

# **Study on last mile connectivity with Metro Rail Stations to improve Metro Rail patronage in CMRL.**

LUTP Project

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# Back Ground on Metro Rail In Chennai

Need For Rail Based Rapid Transport system was the need of the hour to cater to the traffic volumes in the rapidly growing Chennai Metropolitan city.

Two corridors are implemented in Phase-1

Corridor-1 : 23.1KMs and 17 Stations

Corridor -2: 22KMs and 17 Stations

Extension: 9KMs and 9 Stations

CMRL envisages to provide the people of Chennai with a fast, reliable, convenient mode of transport which is integrated with other forms of public and private transports, Viz Buses, Sub-urban Trains, MRTS and Auto rickshaws, Share Autos.

## CHENNAI METRO RAIL PROJECT PHASE I



Chennai Metro Rail – Network Map

# Need for the study

Chennai is a city with network of different modes of transport, already existent. Viz, Local trains, MRTS, City Bus, Share Auto, Auto and Taxi. With the partial commissioning of around 25KM and another 20KM of phase-1 in pipeline, it is intended to study on improvement of Metro rail patronage.

Last mile connectivity with Metro rail stations is an area of concern in every Metro Network.

The problem varies from stations to station and locality to locality, which calls for a case to case analysis.

The study is taken to:

- To improve patronage
- To Create awareness
- To streamline other modes of transport around metro stations
- To utilise resources optimally

# SCOPE and OBJECTIVE of STUDY

In this study, we intend,

- To identify few of the functional Metro Stations of CMRL and verify for connectivity to nearby transportation hub, dense population areas, commercial activity centres, business complexes and find ways to improve connectivity to Metro stations.
- Study various parameters around station to improve last mile connectivity.
- Means to Improve cycling and walking patronage around stations.

# Analysis Points – Criteria for choosing

S.No	Parameter	Criteria for choosing this parameter
1	Intermediate Para Transports – availability.	To check how well the transport system is physically integrated with surrounding community
2	Bus connectivity, Availability of other Public Transport:	To remove passenger anxiety when need to change or transfer. To check to reduce transfer time
3	Zones for Hawkers	Helps avoid multiple trips
4	Availability of Active Interfaces, Openness, visibility in Station Premises.	Improves comfort level.
5	Lighting levels	Improves safety. Concern for women travelling at nights or isolated places.
6	Proper footpaths, walk path, foot over bridges availability, Lifts.	Efforts aimed at reducing walking time and making walking more pleasant encourage people use public transports
7	Police Patrolling, Security	To improve safety
8	Parking zones within station premises	Improves passenger convenience
9	Passenger information	To reduce uncertainty for people making new unplanned trips.

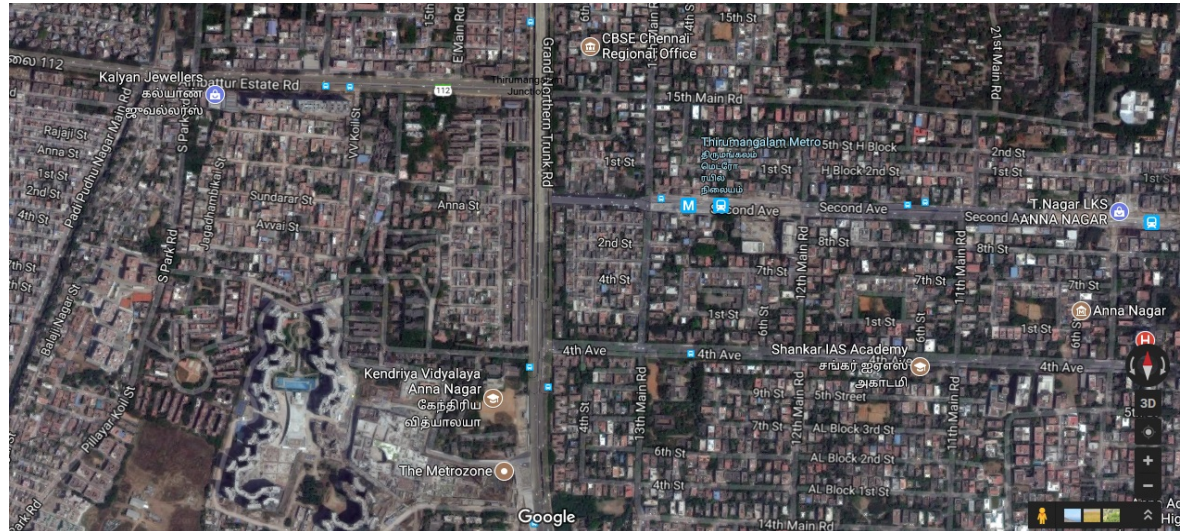
# Thirumangalam Station

## Highlights of Station:

This station is on Second Avenue of Anna Nagar in between 12<sup>th</sup> and 13<sup>th</sup> main Roads. It is in midst of residential area and also connects to the inner ring road. This station also acts as gateway to the nearby dense populated area which are not connected by Metro Rail.

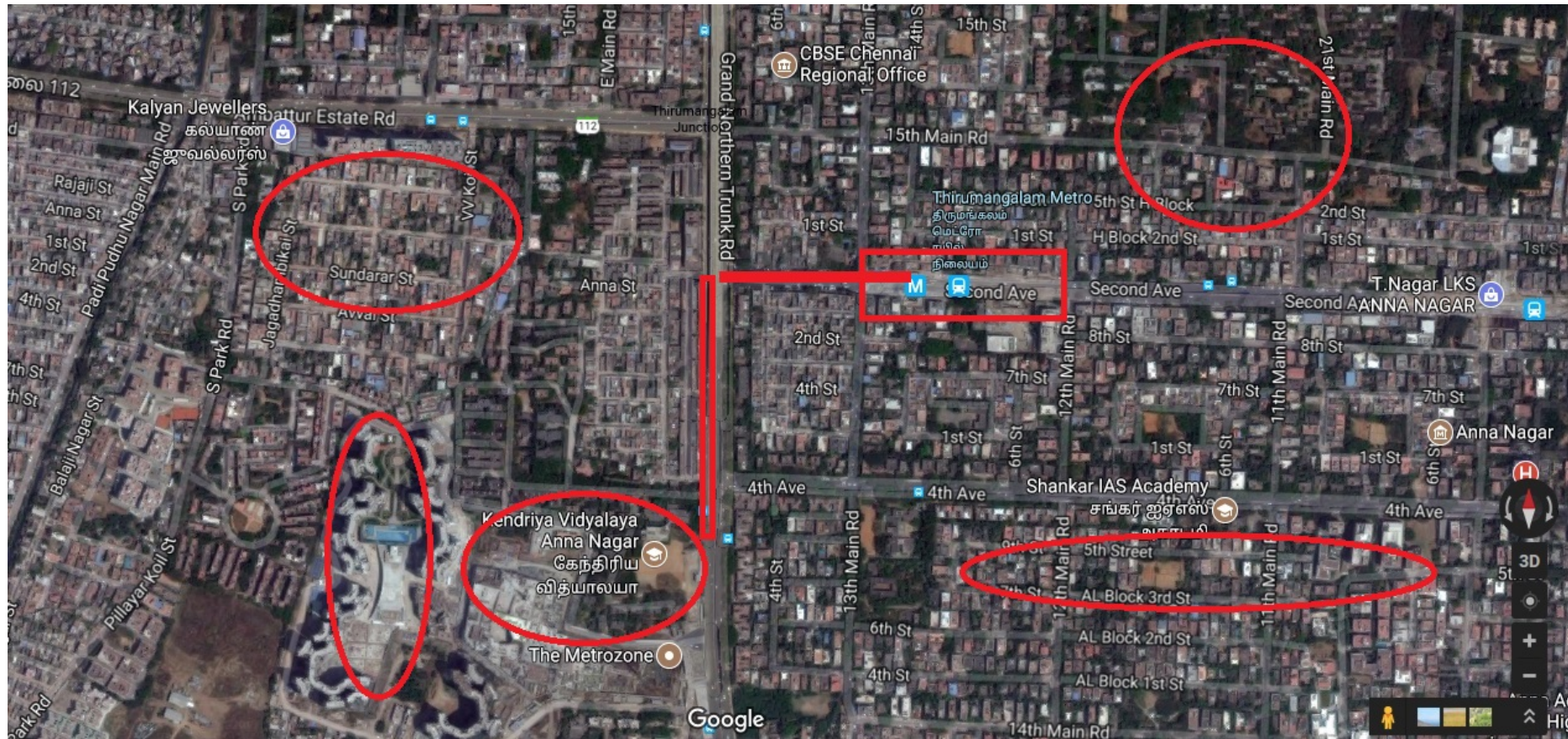
## Analysis:

- (1) IPT – availability and stands for Auto Rickshaw: Tata Magic and Auto rickshaws available
- (2) Bus connectivity, Availability of other Public Transport: City Bus Stand available
- (3) Zones for Hawkers: Not available
- (4) Availability of Active Interfaces, Openness, visibility: Yes
- (5) Lighting levels: Good
- (6) Proper footpaths, walk path: available
- (7) Police Patrolling, Security: Available
- (8) Parking zones within station premises: Ample parking available in this station
- (9) Passenger Information: Available





# Thirumangalam Station





# Thirumangalam Station

## Recommendations:

Integrated Para Transport (IPT): The area has IPT- TATA Magic operating but their parking can be streamlined near the station. Designated stands for IPT/Share Autos can be made.

Improve access from nearby dense populated area: CPWD quarters is in the vicinity of about 500mtrs. Pedestrian routes with safe pedestrian crossing across Inner ring road/ 2<sup>nd</sup> Avenue will reduce time and effort.

Suitable bus route information, bus no. inside station can be made available

Available space can be ear-marked for hawkers making the vicinity more lively. Makeshift Cycle repair shops, cobblers, other petty services providers can be made in station premises abutting the streets.

Shared cycle available in this station. Such Cycle points can also be introduced within Housing colonies, in nearby Govt. Quarters.



# Nehru Park Station

**Highlights of Station:** This station is in the Arterial NH4. Surrounded by many commercial establishments.

Nearby Dense Populated neighbourhood: Moderate.

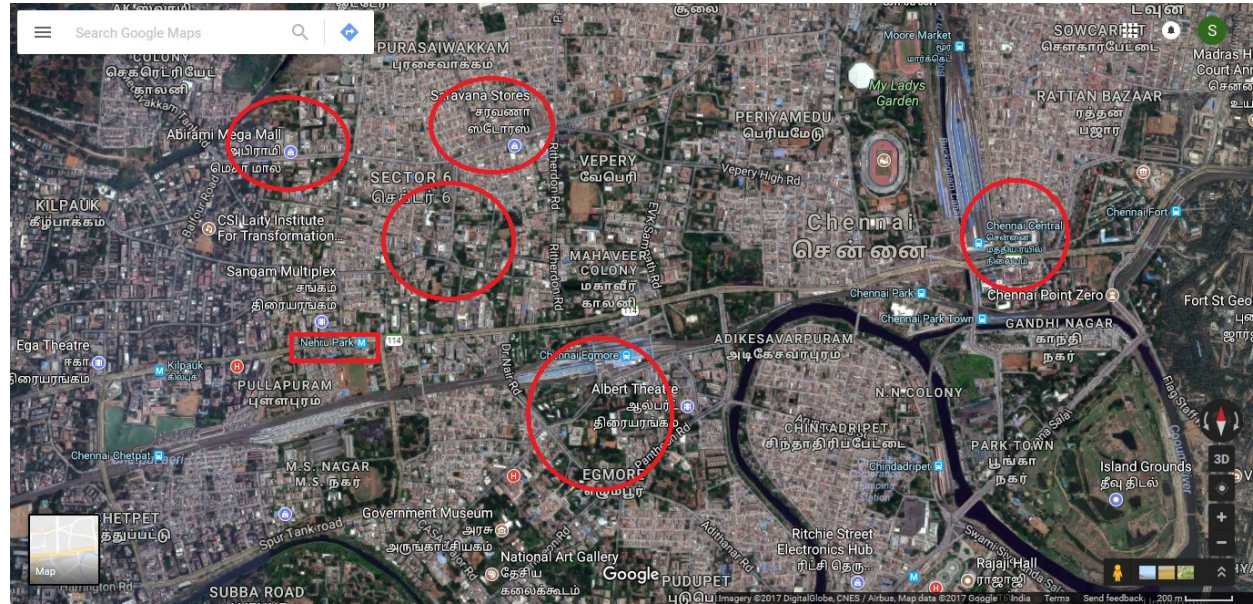
Commercial area: Medium

Tourist/recreational hangouts /spots: Sports complex, Theatres

Office Space: few Establishments

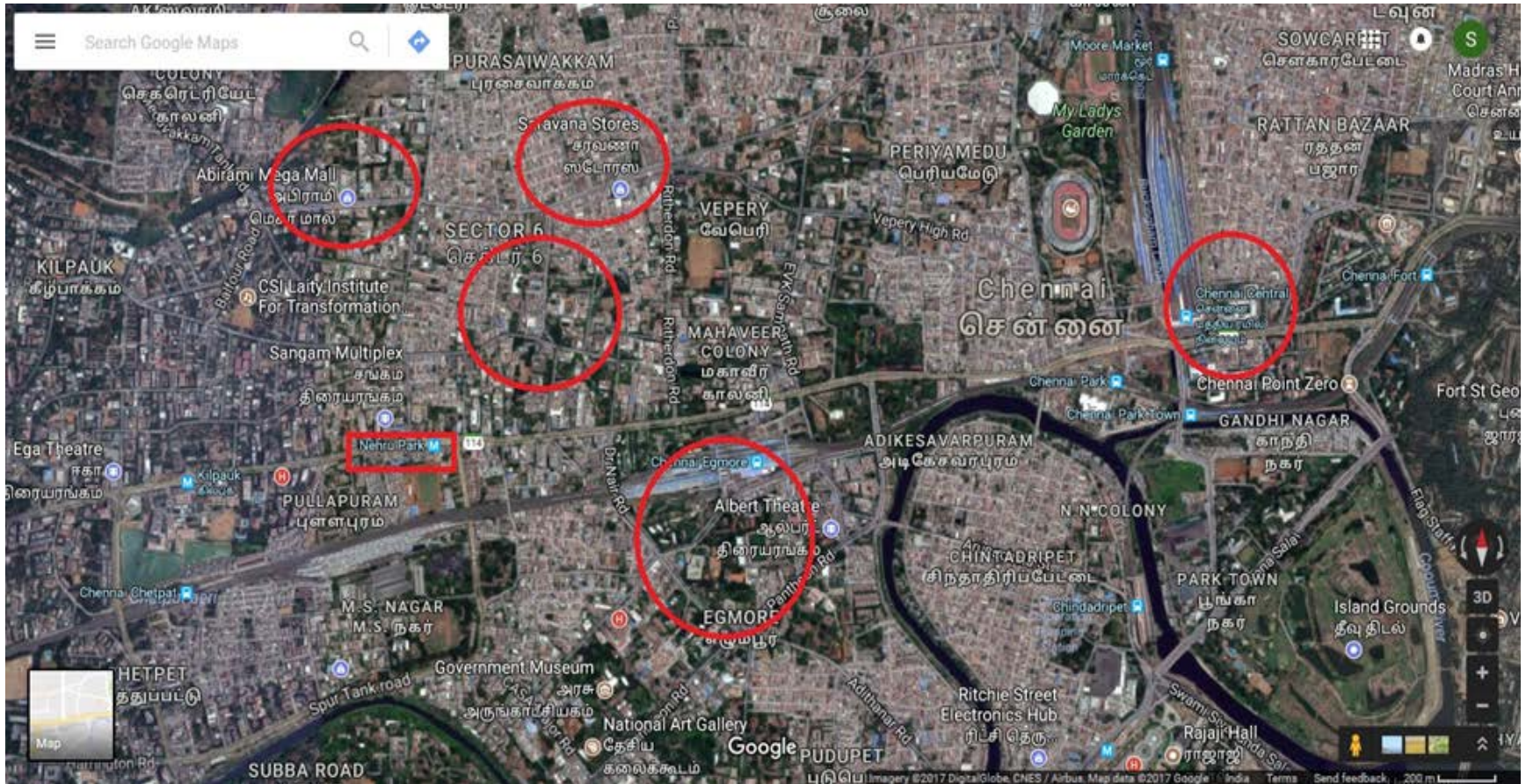
## Analysis:

- (1) IPT – availability and stands for Auto Rickshaw: NO.
- (2) Bus connectivity, Availability of other Public Transport: City Bus Stand available
- (3) Zones for Hawkers: Not available
- (4) Availability of Active Interfaces, Openness, visibility: Yes
- (5) Lighting levels: Good
- (6) Proper footpaths, walk path: available
- (7) Police Patrolling, Security: Available
- (8) Parking zones within station premises: Available in this station
- (9) Passenger Information: Available





# Nehru Park Station



As this is a terminal station as of now, Feeder buses are planned to connect the City Railway terminals from here.

ur Hussain, Meera Hussain and Abdul Rahman

# Metro feeder bus services from Nehru Park begin

**TIMES NEWS NETWORK**

**Chennai:** Passengers reaching the city at the Chennai Mofussil Bus Terminal (CMBT) or Chennai Airport and taking a metro train will now be able to travel up to Egmore and Chennai Central railway terminals after getting down at Narayana Park metro station.

The bus feeder service is a small bus service with the number board S 96 and will be operated once every 20 minutes, Cmrl said. This is likely to continue till the line up to Central and Egmore stations is commissioned.

Chennai Metro Rail (Cmrl) has started bus feeder services from Neelankar park station up to Egmore and Central. The bus feeder service is essentially a small bus service with a number board S 96 and will be operated once every 15 minutes, Cmrl said. It is likely to continue till the line is up to Central and Egmore.

re stations is commissioned, which is likely by March next year, say sources.

The bus will pick commuters up from the entrance of the Nehru park station. Similarly, passengers getting down at Egmore and Central who want a fast transit to locations like Anna Nagar, Koyambedu and even Chennai airport can travel in the 30-minute bus to the Nehru park station quickly. From there, passengers can take the up to CMBT and Alandur on the green line. At Alandur, they can shift to the red line for a train to Chennai airport.

The 7.4 km underground stretch from Thirumangaludi to Nellore was inaugurated in May and has helped residents in the western parts of the city get rapid transit to the southern suburbs. The line, so seen as a surge in patronage after this stretch was opened. Once Central and Egmore is linked, patronage is expected to rise.

A state-of-the-art Central square, which will connect Central railway terminus, suburban train terminus and bus terminus, and stations will come up opposite the square.

CCTVs will be placed at all the four corners of the square to help in solving crime. The Thirumangaludi station will be monitored by more than 100 cameras having night vision and motion detection system linked through a live video link to a mobile control room, the state said.

In a similar manner, a road and a bus stand will be merged here to help commuters in the area.

52 can  
Sowca  
help cu

**KEEPING WATER**  
the newly-installed  
be monitored at a  
police station

**Chennai:** City Commissioner AK Viswanathan inaugurated 52 CCTVs at the Lower Bazaar Police Station in Sowcarpet area. The area has many clothes and garment shops and is known for its district. More CCTVs will operate on the police road.

CCTVs will curb crime but also help in solving it. It will include the Thangasala area. More Lower Bazaar cameras have megapixel detection and linked through a live feed on mobile phones, statement he said.

In a street road and menpet have cameras. Issues in the



(9) Passenger Information: Available



# Airport Station



# Airport Station

## Recommendations:

Improve access from nearby dense populated area: Feeder Bus to Nearby residential locations to Chrompet, Tambaram from the vicinity of Station.

MEPZ, Madras Export Processing Zone. Feeder service, IPT to this area from Metro station will improve connectivity.

Information of train timings can be displayed inside arrival hall of Airport.





# Little Mount Station

**Highlights of Station:** This station is on GST Road. This station also acts as gateway to the nearby dense populated area Like Adyar and which are not connected by Metro Rail. Currently this station serves as a terminal station.

Nearby Dense Populated neighbourhood:  
Many neighbourhoods not connected by Metro/Train.

Commercial area: Not many

Tourist/recreational hangouts /spots: Nil

Office Space: connects to many Private and Government establishments.

## Analysis:

(1) IPT – availability and stands for Auto Rickshaw: Tata Magic and Auto rickshaws available

(2) Bus connectivity, Availability of other Public Transport: City Bus Stand available

(3) Zones for Hawkers: Not available

(4) Availability of Active Interfaces, Openness, visibility: Yes

(5) Lighting levels: Good

(6) Proper footpaths, walk path: available

(7) Police Patrolling, Security: Available

(8) Parking zones within station premises: Moderate

(9) Passenger Information: Available



# Little Mount Station





# Little Mount Station

## Recommendations:

Integrated Para Transport (IPT): The area has IPT- TATA Magic operating but their parking can be streamlined near the station. Designated stands for IPT/Share Autos can be made.

Improve access from nearby dense populated area by providing reliable and frequent feeder service from Adyar, Kottur and other southern interior localities.

Suitable signage for bus connectivity in side station can be made available

Available space can be ear-marked for hawkers making the vicinity more lively. (Cobblers, other petty vendors)

The path from Bus stand to Station can be made more passenger friendly . Suitable barricades and railing, disabled friendly footpaths can improve .





# Saint Thomas Mount Station

**Highlights of Station:** St. Thomas Mount station is a sprawling two level premises and is an inter modal hub. Public can interchange with the Sub-Urban train network and as well the upcoming MRTS line.

Nearby Dense Populated neighbourhood: Many Dense neighbourhoods

Commercial area: Nil

Tourist/recreational hangouts /spots:

Office Space: Not many.

## Analysis:

- (1) IPT – availability and stands for Auto Rickshaw: NO.
- (2) Bus connectivity, Availability of other Public Transport: No
- (3) Zones for Hawkers: Not available
- (4) Availability of Active Interfaces, Openness, visibility: Yes
- (5) Lighting levels: Good
- (6) Proper footpaths, walk path: available
- (7) Police Patrolling, Security: Available- Minimum
- (8) Parking zones within station premises: Ample parking available in this station
- (9) Passenger Information: Available







# Saint Thomas Mount Station

## Recommendations:

Improve access from nearby dense populated area: Feeder Bus to Nearby residential locations.

Ample covered parking space available. This can be leveraged by pooling residents in the nearby residents who prefer to use for last mile connectivity.



2017-11-05 14:02:26 STM P3 S GV



2017-11-05 14:00:10 STM P1 S CAR PARK

# Koyambedu Station

## Highlights of Station:

This station is on National Highway. It is also a vantage point to the entry of the city from South and west Tamil nadu through Chennai By pass and NH4. CMRL Admin building and Depot is catered by this station.

Nearby Dense Populated neighbourhood: Not many 1-2 Km

Commercial area: Wholesale markets nearby.

Tourist/recreational hangouts /spots: Nil

Office Space: CMRL administrative building

## Analysis:

- (1) IPT – availability and stands for Auto Rickshaw;
- (2) Bus connectivity; Availability of other Public Transport- Yes.
- (3) Zones for Hawkers - No
- (4) Availability of Active Interfaces, Openness, visibility - Good
- (5) Lighting levels- Good
- (6) Proper footpaths, walk path: Moderate.
- (7) Police Patrolling, Security- Yes
- (8) Parking zones within station premises – Ample parking space available.
- 9) Passenger Information: Available





# Koyambedu





# Koyambedu Station

## Recommendations:

**IPT:** The area has Auto Rickshaws operating but their parking can be streamlined near the station. No designated stands for Autos. The Auto is parked on the road and not streamlined. The availability of IPT can be advertised inside station premises.

The city bus stand near Rohini Cinema can be moved near to station access along highway. station building/entrance on Highway to be made more lively. Encourage hawkers presence .

Improve access from nearby dense populated area:

Suitable signage for bus connectivity in side station.

Cycle repair shops and other utility can be encouraged surrounding the premises.



# General Recommendations

- Improve on Pedestrians paths
- Encourage IPT around station premises.
- Encourage NMT
- Feeder bus service
- Establish Cycle repair shops, Other petty service providers
- Improve Hawkers in station premises to make more lively.
- Relevant Passenger information display in vantage positions.

# Study- Way Forward

- A qualitative analysis was done. Going forward we plan to do a quantitative analysis with the set parameters.
- Various parameters to be defined with rating
- A questionnaire may be circulated to collect the statistics.
- Interactive screens or Mobile App developed to collect primary data.
- Extend the study to other stations

CMRL

**THANK YOU**

# Information Dissemination

## (1) Mobile Apps

Connectivity, route stops, schedules

Other facility availability

Fare structure, Locate Nearest station

Places of interest from station, tour guide

feeder services details

Parking lots availability

Way finding within stations and interchanges

Information on arrival and departure

## (2) Integrated information display



# Others

- Existing transport modes which would be considered for multi modal hub
- Fare integration
- Estimated modal share which would be considered for identifying the metro stations for considering them for multi-modal hub
- Parameters to be considered for last mile connectivity
- Conclusion - Typical Road Cross - Sections at Metro Stations, Guiding principles for considering last mile connectivity, representation of Metro stations considered for multi modal hub through maps, etc.

# Media News

Hussain, Meera Hussain and Abdul Rahman.

The currency was in the form of 8,000 Euros, 52,500 Saudi Riyals, 2,500 US dollars, 8,500 Dirhams, 235 Kuwaiti Dinars, 4,000 Swiss Francs, 620 Canadian dollars, 40 pounds and 250 Omani Riyals. The currency was hidden and concealed in the room of the passengers.

The currency is used to buy gold in countries like Singapore, Malaysia and Dubai which is smuggled back into India, said senior officials.

Usually the currency is packed into a roll and placed inside the rectum just before boarding the flight, sources said. After the passengers board the flight, they remove it so that there is no discomfort during the journey.

Just before the flight is about to land, the currency notes are again concealed inside the rectum, to escape the eyes of enforcement agencies like Customs and Directorate of Revenue Intelligence (DRI), said officials. Women are generally preferred for these kind of operations as they are undetected on most occasions.

Three women were arrested at the Mumbai airport on Wednesday who had tried to conceal a large amount of foreign currency in a similar manner in their rectum. They were travelling to Dubai.

Last Saturday, Customs officers seized 250gm gold worth ₹7.5 lakh from one Pankaj Kumar, who arrived at the airport from Singapore by Scooty flight no TR 502. He had concealed the bars in his rectum.

and 230 other locations across five countries to raise awareness on eye donation

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52 can Sowcar help cu



**KEEPING WATCH**  
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In a road and menpet h. cameras. issues in the kers have l

does not trust card tests, says it returns 'fail'

**WAR ON DENGUE**

**Cycle sharing comes to city; rent a bicycle at ₹10 an hour**

**Don't drink HC**

**Chennai Metro Rail**  
Published by chennaimetrorail@gmail.com | 17 | 22 hrs

You ride their two wheels free of cost - The New Indian Express

**You ride their two wheels free of cost**  
Now cycle every day to your office from the metro station at Velupillai, Sheny Nagar and Nehru Park

KEVIN DIAZ EXPRESS.COM

22,518 people reacted

Like Comment Share

Write a comment...

Top Comment -  
Vidyalakshmi Gunaakaran Chennai Metro Rail I recently checked with a personnel @ Thirumangalam station and I was informed that we should pay rental of 3000 every month and we can use the bicycle for 12 hours and after 12 hours we will be charged 50 Rs/hr. Does this differ from station to station?

Like Reply Message 2 · 17 hrs

View 1 more reply

Chennai Metro Rail Thank you for your enquiry, The CMRL Eco Friendly Transport Initiative has a security deposit of Rs. 3000 which is refundable and is presently available in Egmore, Thangasalai, Nehru Park, Thirumangalam and Anna Nagar Tower metro stations.

Like Reply 1 · Commented on by chennaimetrorail@gmail.com | 17 | 2 hrs

Vinay Venkatesh need to pay 3000 every month to use the cycle... Nothing is free...

Like Reply Message 2 · 14 hrs

View 6 more comments



Chennai Metro Rail  
Published by chennaimetrorail@gmail.com | 17 | 22 hrs

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Like Reply Message 2 · 17 hrs

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View 6 more comments

22,518

People Reached

370

Reactions, Comments & Shares

271

Like

234

On Post

37

On Shares

10

Love

5

On Post

1

On Shares

2

Haha

0

On Post

2

On Shares

12

Wow

12

On Post

0

On Shares

1

Sad

0

On Post

1

On Shares

1

Angry

1

On Post

0

On Shares

15

Comments

13

On Post

5

On Shares

56

Shares

56

On Post

0

On Shares

1,092

Post Clicks

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