There may be joint use of taxi bay facilities by other vehicles for the same drop off/pick-up function.

7.3.2 What are taxi and limousine services?

7.3.2.1 Taxi services

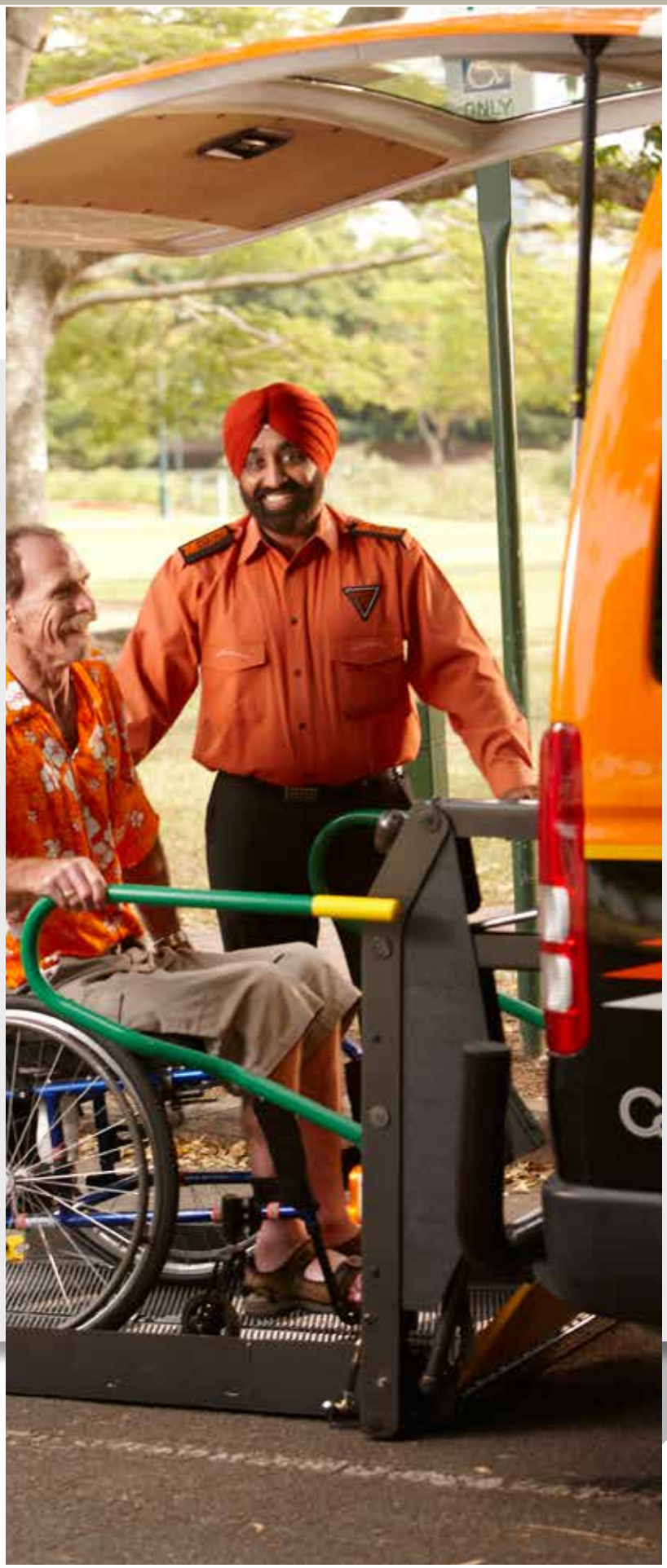
Taxi services are a critical part of the passenger transport network, providing flexible, demand responsive 24-hour service. Traditional taxi services remain an essential part of a balanced transport system and are a key form of transport for those who cannot access other forms of public transport or drive independently. Taxi services ensure such passengers have access to other areas within their community when they need, and at a reasonable cost.

A taxi service can be booked, hailed by the public, or may ply or stand for hire on a road. Typically, when taxis are vacant and available for immediate hire, taxis stand at designated taxi ranks located at key points within taxi service areas.

The department is responsible for determining the maximum fares for Queensland taxis. The department is also responsible for the control and licensing of both taxi and limousine services.

Refer to TMR website for Queensland taxi fares, service area and maps.

[1] *By the Department of Transport and Main Roads*



7.3.2.2 Limousine services

A limousine service is an unscheduled passenger service provided by a luxury motor vehicle operating under a limousine service licence. The journey must be pre-booked and the fare agreed to before the journey begins.

The *Transport Operations (Road Use Management – Road Rules) Regulation 2009* includes a limousine in the definition of taxi; however the use of taxi ranks by limousines is prohibited under the *Transport Operations (Passenger Transport) Regulation 2005*.

Specifically:

- a limousine for hire must not ply or stand at a place unless the place is the limousine owner's premises or a limousine standing area or limousine rank
- a limousine standing area is a place approved by the department as a place where limousines may stand while waiting to attend a booking made earlier
- a limousine rank is a place approved by the department as a place where limousines may stand for hire to set destinations or areas for set fares.

7.4 Taxi facility planning and design

The process of planning and design for taxi facilities is illustrated in Figure 7.1.

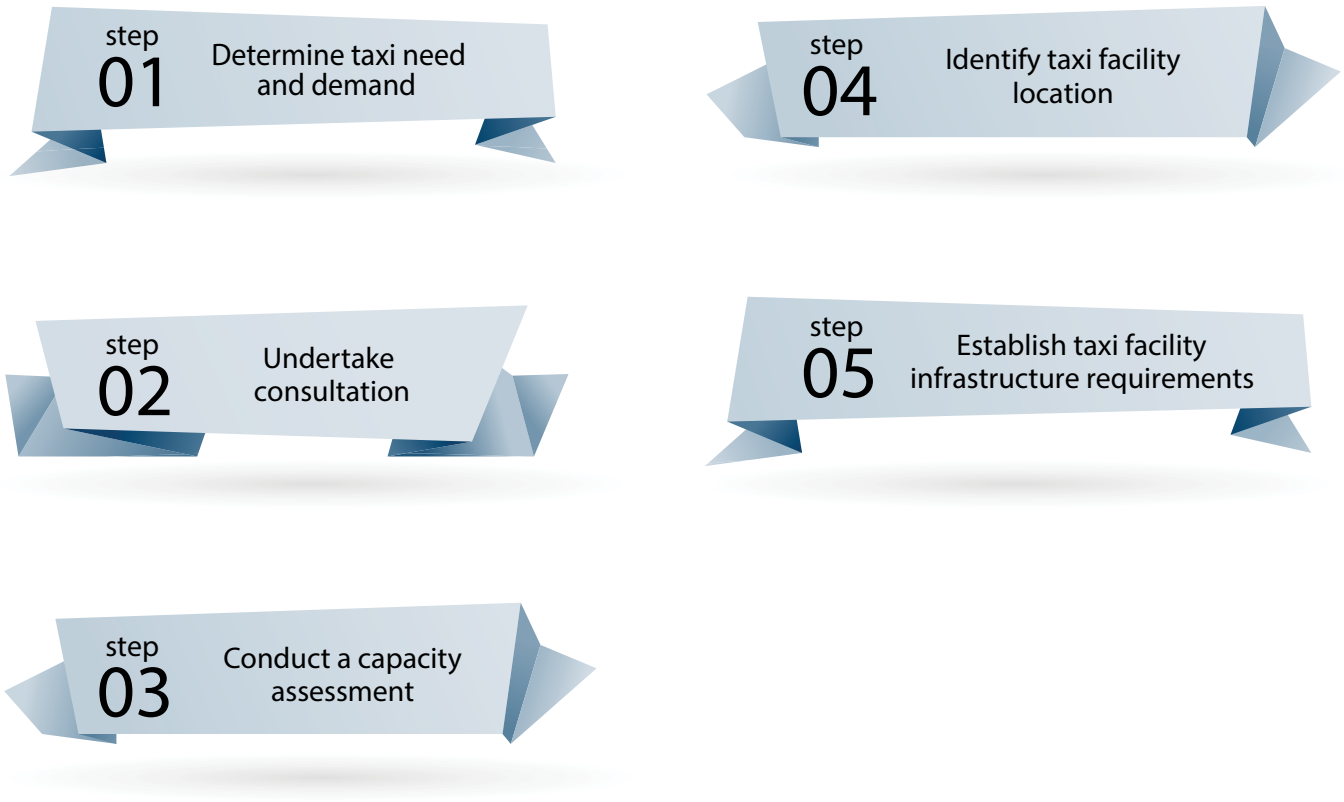


Figure 7.1 –
Taxi facility planning process

7.4.1 Needs assessment

The first step in assessing the need for taxi facilities is the land use associated with proposed development.

The following list provides an indication of common land uses where taxi facilities are often provided and where demand is generated.

- Public transport facilities including rail stations, bus stations, busway stations, airports and ferry terminals
- Major shopping centres (over 10,000m2)
- Major sport, recreation and entertainment precincts
- Medical facilities such as hospitals and medical centres
- Bus park 'n' ride facilities
- Commercial precincts
- Food and drink precincts
- Accommodation facilities (for example, motel)
- Residential care facility (for example, nursing home)
- Clubs, casinos
- Tourist attractions
- Hotels
- Function facilities
- Mixed use developments
- Theatres
- Local shops

The demand for taxi services in these locations is based on a range of factors including:

- the need for short trips not served by alternative means
- lack of private transport options
- origin/destination locations are not serviced by scheduled public transport
- connection to scheduled bus services and rail services
- trips are outside operating hours for scheduled public passenger transport services
- luggage or shopping needs to be carried
- personal mobility is difficult

It is intended that taxi facilities be located to conveniently service such needs (that is, minimise passenger walking distances[2] and assist with passenger convenience and safety).

[2] *The Australian Taxi Industry Association (ATIA) recommends that the general acceptable standard practice for taxi rank location is a maximum 400 metres walking distance to a major venue entrance and exit. This distance equates to approximately a five-minute walking journey, which is a maximum distance that most people will find acceptable, however this distance may also depend on weather, topography and other characteristics.*

7.4.2 Demand assessment

Whilst there is a general understanding of ***need*** for taxi infrastructure, based on land use characteristics it is necessary to determine the ***demand profile*** for the particular location. This is required to forecast taxi facility vehicle capacity. The following demand characteristics should be analysed:

- catchment demographics including:
  - persons per household
  - age profile of catchment
  - household income
  - private vehicle ownership
- development type and operational hours
- density and types of surrounding development
- availability of car parking in the area
- availability and frequency of other public passenger transport options
- competing modes
- number of taxi licences in a given service area.

In all cases, the above factors need to be considered and a demand profile established to determine 'peak passengers per hour' for the proposed development.

Once a demand profile for a proposed development or changes to an existing development has been established, the impact on existing local factors also needs to be investigated. Factors that need to be addressed include:

- existing demand for taxis, including information obtained from taxi operators regarding current patronage and issues
- the location of existing taxi facilities and the number of parking spaces
- characteristics of existing development (relative to demand)
- number of taxi licences in the catchment area
- traffic impacts.

The outcomes of this assessment will need to include possible overall increase in taxi demand in the area, possible impacts on taxi licence numbers, and impacts on the existing road network.

It is also necessary to include in this assessment how taxi operations associated with the proposed development have been addressed relative to their interface with:

- the internal and/or external road network
- other public transport operations
- the entry and exit points of the proposed development.

7.4.3 Consultation

Taxi facility assessment requires targeted research and consultation to ensure site-specific issues are addressed.

This should include consultation with:

- local government
- taxi companies
- Taxi Council of Queensland
- Local Government Association of Queensland
- Department of Communities, Child Safety and Disability Services
- disability sector organisations
- Office of Liquor and Gaming Regulation
- Queensland Police Service (QPS)
- shopping centre managers.

This consultation is undertaken early to inform the planning process. Importantly, further consultation should be undertaken once planning outcomes and initial designs have been documented.

7.4.4 Taxi facility capacity

Once the demand for a taxi facility has been established, the number of required taxi parking spaces should be determined. Considerations should be given to the capacity of any existing facilities and the additional taxi demand that needs to be accommodated.

Firstly it must be understood that there is no standard number of taxi rank spaces that can be applied to a given development type, size or location. The expected number of passengers wanting the taxi service and the expected number of taxis arriving at the rank in the same period of time will determine the required capacity of a taxi facility. This queuing system requires individual characteristics of the proposed development to be investigated.

The two key factors that will determine taxi facility vehicle capacity are taxi arrival rates and dwell time.

7.4.5 Taxi facility location

Once it is established that a taxi facility needs to be included in a development, the optimal location needs to be determined in consultation with taxi operators and TransLink.

Preferably taxi facilities should be provided parallel to the kerb and adjacent to the main entrance of a development. Taxis provide an important door to door service for people who are often incapable of driving and therefore they should be in the most accessible location.

Location selection should consider:

- proximity of other taxi facilities in the area
- shortest walking distance to the attractor (there should not be barriers or pedestrian pinch points obstructing the way)
- the possible impact on adjacent properties including driveways and access points.

The location should:

A taxi facility should be located:

- as close as possible to the entrance of major trip generators
- close to other passenger transport to facilitate interchanging/transfers
- close to key community facilities and services
- where on-road, near intersections or side/minor roads, where possible, to maximise coverage and decrease distances that passengers have to walk
- where on-road, preferably on the far side of intersecting streets to assist with sightlines of intersecting vehicles and pedestrians, as well as assisting in taxi movement, refer to Queensland Road Rules stopping prohibition minimum distances.[3]
- so that roads and/or driveway access to the facility is as direct as possible
- allow priority for taxis exiting a development when carrying passengers
- so as to minimise conflict with parking/queuing private vehicles and buses

Pedestrian access, including disabled access, should be readily provided to the taxi facility from building entrances, pedestrian pathways within a development site, and/or pedestrian footpaths on the road network.

3 *Refer to Queensland Road Rules (QRR) Sections 170, 171, 172, 173 and 174.*

Taxi ranks should not be located:

- where signage indicates the road is reserved for other vehicle classes
- within 0.5m of a fire hydrant or 'FH' letter marking or indicators
- near sewer and electricity pits (where possible)
- in or near stormwater drains or pits (to prevent splashing water and reduce possible drain surcharge impacts).

For additional guidance on the siting of taxi facilities consider refering to *ATIA Taxi Rank Design Specification (2012)*.

7.4.6 Taxi arrival rates

The taxi industry and supply of taxi services is a commercial, demand-based model. It does not operate on timetables or specified routes. There is some integration with other transport operations where taxis might meet scheduled services such as with air, rail and port services and to a lesser degree, bus services. Taxi arrival rates influence both passenger queue lengths and taxi queue lengths or taxi rank capacity.

Passenger demand also varies between locations, depending on times of the day or night, weather conditions, school and school holiday times, and peak tourist times, to name a few. For example, at airports or rail stations, racecourses, sporting venues, and entertainment venues, passenger demand could be predictable relative to service times or venue events and timetables.

In other cases, such as shopping centres, demand can be less predictable. TransLink supports liasing with, for example, shopping centre management where they can assist with understanding demand profiles.

Demand characteristics influence taxi arrival rates greatly. For example, where there is a demand for taxi services at known peak times (depending on the nature of the development) you will often find taxis queued at a rank ready to pick up passengers. At other times there may be a queue of passengers. It is uncommon for these two queues to coincide except very briefly. Further, taxis do not always return to the same rank. The 'For Hire' route choice is driven by least time to the next fare.

Some of the key factors influencing taxi arrival rates include:

- taxi service area
- fare trip travel time
- fare trip length
- taxi service operating times
- number of taxi licences in a taxi service area
- road network congestion
- 'For Hire' taxi route choice (to find the next fare)
- location of other ranks
- opportunity to layover in non-taxi designated parking spaces.

7.4.7 Dwell time

The second key factor in determining taxi rank capacity is taxi dwell time (that is, how long a taxi might spend at a rank). This, of course, has a direct relationship with demand. In peak demand periods this might only be a minute or so. In other times a taxi might wait for extended periods. The need to be commercially viable will influence the latter dwell-time profile.

The ATIA *Taxi Rank Design Specification (2012)* suggests a reasonable assumption of a taxi dwell time during the peak hour of 10 minutes at a busy rank. However this should be used with caution, as every site will have specific characteristics such as:

- taxi licence area
- location of facility
- number of taxis in licence area.

7.4.8 Number of taxi bays

In establishing the number of taxi bays required for a development there are two deciding factors:

- peak passenger demand and taxi arrival rate, or
- taxi dwell time and taxi arrival rate.

The larger of the two numbers should be adopted as the required capacity of the taxi rank.

7.5 Functional design elements for taxi facilities

A taxi facility has basic requirements that assist with its effective use and safe operation. Taxi facility design should cater for current capacity and future growth requirements.

Table 7.1 includes details of the functional design elements that need to be considered when designing taxi facilities.

Table 7.1:
Functional design elements for taxi facilities

Design element	Considerations
Designing for vehicle needs	Taxis need to be able to stand and pull away from the taxi rank in a safe manner and have easy ingress and egress to and from the rank. When designing taxi ranks, the following vehicle needs should be considered: • The most suitable location is parallel to the kerb, allowing taxis at the head of the queue to exit easily and for other taxis to move forward. • Adequate room to access and egress the taxi, including enough space allocated for luggage to be loaded from the rear of the taxi. • Adequate vehicle swept paths for the largest-sized taxi anticipated at the facility (taxi accommodating persons with a disability). • Design should allow taxis to move in a forward direction at all times (no reverse movements). • Ingress and egress routes should cater for the main direction taxis would be expected to transport passengers to and from the rank. If the direction of the taxi rank is opposite to the predominant direction, provide safe u-turn facilities for taxis or a rank on the opposite side of the road with pedestrian access. • Areas with high taxi demands in a compressed time (for example, airports) may need a feeder rank and/or taxi holding facility. • The minimum length of a taxi rank is specified in *AS2890.5-1993 Parking facilities* as (5.4n + 1) metres where n is the number of taxis to be accommodated. • TransLink suggests that the minimum height clearance on taxi routes and facilities (primarily a concern under buildings or other infrastructure) is at a minimum height of 2.3m with a suggested preferred minimum of 2.6m to allow for wheelchair accessible taxis. • Avoid conflict with pedestrian, cyclist and other traffic.

Design element	Considerations
Passenger and driver safety	To ensure safe operation the following needs to be considered: • Driver and waiting customers need to have clear visibility to each other. • Maintain clear visibility around the taxi rank (that is, away from dense foliage and other objects that obstruct direct sightlines) and adhere to *CPTED* principles. • Locate the ranks on the left-hand side of the road to facilitate safer loading of passengers and increase driver security[5]. • Locate ranks where footpath widths are sufficient to accommodate passenger waiting and passing pedestrian traffic, or where footpaths can be easily widened.
Passenger facilities at the rank	Passenger waiting areas need to consider: • Waiting, queuing and boarding areas for passengers. • Signage[6] at the head of the vehicle queue stating it is a taxi rank (could include operating hours, the location of other nearby ranks, and telephone numbers of taxi companies serving the rank). • Pedestrian footpaths adjacent to the taxi rank should provide clear space allowing adequate width for waiting passengers and passing pedestrians. • Safe and convenient pedestrian access to the taxi rank clear of immovable objects that hinder passengers boarding taxis. • Kerbs adjacent to the taxi rank should be flush to assist passengers, including those with disabilities, the elderly or frail, to easily access taxis. • Passenger queuing facilities may be needed at higher demand areas and should be designed to ensure passengers at the back of the queue cannot enter taxis from the rear of the rank (queue). • Weather protection should be considered at taxi ranks on a case-by-case basis. Considerations should include frequency of taxi service (for example, more than 30 passenger pick ups per day), nearby land use (for example, transport interchange, or aged care facility) and existing nearby shelter (for example, building awnings). • Priority seating for users such as the elderly or frail, expectant mothers, parents with young children, and people with disabilities should be provided where appropriate.
Signage and way-finding	• In areas where it is not obvious that taxis ranks are provided, directional signage should be provided. • At transport interchanges and major facilities, such as shopping centres and airports, it is recommended that directional signage be installed within the facility to direct pedestrians to where a rank is located. Signage could also include information on walking distance and rank operating hours. Refer to the *PTIM, Branding, Theming and Signage* chapter for further details on signage.

Design element	Considerations
Provision for disability access	Taxi facilities (including access paths, manoeuvring areas, ramps, waiting areas and surfaces) must comply with the requirements of the *Disability Standards* and relevant *Australian Standards.* When designing taxi ranks the following should be applied: • space for at least one wheelchair accessible taxi (WAT) located at the front of the queue. The length of WAT spaces is to be 7.8m[7], with appropriate road line marking and signage to designate this space for a WAT. • where a taxi rank is more than four spaces (including the WAT space), an additional WAT space is to be provided at the end of the first four spaces. This pattern should be repeated for every four additional spaces. • other functional design elements to be incorporated include: – TGSI to direct vision-impaired passengers to the head of the rank – facilities designed at-grade (no kerb) to eliminate the need for kerb ramps – signage information accessible for people who are blind or have a vision impairment – where kerb ramps are included for wheelchair access requirements, these shall be located at the rear of a designated WAT space – in very high volume sites, such as airports or sporting venues, where a passenger queuing fence is installed, access to the front of the queue to access the WAT space is to be provided. Technical guidance regarding the location and placement of TGSI is provided in *AS/NZS 1428*[4] *Designing for access and mobility.*

Design element	Considerations
Security and safety	Site-specific needs will determine security requirements. Some general considerations include: • locate the facility at the hub of pedestrian activity for passive surveillance. • at passenger transport hubs, locate the facility adjacent to the station platforms. Consider lighting and security cameras provisions for the facility as part of station design. Requirements for lighting of public areas are outlined in *AS/NZS 1158 Lighting for roads and public spaces*. • locate facility so taxi passengers are generally not required to cross a road, especially at night. • taxi facilities with high use for late night travel may need to be established as 'secure' taxi ranks (usually Friday and Saturday nights and special events such as New Year's Eve). These ranks could include: – taxi rank marshalls and security guards to supervise passengers to queue in an environment that is free from unruly and inappropriate behaviour – an organised supply of taxis to the rank to meet demand – management of the flow of passengers and organisation of share rides as required – answers to customer queries about routes and fares – security camera surveillance.

4 *Refer to the relevant Australian Standard as referenced in the Transport Standards (AS 1428.4-2002 Designing for access and mobility - Tactile indicators) or the Premises Standard (AS/NZS 1428.4.1-2009 Design for access and mobility - Means to assist the orientation of people with vision impairment - Tactile ground surface indicators) as applicable.*

5 *Locating ranks on the left hand side ensures passengers can access the front seat of the taxi from the footpath. It is also generally accepted that taxi drivers, for their personal safety, do not want passengers sitting directly behind them out of sight – particularly if there is just one passenger. It is preferable for a single passenger to occupy either the front seat or, if in the back, to be diagonally opposite the driver.*

6 *Queensland Road Rules section 182 requires all taxi ranks to have a Taxi Zone sign (R5-21 as described in AS 1742.11 Manual of uniform traffic control devices: Part 11: Parking controls) located at the head of the taxi rank queue.*

7 *Refer to Australian Standard AS/NZS 2890.6 Parking facilities - Off-street parking for people with disabilities*