

Last-Mile Delivery Guide for Developments



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This guide is co-developed with industry practitioners to help built environment professionals plan and design developments to facilitate delivery activities and provide operational advice for stakeholders such as MCSTs and building operators. LTA and URA shall not be held responsible for any loss, damage, or injury that may be suffered by any person in connection with the recommendations in this guide.

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Foreword

The growth of e-commerce has increased deliveries to our towns and neighbourhoods. To maintain a liveable environment while supporting timely deliveries, it is necessary to design developments to facilitate safe and efficient deliveries.

This guide helps architects, developers, building managers and related professionals to design and manage developments to facilitate food and parcel deliveries.¹ Developments should implement the solutions that best suit their needs.

Since its formation in November 2023, the Tripartite Workgroup for Last-Mile Deliveries had conducted surveys, focus group discussions and regular meetings with relevant stakeholders to develop the recommendations set out within this guide.

We seek your support to implement the relevant solutions in this guide. These collective efforts will contribute to keeping our built environment resilient and adaptable to our evolving needs.

Priscilla Chan

Group Director
(Policy & Planning)
Land Transport Authority

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¹ Delivery personnel also play a key role in facilitating deliveries. Refer to this [e-guide](#) for the rules and best practices for delivery personnel.

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Introduction

E-commerce has changed how we live, work and shop. Today, close to 40% of Singapore residents order food or shop online at least once a week.¹

As e-commerce grows, our built environment must keep pace. Making appropriate changes brings benefits to delivery and security personnel, building managers as well as consumers, through safer parking, smoother operations and faster deliveries.

This guide shares practical solutions to improve deliveries, drawing on insights from delivery personnel and industry professionals. These best practices address common challenges, such as building access, parking and wayfinding.

This guide should be read alongside LTA's Code of Practice on Vehicle Parking Provision in Development Proposals.

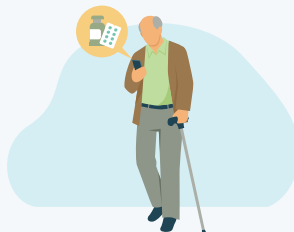
Delivery services support diverse community needs



Daily necessities such as groceries



Meals on Wheels programme for the elderly



Medical and healthcare supplies



Convenient access to a diverse range of retail goods

¹ Lifestyle Perception Survey (URA, 2025)

Understanding Delivery Stakeholders

Deliveries involve different stakeholders, each with different roles:



Delivery Personnel

Value speed and ease of access. Their top challenges include the lack of appropriate parking spaces, confusing building layouts and tedious entry procedures.



Architects and Developers

Plan and design developments. They are key to ensuring that building designs facilitate deliveries.



Building Managers and Management Corporation Strata Title (MCST) Councils

Manage building operations and maintenance while catering to residents' and tenants' needs. They determine how deliveries are managed and whether to adopt delivery-friendly practices.



Residents and Tenants

Help ensure smooth deliveries by providing accurate delivery information and being contactable. Some prioritise convenience while others prioritise security. Their needs guide a development's approach to deliveries.



Security Guards

Keep residents and tenants safe by carrying out security checks within the development. They can also communicate delivery rules, give parking directions and help locate units.

Common Delivery Challenges

An example of a delivery process



Issues such as denied entry and traffic-related conflicts among delivery personnel, cars and pedestrians, may result in delivery delays and potential accidents.

Some condominiums restrict delivery vehicles or have extensive protocols that may cause delays.



Lack of convenient delivery waiting bays (DWBs) could lead to indiscriminate parking. This inconvenience, others, blocks emergency access and strains security personnel with enforcement duties.



Poor wayfinding, especially for larger developments, complicates navigation and delays deliveries.

Poor network connectivity in places like basements disrupts communication with customers, causing further delays.

Facilitating Entry

For the following sections on possible delivery solutions, please refer to the icons to find out which solutions apply to you.

Permitting Access



Building Managers
and MCSTs

Developments should allow access for delivery personnel and their vehicles. For MCST developments, this is a legal requirement under the Building Maintenance and Strata Management Act.



Streamlining Security Procedures



Building Managers
and MCSTs



Provide Clear Instructions

Install clear signage, especially near guardhouses, listing the required registration details.



Use Technology for Efficient Registration

Use building management apps to simplify registration, such as by pre-populating the details of delivery personnel.

Providing Delivery Collection Points and Lockers



Architects and Developers



Building Managers and MCSTs

For developments with higher security needs, place delivery collection points or lockers near entrances or guardhouses. This cuts down missed deliveries, and could reduce security procedures and the time delivery personnel take to find drop-off locations.



Parcel locker



Food locker

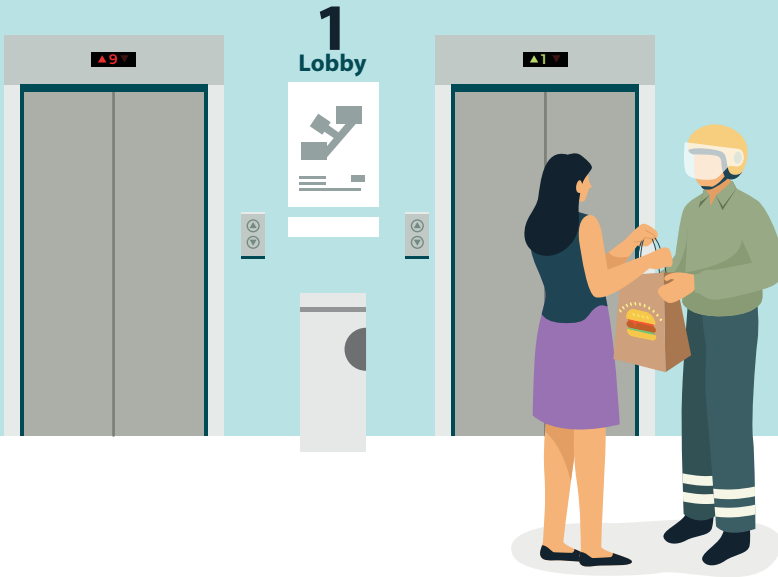
While lockers have set-up and maintenance costs, developments can consider financing models such as advertisements.

Enabling Self-Collection



Building Managers and MCSTs

Building management can encourage residents and tenants to self-collect items from delivery personnel at the ground floor or lobby.



Providing Delivery Waiting Bays

Delivery Waiting Bays



Architects and
Developers



Building Managers
and MCSTs

Delivery waiting bays (DWBs) are designated parking spaces for delivery motorcycles, bicycles or power-assisted bicycles (PABs). They are a low-cost solution to manage indiscriminate parking and improve delivery efficiency.



When implementing DWBs, consider these factors:

Location

- Locate DWBs close to delivery routes (e.g. entrances, lift lobbies, escalators, food and beverage (F&B) outlets).
- Keep them away from vehicular access points, fire engine access routes and fire escape routes.
- Separate DWBs for different vehicle types to avoid conflicts (i.e. motorcycle versus bicycles and PABs).
- Ideally, provide shelter.
- For existing buildings, site DWBs where delivery personnel currently park, or at under-utilised areas.
- DWBs could be demarcated using floor stickers or floor markings (see pg. 11).

Size

- Size DWBs according to the expected number of delivery vehicles.
A guide: 0.7m x 1.8m for one bicycle or PAB, and 0.8m x 2.4m for one motorcycle.

Operations

- Reserve DWBs for delivery personnel only. Educate users and enforce rules.

Wayfinding (see pg. 12 for more info)

- Use signs to direct delivery personnel to the nearest DWB.
- Give additional safety instructions near DWBs (e.g. dismount and push).
- Click [here](#) to download reference markings for DWBs.

Floor Markings/ Stickers:



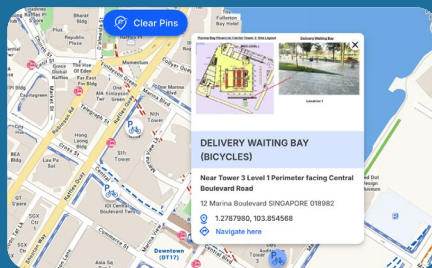
Wall Markings/ Stickers:



Find the Nearest Delivery Waiting Bay!

Building on feedback from delivery personnel, URA and the National Delivery Champions Association (NDCA) crowdsourced data from building owners and worked with the Singapore Land Authority (SLA) to publish the locations of DWBs on [OneMap](#)!

Spot or introducing a new DWB that is not mapped? Email ndca@ntuc.org.sg to include it in the database!



Parking Grace Period



Allow a parking grace period of at least 15 minutes to give delivery personnel sufficient time.

Season Parking



Offer season parking to delivery personnel. This could reduce parking violations and disorderly parking around the development.

A 15-minute grace period is offered at all URA and HDB car parks.

Eligible motorists with a valid HDB season parking for motorcycles can also top up \$3 to \$5 each month to enjoy concessionary season parking at all HDB car parks and selected URA car parks.

Easing Navigation and Wayfinding

Building Design Principles



Architects and
Developers

Good design improves delivery experience. Architects should design spaces that are easy to navigate.

Guiding principles:

1. Design for intuitive wayfinding



- Ensure clear line of sight and minimise turns in parking spaces and corridors.
- For large developments, place layout plans at key locations, such as at entrances and near DWBs.
- Use clear signs showing directions to different blocks and to DWBs.

2. Locate DWBs conveniently



- Near building entrances, lifts and collection points.
- Refer to pg. 10 for examples of ideal DWB locations.

3. Design for safety



- Use anti-slip flooring.
- Implement speed controls and safe crossing points.
- Where practicable, keep delivery vehicle paths separate from other traffic.

Lift Design



Architects and
Developers



Building Managers
and MCSTs

Delivery personnel provided feedback that poor lift design and practices can add 10 to 15 minutes per delivery, cutting into earnings and causing delivery personnel to avoid certain developments.

Design effective lift systems by ensuring adequate capacity, especially during peak periods.

Allow lift access for service staff including delivery personnel.



Lighting



Architects and
Developers



Sufficient lighting (e.g. bright or coloured lighting) helps delivery personnel locate DWBs easily. Poorly lit carparks may create safety hazards.

Network Connectivity



Architects and
Developers



Building Managers
and MCSTs

Having network connectivity in common areas, including basement carparks, can help delivery personnel gain access to delivery information and contact customers when needed. Wi-Fi serves as an alternative solution where mobile coverage is poor.



Inform Residents and Tenants



Building Managers
and MCSTs



MCSTs should share delivery guidelines and by-laws with residents and tenants, including permitted delivery timings and DWB locations. This empowers consumers to guide delivery personnel for successful deliveries. Share this information via building management apps, circulars or notice boards at lift lobbies.

Creating a Delivery-Friendly Ecosystem: Benefits for All

Facilitating deliveries within developments builds a delivery-friendly ecosystem.

Benefits include:

Residents and Tenants



- More convenience through faster deliveries
- Higher satisfaction

Delivery Personnel



- Easier access
- Less hassle and parking costs
- Less time spent navigating

Developers and Building Managers



- Enhanced property appeal
- Positive reputation
- Less congestion
- Fewer complaints



Summary of Delivery Best Practices

Good Practices

Facilitating Entry



Streamline security procedures



Implement lockers or collection points

Providing Delivery Waiting Bays



Designate delivery waiting bays for motorcycles and active mobility devices



Provide parking grace periods or concessionary season parking

Easing Navigation and Wayfinding



Install anti-slip flooring



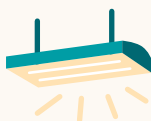
Design lifts adequately and allow access for delivery personnel



Display clear signage



Install traffic calming measures to control speed and safety



Ensure delivery routes are well lit



Share delivery-related by-laws with tenants and residents



“

When building owners invest in regular upgrades, they empower delivery personnel with smoother access and more efficient operations.

”

Charlie, Associate Director
RSP Architects

“

Finding parking during peak hours is challenging and can cause delays. Delivery-friendly initiatives such as designated delivery waiting bays and streamlined entry procedures enable us to save time and complete our deliveries more efficiently and safely.

”

Ng Gan Poh,
Delivery Personnel

“

Providing seamless delivery infrastructure is essential for modern developments. It enhances tenant convenience, reduces congestion, and ensures a future-ready environment that supports the evolving needs of urban lifestyles.

”

Chloe Poh, Head of Operations, City Square Mall
City Developments Limited



Land Transport Authority
We Keep Your World *Moving*



To make Singapore a great city to live, work and play