



# Jakarta Intermodal Integration Guideline







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# FOREWORD

## 1.1

### BACKGROUND

Jakarta is building massive public transportation infrastructure and it needs proper integration to help the intermodal transfer run smoothly. Therefore, it is important to apply the principle of integration design to avoid poor intermodal connectivity.

# 1

## 1.2

### PURPOSE OF THIS GUIDELINE

This practical guide was prepared in order to create intermodal integration, which emphasizes the ease of passengers' mobility aspect. It can be used by the DKI Jakarta Provincial Government as a reference in planning Jakarta's intermodal integration.

## 1.3

### SCOPE OF DISCUSSION

Jakarta's intermodal integration design which focuses on:

- Passenger's access speed
- Passenger's convenient
- Fare affordability
- Locations with integration needs







# BAD PRACTICES

## 2

### 2.1

#### CSW INTERSECTION

This location is an intersection between Transjakarta corridor 1 & 13 with MRT. CSW Transjakarta bus shelter, which is located at a 23-meter height, only has stair access and no direct connection with Sisingamangaraja MRT station located less than 100 meter north.

### 2.2

#### CAWANG CIKOKO



There are very few facilities that provide connectivity between Transjakarta with KRL. Passengers must pass through 90cm-wide pedestrian access if they wish to access the station's south side. Conditions worsen at night and during rain, with the lack of lighting and the water-filled access. This location will also hold Jabodebek LRT Station in the future.

### 2.3

#### THE AIM OF INTEGRATION



to shorten passenger's wait and transfer time



to make passenger's experience more convenience; shorten passenger's walking time, provide clear information about transfer information and seamless intermodal system



integrated fare and payment system lower passenger's transportation cost

No direct connection between Transjakarta Bus Stop with the MRT Station at CSW Intersection





GİRİLMEZ (No Entry) ⊖

Metrobüse Gidiş  
Access to Metrobus →





# Components of Integration

## 3.1

### FASTER, EASIER

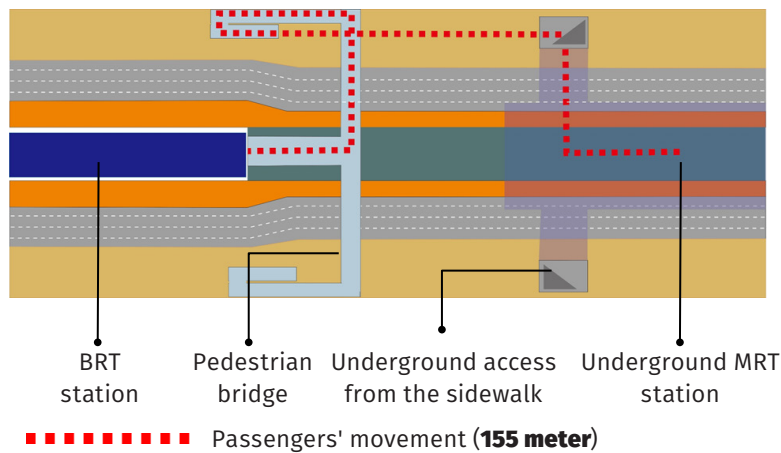
# 3

#### 3.1.1 DIRECT CONNECTION

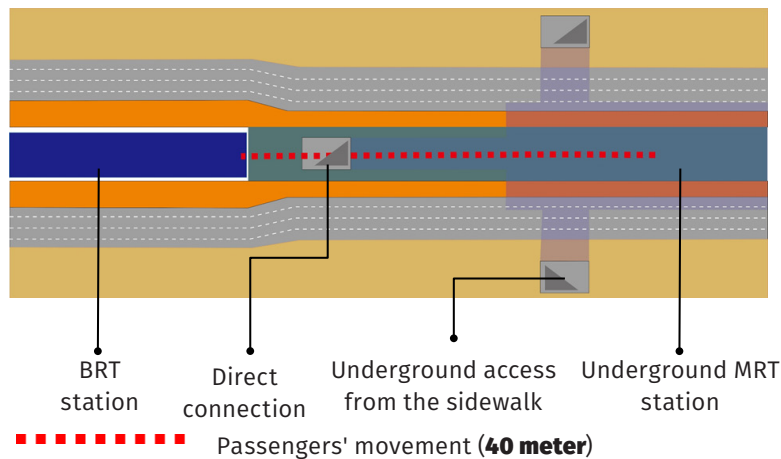
- **Direct Connection**
- **At-Grade Crossing**
- **Pedestrian facilities within 500 m radius**

Most of the time, the placement between existing and new public transport station is relatively close. During the planning stage, this common practice needs to be agreed upon between the mode's stakeholders. This integration of infrastructure is very beneficial for transferring passengers since it will shorten the wait time, transfer time, and walking distance.

#### CONVENTIONAL CROSSING



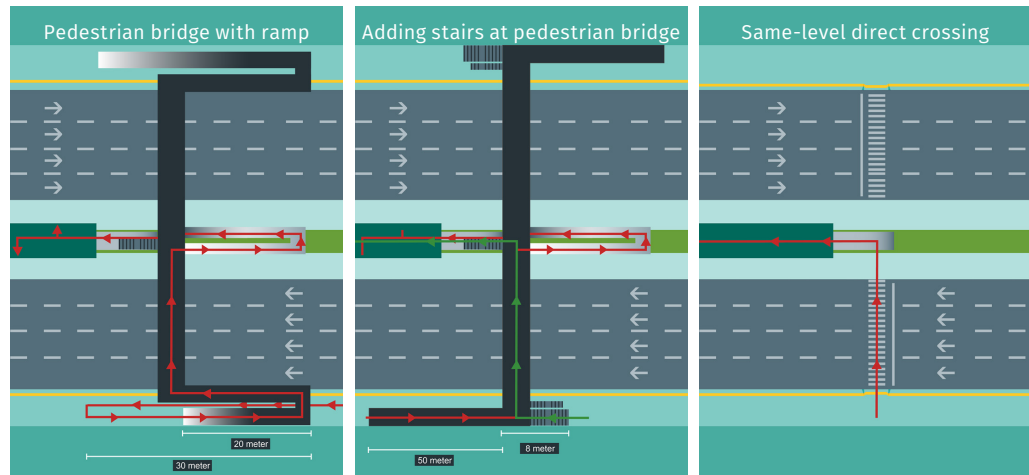
#### PASSENGER MOVEMENT WITH INTEGRATION



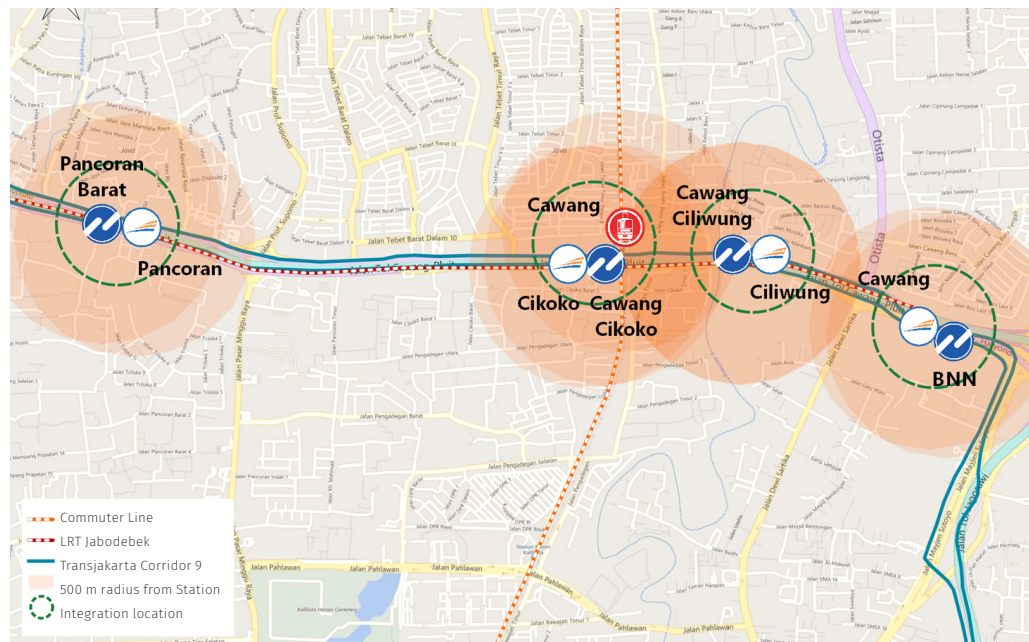
Currently, the only direct connection between Transjakarta and MRT Jakarta are only implemented at Bundaran HI Station, where underground tunnel directly connect the two modes. A direct connection will shorten the time and distance up to 74%, and passengers will not need to leave the bus stop or station.

### 3.1.2 AT-GRADE CROSSING

The majority of access to Transjakarta stations is in the form of pedestrian bridges (*Jembatan Penyeberangan Orang /JPO*), few of these has a ramp for wheelchair users. This lead to an increase in distance and time needed for the passenger to reach the bus station. JPO with a ramp can be modified by adding a set of stairs in the middle of the ramp. ITDP recommends at-grade direct crossings as access to the bus shelter, which is more universal and faster for the passengers.



### 3.1.3 AREA ACCESSIBILITY



Areas such as Cawang Cikoko become a hub of intermodal stops and stations. There are at least three modes with stopping points at Cawang Cikoko. Area integration is meant to ease the passengers' intermodal transfer.

The basic principle is to improve pedestrian accessibility within a 500-meter radius, not just on the main road. Additional pedestrian facilities can be in a form of pedestrian corridor, which are protected from the weather, with foliage and active frontage.



Connecting canopy along the sidewalk



Wide and inclusive sidewalk with proper lighting



Active building frontage



Improvement of accessibility to the intermodal station area can be made with the following elements:

**1. Shade**

The canopy will protect pedestrians from the sun and rain.

**2. Wide sidewalk**

The station area can be crowded with passengers' moving so its design needs to be inclusive and with better lighting at night.

**3.. Active building frontage**

Creating an interesting and enjoyable atmosphere for walking.

## 3.2

### MORE AFFORDABLE

- **Fare integration based on distance/time**
- **Universal electronic payment method**
- **Concession fare (students, elderly, tourists, people with disabilities, etc.)**

#### 3.2.1 RATES & PAYMENT

TransJakarta, MRT, LRT, and KRL as one united service will ease intermodal transfer with features such as one-timed payment and integrated fare. Intermodal fare and payment schemes include:

#### Stored value

- High flexibility for the user depending on available balance
- Rates adjustment or promotion flexibility for operators

#### Time-based

- The flexibility of the number of trips within a certain period for passengers
- Additional income for operators when trips duration are minimized

#### Trip-based

- Upfront ticket purchase if the passengers didn't complete the trips
- Additional income for operators for unused trips

Income from tickets is collected and consolidated by a clearinghouse, then distributed to public transportation operators based on the percentage of mileage carried out.

With this model, passengers can use the same card for every mode and change modes without having to pay again in the certain period of time.



# ACCESSIBILITY

# 4

## 4.1 AT-GRADE CROSSING



### 4.1.1 FIXED TIMING

- Adding access to at-grade crossings, especially for bus stops located near intersections
- Adding pedestrian traffic light at intersections
- At-grade crossing as direct access to the bus stop without having to use pedestrian bridge

Bank Indonesia  
BRT station



Sarinah  
BRT station





**4.1.2**  
**PELICAN**  
**CROSSING**

- This type of crossing can be placed between a wide block of roads with high traffic
- Pedestrians are asked to push a button which will automatically activate the lamp as a signal for vehicles to stop
- Currently, several TransJakarta have applied pelican crossings at Monas Station, Bundaran Senayan Station and Gelora Bung Karno Station

Bundaran Senayan  
BRT Station



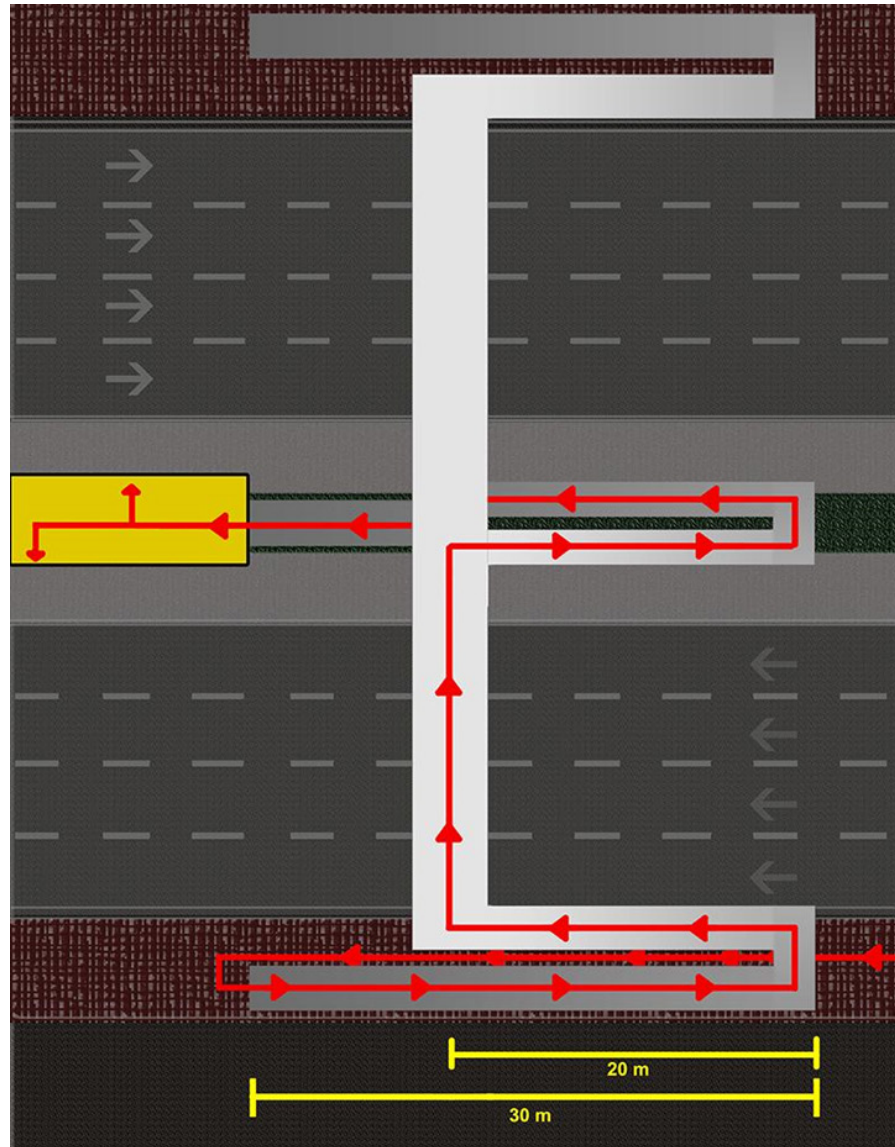
Gelora Bung Karno  
BRT Station





## 4.2 MULTI-LEVEL CROSSING

### 4.2.1 PEDESTRIAN BRIDGE



Currently, the majority of access to or from Transjakarta BRT stations are pedestrian bridge equipped with a ramp. According to the Indonesia Ministry of Public Works, the standard of pedestrian bridge's ramp maximum slope is 8%. But field assessment shows that no pedestrian bridge's ramps have met the standard yet.

Pedestrian Bridge Location	West Side	Centre	East Side
<b>Dukuh Atas</b>	8,9% - 15,6%	42%	10,5 - 12 %
<b>Karet</b>	Stairs	10,8% - 11,9%	Stairs
<b>Bendungan Hilir</b>	11,2% - 10%	10,3% - 22,3%	8,2% - 10,5%

The previous table shows that the pedestrian bridge's ramps are too steep for wheelchair users to access the BRT stations independently.

To use pedestrian bridge as access, the followings must be ensured:

- Maximum ramp slope of 8%
- Additional stairs are recommended as an alternative for faster access

**4.1.2**  
**ADDITION**  
**TO EXISTING**  
**PEDESTRIAN**  
**BRIDGE**

EXisting  
Pedestrian  
Bridge

For existing pedestrian bridge with ramp, the short term solution is to add stairs at the middle of the ramp. This facility is an option for passengers to access the bus shelter faster. Passengers can shorten the distance up to 30-meter with the additional stairs.



Design  
Recommendation





## 4.3 ACCESSIBILITY IMPROVEMENT

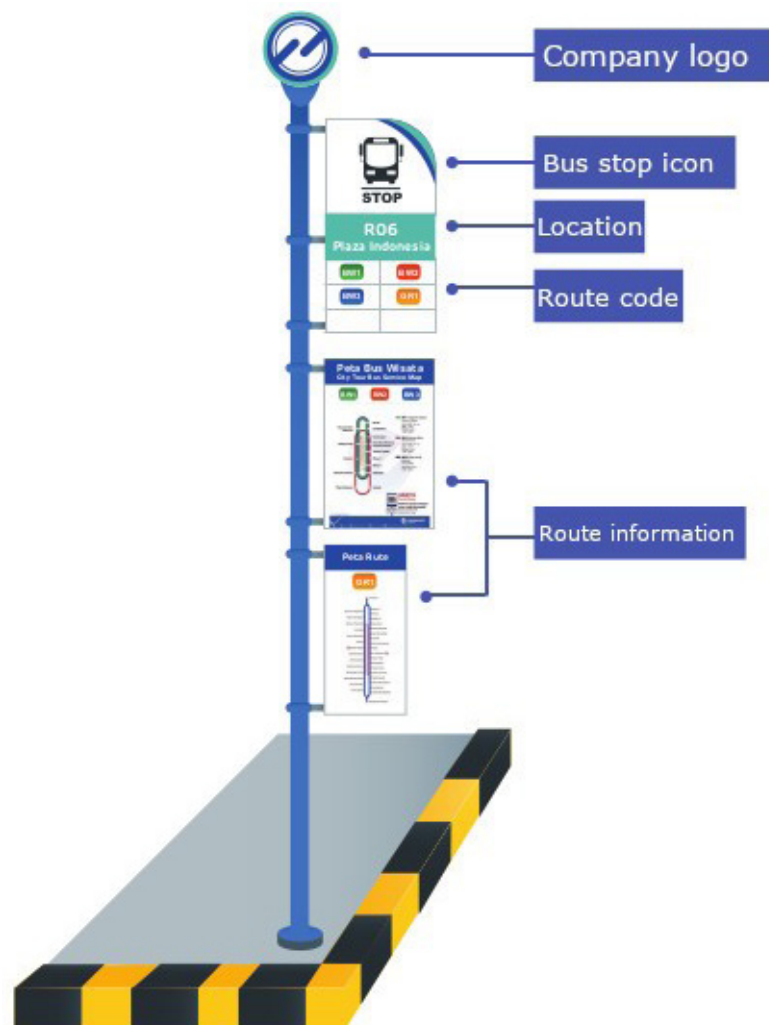
### 4.3.1 SIGNAGE

Signage at Bank Indonesia TransJakarta BRT Station

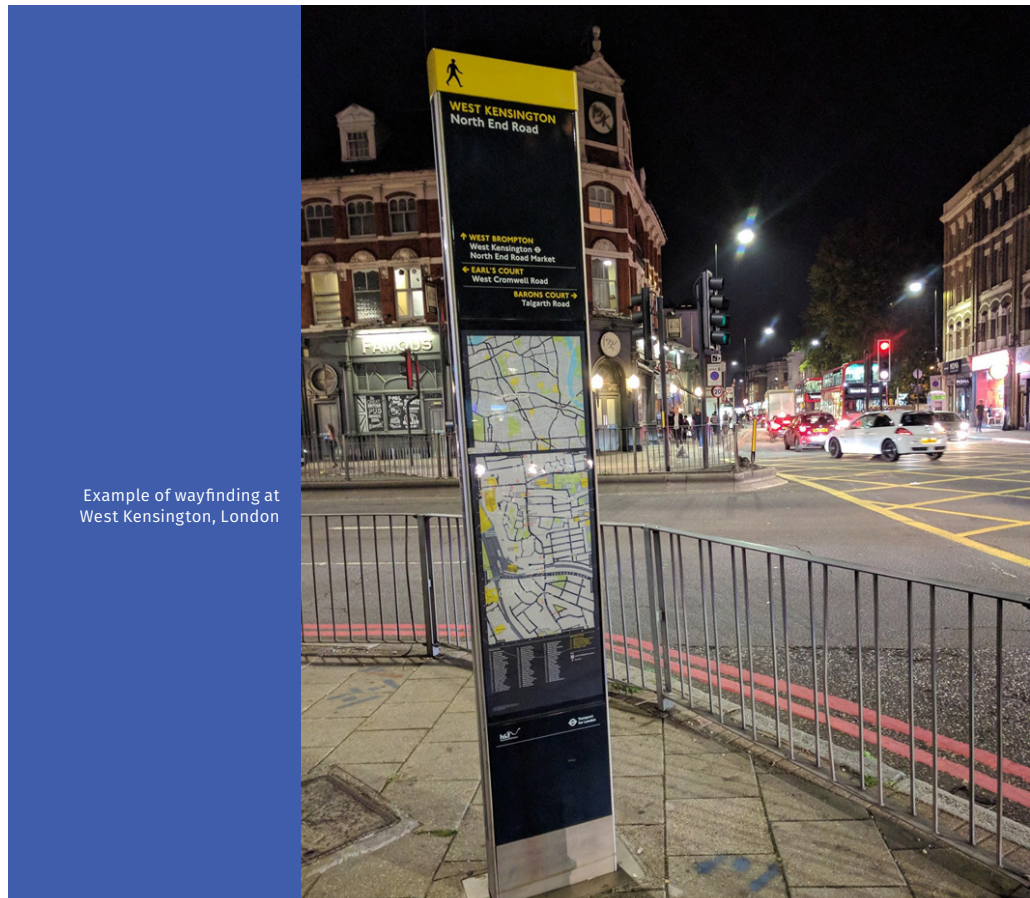


Signage as location and directional markers for pedestrians and public transport users.

### BUS STOP DESIGN



### 4.3.2 WAYFINDING



Example of wayfinding at West Kensington, London

Wayfinding and totem serve as a more complete direction and location information for pedestrians and public transport users. Wayfinding can be placed at the sidewalk near an intersection, at the middle block of a road segment, or the station/bus stop entryway. The contents on a wayfinding include:

- Street name
- Direction directory according to wayfinding location
- Public transportation information
- Situational map





### 4.3.3 WAYFINDING ON SIDEWALK TILE

Wayfinding at East  
Jatinegara Street, 500 m  
towards Kampung Melayu



Information includes:  
1. Transjakarta logo  
2. Directional sign  
3. Distance (100 m, 200 m, 300 m)  
r= 25 cm

Wayfinding can also be integrated directly on the sidewalk tile. Installation can occur during sidewalk construction or using pre-made mould. The content of this wayfinding are:

- Public transportation logo
- Directional sign
- Distance

**4.3.4  
IMPROVING  
SIDEWALK  
QUALITY**

East Jatinegara before improvement



East Jatinegara after improvement



Sidewalk at Dukuh Atas, Sudirman





### 4.3.5 SHADES

Sidewalk canopy at  
Kuala Lumpur



Shopping arcade at  
Kuala Lumpur



The convenience of walking, especially in tropical countries, can be improved by providing canopies to protect pedestrians from the sun or rain. Shading can be in the form of a canopy on the sidewalk or arcade/alley, added with shops opening as active frontage.



↑ 地铁 Metro

← 地铁 →





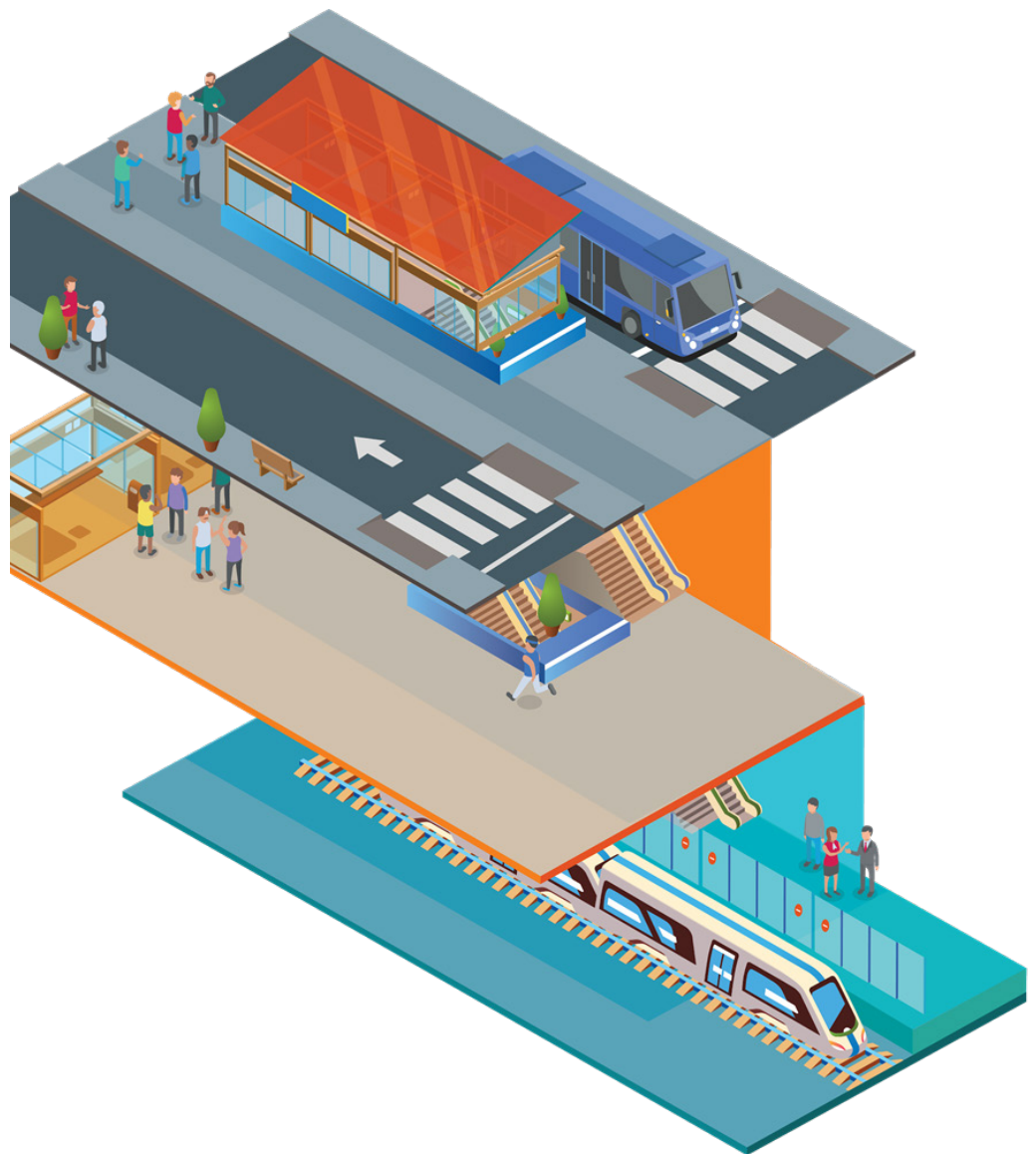
# TYPICAL DESIGN

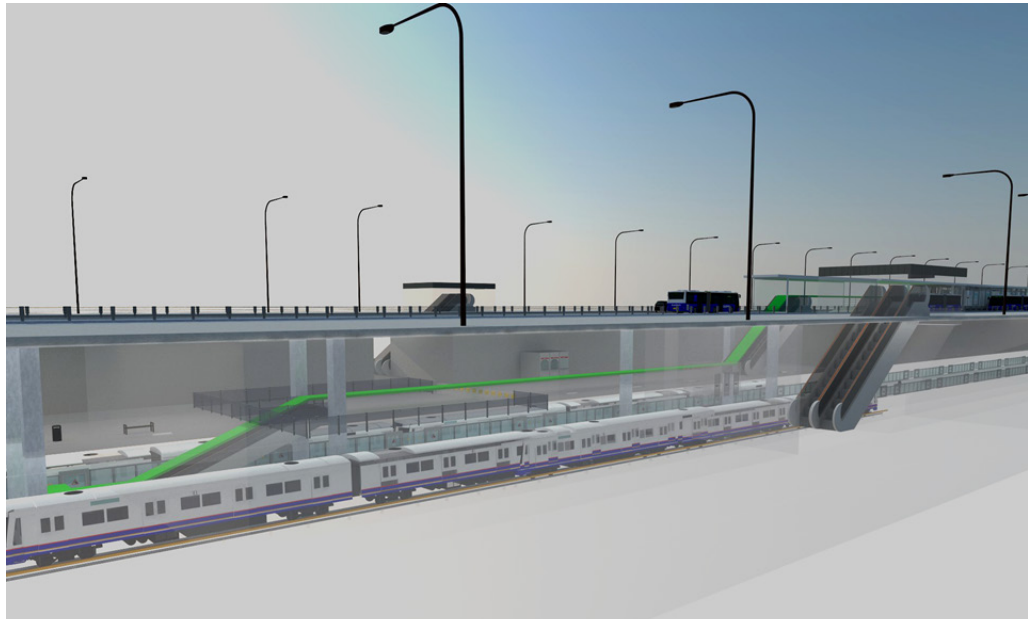
## 5.1

### MEDIAN BRT - UNDERGROUND MRT

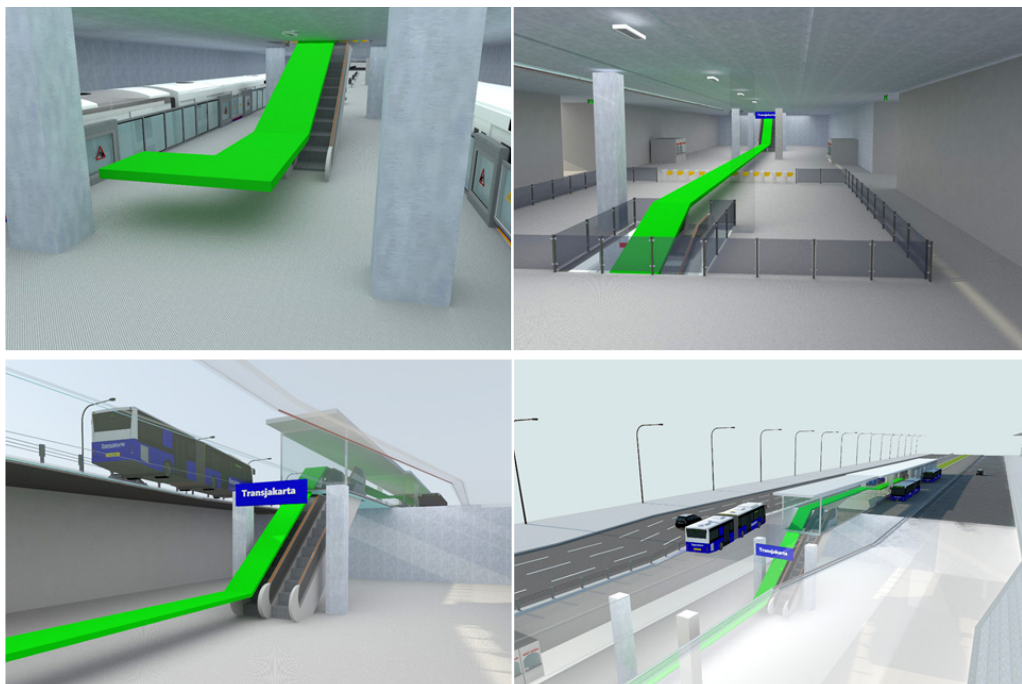
# 5

- Underground MRT stations are commonly located near existing BRT bus shelter on the road median
- The MRT station and BRT station must be connected with a tunnel on the concourse area
- Concourse area becomes a common space shared by BRT and MRT passengers
- Elevator and escalator provided for this connection will ensure universal access





Integration of infrastructure between underground MRT station and BRT station at road median using a connecting tunnel, become a direct connection for intermodal transfer.



A tunnel connecting the underground MRT station and BRT station at road median as a direct connection provides the following benefits for intermodal transfer:

- Shorter distance
- One similar element for passengers
- Expanding mass transportation network

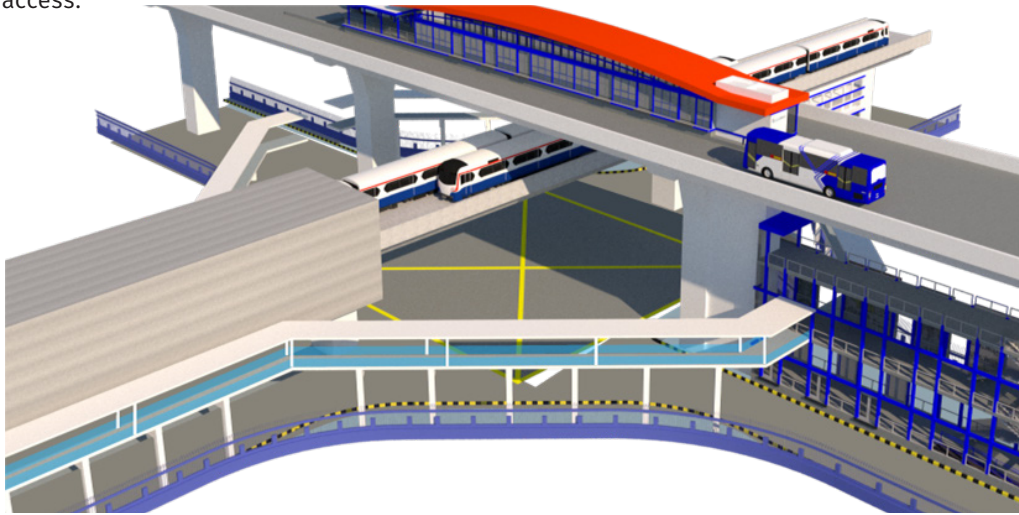


## 5.2

### ELEVATED BRT - ELEVATED MRT

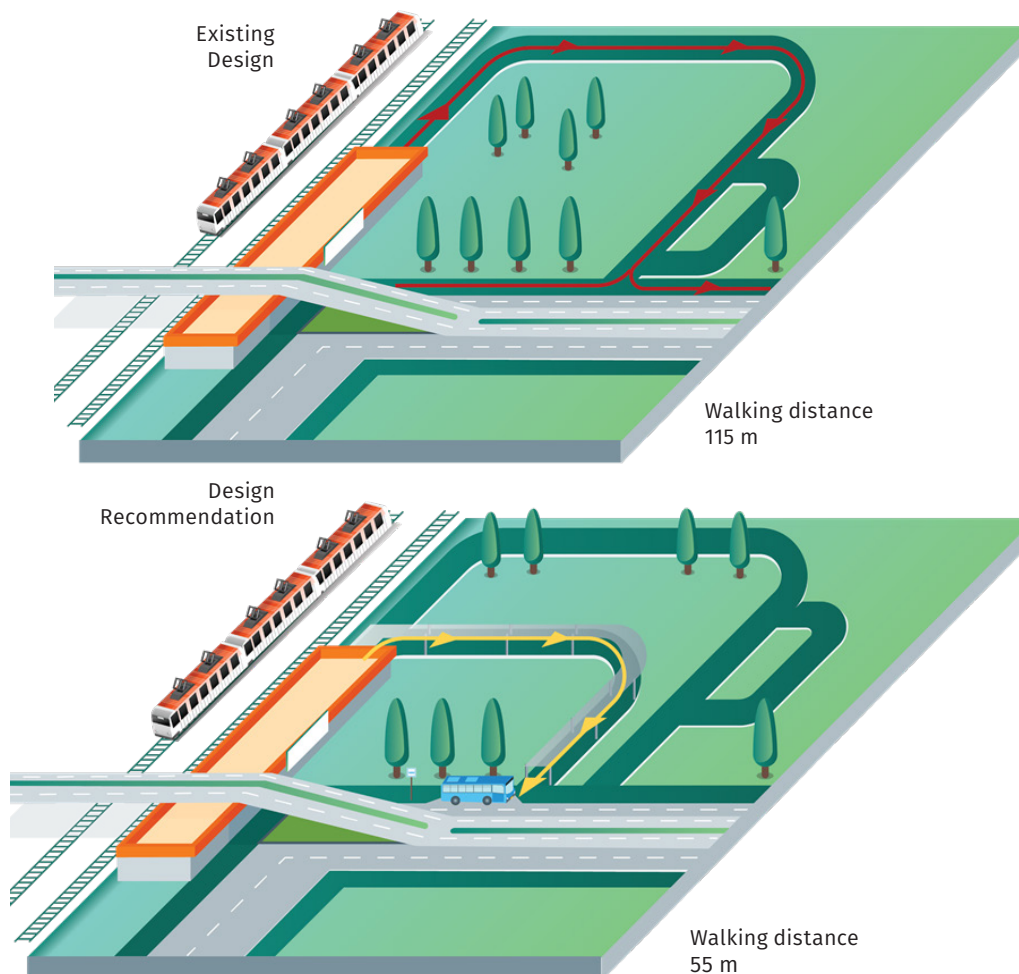
It's important to have a connection for intermodal transfer to keep passengers inside the system.

The solution to elevation difference is by providing elevators and/or escalators as universal access.



## 5.3

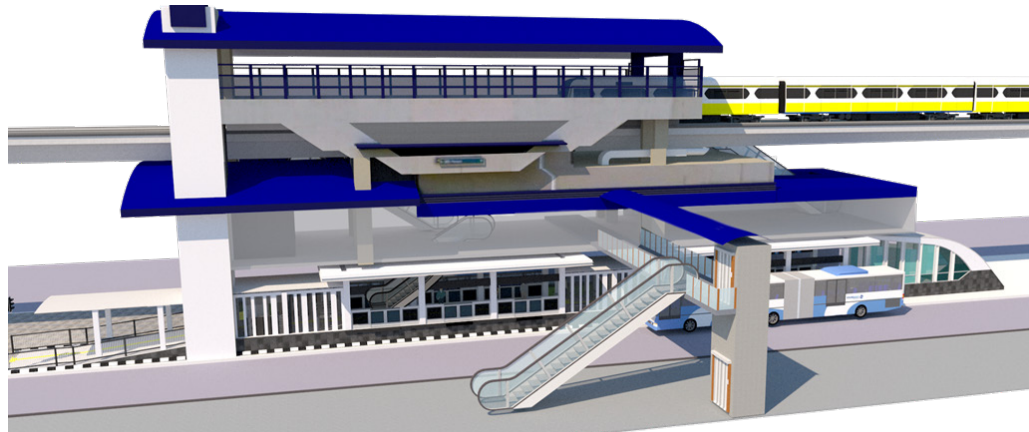
### BRT - KRL



Commonly, passengers from the train station have to continue to their trip with other modes. The followings are the principle for this typical integration:

- Bus stop located as near as possible to the train station exit
- A weather-protected pedestrian connection between the station and bus stop
- Clear directional, route, and schedule information

## 5.4 BRT - LRT

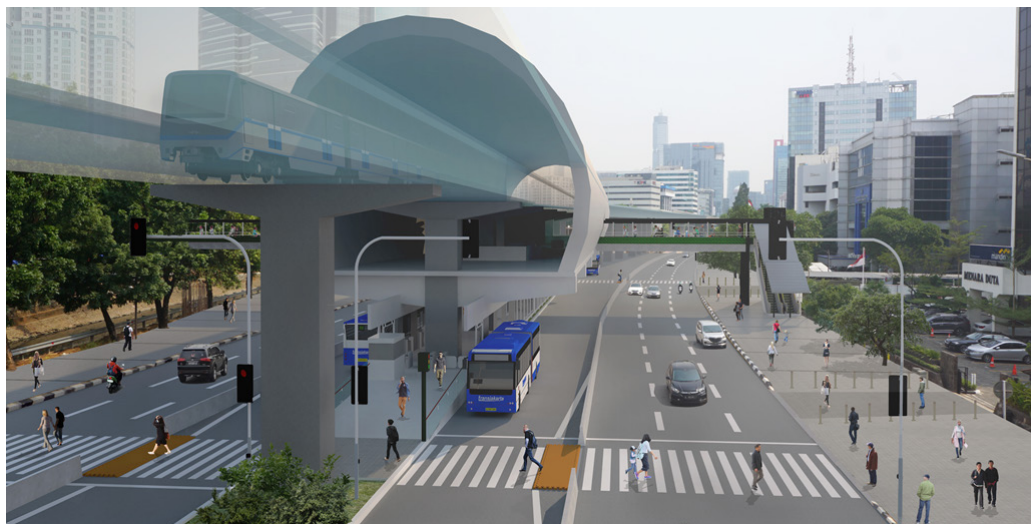


- Closely located LRT stations and BRT stops (top and bottom) are integrated on the station concourse area with a direct connection
- Escalator and elevator as access from the sidewalk

Setiabudi Utara  
Existing  
Condition

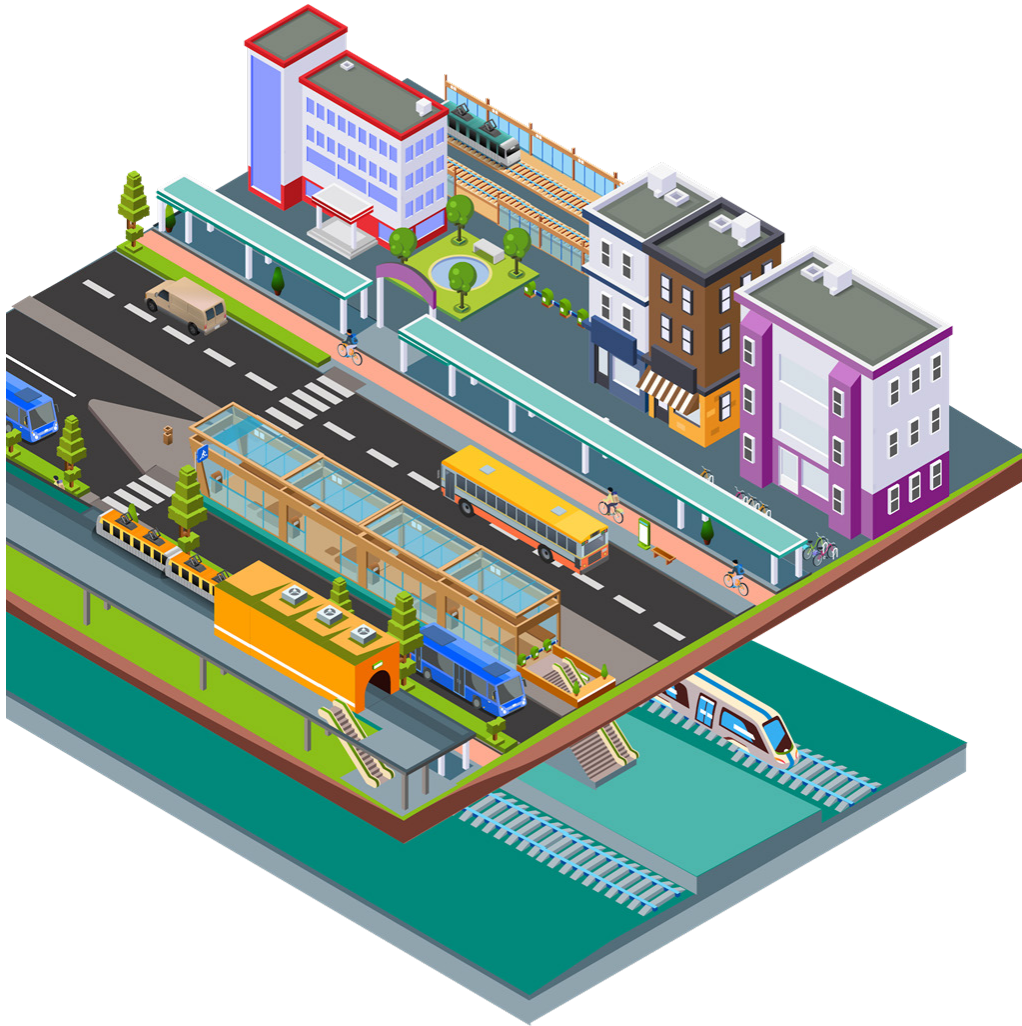


Setiabudi Utara  
Design  
Recommendation





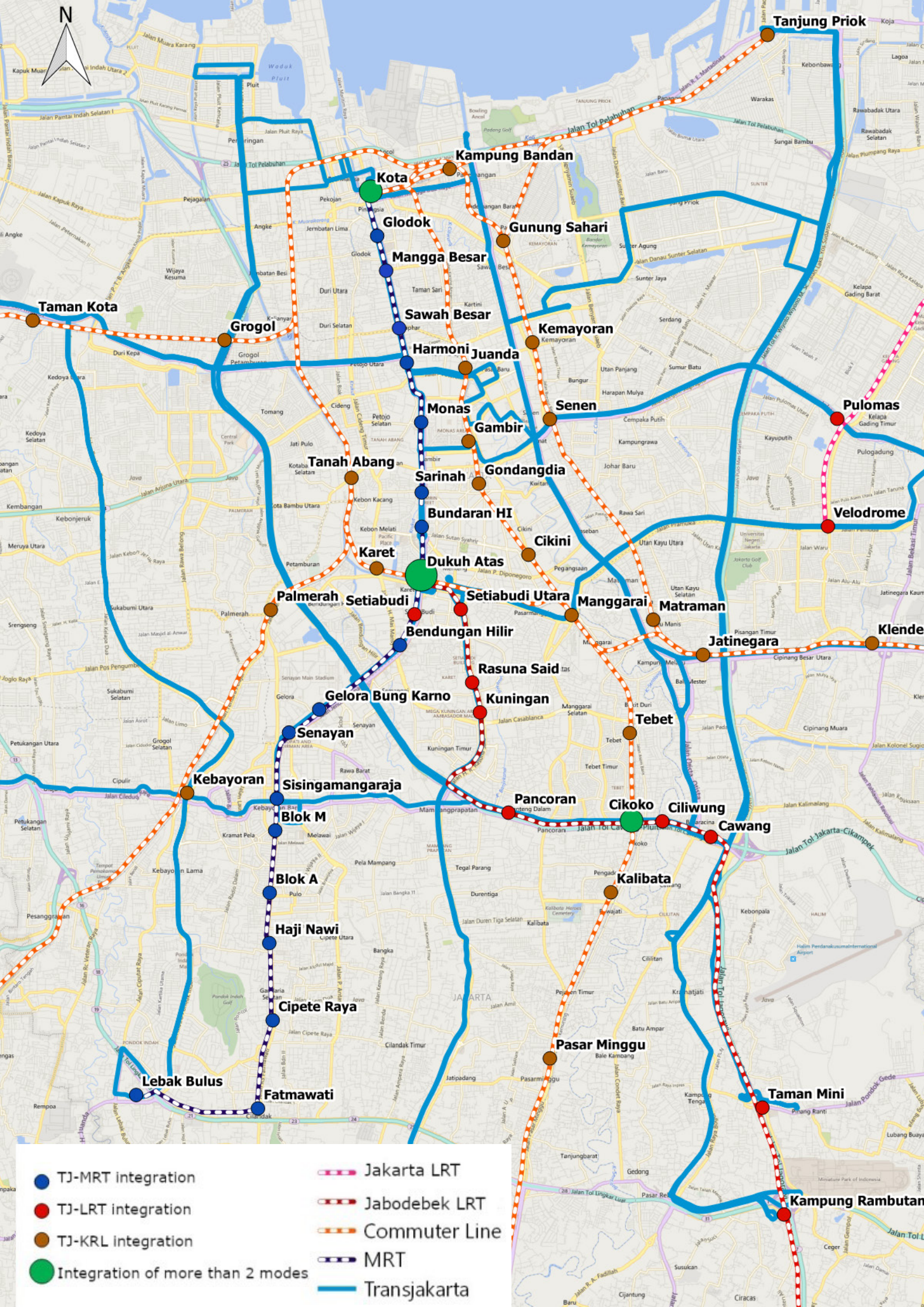
## 5.5 AREA OF INTEGRATION



Area integration is focused on accessibility and connectivity within a 500-meter radius from every station or any public transport stop. Pedestrian movement is facilitated for convenience, safety and attractive at the intermodal area with the following elements:

- Wide sidewalk
- Proper shade and lighting
- Public space activation for interaction





- TJ-MRT integration
- TJ-LRT integration
- TJ-KRL Integration
- Integration of more than 2 modes
- Jakarta LRT
- Jabodebek LRT
- Commuter Line
- MRT
- Transjakarta



# INTEGRATION LOCATION

# 6

## 6.1 MAPPING

### Location needed intermodal integration

There are a total of 53 locations at Jakarta that have a potential for intermodal integration. These intermodal integration types are:

- TJ - MRT
- TJ - KRL
- TJ - LRT Jabodebek
- TJ - LRT Jakpro
- Integration of more than 2 modes on one location

## 6.2 LIST OF LOCATIONS



Phase 1

Transjakarta stop	MRT Station	Integration Typical Design
Bundaran HI	Bundaran HI	Direct Connection Area Integration Bus Bay Stop-station connection Accessibility Improvement
Dukuh Atas 1 & 2	Dukuh Atas	Area Integration
Dukuh Atas 1	Setiabudi	Direct Connection
Karet	Bendungan Hilir	Direct Connection
GBK/Polda	Istora	Direct Connection
Bundaran Senayan	Senayan	Direct Connection
CSW	Sisingamangaraja	Direct Connection
Blok M	Blok M	Area Integration
Blok A Petogoan (Bus Stop)	Blok A	Bus Bay
H. Nawi Raya (Bus Stop)	Haji Nawi	Bus Bay
Jalan Cipete Raya (Bus Stop)	Cipete Raya	Bus Bay
Jalan Banjarsari (Bus Stop)	Fatmawati	Bus Bay
Lebak Bulus	Lebak Bulus	Direct connection



Phase 2

Transjakarta stop	MRT Station	Integration Typical Design
Sarinah	Sarinah	Direct Connection
Harmoni	Harmoni	Direct Connection
Sawah Besar	Sawah Besar	Direct Connection
Mangga Besar/Olimo	Mangga Besar	Direct Connection
Glodok	Glodok	Direct Connection
Kota	Kota	Direct Connection



Transjakarta stop	MRT Station	Integration Typical Design
Dukuh Atas 1 & 2	Dukuh Atas	Area Integration
Setiabudi Utara	Setiabudi	Direct Connection
GOR Sumantri	Rasuna Said	Direct Connection
Depkes	Kuningan	Direct Connection
Pancoran Barat	Pancoran	Direct Connection
Cawang Cikoko	Cikoko	Direct Connection
Cawang Ciliwung	Ciliwung	Direct Connection
BNN	Cawang	Direct Connection
Kampung Rambutan	Kampung Rambutan	Transjakarta-train station connection
Garuda Taman Mini	TMII	Transjakarta-train station connection
Pemuda Rawamangun	Velodrome	Transjakarta-train station connection
Pulomas	Pulomas	Transjakarta-LRT station connection





Transjakarta stop	KRL Station	Integration Typical Design
Dukuh Atas 1 & 2	Sudirman	Area Integration
Senen & Senen Central	Pasar Senen	Area Integration
Cawang Cikoko	Cawang	Area Integration
Manggarai	Manggarai	Area Integration
Stasiun Jatinegara 2	Jatinegara	Accessibility Improvement
Jembatan Merah	Rajawali	Accessibility Improvement
Pasar Baru Timur	Kemayoran	Accessibility Improvement
Slamet Riyadi	Pondok Jati	Accessibility Improvement
Taman Kota	Taman Kota	Accessibility Improvement
Pademangan	Kampung Bandan	Accessibility Improvement
Pasar Kebayoran lama	Kebayoran	Accessibility Improvement
Grogol/Latumenten	Grogol	Accessibility Improvement
Stasiun Klender	Klender	Accessibility Improvement
Gambir 1 & 2	Gambir	Stop-Station Connection
Juanda	Juanda	Stop-Station Connection
Kota & Stasiun Kota	Jakarta Kota	Stop-Station Connection
Tanjung Priok	Tanjung Priok	Stop-Station Connection
Stasiun Cikini (Bus Stop)	Cikini	Bus Bay
Stasiun Gondangdia (Bus Stop)	Gondangdia	Bus Bay
Stasiun Tebet (Bus Stop)	Tebet	Bus Bay
Stasiun Duren Kalibata (Bus Stop)	Duren Kalibata	Bus Bay
Stasiun Pasar Minggu (Bus Stop)	Pasar Minggu	Bus Bay
Stasiun Karet (Bus Stop)	Karet	Bus Bay
Stasiun Tanah Abang (Bus Stop)	Tanah Abang	Bus Bay
Stasiun Palmerah (Bus Stop)	Palmerah	Bus Bay

# CASE STUDY AND RECOMMENDATION

## 7.1

### TAMAN KOTA

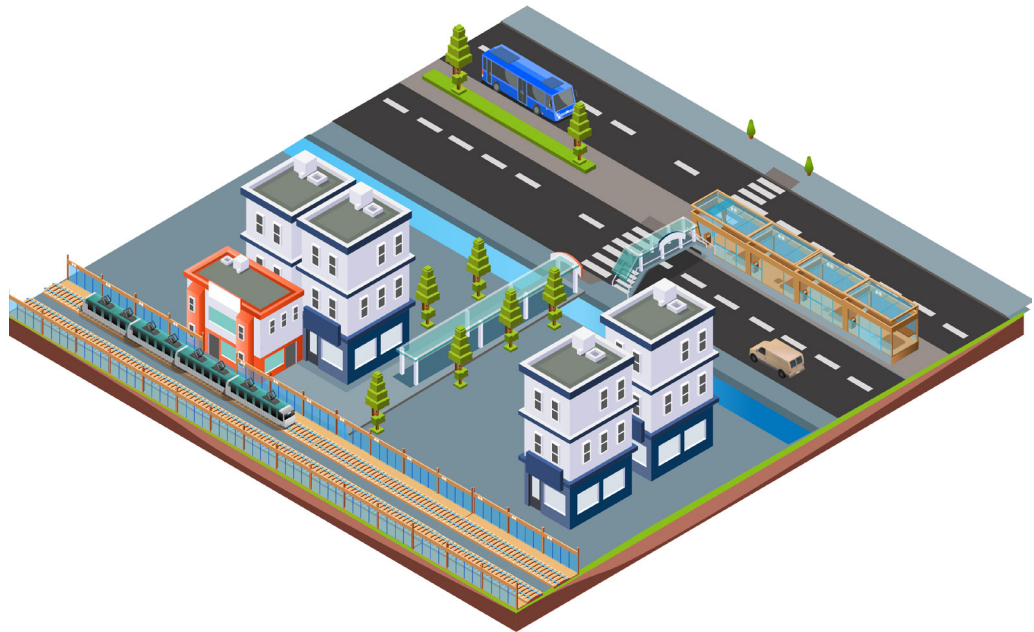
# 7

- The distance between Taman Kota Transjakarta BRT station (corridor 3) and Taman Kota KRL station is approximately 180 meter.
- Both are connected with Taman Kota street, which has minimal pedestrian facilities
- Recommended for intermodal connection for this case are continuous improvement of the surrounding sidewalk, with continuous sidewalk, proper shades, and proper lighting for passenger safety at night time.

Taman Kota Transjakarta BRT station and KRL Station Map

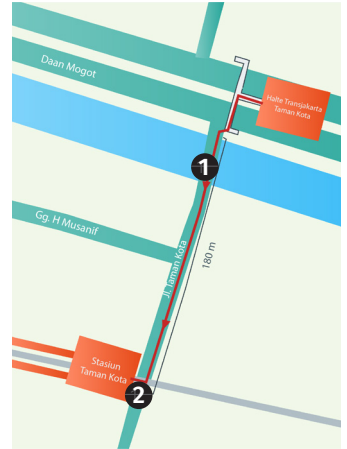


Design recommendation of Taman Kota Intermodal Connection





Location 1  
Existing  
condition



Location 1  
Design  
recommendation



Location 2  
Existing  
condition



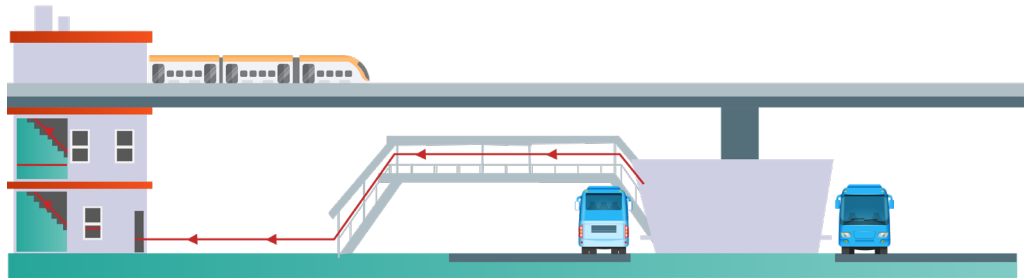
Location 2  
Design  
recommendation



## 7.2 JUANDA

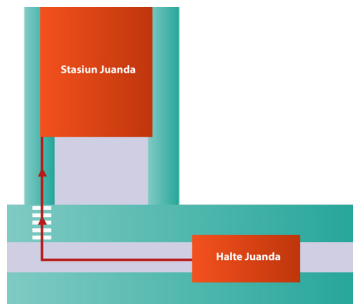
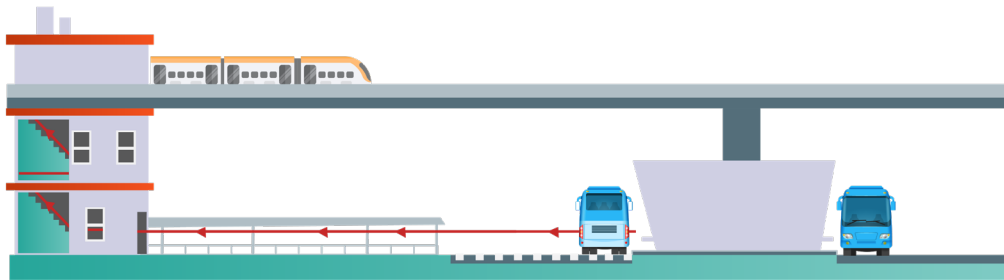
Existing connection between Juanda Transjakarta BRT station and KRL station

Existing  
Juanda Integration



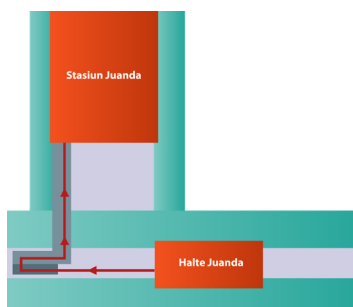
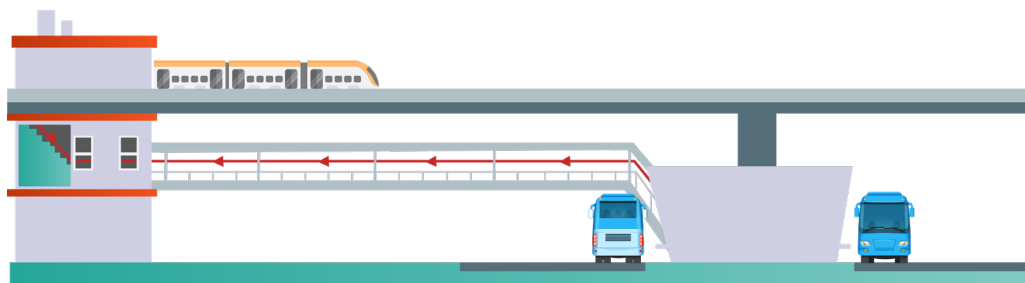
- Currently, the integration at Juanda is still partially done, as Transjakarta pedestrian bridge connection only lands on the sidewalk at the end of the station
- Passengers have to descend the pedestrian bridge then climb back at concourse to KRL platform
- ITDP is recommending two alternatives; direct connection from pedestrian bridge to KRL concourse or at-grade crossing to increase pedestrians movement efficiency

Option 1  
Design  
Recommendation



At-grade crossing for passenger connection

Option 2  
Design  
Recommendation



Direct connection through pedestrian bridge from Transjakarta shelter to KRL station concourse level



Existing condition of Juanda intermodal integration



Option 1  
Design  
Recommendation



Option 2  
Design  
Recommendation







# CONTACT PERSONS

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