

A long-exposure photograph of a multi-lane highway at night. The image is dominated by bright, curved light trails from vehicles, creating a sense of motion and flow. The trails are primarily yellow and white, contrasting sharply with the dark blue and black background of the night sky and road. The road curves to the right, and a guardrail is visible on the left side. The overall mood is dynamic and modern.

LAST MILE CONNECTIVITY

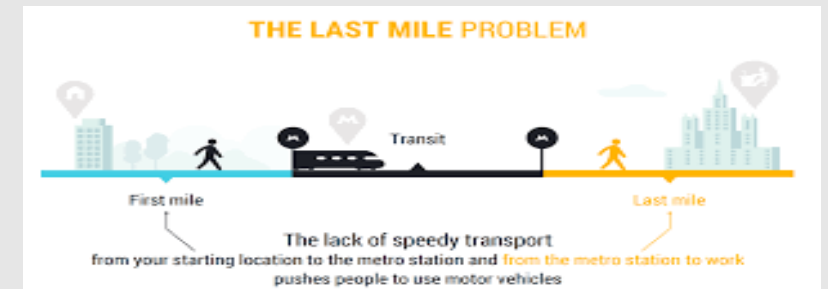
MEENABAKKAM – METRO STATION

INTRODUCTION

- “Last Mile Connectivity” MEANS

origin to transit system OR transit system to origin

refers to getting people from a transportation hub like a railway station, bus depot or metro station to their final destination or vice versa.



INDEX

- CHENNAI METROPOLITAN AREA
- STUDY AREA DELIENATION – REASONS
- METHODOLOGY
- OBJECTIVE OF THE STUDY
- STUDY AREA - TRANSPORT CHARACTERISTICS
- STUDY AREA - TRANSPORT ISSUES –
- ANALYSIS
- RECOMMENDATION AND PROPOSALS

1.	Chennai metropolitan Area	1189 sqkm
2.	Population (2011)	86.54 lakhs
3.	Growth rate	2.08 (decadal)
4.	Major corridors (radially spread)	<ol style="list-style-type: none"> 1. NH5 — towards red hills – Vijaywada 2. NH 205 — towards Avadi – Arakonam 3. NH4 — towards Sriperumbudur – Bangalore 4. NH45 — towards Tambaram – Tiruchy
5.	Major radial ring roads	<ol style="list-style-type: none"> 1. Inner Ring Road 2. Outer Ring Road 3. Chennai By pass road
6.	Existing Public transport system	Bus, sub urban rail system, Metro Rail system
7.	Vehicular Registration (as on 2018)	55.7 lakhs
8.	Public trabsport Modal Share	28.2% (Bus + Rail)
9.	Average Trip length	9.9km
10.	Length of Roads	6010 km(5623 km – Interior roads and 387.35km Bus Route Roads)



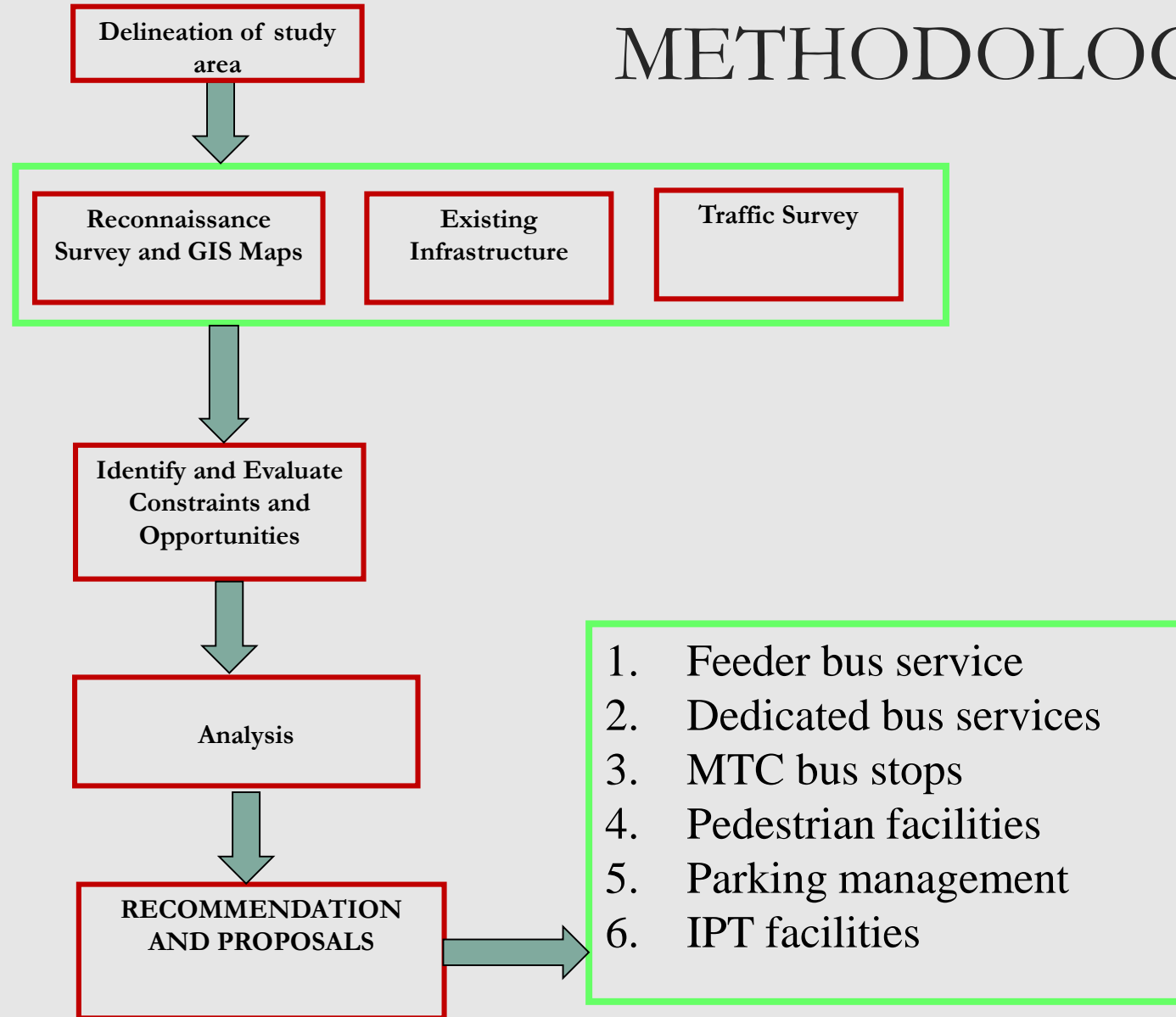
REASONS FOR CHOOSING

MEENAMBAKKAM	PALLAVARAM
Strategic location, regional headquarters of the Airports Authority of India for South India	Immediate neighbourhood after Airport
The existing transit modes / feeder networks are not connected to the Northern, eastern, western and southern part of the city	This place lacks connectivity to the Airport
Lacuna of integration Public transport	Last Mile connectivity with the parallelly and perpendicularly running IT corridors is missing

OBJECTIVE

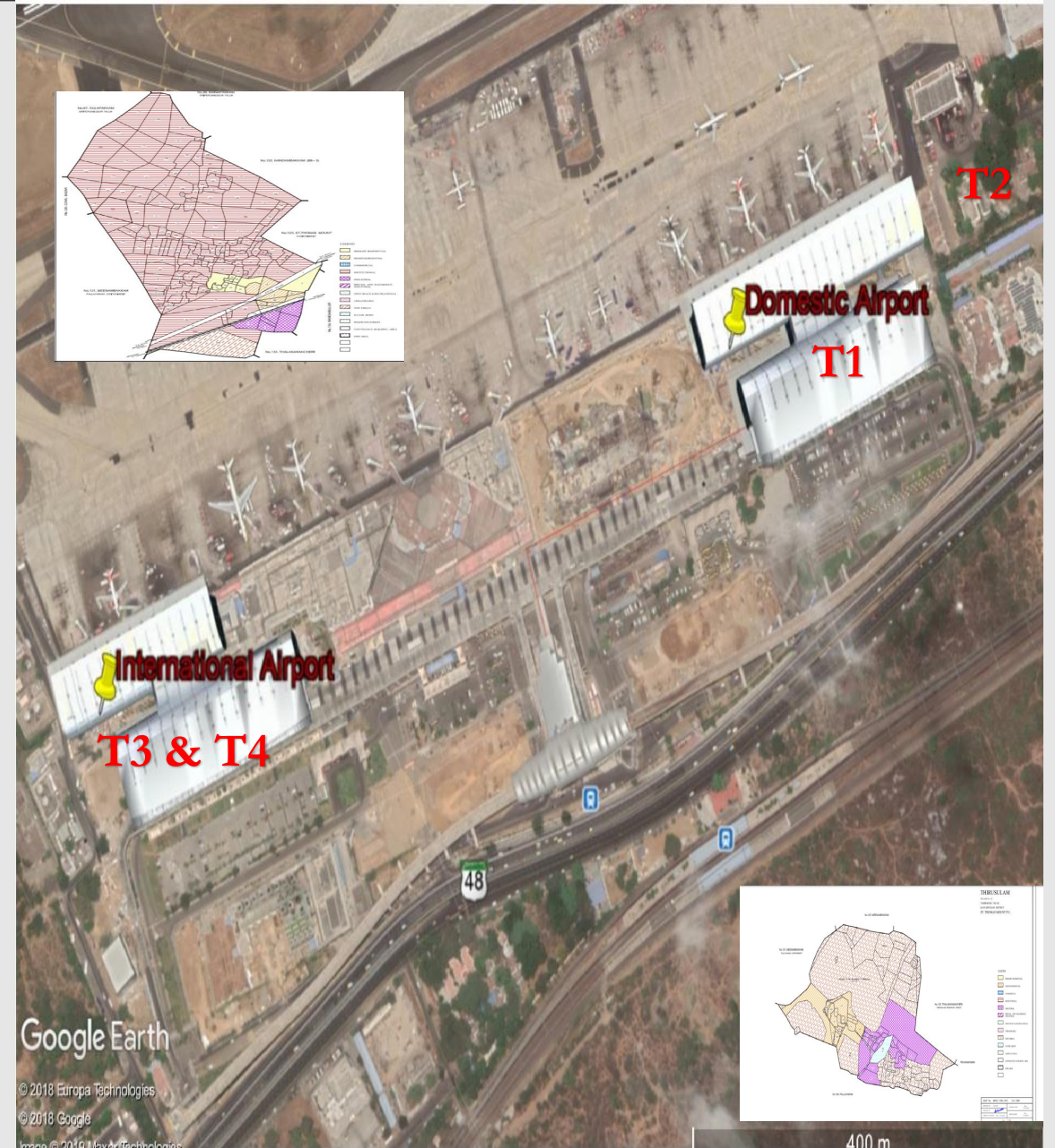
MEENAMBAKKAM AIRPORT	PALLAVARAM
Improve/enhance the existing feeder service available inside the airport to ease the journey of the commuters from/to the Airport	Achieve Last mile connectivity to/from the Airport
Improve accessibility and establish Last mile connectivity from station to the traffic generators through different modes in the influence area	To propose feeder network connectivity with the Airport
To prepare Concept Plan for Multi Modal Integration for the Study Area	To enhance traffic signaling at junction
Introduce Bus services from Airport connecting to the other parts of the city	introduce feeder and MTC bus stops within the area to improves the connectivity and accessibility
Promote shuttle service at the entry/exit point of the airport	To improve pedestrianization access, connectivity and mobility

METHODOLOGY



MEENAMBAKKAM AIRPORT

- first airport in India to have international and domestic terminals located adjacent to each other.
- Located in the southern neighborhood on the GST Road (@ 21km from CBD)
- Spread over an area of 550 acres
- Terinal 1 – Domestic , Terminal 2 - Cargo ,
Terminal 3 & 4 - International Airport
- Existing Landuse – Institutional, residential and Commercial
- Chennai Metro, Tirusulam and sub urban railway
- Airport premises fall within the St Thomas Mount and Pallavaram Cantonment Board's limits.
- The rest of the area comes under the Meenambakkam town panchayat's jurisdiction



EXISTING TRANSPORT FACILITIES AT THE AIRPORT

1. AC Minibuses

Trips are from Chennai Airport to CMBT (Koyambedu). Frequency: Every 30 minutes.

2. Metropolitan Transport Corporation

serve four buses which run on two routes, Anna Nagar or Egmore.

Frequency: hourly. For schedules please ask at the airport.


There are other several lines that stop at the airport and goes to the city centre. All of them rarely stops at designated places, you'll have to make them stop by doing some signals.

3. TAXI

Chennai Airport Taxi is without a doubt the best way to get directly to the city Centre

Taxis are available outside the terminal building at the taxi lines and also outside Terminal 4

SERVICES AT MEENAMBAKKAM AIRPORT METRO (Provided by CMRL)



Mini Bus

Frequency: Every 30 minutes.
Airport to CMBT with AC which
doesn't has a fixed schedule


Last Mile Connectivity (Feeder Service)



SHARE AUTO SERVICE

RS.5 ONWARDS


View Details



SHARE TAXI SERVICE

RS.10 ONWARDS

View Details



METRO CABS SERVICE


RS.10 ONWARDS

View Details

LMC – Commuter app online booking

CMRL Feeder Services

Commuter App Online Booking



View Instruction

Quick Links

- Share Taxi Services
- Share Auto Services
- Metro Cab Services

Write To Us

chennai@cmrl.in

Useful Links

- Delhi Metro
- Bengaluru Metro
- Mumbai Metro
- Ministry of Urban Development
- Govt. of Tamil Nadu
- JICA
- UITP
- CMDA
- MTC

[ABOUT US](#)

- ABOUT CMRL
- VISION & MISSION
- BOARD OF DIRECTORS

[THE PROJECT](#)

- WHY METRO RAIL
- PROJECT BRIEF
- ALIGNMENT MAP

[TENDERS](#)

- E-TENDER NOTIFICATIONS - CPP PORTAL
- E-TENDER

[FOR COMMUTERS](#)

- FEEDER SERVICE
- PARKING FACILITIES / AVAILABILITY
- FAQS AND NOTICE

[MEDIA](#)


- PHOTO GALLERY
- PRESS CLIPPINGS
- BROCHURE

[CAREERS](#)

- JOB NOTIFICATIONS

[VIGILANCE/RTI](#)

- VIGILANCE DIRECTORY
- FRAUD PREVENTION POLICY
- WHISTLE BLOWER POLICY



Windows Taskbar showing various application icons and system tray information.

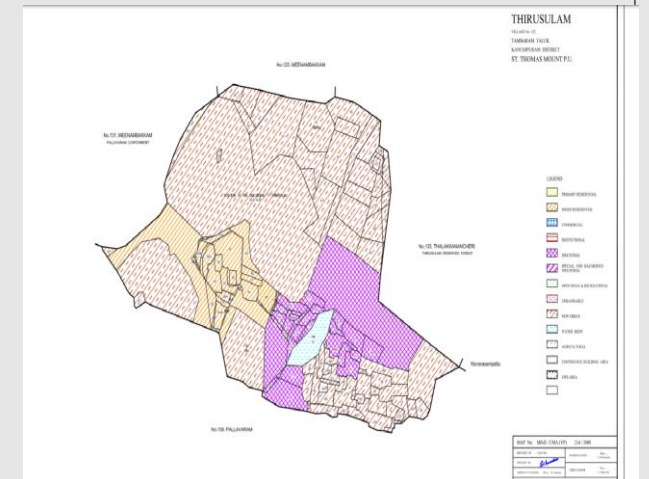
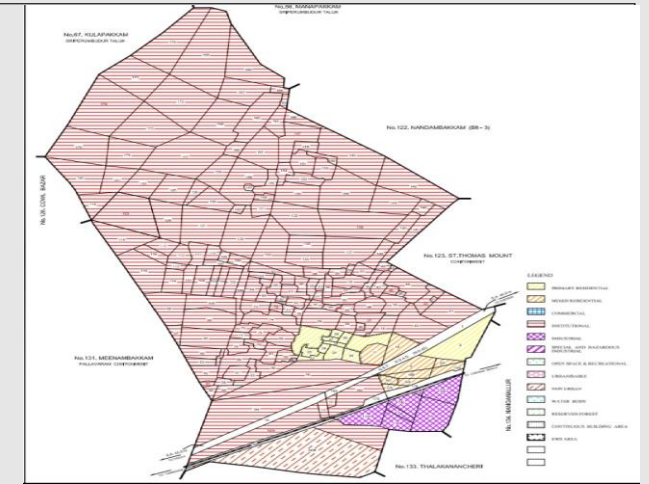
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Issues faced at the AIRPORT

- ❖ Long walk from the Airport Terminals, so it would be better to take a taxi or a rickshaw if you carry large or heavy baggage.
- ❖ walk to GST road for more than 500m distance, from where you will be able to ride regular buses at GST road bus stand.
- ❖ Many of MTC buses rarely stops at designated places, (you'll have to make them stop by doing some signals.)
- ❖ Pedestrian signalisation is poor
- ❖ Lack of integration between private and IPT transports.
- ❖ Lack of connectivity with the nearest residential, institutional and industrial areas located at a distance of 2 km – 5km.

ANALYSIS

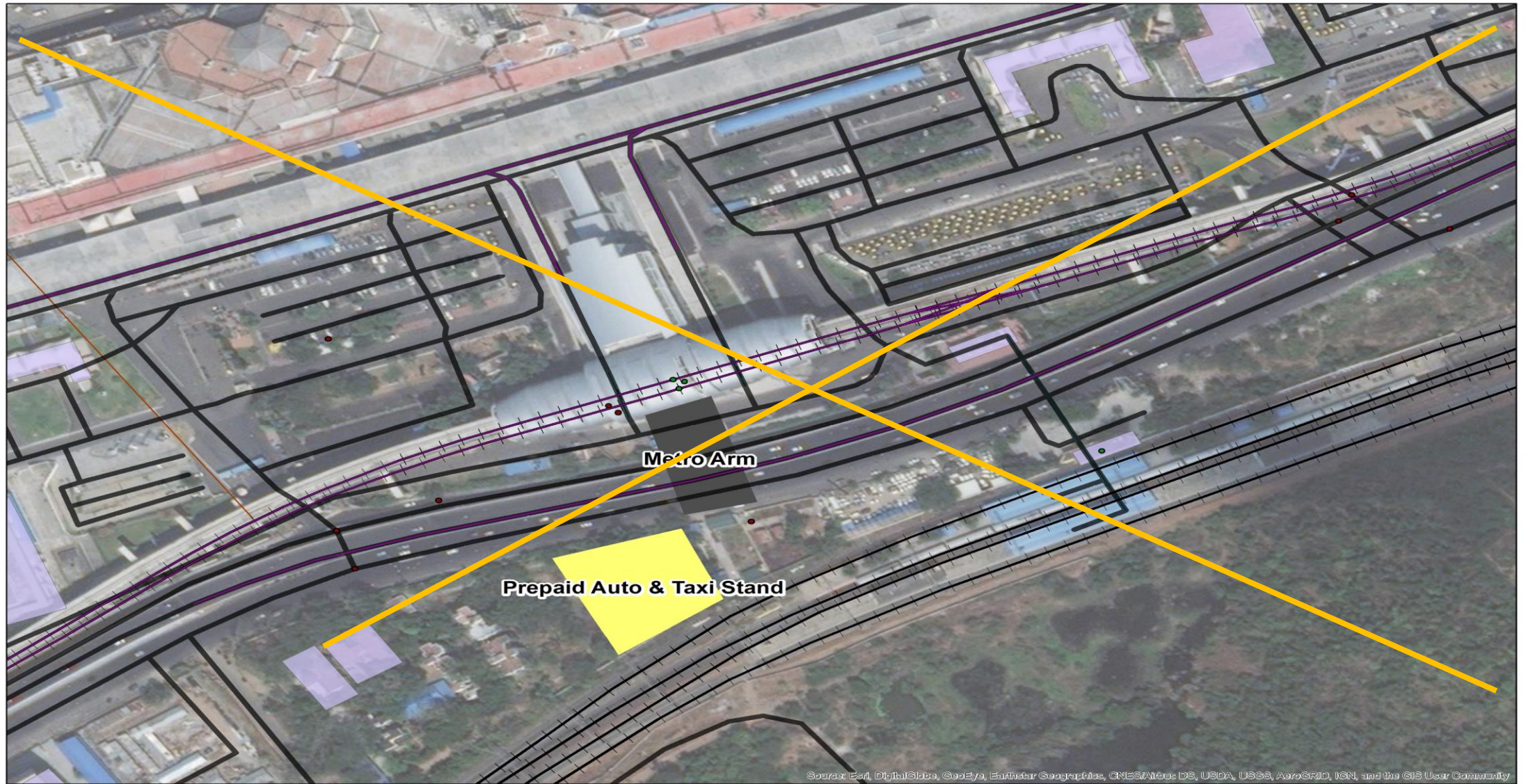
- Major Landuse
Meenambakkam: Institutional i.e Airport
Thirusulam : Non – urban use (mostly covered by mountains)
- Handled over 22.5 million passengers in the fiscal year 2018-19, with over 570 aircraft movements and 30,000 passengers per day
- Ridership generators : It's Location
 - third busiest in international traffic and cargo capacity in the country behind New Delhi and Mumbai
 - fourth busiest airport in country's overall passenger traffic
 - serves as the regional headquarters of the Airports Authority of India for South India
- Public Transport esp: Bus in not integrated with the existing multi modal system
- Only choice of transport for passengers travelling to other parts of the city other than CBD is **taxi**
- **No connectivity to the neighbourhoods located around**



PROPOSALS

I. Direct Bus services and Feeder Services





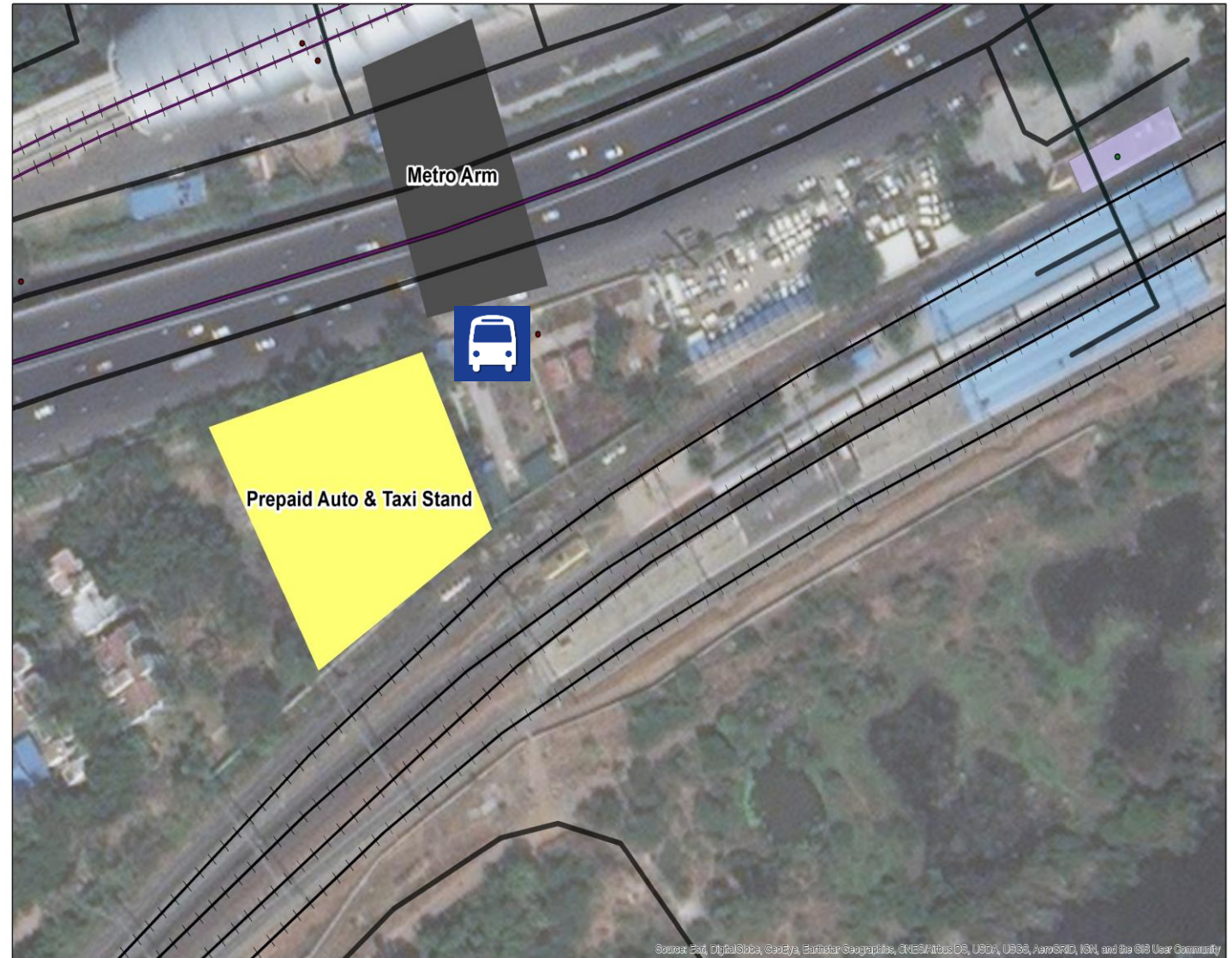
PROPOSALS contd...

II. MULTI MODAL INTEGRATION - BUS



PROPOSALS contd...

- This arm of the Metro :
- Connects to the bus stop out side
- Encourages IPT
- Ease the commuters to reach outside of the airport within 5 minutes
- No land acquisition needed



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Two bus bays proposed

Dedicated bus services
B1

routed all over the city

Feeder bus services
B2

For a distance of 5km
on either side

Two arms from metro
station
B1 & B2

Free shuttle services –
battery/solar operated
vehicles

Monitored signaling at junction and
pedestrianization signalling

IPT services (dedicated
bay)

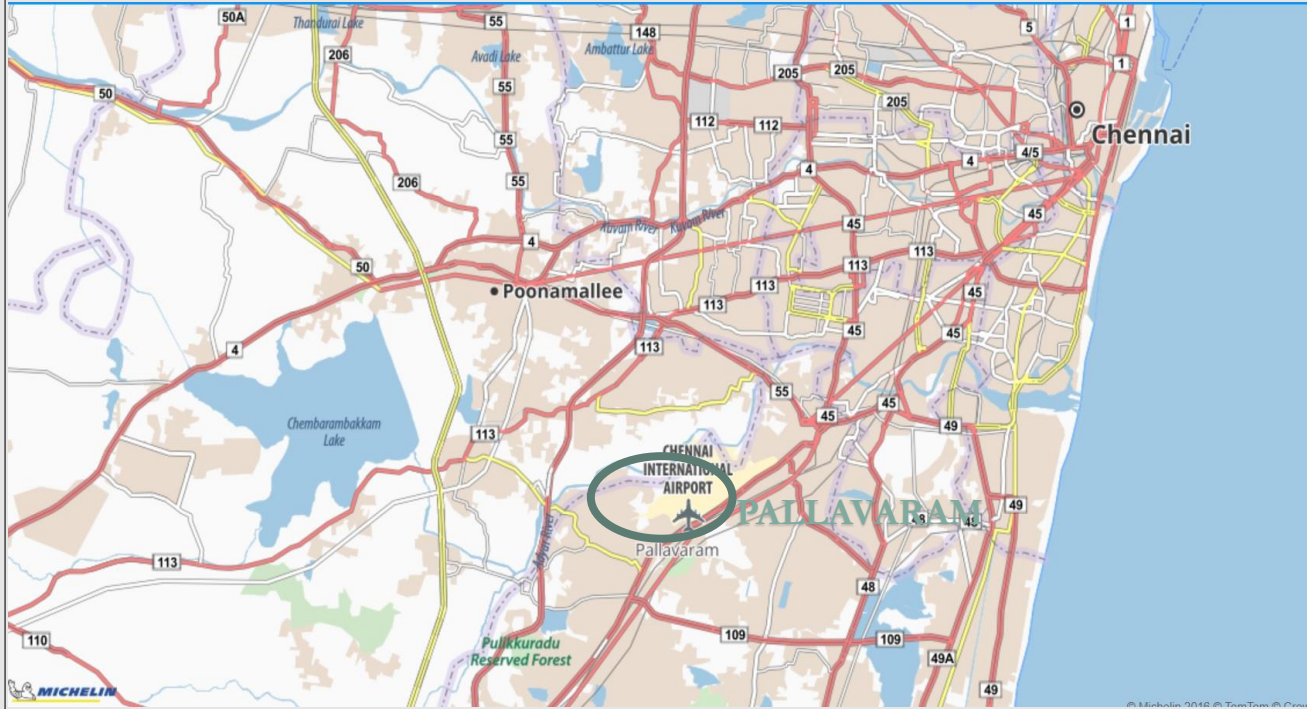
REASON FOR CHOOSING THE RESIDENTIAL NEIGHBOURHOOD - PALLAVARAM

1. The adjacent station is Tirusulam – Land use - only Non –Urban usuage
No trips are generated to the Airport
2. the southern arm of GST road lacks connectivity to the Airport and hence, one of the neighborhood place is taken as a sample.
3. The measures and initiatives taken for the nearest place shall be implemented for the other places falling on the southern arm
4. Adjacent place in the neighbourhood is **Pallavaram**
Lacks connectivity to the Airport

Objective :

- to establish last Mile connectivity from Airport to the neighbourhoods(Pallavaram) around with cost effective solutions, utilising / enhancing the existing transport system, encouraging other modes of transport

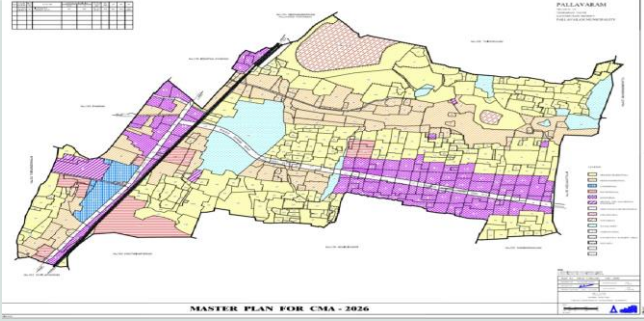
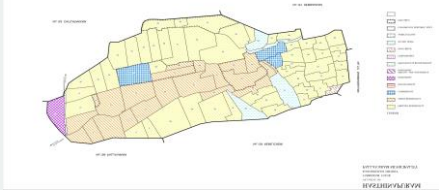



STUDY AREA – PALLAVARAM



- Located in the southern neighborhood on the GST Road (@ 25km from CBD)
- Spread over an area of 18 sqkm
- Proximity to Chennai International Airport (3.3kms)
- Existing Landuse – Mixed Residential, Residential, Institutional and Commercial

S.No	Parameters	Values
1.	Population (2011)	2.15 lakhs
2.	Adminsitration	Pallavaram Municipality (42 wards)
3.	Transit modes	<ol style="list-style-type: none"> 1. Sub urban railway 2. Bus 3. Metro Rail
4.	Major Corridors	<ol style="list-style-type: none"> 1. MMRD scheme 200 feet road 2. GST Road

PALLAVARAM – ADMINISTRATIVE BOUNDARY

S.No:	Administrative Division	Land Use Map	Land Use	Remarks
1.	Pallavaram		<ul style="list-style-type: none"> Residential Industrial Mixed residential Water body Institutional 	Industrial and Mixed residential developments are observed along MMRD 200 feet road. Suburban on the west with major landuse industrial
2.	Hasthinapuram		<ul style="list-style-type: none"> Residential Mixed Residential Commercial Institutional waterbody 	Major landuse is the residential. Lies to the SW of pallavaram adjacent to Sub urban railway
3.	Issa Pallavaram		<ul style="list-style-type: none"> Mixed residential Residential Industrial 	Developments along the GST Road, hence the major landuse is Mixed Residential and institutional
4.	Keelkattalai		<ul style="list-style-type: none"> Industrial Mixed residential Residential Commercial Water body 	Major Landuse is Industrial continues along the MMRD scheme road and the attached land use is Mixed
5.	Nemilicheri		<ul style="list-style-type: none"> Residential Mixed Residential Water body 	Major Land use is Residential adjoining the industrial area along the MMRD Scheme road.

EXISTING TRANSPORT FACILITIES AND INFRASTRUCTURE

TRANSPORT FACILITIES

1. SUB URBAN RAIL SYSTEM
2. MTC BUSES
3. NMT – IPT
4. MINI BUS SERVICES

TRANSPORT INFRASTRUCTURE

PALLAVARAM FLYOVER

BUS TERMINUS

SUB URBAN RAILWAY STATION

OPPURTUNITIES AND CONSTRAINTS

◦ **Opportunities**

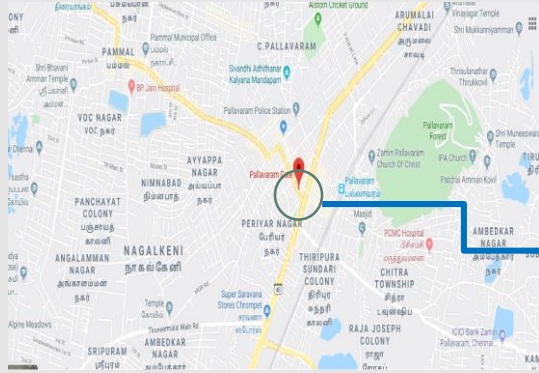
- The percentage of people accessing railway stations by walk, and by cycles is likely to increase due to existing landuses surrounding the station.
- The density of population and employment within Pallavaram area is expected to grow in the up coming years, and much of the anticipated development mostly within walking and biking distance of the stations.
- As the bus stop is being located abutting an Arterial Road, access to the Bus terminus through public transit and feeder connectivity is viable
- The Two wheleers, mini bus and the three wheelers are likely to use the sub arterial roads running within and establish last mile connectivity for the residential and industrial area around
- The Pallavaram flyover would organize the traffic coming from the Airport and moving towards down the southern arm
- More buses at the Bus Terminus, at lowest fares with increased frequency
- Improvement in the IPT and feeder services within an influence area of 3km

CONSTRAINTS

- As the Station is located in already well developed thickly built area, possibility of widening the approach roads to station is very difficult
- As area of Station is less, more area for parking of IPT, Cycle, Two Wheeler, Four Wheeler and Bus-bays and space for drop zone could not be provided to the comfortable level
- Pedestrian signalling is missing for the pedestrians walking from Tirusulam to the Pallavaram Bus terminus
- No convenient crossing of GST Road with Kundrathur road. Crossing road is unsafe.
- The Pallavaram bus depot, Friday Santhai, Railway station and junction of GST road with 200 feet radial road does not have adequate foot path available
- Unorganized parking is also observed around the Railway station , Bus Terminus stretch. No organized parking stands for IPT and Two wheelers near the station.
- fewer feeder bus system connecting residential areas to the surrounding industrial areas
- At present MTC operates buses with lesser frequency , higher fares and not accessible
- No designated bus bays

CONSTRAINTS contd..... AT JUNCTIONS

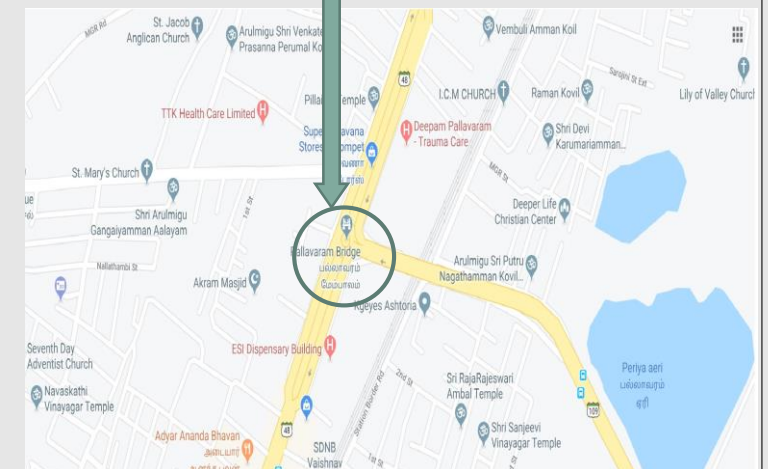
1. GST ROAD AND KUNDRATHUR ROAD



- No pedestrian signaling
- Inadequate foot path width due to the encroachment of hawkers
- Insufficient road width at the terminus due to the construction of Pallavaram flyover
- Unorganised parking of vehicles
- Reduced carriageway
- Poor maintenance of footpaths

2. GST ROAD & 200' RADIAL ROAD

- Improper crossing of vehicles
- Inadequate foot path width due to the encroachment of hawkers
- unorganised parking of vehicles due to commercial establishments
- Missing of pedestrian signaling
- Less carriageway width



PLANNING OF FACILITIES

MEENAMBAKKAM - AIRPORT

1. TRANSIT
2. KISS & RIDE
3. PARK & RIDE



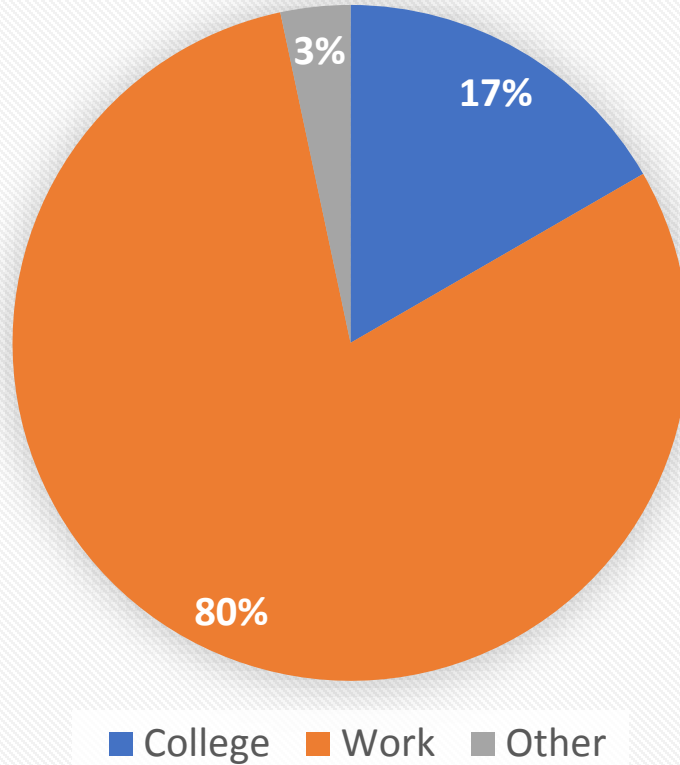
PALLAVARAM

1. PEDESTRIANS
2. BICYCLES
3. TRANSIT
4. KISS & RIDE
5. PARK & RIDE

1. PEDESTRIANS
2. TRANSIT
3. KISS & RIDE
4. PARK & RIDE

ANALYSIS

Purpose of Travel

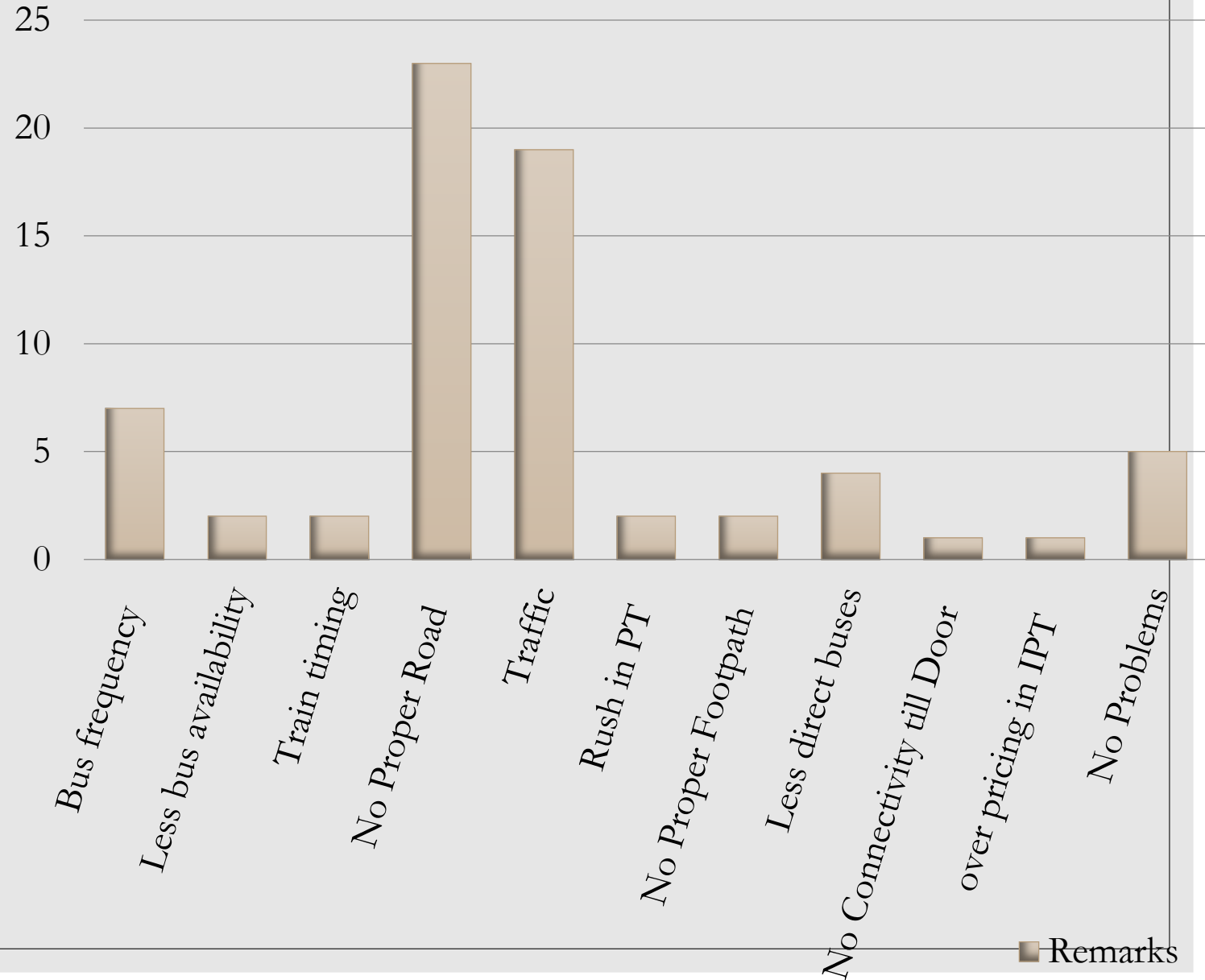


OBSERVATIONS

- A person travelling from Saidapet to Pallavaram by train and sharing 2 wheeler with his friend upto Oragadam.
- A person travels from Guduvanchery to Anakapathur via Pallavaram, taking IPT or Bus to Anakapathur.
- Only 1 direct bus is available which is less in numbers.
- During return in evening travel time takes about 2 hours due to traffic.
- No meter used in IPT
- Water stagnation in road during rainy season.
- Should walk long to reach bus stand.

Issues faced by the Public

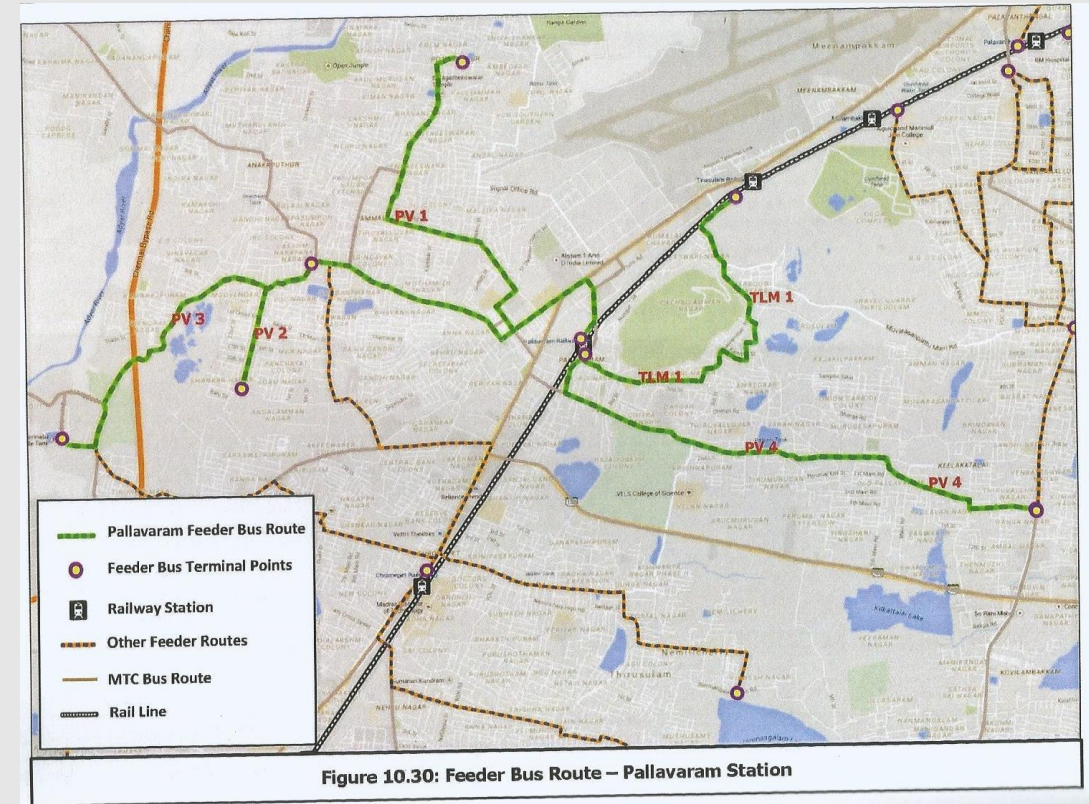
- Bus frequency
- Less bus availability
- No bus facilities
- Train timing / Peak hour
- No Proper Road
- Traffic during peak hours
- Rush in PT
- No Proper Footpath
- Less direct buses
- No proper Connectivity till Door
- over pricing in IPT



RECOMMENDATION AND PROPOSALS

PROPOSAL - I

Route No:	Feeder route	Route length in km	Forward trips per day	Peak hour trips	Peak hour peak direction trips
PV1	Pallavaram railway station to pozhichalur bus terminus	4.2	8323	832	583
PV2	Pallavaram bus stand – Shankar nagar bus stop	4.1	8125	813	569
PV3	Pallavaram railway station - Tiruneermalai	5.8	11494	1149	805
PV4	Pallavaram Railway station – Keel kattalai bus stand	4.2	2587	259	181



Station Influence Area – Radius 5km – extends to an area of 23.14 sqkm

Population – 2,68,156 (2011 census)

Average Number of passengers – 35,684

Chennai Metro to connect Airport with Kilambakkam

Sunitha Sekar

CHENNAI, NOVEMBER 12, 2019 00:45 IST



Work on 15.3-km stretch expected to start in 2021; to be built on GST Road

Thousands of commuters from areas such as Tambaram and Chromepet to the city can rejoice as Chennai Metro will soon start work on a connection from Airport to Kilambakkam. Construction is expected to get under way in 2021, according to sources.

The sources told *The Hindu* that Chennai Metro has already submitted the feasibility report for this stretch and will now start work on the detailed project report. “It will take about 10-12 months to finish the report, after which the project can begin immediately because there is a lot of demand in that stretch,” a source said.

The Airport to Kilambakkam stretch will be 15.3-km long, with around 13 stations. This will be built entirely on GST Road as an elevated stretch, the sources said. “The reason for choosing to build it as an elevated stretch is, it is faster to construct than an underground stretch and cheaper too,” he added.

SHORT TERM RECOMMENDATIONS

- **Integration with land-use planning**
 - Making public transit links first and then developing high-density, mixed land use areas around them, thereby reducing the need to move around, particularly by private vehicles
- **Integration within and between different modes of conveyance**
 - **Physical Integration:** Facilitating direct, easy, convenient, and safe approach to public transport (providing secure, direct road crossings, treeshaded paths, refreshments, cycle and rickshaw parking, differently abled pavements and access levels).
 - **Fare Integration:** Enabling the public transit user to pay only once for a journey involving different modes of transport.
 - **Path Integration:** Facilitating logical interchange points where passengers are able to change from one vehicle or style to another conveniently and safely
 - **Data Integration:** Enabling a 'one-stop-shop' for public transit users, bicyclists, and pedestrians to clear data on whatever journey they wish to transmit using these styles.
 - **Institutional Integration:** Ensuring that different public transit providers see themselves as part of a network and offer connections to other types of transit, walking, and cycling for seamless connectivity.

LONG TERM RECOMMENDATIONS

- Local bodies to be consulted on measures to improve road safety in their arena and to be involved in small- scale, adequately resourced local transport (walking/ cycling/public transport access) audits, improvement, and road safety schemes.
- Insertion of a suitable methodology and plan to alter streets in business with the Pedestrian Design Guide- lines: better quality street furniture, including tree shading, spaces for hawkers to provide road users with refreshments, spots to congregate, and require a breath away from traffic.
- First appearance of demand management schemes to promote usage of public transport, walking and cycling such as road pricing, stricter parking control, and taking out subsidies on fuel and parking.
- As investment in public transport, walking and cycling facilities grow, with greater efforts to explain policy changes to the public through a series of carefully targeted campaigns