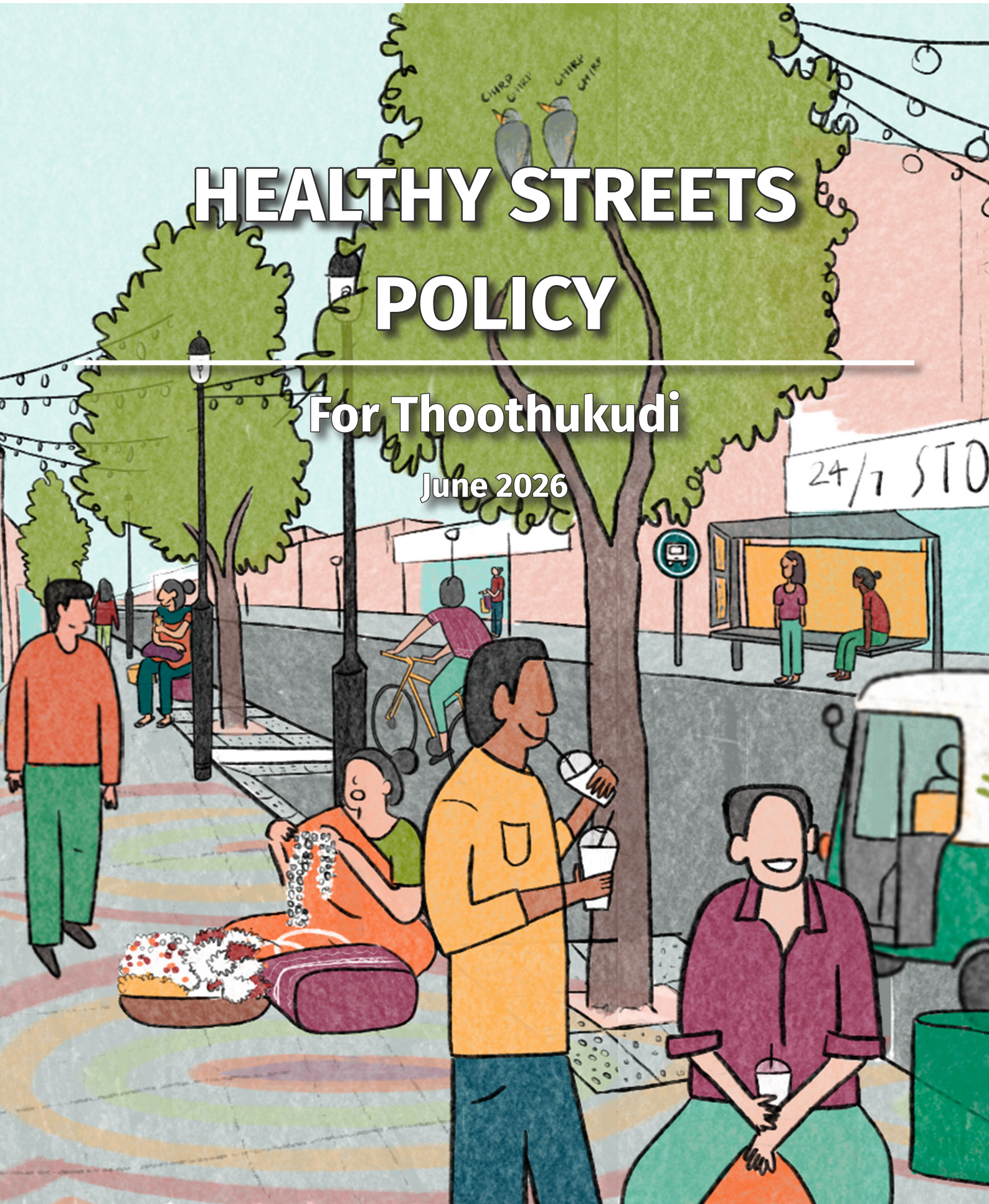
UK PACT

Knowledge Partner

ITDP INDIA



HEALTHY STREETS POLICY

For Thoothukudi

June 2026

All photographs & graphics by ITDP, unless mentioned otherwise

Acknowledgements

The Municipal Administration and Water Supply (MAWS) Department, Government of Tamil Nadu is responsible for policy formulation, planning, and oversight of Urban Local Bodies, including Municipal Corporations, Municipalities, and Town Panchayats. The department guides and funds urban services such as roads and street infrastructure, water supply, sewerage, storm-water drainage, solid waste management, and street lighting, while also coordinating implementation of state and centrally sponsored urban programmes to improve service delivery and urban governance.

The Thoothukudi City Municipal Corporation (TCMC) is the civic body governing the city of Thoothukudi in Tamil Nadu, India. It was initially constituted as a municipality in 1866 and upgraded to a municipal corporation on 5 August 2008 due to rapid population growth and urban expansion. Today, the City Municipal Corporation administers an area of 90.66 sq km, divided into 60 wards across four zones. The governance structure includes an elected Mayor, Deputy Mayor, and a Municipal Commissioner heading the administration.

UK Partnering for Accelerated Climate Transitions (UK PACT) is a programme funded by the UK Government. UK PACT supports countries that strive to overcome barriers to clean growth and have high emissions reduction potential to accelerate their climate change mitigation efforts. The programme funds projects which support partner countries to implement and increase their ambitions for carbon emissions reductions in line with their Nationally Determined Contributions (NDC). All UK PACT projects work to accelerate partner countries' transition to low carbon development. UK PACT delivers impact through a combination of funding longer-term capacity building projects and the rapid mobilisation of expertise.

Knowledge Partner

The Institute for Transportation & Development Policy (ITDP) is a global non-for-profit organisation that works with cities worldwide to promote transport solutions that reduce traffic congestion, air pollution, and greenhouse emissions while improving urban liveability and economic opportunity. ITDP is represented in India by ITDP Pvt Ltd and works with governments, multilateral agencies, and civil society to make visible, on-the-ground improvements by providing technical expertise, policy solutions, research publications, and training programmes.


10X FASTER

Contents

01 Introduction

Thoothukudi, popularly known as the “Pearl City”, is a major port and industrial city located along the Gulf of Mannar on the southeastern coast of Tamil Nadu. Home to the V.O. Chidambaranar (VOC) Port, one of India’s major ports, the city plays a vital role in maritime trade, logistics, salt production, fisheries, manufacturing, and energy sectors. Owing to its strategic coastal location and strong industrial base, Thoothukudi serves as an important economic gateway for southern Tamil Nadu and neighbouring states.

Thoothukudi has a population of about 5.33 lakhs in 2025 (as per the Master Plan 2045 Population Projection). The population density in the city corporation area averages nearly 59 persons per ha. The city has witnessed rapid urban and industrial expansion over the last two decades, driven by port-led development, industrial investments, and regional economic growth. Its economy is anchored by the VOC Port, SIPCOT and SIDCO industrial estates, thermal power infrastructure, fisheries, salt pans, logistics activities, and emerging service sectors.

As per the Comprehensive Mobility Plan (2014), nearly 47% of trips are made on foot, followed by 2-wheelers at 24%, while overall mode share is 9% for public transport, 12% for cycling, 6% for IPT, and 2% for cars/taxis. With rising dependency towards individual motorised transport, the city is at a critical juncture to assess its way forward in urban mobility planning. To further improve conditions, progressive policies, and guidelines designed to support and encourage sustainable mobility are needed.

Current initiatives to improve Sustainable Mobility

Thoothukudi stands at a pivotal moment in its urban mobility journey. While recent investments signal a growing commitment to pedestrian and cycling infrastructure, significant gaps persist; gaps that the Healthy Streets Policy directly seeks to close.

As one of the non-attainment cities under the National Clean Air Program, Thoothukudi has made consistent strides that reflect a shift toward people-centric street design. The NCAP funds have been well utilised to create pedestrian infrastructure across key corridors of the city. Landmark projects have begun to redefine what safe, inclusive streets can look like in the city. The redevelopment of Buckle Odai (approx. 7.2 km) has introduced dedicated walkway-cum-bicycle lanes, jogging tracks, and LED lighting, creating high-quality non-motorised environments. Smart Road interventions in the ABD area have brought cement concrete pavements, tactile paving for universal accessibility, and organised parking bays that reduce footpath encroachment.

With numerous positive impacts underscoring the need for such pedestrian-friendly public spaces improving accessibility, community life, economic vitality, and public safety, Thoothukudi is now looking forward to creating Healthy Street in the city. However, there is a need to sustain this commitment. Transforming successful pilots into larger city-wide networks of Healthy Street requires the city to embrace a progressive long-term vision, set ambitious goals, mandate funding to design, implement and maintain walking and cycling infrastructure, as well as set up an institutional framework that supports project implementation — adoption of a Healthy Street Policy.

With a continued commitment to prioritize non-motorized transport, Thoothukudi City Municipal Corporation (TCMC) aims to bridge the gap between infrastructure needs and provisions. The Thoothukudi Healthy Street Policy extends beyond infrastructure to encompass walking, cycling, services, and systems related to public transport and road safety. By creating a statutory framework, this policy ensures meticulous planning, design, implementation, and management of footpaths and cycle tracks. It holds paramount importance in providing a unified vision for stakeholders and departments involved in developing Healthy Street in the city, aligning with Thoothukudi’s equity and sustainable urban development goals

Image Source: Flickr

02 Vision and Guiding Principles

NMT Vision for Thoothukudi

> ***Thoothukudi's vision for the future is to transform all urban streets into 'Healthy Streets' which are designed for the people — where everyone can move around with ease. Thoothukudi will be well-connected, where people prefer to walk, cycle, and use public transport over cars. Thoothukudi will be a city with pleasant, safe streets and vibrant public spaces where citizens can linger, socialise, and visit local businesses.***

Image Source: TCMC

Guiding Principles

The Healthy Street Policy sets out the vision, goals, and the steps required to transform Thoothukudi's streets into safe, attractive, and accessible spaces. It lays out different initiatives that citizens can expect from the city in the coming years to achieve this vision. The policy heralds a change in the city's focus by committing to a long-term strategy to transform its streets in collaboration with its citizens.

The Healthy Street Policy is centred around three key principles -

- **Equity**
  To include all groups of people, especially the vulnerable and the marginalised.
- **Sustainability**
  To meet the needs of the present without compromising the needs of future generations.
- **Quality of Life**
  To promote dignity and improve the quality of life for everyone.

Healthy Street are streets where...

Every citizen gets a fair share of road space

Thoothukudi will provide every citizen a fair share of limited road space, Thoothukudi will prioritise space-efficient modes like walking, cycling, and public transport and discourage modes that occupy more space per person, such as cars.

Everyone breathes clean air

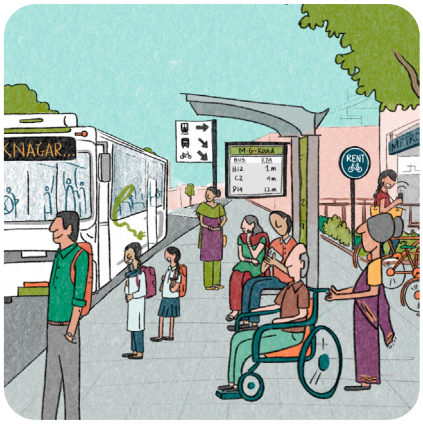
Thoothukudi will prioritise zero emission modes like walking and cycling, shared modes like public transport that emit less per capita, and low emission modes that employ clean vehicle technology.

No lives are lost

Thoothukudi will encourage safe driving and design streets to reduce conflict between motor vehicles and vulnerable road users like pedestrians, cyclists and motorcyclists by mitigating speed and accounting for human error.

Walking and cycling are attractive

Thoothukudi will create a network of safe, shaded, and clean walking and cycling spaces that connect all parts of the city.



Public transport is easily accessible

Thoothukudi will ensure that public transport services are within easy reach and interconnected by walking and cycling facilities, and that public transport stops provide safe shelter for all, at all times.

Everyone moves around the city seamlessly

Thoothukudi will remove hindrances to the movement of vulnerable and disabled citizens to facilitate their independent mobility.

Women, children, and the elderly feel safe at all times

Thoothukudi will eliminate opportunities for crime on its streets—especially against women, children, and the elderly—through better design and activity management.

People enjoy street life

Thoothukudi will design streets as vibrant public spaces that invite everyone including women, children and elderly to spend more time outdoors and socialise, thus improving the mental and physical well-being of citizens.

Local businesses flourish

Thoothukudi will enhance livelihoods by integrating street vending and local retail businesses in the street design.

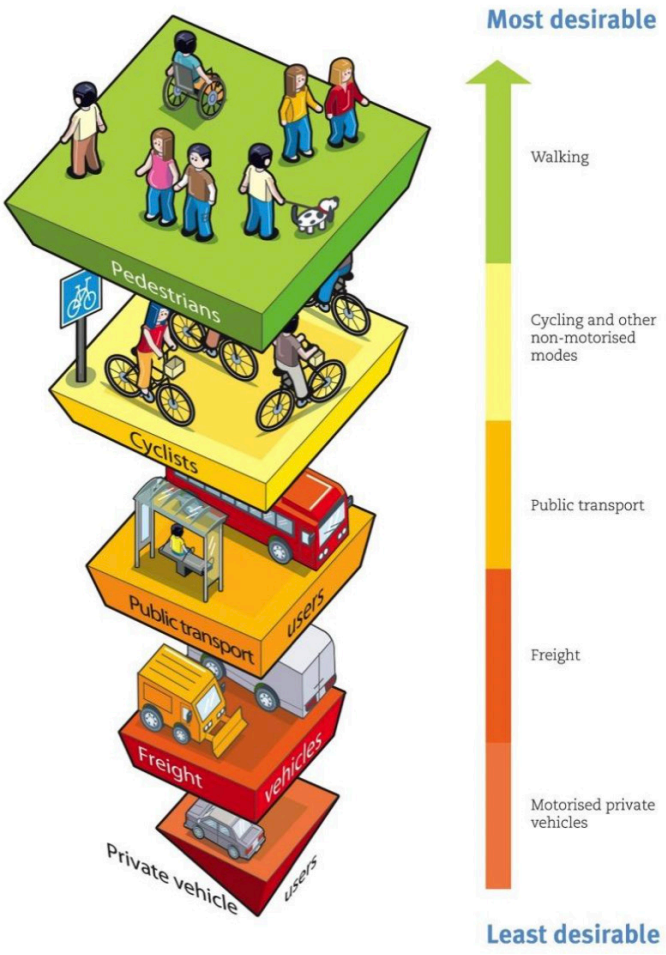
The design adapts to climatic changes

Thoothukudi will use materials and designs that enhance the life of infrastructure, ease maintenance, and are responsive to the environment.

Harrington Road, Chennai

03 Approach

Thoothukudi commits to the following approach to achieve ‘Healthy Street’–



- **People Centric Policy Implementation**

  Thoothukudi can only deliver on its mission of Healthy Street with citizens' support, feedback, and participation. The city will inform and engage citizens from all walks of life—of different incomes, genders, ages, and abilities—throughout the process of planning, designing, testing, and implementation.

- **Iterative Progress Model**

  Adopting a “Test-Learn-Scale” approach, the policy advocates for testing design solutions through low-cost and temporary means, learn from them to further refine the design, and finally make it permanent and scale it up across the city.

- **Data-driven governance**

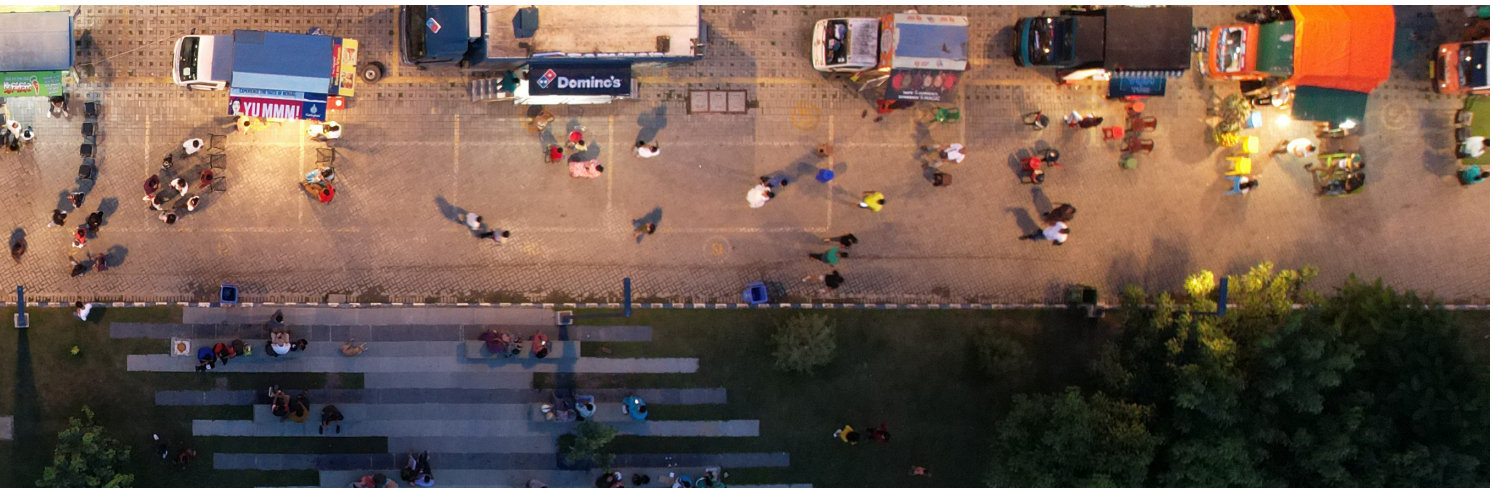
  Thoothukudi will gather and share relevant data on the performance of infrastructure and services to government agencies, policy makers, and citizens, for data-driven decision-making on initiatives, investments, research, and communication strategy.

New Town Kolkata

04 Goals and Targets

The ultimate focus of the policy is to provide safe, accessible, convenient and vibrant streets in the city which will encourage increased use of sustainable modes like walking, cycling and public transport. To achieve this overarching aim, goals are set for a five-year period, after which the Healthy Street Policy will be reviewed and updated to align with Thoothukudi's current needs. Other concerned agencies shall also undertake complementary actions to realise these goals.

Goals	5-Year Targets
Expand and improve walking and cycling infrastructure in Thoothukudi	Implement good-quality Healthy Street network with dedicated footpaths, protected cycle tracks, traffic calming elements and safe intersections on all arterial and collector roads within the TCMC boundary.
Enhance pedestrian safety and security across the city	Reduce pedestrian fatalities by 50% across the entire city.
	Implement traffic calming measures across key blackspot locations
Ensure infrastructure is universally ac-cessible – by people of all ages, gender and abilities.	Ensure all arterial and collector roads in the city include universal accessibility and bar-rier-free interventions
Integrate climate-resilient solutions with street infrastructure across the city	Integrate blue/green infrastructure across all relevant arterial and collector streets in the city.
	Increase the green cover on all arterial and collector roads across the city.
Encourage the use of sustainable modes of travel—walking, cycling and public transport	Implement priced parking management strategies in Thoothukudi to incentivise a shift from motor vehicles to sustainable modes



05 Healthy Street Strategies

Thoothukudi commits to achieve Healthy Street, by adopting various measures structured under a 3-Pillar Strategy—Action, Foundation and Communications. These steps will help to make walking, cycling, and public transport attractive across the city.

1. Action

The Action pillar focuses on creating on-ground transformations and the implementation of supporting infrastructure to guarantee the success of Healthy Street initiatives. All works related to Streets taken up by any implementation agency in the city will follow a standard process for planning, designing and implementation. It will help in creating a uniform, standardised and high-quality street infrastructure across the city. The process will include:

1.1 Street Network and Planning

The walkability of a city is not entirely dependent on just designing good streets. A well-connected street network is an equally contributing factor to improving the walkability and accessibility of a city's neighbourhood. The Thoothukudi Masterplan – 2045 has developed a Comprehensive Non-Motorised Transport Plan and has recommended priority clusters for NMT improvement (Annexure A).

A neighbourhood with a smaller block size usually aids walking and cycling owing to shorter travel distances and route options. To provide a dense network of Healthy Street that prioritises sustainable mobility modes, Thoothukudi will:

1. Create a city-wide Healthy Street network plan to ensure citizens have access to safe, attractive, seamless, and enjoyable streets across the city. The pedestrian network shall be developed to create smaller block sizes with one block side ranging from 100 - 150m
2. Create a city-wide greenway network to improve access for pedestrians and cyclists. The ULBs shall provide access for pedestrians and cyclists in city parks and other public spaces.
3. Create separate planning guidelines for vulnerable areas such as schools, Anganwadis, hospitals and parks by creating special School Zone Plans, and/or City-wide Bicycle Network Plans.
4. Ensure that all new construction and redevelopment limit the block size so that the longest block face is less than or equal to 150m.
5. Prohibit pedestrian cul-de-sacs. Create a pedestrian network that ensures the shortest paths for all pedestrian journeys.
6. All studies of transport and transport plans sponsored by the ULBs, and the other implementation agencies shall incorporate the goal of increasing walking, cycling and the use of public transport rather than accommodating the increased numbers of private vehicles.
7. A city-wide parking management plan shall be created in accordance with the Thoothukudi's Parking Policy, to ensure better road space management and to ensure all road users have a fair share of road space.

8. Ensure that the Healthy Street network plan developed as per (1) is revised every 5 years.

1.2 Street Design

It has been observed that streets designed as per 'Healthy Street' principles have performed better on all aspects – safety, inclusivity, accessibility and sustainability. The Thoothukudi Master Plan – 2045 emphasizes that NMT improvement and footpath development shall conform to Thoothukudi Comprehensive Road and Street Design Guidelines and IRC standards to ensure accessibility, safety and user comfort. In this regard, a Comprehensive Road and Street Design Guidelines contextualized to Thoothukudi shall be prepared. The same shall be adopted by TCMC and shall be applicable to all roads (Corporation and Highways) in the Jurisdiction. All streets within the TCMC shall be designed as Healthy Street that are safe and prioritise pedestrians, cyclists and public transport users. Thoothukudi will:

1. Provide dedicated and physically separated footpaths, protected cycle tracks, and safe intersections prioritising pedestrians and cyclists, wherever motor vehicle speeds exceed 15 kmph.
2. Prioritise at-grade solutions that facilitate shorter travel distances for pedestrians and cyclists rather than grade-separated facilities such as pedestrian subways and foot overbridges.
3. Provide dedicated vending zones, particularly in areas close to the rapid transit stations, which will help improve safety as vending zones shall function as "eyes on the street".
4. Ensure all the streets within Thoothukudi Local Planning Area be designed as per the standards mentioned in Thoothukudi's Comprehensive Road and Street Design Guidelines. This includes standards for footpaths, cycle tracks, carriageway, pedestrian crossings, traffic calming elements, signages, road markings, on-street parking, materials, etc.
5. Ensure that all the streets within a School Zone (500m radius around a school) are designed as per the standards mentioned in the "Designing School Zones" chapter of the Thoothukudi's Comprehensive Road and Street Design Guidelines.
6. All streets within the TCMC limits shall use the templates provided in the Guidelines as reference but shall be contextualised based on the land-use, traffic patterns, RoWs, natural systems, watersheds, and other contextual criteria.
7. Ensure all the intersections within TCMC limits be designed as per the standards mentioned in Thoothukudi's Comprehensive Road and Street Design Guidelines. Intersections shall be redesigned to accommodate pedestrian and cyclists' volumes safely by minimising crossing distances, reducing motor vehicle speeds, simplifying signal cycles, or through other means.
8. Ensure all streets within TCMC limits follow the material specifications mentioned in Thoothukudi's Comprehensive Road and Street Design Guidelines.
9. Ensure that competent designers are hired to develop street designs in accordance with the Comprehensive Road and Street Design Guidelines. The hiring of design consultants shall conform to the scope of work and conditions specified in Annexure (B). The ULBs shall engage with these consultants to develop and review detailed street designs, periodically.

10. For all streets within the TCMC limits, concerned agencies at the city- and state-level, such as the ULBs, Tamil Nadu Highways Department, Local Planning Authority, and other agencies, shall follow street design standards consistent with the Comprehensive Road and Street Design Guidelines.

11. Coordinate various decisions regarding the planning, design, and use of public Right-of-Ways in accordance with this policy. These actions will be coordinated through an approval or decision concerning any public and private project that impacts or is adjacent to a publicly accessible Right-of-Way.

12. Where there are conflicting standards in guidance provided by agencies such as the Indian Roads Congress (IRC), the ULB will prioritise walking, cycling and public transport modes in the allocation of street space, the design of street design elements, and street management.

13. Encourage innovative solutions to reuse such excess street space as planted or open space areas. Establish a program to encourage and make it possible for adjacent neighbourhoods to replace paved areas with usable open space, permeable surfaces, plantings, storm water retention areas, and other public amenities.

14. ULBs shall construct flyovers, elevated roads, and other infrastructure without affecting pedestrian infrastructure and shall comply to the standards in Thoothukudi's Healthy Street Policy and the Comprehensive Road and Street Design Guidelines.

15. ULBs may create skywalks to link railway or public transport terminal pedestrian bridges with key destinations, provided that doing so does not compromise at-grade pedestrian and cyclist infrastructure. Whenever skywalks are implemented, ULBs shall carry out improvements in parallel at-grade facilities.

16. ULBs shall prioritise known/identified black spots for Healthy Street improvements. They shall identify key conflict points, black spots, areas of sexual harassment and/or violence, areas of personal crime, and areas of isolation. ULBs will provide additional lighting at these locations to improve safety and security for pedestrians, cyclists, and public transport users.

17. Ensure that appropriate lighting is provided in isolated spaces, such as foot over-bridges, subways, and walkways next to parks or blank compound walls to reduce the risk of theft, harassment, and sexual assault.

1.3 Implementation

1. ULBs shall ensure that competent contractors who can deliver high-quality implementation are hired for implementing Healthy Street infrastructure and overseeing the works at various stages. The hiring of contractors shall conform to the scope of work and conditions specified in Annexure (C)

2. Develop a work-zone management plan to ensure all road users can use streets safely and conveniently during implementation.

3. Conduct reviews and audits to identify and rectify gaps promptly during the design and implementation of Healthy Street initiatives.

4. Coordinate between contractors, consultants, and experts to address on-site issues during construction.

5. Conduct public stakeholder meetings as required.
6. Mediate any conflict between stakeholders (both public and governmental) during construction.
7. Maintain a database of topographic survey data, geo-technical information, and other databases required for detailed design and implementation.
8. Monitor project implementation and maintain a database of as-built drawings.
9. During construction projects that compromise the use of NMT infrastructure, ULBs shall provide alternative means for pedestrians and cyclists to circulate.

1.4 Street Management, Maintenance and Enforcement

Regular operations and maintenance, including clearance of encroachments is therefore crucial to prevent further damage, enhance road safety, and reduce long-term repair costs. Prioritising street maintenance should be guided by road inventories and regular inspections. Roads with heavier pedestrian and vehicular movement should be taken up on priority, along with those serving important facilities like schools, hospitals, institutions, and major public destinations. The classification of the road: arterial, sub- arterial, collector, or local also influences priority, helping ensure that essential network links remain safe and functional. For further details on type of regular maintenance interventions, activities, timelines, performance monitoring refer Annexure (E).

1.4.1 Maintenance

1. Ensure that all projects involving the new construction or retrofitting of streets improve safety and convenience for street users per the Thoothukudi Comprehensive Road and Street Design Guidelines.
2. If there is a need to reconstruct the street while developing areas along the road, the reconstruction will be done as per the said policy. Efforts should be made to utilise such opportunities to set a good precedent for further development work.
3. Monitoring physical infrastructure regularly, to ensure that it is maintained over time and meets appropriate maintenance standards.
4. Institute a “Repair and Maintenance Programme” to keep all footpaths and cycle tracks in a good state of repair and cleanliness.
5. Deploy “Road Maintenance Vans” which will have essential tools and materials to quick street fixes. Each ULB will have an online and offline grievance redressal system for streets.
6. Adopt a zero-tolerance approach for managing encroachments on footpaths.
7. Any issues related to street network planning, management and usage will be discussed with the stakeholders. Discussions will also be held with public or private property owners of the road under the influence of this policy.

1.4.2 Traffic Management

1. Signal phases should include adequate time for all pedestrians including toddlers with caregivers, pregnant women, people on wheelchairs, the elderly and people with reduced mobility.
2. Green phases should be timed to facilitate cycle and public transport movement.
3. Motor vehicle users must give the right-of-way to pedestrians and cyclists.

1.4.3 Vending Management & Enforcement

1. Identify locations where there is existing and potential demand for goods and services of street vendors.
2. Regulate street vendors in on-street locations at Mass Rapid Transit stations, railway stations, market areas, commercial centres, and other key destinations.
3. Enhance and preserve existing, culturally significant street vending markets.
4. Regulate street vending by providing vendor infrastructure in locations that ensure the continuity of footpaths and cycle tracks.
5. Form a partnership with vendors under which they would be expected to keep vending areas clean and well-maintained, to ensure that pedestrian and cyclist paths are not hindered.
6. Encroachments and other temporary and/or permanent obstructions forcing pedestrians to walk on the carriageway shall be removed.
7. Advertisement boards shall be designed to maintain a minimum of 2m wide and 2m high clear path, avoiding causing obstructions in pedestrian and cycling movement.

1.4.4 Service Utility Management

1. Access points for underground and overground utilities will be designed to avoid conflict with pedestrians and cyclists' movements. Manhole and machine hole covers will be on level with footpaths, cycle tracks, and the surfaces of others. The covers should be fitted such that it shall not compromise safety. These access points shall be designed to minimise disruption to pedestrians and cyclists during maintenance.
2. All utilities shall be provided only in the Multi-Utility Zone (MUZ) of the footpaths, to ensure the walking space is not compromised. A change in the design of the utility infrastructure and shifting of existing utilities shall be encouraged to facilitate this.
3. Stormwater systems should help water drain off the Healthy Street infrastructure into appropriate channels and catch pits. At no point will footpaths, cycle tracks, or other NMT facilities lie at the lowest level in the street cross-section, except in the case of NMT-only streets. Stormwater facilities will be maintained regularly to prevent flooding of the Healthy Street infrastructure.

1.5 Evaluation

1. Measure the effectiveness of the street design every year by adopting an impact assessment framework (Annexure D)
2. Create an inventory of footpaths and cycle tracks, conduct surveys of transport system users, and compile other records to measure progress as per the impact assessment framework
3. Commission annual progress reports indicating compliance with this Policy. ULBs shall place these reports in the public domain for scrutiny and feedback.
4. ULB shall work steadily toward achieving the goals of the Healthy Street Policy, prioritising major implementation within the first ten years and using the final five years for consolidation and upgrades. The benching marking and KPI indicators for outcomes and outputs are identified in Annexure (D).

2. Foundation

The Foundation pillar identifies processes that the city needs, to ensure effective scale-up and long-term institutional resilience. This involves establishing necessary institutions and procedures, adopting policies, plans and guidelines, and even providing regular capacity development for their teams.

2.1 Institutional Set-up

Successful implementation of street design projects will involve cooperation between multiple stakeholders, such as Urban Local Bodies, traffic police, planning agencies, consultants and others, at different stages. Thoothukudi will aim to bring all agencies involved in designing and implementing street under one single authority—the TCMC—to ensure successful planning and implementation of Healthy Street infrastructure. A dedicated team is further required to monitor and ensure the implementation of various interventions mentioned above. This shall be done by,

1. The Sustainable Mobility Committee under TCMC, will act as a high-powered committee whose role is to set the goals and targets, monitor and review the progress of various projects and programmes to achieve the vision for a city-wide Healthy Streets network set under this Policy. They will also ensure implementation and coordination between multiple stakeholders such as urban local bodies, traffic police, planning agencies, consultants and others, at different stages. The Committee chaired by the Municipal Commissioner shall comprise of senior officials from the ULBs. The committee will further include the following representatives:

1.4.3 Vending Management & Enforcement

1. Commissioners and Joint/Deputy Commissioners from the ULBs
2. Heads of road owning agencies and all government departments that cater to street works – Traffic Police, Public Transport Agencies, Development Authorities, Public Works Department, State Highways National Highways Authority of India
3. Utility regulators from key decision-making agencies including, but not limited to Water Supply, Electricity, Telecom etc.
4. Experts and civil society groups including non-governmental agencies, academia with an expertise in non-motorised transport,

civil bodies associated with street vending, women / children / disabled rights associations etc.

5. Chief Engineer of the ULB, who is the Head of the Healthy Streets Cell, mentioned under 2.1.2.

6. The responsibilities of the Sustainable Mobility Committee shall be as per Annexure (F)

2. The ULBs will set up a dedicated Healthy Streets Cell to oversee detailed design, construction, and general maintenance of all streets under their ownership. The Healthy Streets Cell is a dedicated team of internal staff with urban planning, urban design, urban transportation and engineering skills whose role is to implement the projects based on the goals prepared by the Sustainable Mobility Committee. They shall also comprise of external specialised consultants to guide the city on specific aspects of street design such as project management, engineering works, landscaping, signages etc.

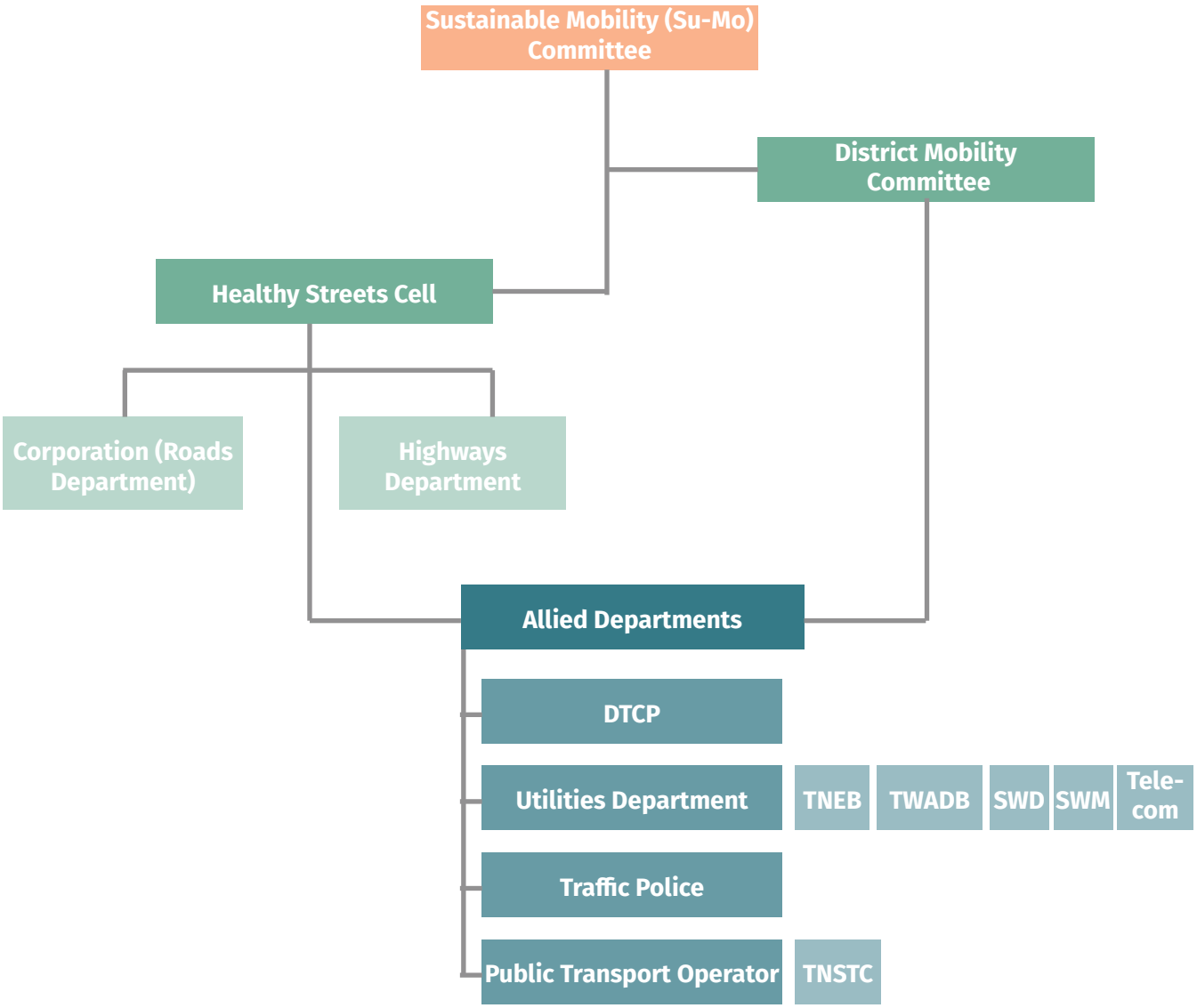
1. The Healthy Streets Cell should have sufficient statutory backing such that the decisions taken by the Cell are binding. The Healthy Streets Cell shall be headed by the Chief Engineer of the TCMC. The rest of the team must include:

a. Executive engineer
b. Urban designer
c. Urban planner
d. Communications expert
e. Draftsperson(s)
f.Support staff(s)

2. The responsibilities of the Healthy Streets Cell shall be as per Annexure (F)

3. The ULBs will develop appropriate stakeholder engagement frameworks to engage with stakeholders, both at the city and zonal levels.

4. The ULBs will also set up Zonal Committees under Healthy Streets Cell to oversee detailed street design at the zonal level.



2.2 Guidelines and Policies

1. Adopt the Comprehensive Road and Street Design Guidelines which specifies guidelines and standards for planning, design, and implementation of Healthy Street initiatives that achieve the goals of this Policy.

2. Adopt other policies that complement the Healthy Street policy such as parking and road pricing policy for better road space demand management to ensure every road user gets a fair share of road space, road safety policy to ensure no lives are lost due to road crashes, and street vending policy that enhances livelihood without obstructing the right of others to street space.

3. To guide the implementation of this Policy, a Healthy Street Action Plan shall be developed. This action plan will outline specific actions to be undertaken by relevant agencies to the goals and targets set out in this Policy. The Action Plan shall be reviewed and updated on a yearly basis to monitor and track progress towards the goals, evaluate the impact of initiatives and make necessary revisions or develop new strategies as needed.
4. The Healthy Street Policy shall be revised every 5 years.
5. Embed the Healthy Street network plan and guidelines in the city master plan (development plan) to achieve statutory backing and to inform future initiatives.

2.3 Data Management

1. Set up the Healthy Street data centre for data-driven decision making, future investments, research, and communications.
2. Annually collect data to measure the goals mentioned in this policy, and plan further interventions accordingly.
    1. Accident data for vulnerable street users such as pedestrians and cyclist would be collected periodically. Such accident sites will be redesigned on a priority basis.
3. Ensure regular updates of gender aggregated mobility data, including mode shares of pedestrians and cyclists, in all studies of urban transport systems. The ULB will regularly reach out to citizens, representatives for feedback and will solicit the feedback in the future proposals.
4. Make information on transport investments openly accessible to the public, allowing evaluation of the impact of ongoing projects.
5. Provide citizens access to this information through the ULB's online web portal or mobile application.
6. Undertake Impact Assessments and Performance Audits, of Healthy Street projects, by collecting and comparing before and after data; and execute recommended changes.
7. Collect speed and traffic data regularly to monitor vehicular speeds during off peak hours. The ULBs will prioritise traffic calming interventions on streets having higher vehicular speeds.
8. Will use technology to do GIS based mapping (AI, crowdsourcing, third party applications), to update existing data and collect new data.
9. Refer to annexure (H) for data field standardisation, data storage and platform, compliance & governance mechanism etc.

2.4 Budget and Funding

The ULBs shall provide sufficient budgetary support to build and maintain the necessary Healthy Street infrastructure to fulfil the policy goals.

1. Create annual budget plans for Healthy Street.

2. Allocate funds in the annual budget to create and maintain Healthy Street infrastructure, with the percentage of funding for Healthy Street infrastructure increasing progressively each year.
3. Leverage central and state grants which can focus on improving mobility and sustainability. Best practises are complied in Annexure (I).
4. Prioritise funding Healthy Street improvements in areas with high pedestrians, cyclists and public transport use.
5. Channel foreign loans and investments toward projects that improve conditions for pedestrians, cyclists and public transport users.
6. The ULBs will use all revenue collected from the parking management program to fund public transport and Healthy Street improvements.

2.5 Capacity Development

1. The ULBs will partner with academic institutions and technical organisations to conduct training programs to train officials, engineers, and staff in the basics of street design.
2. The ULBs shall convene conferences, workshops, seminars and experiential study tours to understand and disseminate best practices in street design among city officials, consultants, contractors and others.

3. Communication

The third pillar of Communication focuses on establishing practices that would build support and nudge behavior for walking, cycling, and public spaces among citizens. This incorporates the participatory planning approach and focuses on using various communication tools to engage with citizens and spread awareness.

3.1 Behaviour Change

1. Working with the Thoothukudi City Traffic Police and other relevant agencies, ULBs shall launch Healthy Street Campaign through open streets events, street design competitions, cycling and walking tours, and cycle training among others to build support among citizens.

3.2 Public Participation

1. Create a community engagement strategy to involve citizens in the Healthy Street initiatives for collaborative decision-making, understand citizens' perception, and increase awareness. The ULBs shall provide regular updates and seek input on such Healthy Street projects and programs through the Sustainable Mobility Subcommittee of the TCMC

3.3 Information

1. Provide information on wayfinding, bus routes, real-time location of bus, expected travel time and others to make walking, cycling, and public transport attractive and reliable.
2. Inform citizens on various Healthy Street initiatives in the city.

06 Annexure

Annexure A

NMT Recommendations from the Thoothukudi Master Plan – 2045

Summarised below are the relevant provisions from the Thoothukudi Master Plan 2045 that directly inform and support the Healthy Streets Policy framework. The extracts are organised thematically to demonstrate the statutory basis for prioritising non-motorised transport, pedestrian safety, sustainable mobility, and inclusive street design across the Thoothukudi Local Planning Area.

1. Sustainable & Green Mobility

The Master Plan advances a comprehensive Non-Motorised Transport (NMT)-led approach, explicitly recognising Thoothukudi's walk-oriented, compact urban structure and the high dependence on walking for daily activities. Central to this approach is a commitment to Safe Streets for Women and Children, acknowledging that pedestrian corridors are disproportionately used by vulnerable groups: women, children, the elderly, and persons with disabilities.

1.1 Priority Pedestrian Corridors

The Master Plan identifies the following corridors as primary movement routes requiring targeted intervention:

- High-intensity areas such as Periya Kovil Street & Old Big Market: Pedestrian-priority measures: temporary pedestrianisation, regulated loading/unloading windows, guardrails, bollards, and durable interlocking pavers to reduce vehicle conflicts.
- Transit hubs, including Old Bus Stand & Railway Street, that witness peak pedestrian volumes of 1,200-1,400 per hour: Widened continuous footpaths, improved wayfinding, seamless railway exit interfaces, pedestrian scrambles, ramps, and tactile paving.
- Institutional stretches such as Bank Street & Old Corporation Building: Shaded walkways, high-visibility crossings, Leading Pedestrian Intervals (LPIs), and encroachment-prevention measures.
- Commercial stretches like DSF Grand Plaza: Traffic calming and enhanced street lighting to ensure safe evening and post-work movement.

1.2 City-Scale NMT Network:

At the city scale, the Master Plan proposes:

- Continuous, unobstructed footpaths with a minimum width of 2.5 m within widened road corridors.
- Segregated cycling tracks along 30 m and 60 m road corridors.
- A connected NMT network linking residential areas to schools, parks, and BRTS stations, aligned with the National Urban Transport Policy (NUTP).

1.3 Supporting Healthy Streets Measures:

Implementation of the above pedestrian interventions is to be supported by the following Healthy Streets-aligned measures, which the Master Plan explicitly notes can be delivered without major road widening:

Roadside tree plantation for shade and thermal comfort.

- Improved street lighting along all pedestrian-priority corridors.
- Safe crossings, refuge islands, and pedestrian signals at key intersections.
- Low-speed street design to reduce vehicular speeds and minimise pedestrian-vehicle conflict.
- Strengthened natural surveillance through activation of street edges.
- Gender-sensitive, child-friendly, and universally accessible design standards.

2. Sustainable & Green Mobility Initiatives

Sustainable mobility is identified in the Master Plan as the overarching theme that ties all infrastructure proposals together. The Master Plan's green mobility framework operates across three scales: mass transit, freight logistics, and street-level design, each of which intersects directly with Healthy Streets objectives.

2.1 Mass Transit: The Healthy Streets Policy's emphasis on seamless first- and last-mile NMT connections is directly supported by this transit-first orientation.

2.2 Green Logistics: Green Mobility is embedded in the Master Plan's infrastructure design through extensive landscaping and urban forestry along 60 m arterial roads. These green belts serve a dual function: acting as carbon sinks and providing noise barriers for adjacent residential zones. They also contribute directly to Healthy Streets outcomes by improving thermal comfort, encouraging walking, and enhancing the quality of the pedestrian environment.

3. Railway Station Upgradation & Multimodal Access

The Master Plan recommends a phased approach to improving railway access as part of a broader multimodal mobility strategy. These provisions directly support Healthy Streets goals for safe, walkable access to transit.

3.1 Satellite Terminal Development

Thoothukudi Railway Station currently operates as a dead-end terminal near the city centre, creating traffic bottlenecks and limiting future expansion. The Master Plan recommends the development of Thoothukudi Melur and Meelavittan as satellite passenger terminals to:

- Decongest the city core and redistribute passenger demand.
- Provide improved access to industrial corridors and the upcoming Multi-Modal Logistics Park (MMLP).
- Enable connectivity improvements through expanded arterial road networks.

3.2 NMT & Pedestrian Infrastructure at Stations

The following station-level interventions are prescribed in the Master Plan:

- Off-Street Parking: Development of multi-level or organised off-street parking facilities at the main Thoothukudi terminal to reclaim road space currently occupied by unorganised parking, restoring footpath continuity.
- Pedestrian Walkways: Wide, shaded pedestrian walkways with non-slip surfaces connecting stations to the nearest major arterial roads, ensuring separation from vehicular traffic. Safe Crossings, Zebra crossings, pedestrian signals, and refuge islands at all primary station entrance points.

4. Bus Stop Design & Public Transport Access

The Master Plan acknowledges that existing bus stops within the Local Planning Area are largely unorganised, with buses halting on the carriageway causing traffic disruptions, pedestrian safety hazards, and operational inefficiencies. The following standards are prescribed:

4.1 Design Standards for Bus Stops

- Well-planned, designated bus stops with shelters along all bus routes to enable orderly boarding and alighting.
- Passenger comfort features: adequate shelter, seating, lighting, and information systems.
- Stop spacing of 500-800 m along the core city transit network; approximately 1 km in expanded areas, calibrated to population density.

4.2 Bus Bays on Arterial Roads

- Provision of bus bays along arterial roads to prevent on-carriageway stopping, improve traffic flow, and enhance pedestrian safety.
- Bus bay platform lengths to be determined based on peak-hour bus frequency and passenger demand.
- Limited land acquisition to be undertaken where required to enable bus bay construction.

Annexure B

Process of Hiring Consultants

Design consultants bring specialised expertise essential for shaping high-quality urban infrastructure. With deep knowledge in applying appropriate design principles and detailing, experienced urban designers, planners, and other professionals help cities plan active mobility networks, create inclusive, sustainable street designs, and ensure long-term project success. In order to ensure sustainable, inclusive and impactful solutions, cities shall onboard such experienced designers, through the various approaches mentioned below.

Approach to Hiring Consultants

There are three primary approaches to hiring design consultants:

- Empanelment – maintaining a pool of pre-qualified consultants for future assignments.
- Tendering – inviting competitive bids through formal procurement processes.
- Invitation-based Low-value Procurement – suitable for smaller projects or pilots under a financial threshold.

For larger or more complex scopes, tendering is commonly adopted. Two widely used tendering processes are listed below.

Tendering Bid System 1: Single Stage Two Cover

In this method, technical and financial proposals are submitted together in two separate covers.

- Cover 1 (Technical) is opened and evaluated first.
- Only those bidders who meet or exceed a minimum technical benchmark (recommended at 75% or above) proceed to the financial evaluation.
- Cover 2 (Financial) is then opened for those technically qualified.
- The lowest financial bidder (L1) is awarded the contract.

When the scope includes multiple sites to be awarded to different consultants under the same RfP, the lowest financial bidder (L1) is awarded only one package. The remaining technically qualified bidders (L2, L3, L4, etc.) are then approached, in order of their financial ranking, and offered the opportunity to match L1's quoted rate. Those who agree are each awarded one package, ensuring a fair and competitive distribution of work.

Tendering Bid System 2: Quality-Cost Based System (QCBS)

- This approach balances technical and financial competence:
- Technical and financial bids are evaluated simultaneously.
- Each bid is scored based on a defined weightage — typically 70% for technical and 30% for financial components.
- The bidder with the highest combined score is selected

QCBS ensures that technically competent bidders with fair financial proposals are preferred, promoting quality in design outcomes while maintaining cost-effectiveness.The sample RfP templates shall be modified depending on the approach to hiring consultants and the tendering system.

Scope of Work

Designer for Planning and Designing Comprehensive Streets

Terms of Reference

A. Objective of the Project

• To employ a holistic approach to street design, incorporating mobility elements—e.g. footpaths, cycle tracks, carriageways—as well as additional elements such as trees, bus stops, street furniture, and organised vending spaces in an integrated design.

• To ensure that street design is based on scientific assessment of needs and behaviour of street users, as observed in the surveys as part of this study.

• To employ traffic calming measures to ensure pedestrian safety on all streets.

• To ensure that all spaces, including footpaths, refuge islands, and pedestrian crossings, are accessible to all users, regardless of age, gender, and physical ability.

• Street elements such as footpaths, cycle tracks, street furniture, underground utilities, etc. are designed to best practise standards.

B. Scope of Work

The Scope of Work includes:

1. Capacity building workshop
2. Review of existing public transport and land use plans
3. Definition of study area
4. Topography survey
5. Underground Utility mapping
6. Survey of land uses
7. Survey of pedestrian facilities
8. Survey of pedestrian movements
9. Parking survey
10. Survey of street vending and related activities
11. Preparation of detailed street designs
12. Bill of quantities
13. Preparation of Terms of Reference (TOR) for contractors for construction
14. Supervision during Implementation
15. Public / Stakeholder Consultation
16. Post Implementation Survey

1. Capacity building workshop

Capacity building workshop will be organised by the Municipal Corporation with the support of advisors to the corporation. The firm and support staff shall attend the workshop. One or two-day long workshop will touch upon the basics of Comprehensive Road and Street Design Guidelines, and encourage interactive sessions on various street elements as well as concerns of the city.

2. Review of existing transport and land use plans

The Consultant is required to compile spatial information on plans for bus priority/ bus rapid transit (BRT) networks, cycling networks, pedestrian networks, and pedestrian zones presented in the reports given by the Client. Particular attention must be given to the Sustainable Cities through Transport strategic plan provided by the Client. These engineering parameters should be mapped using the GIS platform or other illustration software. The Consultant should also identify transport system goals that are stated in these reports.

3. Definition of study area

The selected streets listed in Annexures will make up the Study Area. All streets in the Study Area, along with their legal ROWs, should be mapped using GIS or AutoCAD. Data collection and survey activities (including preparing survey forms and proposing survey locations) will be carried out by the Consultant. The Client must approve the Inception Report before the Consultant proceeds to the next step.

4. Topography survey

The Consultant shall conduct total-station surveys to prepare base plans for critical sections and junctions to facilitate improvements. The survey must cover all streets in the study area along with any intersecting streets up to a distance of 50 m from the intersection. TOR for hiring topographic surveyors will be provided by the Client which includes the specific elements that must be surveyed. In the topography survey, all the above ground utilities including electricity overhead lines, utility and feeder boxes, and all other utilities should also be recorded using GIS platform.

5. Underground Utility Mapping

The Consultant/MEP expert shall collect the utility data through coordination with local municipal authorities and other utility agencies and integrate it into the base map. The base map would also include accurate locations and positions of the above ground as well as underground utilities in digital format.

The following utility details shall be captured as specified by local municipal authority, but not be limited to:

- Location and alignment of drain / channels/ nallah
- Water Networks
- Sewerage Networks
- Storm water drains network
- Solid Waste Management
- Underground Power Cables
- Street lighting

The data related to these utilities are available with the municipal authorities in digital formats or as hard copies. The underground water supply, sewerage, and drainage lines are to be shown through derivation. The derivation of these utility network lines can be done by valve location, manholes, information provided by Municipalities/ Corporations officials, observation survey etc.

Each utility should, at minimum, have following attribute data attached with it:

- Type of utility (Water, Sewerage, Electricity, Telecommunication)
- Depth of Utility
- Size (diameter) of pipe/cable
- Length
- Starting point
- End point

6. Survey of land uses

The Consultant will compile land use information to help inform street design decisions. A land use survey must be carried out for every building adjoining the Study Area. In cases where the ground floor use is different from that of rest of the floors, the surveyors should make a note. The number of floors per structure also must be noted. Important activity generators adjacent to the streets within the Study Area, such as shopping areas, theatres, and housing developments, should be identified. All land use data should be recorded using the GIS platform or AutoCAD.

7. Survey of pedestrian facilities

The Consultant will document the quality of existing pedestrian facilities on all streets in the Study Area, noting properties such as the clear width of the footpath on each side at intervals of 200 m (if present), the number of obstructions per km in the clear width, and the presence of shade at 2 p.m. (from buildings or trees). These data should be stored and mapped using the GIS or other illustration software platform. If cycle tracks are present in the Study Area, a similar survey should be carried out wherever they are present.

8. Survey of pedestrian movement

Surveys shall be carried out to assess NMT user flows at important locations in the study area. The survey shall be from 06:00 to 22:00 hours on a normal working day. The Consultant will record the number of pedestrians and cyclists moving along the road on important corridors. The Consultant will also conduct a tracking survey of pedestrian crossing movements at important intersections along each corridor in the Study Area. Before conducting the surveys, the Consultant must seek approval of the survey locations from the Client.

9. Parking Survey

A parking survey must be carried out on all corridors in the Study Area to identify parking patterns and occupancy rates. Parking demand should be established by a manual count, classified by vehicle type. The count should cover the Study Area streets plus streets within a buffer of 300 m–500 m on either side of the streets within the Study Area. The extent of the parking zones must be approved as part of the Inception Report (see Step 2). The survey shall be conducted for one hour during morning peak and one hour in the evening peak period in such areas. The survey should cover both on-street parking areas as well as off-street public or semi-public parking. Finally, parking fee levels should be noted. If the street falls under City's parking management system, the consultant is required to consult the Client to coordinate the design of parking slots with the Parking Management Plan. All parking data should be recorded using the GIS platform or AutoCAD or other illustration software.

10. Survey of street vending and related activities

The surveyor must make note of all the vendors in the Study Area. The survey should note the type of vending and the physical typology of the vending structure (i.e. permanent or temporary structure). The survey should also note whether the vendor is an obstruction to pedestrian and cycle movement. The location and characteristics of each vendor should be recorded using GIS or other illustration software. The survey also should capture social gathering spaces and other activities found in the public ROW in the study area. The location and number of people engaged in the activities should be noted using GIS or other illustration software. This information will inform the placement of street furniture and other elements in the final design.

11. Preparation of detailed street designs

a. Line drawings

The Consultant shall prepare line drawings for all streets in the Study Area. Line drawings must clearly show the new kerb line in reference to the road median. The drawing must be complete with dimensions at 2 m intervals. Line drawings should be marked on the road with chalk to ensure that the survey drawing resembles on site conditions. The Consultant shall monitor the on-site markings and review the design as per site conditions.

b. Conceptual designs

The Consultant shall prepare detailed street designs for all streets in the Study Area. The design must be consistent with relevant plans, including plans for BRT networks, cycling networks, pedestrian networks, and pedestrian zones with particular regard to the Sustainable Cities through Transport strategic plan. The designs shall be prepared following relevant Indian Roads Congress standards, especially IRC 103:2012, Guidelines for Pedestrian Facilities. The Consultant should also refer to street design manuals such as Street Design Guidelines adopted by TCMC, and other specifications prepared by UTTIPEC, Tender Sure etc.

The pedestrian paths should meet the following standards:

- A minimum of 2m wide clear pedestrian zone
- A height of no more than 150mm
- Flat walking surface without abrupt level differences
- Continuous walking path
- Integrated with landscaping plan to ensure continuous shade

The cycle tracks should meet the following standards:

- At least 2.5 m wide for two-way movement
- Continuous cycling track
- Smooth surface without abrupt level differences; concrete or bitumen surface (paver blocks are unacceptable)
- Maximum grade of 1:12
- Integrated with landscaping plan to ensure continuous shade

Street designs should include but are not limited to the following elements:

- Dedicated pedestrian footpaths
- Dedicated cycle tracks (if the corridor falls on the cycle priority network)
- Pedestrian crossings, including formal speed table crossings as well as median breaks that serve as informal crossing locations
- Trees to provide shade for pedestrians and cyclists as well as decorative landscaping, including compensatory afforestation for the trees removed as part of the project
- Bus stops and IPT stops
- Spaces for street vending
- Medians
- Traffic calming elements, where needed to reduce vehicle speeds
- Physically demarcated on-street parking areas
- Street furniture, including benches, stools, tables, and other seating arrangements
- Signage locations
- Pedestrian refuge islands
- Carriageways, ensuring that the width remains uniform between intersections
- Street lighting
- Storm water drains
- Utility access points

Intersection designs should promote pedestrian safety through elements such as pedestrian refuge islands, reduced angles of approach, reduced turning radii, and traffic calming. The design of pedestrian crossings at intersections and in mid-block locations should ensure that pedestrians do not need to cross more than 2 lanes (6 m) at a time. Where extra ROW is available, the Consultant should identify opportunities to improve and/or create plazas, markets, and other public spaces. The Consultant shall submit plan drawings as well as cross-sections at 50m intervals. The plans will be submitted in hard copy and electronic format. It must include at least two 3D renderings and photomontages of the design proposal.

c. Review of Conceptual Designs

The designs will be evaluated by a Review Committee (see below) before preparing the final working drawings. The Consultant may be asked to present the designs to the Review Committee.

The Consultant may be required to present the plans at a public stakeholder meeting. The Consultant is expected to achieve the design benchmarks mentioned. The review of the designs would be based on the "performance indicators" prescribed by the Review Committee.

d. Revised Conceptual Designs

The Consultant will prepare Revised Conceptual Designs based on the feedback received from the Review Committee and the stakeholders. The Revised Conceptual Design must be submitted to the Client for approval.

e. Draft working drawings

Following approval by the Client of the conceptual designs, the Consultant will prepare detailed construction drawings for the Study Area. The designs should include geometric and vertical profiles and should incorporate drainage designs (see below). The designs should include the following components:

- Typical sections every 50m
- Street plan
- List of existing street elements to be demolished
- Proposed, retained and relocated Underground and over ground utility location plans
- Utility relocation plans (wherever necessary)
- Materials as per Clients specifications
- Construction details for each element

The Draft Working Drawings must be submitted to the Client for approval.

f. Final Working Drawings

The Consultant will prepare Final Working Drawings based on the feedback received from the Client. The Final Working Drawings must be submitted to the Client for approval. The Consultant will submit all conceptual designs and final working drawings to the Client in hard copy and electronic format (DWG format).

12. Bill of Quantities

The Consultant is expected to prepare specifications, bills of quantities, cost estimates, and bid documents as per the TT Act and WB for the implementation of the proposed street improvements including pavements, furniture, street lighting, landscaping, and other components. Bid documents shall be given item-wise (i.e. streets, lighting, landscaping, road markings, etc.). The Consultant will work with the Client to include appropriate mechanisms in the bid documents to facilitate long-term maintenance, such as annuity-based compensation of contractors.

13. Preparation of TOR for contractors for construction

The Consultants will be required to prepare a TOR for contractors for the implementation of street designs. The Client will coordinate with the Consultants to prepare the joint TOR for Contractors.

14. Supervision during Implementation

The Consultant shall provide the detailed street designs to the project management consultant who will be responsible for the execution of the project. However, the Consultant shall be responsible for ensuring compliance with the design. The consultant shall provide periodic supervision (minimum 1 visit per month) to monitor that the design is being executed in accordance with the design and drawings submitted, and that the quality of construction and/or products, equipment, etc. is satisfactory. Any modification to the approved design shall be discussed with the Review Committee and be carried out by the Consultant. The design drawings for the modified design shall also be submitted to the Corporation.

It is expected that the final drawing (with modifications, if any) submitted to the Corporation shall completely match the actual project implemented on the ground.

15. Public / Stakeholder Consultation

The consultant shall conduct regular and continuous public/ stakeholder consultations to get their inputs and make all necessary efforts to include them in the design. The key stakeholders include Electric Supply and Telecommunication authorities, Highways, Transport Department, Traffic Police, Resident Welfare Associations, Vendors Associations, Civic Associations, and Educational Institutions.

16. Post Implementation Survey

The consultant shall carry out surveys including pedestrian counts, cyclist counts, Traffic Counts, Accident rates, Perception surveys, etc. after 3 months from the date of completion of the project. These surveys shall be supported by photographs and other relevant evidences.

Annexure C

For Procurement of Implementing Agency for Execution of Comprehensive Streets

Pre-construction Phase

1. Detailed Programme of Work

- Prepare a detailed programme showing the stages, sequence, and timing of all parts of work. It should include the resources, men, material, and equipment required with clear critical path to execute the work as per agreed implementation schedules by the employer.
- Timelines should be clearly defined. They should include estimated completion date and number of working days.
- Method statement for all works, including transport and delivery of materials, site works including earth works, hard works installation, plant protection, temporary storage, etc. should be clearly defined.

2. Procurement Plan

- Procurement schedule for all materials (including utility services, landscape elements, site furnishings, lighting, bus stops, public toilets, etc.).
- Existing and future availability of materials.

3. Material / Product Samples

- All samples for material, their types and numbers are to be submitted as required and approved by the employer prior to commencement of works on site.
- Product certificates for manufactured products should be submitted.
- Landscape indicating species, height, spread, and root ball size, for final approval by the client. Any agreed substitutions to plants species or specifications should be included

4. Site Management Plan

- Site arrangement layout for temporary structures, storage, utilities, etc. to be planned.
- Phasing plan to be submitted for approval to the employer prior to commencement of site work. Contractor has to ensure that there is little or no disturbance to the traffic, while planning the implementation phasing.
- Consultation will be required with the relevant authorities for construction phasing.

5. Health and Safety Plan

- Method statements on how risks from hazards will be addressed and recorded.
- Procedures for carrying out risk assessments and risk mitigation.
- Emergency procedures including those for fire prevention and escape.
- Procedures for ensuring that all persons on site have received relevant health and safety information and training.

6. Site Waste Management Plan

- Plan should include details on type and quantities of the waste generated including demolition waste, day to day generated waste, and safe disposal of the same, keeping in mind the environmental and social considerations, etc.
- Detail description of the waste management methods and actions.
- Record keeping procedures.
- Auditing protocols.

7. Traffic Management

The traffic management plan shall include, but not be limited to, such items as pedestrian walkway, signages, application and/or removal of pavement markings, roadway lighting, methods and devices for delineation, channelisation, and placement with careful strategy drawn out against project plan for construction activities.

The traffic management plan should be in place during construction activities and trial run. During construction, traffic management plan should address:

- Road user safety
- Traffic flow
- Reduction in delay
- Access arrangement for adjoining properties
- Pedestrian and cyclist provisions
- Parking for construction vehicles
- Incident management & emergency response plan
- Notices and community participation
- Special event traffic management plan
- Impact on structures

Construction Phase

This phase starts from the date of approved Good for Construction drawings (GFC).

1. Intersection and street redesigning

The following items are proposed to be undertaken in this project.

- Site clearance, demolition, earthwork, temporary work, traffic diversion, barricading the construction site, utility shifting, and all ancillary work as shown in the drawings.
- Footpath reconstruction/retrofitting, stamped concrete surfacing, and concrete paver block finish as per design, providing parking spaces as per design with concrete finishing, provision of separate RCC type utility ducts with opening after every 10 m interval to house current and future utilities.
- Excavation of the trenches, relocation of median, removal of existing poles/transformers, etc. and other road related facilities as per standards/drawings.
- Shifting and providing new utility lines like stormwater, water supply, and sewer along with access chambers and electrical cables with connectivity to individual properties, feeder pillars, removal of the existing street light HT/LT poles, and provision of new decorative street light poles, etc.
- Removal of the existing ramps, walls, compounds, fencing, encroachments on road/ footpath, and complete retrofitting of the footpaths.
- Provision of new ramps to access property, reconstruction of compound walls (wherever required), and reconstruction of access locations to property.
- Provision of cobbled finish at intersections and other traffic calming elements like islands, raised pedestrian crossings, etc.
- Relocation/removal and reconstruction of existing small shops.
- Provision of street furniture - concrete bollards, bollard seatings, FRP dustbins, bus stops.
- Provision of street signages, informatory and cautionary signages, road markings, demarcating cycle track and other pedestrian facilities as per the design and drawings.
- Landscaping, plantation of various species of trees, shrubs, and bushes and PVC pipe line work.

2. Other tasks: Traffic Diversion and disturbances

- To conduct (one-way movement – map enclosed) trial run on the identified stretch
- The contractor is required to submit a structured approach for the development of a traffic management strategy which shall be considered, to minimise delay and inconvenience to road users during construction of road alignment.
- The contractor shall be responsible for the control, guidance, and protection of all road and pedestrian traffic along the entire road improvement stretch, and would manage traffic to minimise any delays and disruptions to vehicular and pedestrian access and movement.

3. Trial run

- The trial run is to be carried out for at least two weeks, preferably on the normal days. Before implementing the trial run, the contractor should prepare a plan of action which needs to be approved by the client and traffic police.
- The traffic management scheme to be published in the newspapers and handouts to be distributed to inform the local public of the area, starting at least two days prior to the first test run day.
- Traffic signages need to be installed at strategic locations as discussed by the traffic police.
- Along with signages, contractor would also provide bollards/traffic cones/barricades to manage the traffic at critical locations.
- Contractor has to assist traffic police by deploying sufficiently trained traffic marshals to regulate the traffic

Post Construction

Post construction activities shall include defect liability and also maintenance of roads, landscape, and the utilities laid by the contractor on the smart roads. Any faults, repair and general maintenance, watering of landscape, etc. shall start from the date of practical completion for a period of 24 months and the contractor shall undertake all responsibility for defects of the equipment and landscape materials during this period.

4. Special Instructions for Work Execution

- The contractor should execute the work, causing minimum interference to the existing services in the road in co-ordination with the respective expert of the corporation.
- It is the responsibility of the contractor to execute the work, including excavation of earth and laying new elements or services as per the proposed design, in conjunction with the existing services over and below the ground level.
- Contractor has to inform the line (concerned) department immediately, if any underground services are found hindering the work, and further any re-alignment or damage of the services has to be repaired as per instruction from the line department.
- Any major deviation from the plan shall be reported immediately to the architect/ engineer in charge of the project management team.
- It is integral for the contractor to consider the required quantity and the respective amount incurred related to the existing services interfered or essential services required (only related to existing scenario), so as to execute the project related work.
- The design drawings shall be supplemented by working drawings prepared by the contractor, which are required for the execution of the works. These working drawings shall include, electrical single line drawings, mechanical drawings, piping drawings setting out construction details, layouts, utility relocation and protection, and any other detail the engineer may ask during construction.

Contractor's Facilities

1. Site offices of the contractor

- The site office with all those provisions mentioned above shall be provided and maintained by the contractor throughout the whole construction period until three months after the issuance of the preliminary Handing Over Certificate.
- The office and its facilities, will not however be removed from the site without prior written approval of the engineer.

2. Surveying equipment

- The contractor shall provide one approved set of surveying and measuring equipment for the sole use of the engineer's representative.
- The contractor shall be solely responsible for the maintenance of all such instruments and equipments, and shall ensure that they are in good condition at all times.

3. Laboratory and laboratory testing

- The contractor shall establish full-fledged field laboratory with all testing equipment for testing of the materials and finished products.
- All materials shall be tested as per Indian Standards. The rates quoted for concrete shall be inclusive of cost for establishing laboratory for testing.

4. Progress photographs and reports

- Contractor shall submit monthly six progress photographs as part of his monthly progress report.
- Each photograph shall be mounted on A4 size chart paper on which the following information shall be written:

  Name of the project

  Location

  Type of work

  Serial number of the photographs

  Date of photographs

5. Safety on site

- The contractor shall appoint a Safety Officer who will be in charge of all safety measures. The workers should use safety equipments like helmets, gloves, shoes, etc. for their safety.

6. As-built drawings

- The contractor shall prepare as-built drawings and certify on these drawings that the drawings reflect the actual work executed/installed.

Annexure D

Impact Assessment Framework

i. This framework identifies barriers to walkability, safety, and inclusive access while assessing pedestrian experience through field audits and user surveys. It also documents key street-level environmental, social, and economic indicators to establish baseline data for post-implementation impact evaluation.

	Parameter	Indicator Description
Pedestrian Infrastructure	Footpath Width	Minimum unobstructed width for pedestrian movement
	Continuity	Presence of uninterrupted footpaths on both sides
	Obstructions	Free from vending, utility boxes, parked vehicles, poles
	Street Lighting	Adequate lighting for footpaths and crossings
	Public Seating	Seating for resting, esp. elderly and differently abled
	Accessibility	Ramps, tactile tiles, kerb ramps, auditory signals
Crossing and safety	Pedestrian Crossings	Presence of zebra crossings, pedestrian refuge is-lands
	Vehicular Dominance	High speeds, narrow footpaths, unsafe crossings
	Traffic Volume	Classified count of vehicles passing through the street during peak hour
	Speed Control Measures	Presence and quality of calming features (speed humps, rumble strips, raised crossings)
	Perception of Safety	How safe users feel on the street
Equity Inclusion and Vibrancy	Pedestrian Volume Counts	Gender/age/disability disaggregated pedestrian counts
	Mode Share	Mode of commute for different groups incl. shopkeepers & residents
		Mode of commute for non-residents visiting the street
		Frequency of pedestrian trips
		% of space allocated for each road user
	Street Use Patterns	Usage by time of day and type of activity
		Desire Lines of pedestrians
	Vendor Presence	Number of local vendors or small businesses
	Perception of Belonging	Whether users feel welcome on the street

	Parameter	
Environment and Resilience	Shade & Trees	Shade provision, environmental cooling
	Trees and Canopy Cover	Trees planted regularly to provide thermal comfort
	AQI / Vehicular Emissions	Air pollution levels from vehicles
	Surface Temperature	Street surface temperature
Accessibility to Social Infrastructure/ Public Amenities	Flood Resilience	Street usability in monsoons, proper stormwater design
	School Access (Count & Proximity)	Number of schools within walking distance from residential areas or transit nodes
	College Access (Count & Proximity)	Number of colleges/institutions within walk/cycle distance
	Hospital/PHC Access	Proximity to public and private hospitals or primary health centres (PHCs)
	Access to Parks/Open Spaces	Availability of safe, accessible public open spaces and parks
	Access to Social Facilities	Access to libraries, community halls, ration shops, anganwadis, etc.
	Grade Separator Integration	Pedestrian and cycle access under/around grade separators, flyovers
	Transit-Oriented Facility Mapping	Land use mix near transit corridors (residential, health, education, parks)
	Connectivity to Transit Corridors	Direct access to major transit routes like metro, BRT, or suburban rail
Parking Management	On-Street Parking Alllocation (Supply)	Area or % of right-of-way allocated for parking (2W, 4W, goods)
	Parking Obstruction	Whether parked vehicles block pedestrian/cycle movement or crossings
	Integration with NMT	Parking zones placed away from pedestrian desire lines and crossings
	Parking Demand	

ii. The table outlines a set of economic, social, environmental, political, and institutional parameters to systematically assess the benefits of street projects. It identifies measurable indicators to capture changes in business activity, land and rental values, public health, safety, inclusivity, environmental quality, governance support, and institutional capacity. Together, these parameters enable evidence-based evaluation of outcomes, support accountability, and provide baseline data to track impacts over time and inform future street design and investment decisions.

	Parameter	Indicator Description
Economic	Higher business for shopkeepers	% change in average daily/weekly turnover of street-front businesses
	Land value	% change in guideline/market land value in the corridor
	Rental value	% change in monthly commercial and residen-tial rents
	Increase in shops and vendors	Net increase in number of formal shops and licensed vendors
	Return on invest-ment	Benefit–cost ratio of project (economic benefits vs project cost)
	Tourist activity	Change in footfall of visitors/tourists and relat-ed spending
	Façade upgrades / renovations	% of buildings with visible façade improvement or renovation
	Health care cost sav-ings	Estimated reduction in health costs from in-creased walking/cycling
	Revenue generation opportunities	Annual revenue from parking, vending, adver-tisements, events
	Fuel savings	Estimated reduction in vehicle km travelled (VKT) and fuel consumption
Social	Active lifestyle	% increase in pedestrians, cyclists, joggers using the street
	Mental health	Self-reported improvement in well-being (sur-vey-based index)
	Elderly & PWD us-age	% share of users who are elderly and persons with disabilities
	Livelihood access	% increase in users accessing jobs/markets via the street
	Gender inclusivity	Female and non-binary user share during dif-ferent time periods
	Access to schools	% of children walking/cycling to school along the corridor

	Parameter	Indicator Description
Social	Social interaction	Observed number of social activities (sitting, talking, vending)
	Community identity	Survey score on sense of place and community belonging
	Personal safety	% reduction in reported harassment, crime, and near-miss incidents
	Time spent on street	Average dwell time disaggregated by age and gender
	Destination value	% of users reporting the street as a “place to go” vs just pass through
	Road safety	Reduction in crashes, injuries, and fatalities
	Road rage	Reduction in aggressive driving complaints and incidents
Environmental	Air quality	Change in PM2.5 / NO_2 levels at street level
	Noise pollution	Change in average decibel (dB) levels
	Ambient tempera-ture	Reduction in surface/air temperature (°C) due to shading/greening
	Flooding / storm-water	Reduction in waterlogging duration and fre-quency

iii. Key Performance Indicator and Benchmarking

a. Outcome indicators define the broader sustainable mobility vision. The detailed indicators, along with frequency, the sources of data required, level of difficulty, and service level benchmark for each indicator are given below:

Establishing Baseline

The cities are required to obtain certain primary data to establish baseline information about the city to help them achieve the policy goals. Cities should review their existing streets to understand the extent of pedestrians' and cyclists' mobility issues. Surveys should be conducted to identify the existing characteristic of the street. The following data will be required to assist them in monitoring and evaluation of Healthy Street projects:

Aspect	Activities Required
Mode share	Household survey with a sample size between 0.5-1% of the total population
Traffic injuries and fatalities	1. Disaggregation of injuries and fatalities by pedestrians, bicyclists, two wheelers, and others 2. Identification of black spots
Ambient air-quality	Set up air quality monitoring stations in the city in coordination with Central Pollution Control Board/State Pollution Control Board/Pollution Control Committees
Extent and quality of walking facilities	1. GIS mapping of city-wide street network up to local streets 2. Conduct city-wide accessibility audits for walking environment 3. Conduct primary survey to assess accessibility, safety, comfort and quality
Extent and quality of cycling environment	1. GIS-mapping of: City-wide cycling network| Ground-cover from satellite imagery | Ward-boundaries with population 2. Conduct city-wide accessibility audits on cycling network 3. Conduct primary surveys to assess accessibility, safety, comfort and quality
Parking Management	1. GIS mapping of: - All on-street parking locations with ECS and occupancy - All off-street parking locations with ECS and occupancy 2. Installation of IT-enabled systems at designated parking locations
Access to Public Transport	1. GIS mapping of: City wards with population| Ground cover from satellite imageries | Bus Stops| Bus Routes with frequencies | Mass transit stations | Mass transit routes with frequencies 2. Conduct accessibility audit of mass transit stations and bus stops 3. Carry-out primary surveys
Vibrancy and Inclusivity of Streets	Conduct primary survey to assess usage of streets by categories
Budgeting for M&E	Segregation of budget for walking and cycling in the transport budget from the current practice of clubbing these under road construction or improvement programmes
Capacity Development	1. Conduct regular training for engineers and surveyors on monitoring and evaluation
Communication and Outreach	1. Create a communications plan to engage with the general public 2. Conduct perception surveys

Outcome Indicator

efficient mobility

Indicator	Data Source	Frequency	Level of difficulty	Benchmark / Level of service
Mode share - disaggregated by: Walk, cycle, bus, rail, metro, IPT, personal two-wheelers and personal four-wheelers	Household Survey	Every 5 years	🟠	20% or more increase in walking and cycling from baseline
Registered vehicles data for last (financial) year and the preceding decade	Regional Transport Office (RTO)	Every year	🟡	Relative percentage decrease from baseline

livable, accessible, and comfortable streets

Indicator	Data Source	Frequency	Level of difficulty	Benchmark / Level of service
Mode share (disaggregated by gender, ability, income, and age-people above the age of 60 as elderly and below the age of 15 as children)	Household Survey	Every 5 years	🟠	20% or more increase in walking and cycling from baseline women, children (5-15 years), elderly (more than 60 years), and people with disabilities
Perception surveys (disaggregated by gender, age, ability, and income) on: • access • comfort • satisfaction • security	Primary Survey	Every 5 years	🟠	80% of people should feel that the streets are accessible, comfortable, and safe
Share of sub-arterial and arterial streets with mixed land use	Primary Survey	Every 5 years	🟠	20% or more increase in streets with mixed land use

safety

Indicator	Data Source	Frequency	Level of difficulty	Benchmark / Level of service
• Traffic injuries per lakh population (disaggregated by mode and cause)	Traffic Police	Every year	🟢	50% or more reduction in injuries and deaths from road traffic accidents

environmental sustainability

Indicator	Data Source	Frequency	Level of difficulty	Benchmark / Level of service
Annual mean particulate matter concentration: • PM10 • PM2.5	Central Pollution Control Board/ State Pollution Control Board	Every year	🟠	The annual mean particulate matter concentrations should be less than 60 for PM10 (µg/m3) and 40 for PM2.5 (µg/m3)
The choice of materials or design of sidewalks	Primary Survey	Every year	🟠	The choice of materials or design of at least 50% of sidewalks in the city should allow percolation of stormwater

🟢 Low
🟡 Moderate
🟠 High

Output Indicator

The output indicators have broadly been classified into 4 categories of

- Infrastructural Outputs
- Management and Monitoring Outputs
- Financial Outputs
- Communication and Outreach Outputs

The detailed indicators, along with frequency, the sources of data required, level of difficulty, and service level benchmark for each indicator are given below:

Infrastructural outputs

Extent and quality of walking environment

All streets have continuous, safe, accessible, secure, and comfortable walking environment.

Indicator	Data Source	Frequency	Level of difficulty	Benchmark / Level of service
1. Percentage of street length with -Continuous, -Barrier free clear walking zone of minimum 1.8 m as per IRC:103-2012, (Also refer IRC:103 for footpath widths as per adjoining land use and pedestrian LOS) -Maximum footpath height of 150 mm	Accessibility Audit	Every year	High	1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%
2. Accessibility: Percentage of blocks with a median block length of 100-150 m bounded by publicly accessible roads (for pedestrian and cyclists) on all sides (only for new street network)	City-wide street network plan	Every year	Moderate	1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%
3. Traffic safety: Percentage of street length design with motor vehicle design speeds of more than 15kmph having at least 1.8 m of clear footpath walking zone (does not include dead and furniture zone, as per IRC:103-2012)	Accessibility Audit	Every year	Moderate	1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%
4. Traffic Safety: Percentage of street length with motor vehicle design speeds of less than 15 kmph being traffic calmed	Observational Survey with GIS Mapping	Every year	Moderate	1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%
5. Traffic Safety: Percentage of intersections with universally accessible at-grade crossings and adequate lighting of 50 lux	Accessibility Audit Primary Survey between 7-9 pm	Every year	High	1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%

Low
Moderate
High

Indicator	Data Source	Frequency	Level of difficulty	Benchmark / Level of service
6. Traffic Safety: Percentage of signalised intersections with universally accessible at-grade crossings with adequately timed signal and lighting of 50 lux. (The time signal should be long enough for children/ elderly/people with disabilities etc. to cross at a speed of 0.41 m/s to 0.61 m/s)	Accessibility Audit Primary Survey between 7-9 pm	Every year		1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%
7. Traffic Safety: Percentage of street length with universally accessible mid-block pedestrian crossings at 80-250 m intervals (on streets with medians, as per IRC:103-2012) having adequate lighting of 50 lux	Accessibility Audit Primary Survey between 7-9 pm	Every year		1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%
8. Personal Security: Percentage of footpath with adequate lighting of 30 lux	Accessibility Audit Primary Survey between 7-9 pm	Every year		1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%
9. Personal Security: Percentage of street segments (every 100m) being active	Primary Survey between 7-9 pm	Every year		1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%
10. Comfort: Percentage of street length with walking area shaded by trees or buildings	Primary Survey during afternoon hours	Every year		1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%

Extent and quality of cycle tracks

The entire city is accessible through a continuous, safe, secure, and comfortable cycle network with minimum detours.

Indicator	Data Source	Frequency	Level of difficulty	Benchmark / Level of service
11. Percentage of people living within 500 m walking distance from continuous and barrier-free cycling network of at least 2 m (excluding 0.5 m of buffer zone)	Accessibility Audit	Every year		1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%

- Low
- Moderate
- High

Indicator	Data Source	Frequency	Level of difficulty	Benchmark / Level of service
12. Accessibility: Percentage of streets with bicycle parking stations at an interval of less than 300 m throughout the cycling network or at all transit stations/bus stops	Audit	Every year		1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%
13. Traffic safety: Percentage of street length with design speeds of more than 30 kmph having a segregated cycle track	Primary Survey with GIS Mapping	Every year		1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%
14. Traffic safety: Percentage of street length with design speeds of less than 30 kmph being shared streets	Primary Survey with GIS Mapping	Every year		1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%
15. Traffic Safety: Percentage of intersections with safe crossings for cyclists, provided with bicycle box on arterial roads	Primary Survey	Every year		1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%
16. Personal Security: Percentage of cycle network with adequate lighting of 30 lux	Accessibility Audit Primary Survey between 7-9 pm	Every year		1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%
17. Comfort: Percentage of cycle network being shaded by trees or building	Primary Survey between afternoon hours	Every year		1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%

Parking management

All streets that have a parking occupancy of more than 60% during peak hours shall be brought under an IT-enabled parking management system.

Indicator	Data Source	Frequency	Level of difficulty	Benchmark / Level of service
18. Number of paid on-street and public off-street parking slots (ECS-equivalent car space numbers) per lakh population	ULB	Every year		Relative percentage increase in no. of paid on-street parking slots per lakh population Relative percentage decrease in no. of paid off-street parking slots per lakh population

Low
Moderate
High

Indicator	Data Source	Frequency	Level of difficulty	Benchmark / Level of service
19. Share of roads with parking occupancy of more than 60% during peak hours having demarcated parking (including parking slots) and no parking areas equipped with IT-enabled parking management system with demand- pegged pricing	Primary Survey	Every year		1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%
20. Annual revenue per ECS (on-street and public off-street parking)	ULB Annual Budget Report	Every year		Relative comparison with market rent value for the same patch of land, to understand the undervaluation of land caused by parking.

Access to public transport

Improving access to mass transit and Intermediate Public Transit

Indicator	Data Source	Frequency	Level of difficulty	Benchmark / Level of service
21. Coverage: No. of operating buses per lakh population	State/City Transport	Every year		1. 60 buses/lakh population or more % - 100% 2. 40 - 60 buses/lakh population 3. 20 - 39 buses/lakh population 4. 0 - 19 buses/lakh population
22. Accessibility: Percentage of population within 500 m walking distance of mass transit station	ULB	Every 2 years		1. 60% or more 2. 45% - 59% 3. 30% - 44% 4. 0% - 29%
23. Accessibility: Percentage of population within 500 m walking distance of bus stop or station with a frequency of 15 schedules/hour or better	ULB	Every 2 years		1. 80% or more 2. 45% - 59% 3. 30% - 44% 4. 0% - 29%
24. Accessibility: Percentage of bus stops with real-time information and route maps	Primary Survey	Every year		1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%

Low
Moderate
High

Indicator	Data Source	Frequency	Level of difficulty	Benchmark / Level of service
25. Security: Percentage of stations/bus stops with uniform and consistent lighting of 30 lux	Accessibility Audit Primary Survey between 7-9 pm	Every year		1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%
26. Security: Percentage of bus stops with information on functional emergency hotline numbers	Primary Survey	Every year		1. 75% - 100% 2. 50% - 74% 3. 25% - 49% 4. 0% - 24%
27. Comfort: Percentage of sheltered stations/bus stops	Primary Survey	Every year		1. 60% or more 2. 45% - 59% 3. 30% - 44% 4. 15% - 30%

Vibrant and inclusive streets

All streets are more vibrant and attractive through increase in non-transport activities.

Indicator	Data Source	Frequency	Level of difficulty	Benchmark / Level of service
28. Percentage of non-walking activities like sitting, children play spaces, vending, etc. on streets (disaggregated by gender, age, and ability)	Primary Survey in the evening from 7-9 pm	Every year		Relative increase in percentage from baseline

Management and monitoring outputs

Monitoring

The city will ensure coordination among various street-related stakeholders/ departments.

Indicator	Data Source	Frequency	Level of difficulty	Benchmark / Level of service
29. Organise monitoring and coordination meetings with members of a high-powered committee.	TCMC	Every year		Once every quarter or more

Financial outputs

Budgeting for M&E

The city will ensure that sufficient financial capital is allocated for implementation and monitoring of the projects.

Indicator	Data Source	Frequency	Level of difficulty	Benchmark / Level of service
30. Percentage of transport municipal budget allocated for planning, implementation, and management of infrastructure and systems essential for Healthy Street	ULB Annual Budget Report	Every year	🟢	1. 30% or more 2. 25% - 29% 3. 15% - 24% 4. 10% - 14%
31. Per Capita spending on walking and cycling infrastructure	ULB Annual Budget Report	Every year	🟢	1. > ₹5 per person per year 2. ₹2-₹5 per person per year 3. ₹1-₹2 per person per year 4. < ₹1 per person per year
32. Percentage of transport municipal budget allocated for monitoring and evaluation	ULB	Every 2 years	🟡	1. 2% or more 2. 1% - 2% 3. 0.1% - 1% 4. 0%

Communication and outreach outputs

Capacity development

The city will ensure that the ULB has the capacity to implement and monitor the projects.

Indicator	Data Source	Frequency	Level of difficulty	Benchmark / Level of service
33.Number of capacity building workshops, exposure visits organised, etc.	ULB	Every year	🟢	Increase in number from baseline
34. No. of people trained from government departments related to CS implementation	ULB	Every year	🟢	Relative increase in number from baseline
35. Number of air quality monitoring stations in the city	Primary Survey	Every year	🟢	As per Central Pollution Control Board recommendations

Communication and outreach

The city will take initiatives to communicate the benefits of Healthy Street projects, increase awareness, and get support of the public.

Indicator	Data Source	Frequency	Level of difficulty	Benchmark / Level of service
36. Average number of participants per open-street event	ULB	Every year	🟢	Relative increase in percentage from baseline

Annexure E

Operations and Maintanence

Regular operations and maintenance, including clearance of encroachments is therefore crucial to prevent further damage, enhance road safety, and reduce long-term repair costs. Prioritising street maintenance should be guided by road inventories and regular inspections. Roads with heavier pedestrian and vehicular movement should be taken up on priority, along with those serving important facilities like schools, hospitals, institutions, and major public destinations. The classification of the road: arterial, sub- arterial, collector, or local also influences priority, helping ensure that essential network links remain safe and functional.

The type of regular maintenance interventions needed are elaborated on the tables below:

Category of Clearance	Activities Included	Agencies Responsible
Vendor Encroachments	Removing unauthorised street vending/hawking that blocks footpaths & obstructs pedestrian movement	Town Vending Committee, ULB Zonal authorities
Parking Encroachments	Removing unauthorised parking on streets/footpaths	ULB Traffic Police Zonal authorities
Shifting of Above-Ground Utilities	Shifting cables, poles, pillar boxes, transformers etc. to ensure barrier-free footpaths	Line agencies ULB Telecom TANGEDCO
Shifting of Temporary/ Small Religious Structures	Relocation of structures to maintain an accessible public Right of Way (RoW)	ULB Zonal authorities
Removal of Permanent/ Property Encroachments	Clearing structures extending into the Right of Way (RoW)	ULB Revenue Department Zonal authorities


Egmore, Chennai


ECR, Chennai

Recommendation

A concessionaire shall be onboarded to undertake all Operations and Maintenance work in cluster/ zonal level as mentioned in chapter 6.2 during short contract periods of 3 years, i.e., 36 months across different zones of the Urban Local Body (ULB). During this period, the Concessionaire shall provide the required labour, plant, machinery, tools and supervising staff for attending to all the O&M activities. The enforcement/clearance of encroachments shall be undertaken in consultation with the respective stakeholder departments/agencies.

Category of routine/ periodic maintenance	Activities Included	Agencies Responsible
Roads	• Repair of topcoats, Resurfacing and addressing water-table cracks • Patching, Pot-hole filling • Repair of medians, • Repair of traffic calming elements such as speed breakers, pedestrian crossings and road markings. • Restoration of road cuts by line agencies	Urban Local Body (ULB) Zonal authorities Line agencies (TWAD, Telecom & TANGEDCO)
Footpaths and Street Furniture	• Repairing, replacing and installing pavements, kerb and kerb ramps • Refixing of tree pits/grating, Refixing disturbed/broken signage/caution boards, bollards and guard rails • Refixing displaced/damaged seating.	ULB Zonal authorities
Street Utilities	• Repairing and replacing street lights, pillar boxes of line agencies (Electricity and Telecom Departments), transformers, machine holes, garbage bins and organising overhead cables. • Cleaning/desilting of road-side drain/ gutter, inlet chambers, catch pits, chute pipes, cross drains, and grating • Restoration of rain cuts and saucer drains • Refixing of FRC/FRP manhole doors and marking of manholes.	Line agencies (TWAD, Telecom & TANGEDCO) ULB **For Road cut and pot-hole restoration**: ULB should go for annual contract at zonal-level so that appropriate modern machinery/man-power can be deployed by the vendor to ensure timely and quality restorations.
Landscape	• Pruning, timely removal of damaged/ torn trees • Transplantation of trees due to implementation challenges • Planting more indigenous species	ULB Parks Department Zonal authorities
Street/Road/ Footpath Cleaning	• Sweeping and debris removal from above ground and underground elements/ utilties within given RoW.	ULB Solid Waste Management (SWM) Department Zonal authorities


Jawarlal Nehru Salai, Chennai


Chennai

Maintenance Planning

Item of work	Time limit for repair/replacement	Frequency for repair/replacement
Filling Potholes	2 days	As and when required
Patch Repairs (Carriageway/Footpath/ Centre Median)	1 week	
Kerb repairs and replacement	1 week	
Tree grating repair/replacement	1 week	
Removal of obstruction on roads	1 day	
Replacement of SWD chamber covers	2 days	
Removal of obstruction on roads	2 days	
Relaying of Bus Route Roads (Compacted Bituminous Concrete (CBC) 40mm thick; Dense Bituminous Macadam (DBM) 50mm thick - Wherever the existing base is badly damaged the road is strengthened by laying this base course)		Once in 5 years
Desilting of SWDs		Weekly Basis
Painting of kerb stone		Twice a year
(a) With road Marking Paint - Lane marking, and marking of zebra, stop line etc.		Once in every two months for Major Roads Once in every three months for other roads
(b) With Thermoplastic Paint		Once in two years
(i) Lanes		
(ii) Zebra, Arrows & Stop Line		Every Year
Maintenance of medians – grating, kerbs, pedestrian refuges		Twice a year
Cleaning of signboards, Railing, delineator etc.		Twice a year
Painting of signboards, railings		Once in a year
Pruning of trees		Twice a year
Manuring of tree beds		Twice a year

Performance Monitoring

Performance Indicators	Target	Failure Point	Payment Due to the Authority for Failure
Availability of Site Engineer during the Operation and Maintenance Period	Less than three (3) incidents noticed during each Payment Period	GCC observed three (3) or more cases during their scheduled site visits/ meetings in a Payment Period	INR. Five thousand (INR. 5,000) per additional case
Proper maintenance of edge-to-edge infrastructure as per the standards given in the Tender Document	Less than three (3) incidents noticed during each Payment Period	GCC observed three (3) or more cases during their scheduled site visits in a Payment Period	INR. Ten thousand (INR. 10,000) per additional case

Annexure F

Roles and Responsibilities for implementing Street Design Projects:

This annexure defines the roles and responsibilities of the Sustainable Mobility (Su-Mo) Committee and the Healthy Streets Cell in planning, approving, and overseeing Healthy Street and active mobility projects. It establishes a clear institutional framework for coordinated policy adoption, project design, implementation, monitoring, and inter-departmental review to ensure effective and timely delivery. Refer to Annexure G for legal provisions that enables ULB/ ROA to execute the mentioned responsibilities.

Institutional structure	Responsibilities
Sustainable Mobility (Su-Mo) Committee	1) Monitor the creation and adoption of city-specific transport policies, including the Healthy Street Policy by the Urban Local Body (ULB). 2) Enable and approve new Healthy Street project proposals for implementation in the city 3) Review and approve (for presenting it to the general body/ standing committee if any) Healthy Street projects, public space design projects and other walking and cycling projects in the city 4) Organise review meetings with the Healthy Streets Cell and all concerned departments once a month , and based on the project stages to address issues related to design, implementation, management, budget etc for smooth progress of work
Healthy Streets Cell	**A. Planning** i. Identify and develop new Healthy Street projects in discussion with the Su-Mo Committee ii. Develop and update the Healthy Street Network Plan in relation with the Parking Management Plan iii. Procure field data/drawings from other departments iv. Define the roll-out plan including financing sources and timelines for all projects **B. Project designing and implementing** i. Engage and coordinate with consultants to develop feasibility study, detailed street designs, BOQs and drawings for construction. ii. Assist in convening regular meetings with the Road Sustainable Mobility Committee to review and oversee designs developed by consultants. iii. Identify contractors for implementation and oversee implementation works at various stages to ensure construction meets the required design as per Thoothukudi's Comprehensive Road and Street Design Guidelines and other implementation standards. iv. Coordinate between contractors, consultants, other government agencies such as traffic police, utility agencies and other stakeholders to address onsite issues during design and construction.

Institutional structure	Responsibilities
Healthy Streets Cell	**C. Monitoring and Evaluation** i. Undertake monitoring and evaluation of Healthy Street projects as per the framework approved by the Su-Mo Committee **D. Capacity development** i. Convene conferences, workshops, site visits, experiential study tours and training programs to understand and disseminate best practices in street design and implementation for engineers, decision makers, other ULB officials, consultants, contractors, traffic police and others. **E. Community engagement and communication** i. Build support through regular engagement between stakeholders (both citizens and governmental) during planning, design and construction. ii. Communicate benefits of Healthy Street to the citizens through advocacy campaigns, workshops, media articles, etc. iii. Conduct consultations with local stakeholders such as resident welfare groups, shop-owner associations etc. during design and implementation.

Annexure G

Existing Legal Provisions

74th Constitutional Amendment

Article 243W – Powers, authority and responsibilities of Municipalities

This Article empowers State Governments to devolve to ULBs the responsibility for preparing and implementing plans for:

- Urban planning,
- Regulation of land-use,
- Planning for roads and infrastructure,
- Functions listed in the 12th Schedule.

12th Schedule

Item 2: Regulation of land-use and construction of buildings

Street alignment | Building setbacks | Right-of-way protection | Control of encroachments | Sidewalk continuity

Item 4: Roads and bridges

Construction | Maintenance | Upgradation | Management of city roads | Management of bridges & culverts

These form the foundation for:

Footpath and cycle track design | Junction improvements | Signage | Parking regulation on streets | Street vending zones (under street management)

Item 12 and 17: Provision of urban amenities and facilities, and Public amenities including street lighting, parking lots & bus stops

Street lighting | Parking lots | Bus stops | Public conveniences

Motor Vehicle Act 1988

Section 210D:

The State Government may make rules for design, construction and maintenance standards for roads other than national highways, and for any other matter which is, or may be, prescribed by the State Government.

Section 138 (1A):

The State Government may, in the interest of road safety, make rules for the purposes of regulating the activities and access of non-mechanically propelled vehicles and pedestrians to public places and national highways.

Tamil Nadu Urban Local Bodies Act, 1998 (Amended 2022).

Section 119: Restriction on erection of, or addition to, building within street alignment or building line

(1) No person shall construct any portion of any building within a street alignment prescribed by laws provided however that the Commissioner may, in his discretion, permit additions to a building to be made within a street alignment, if such additions merely add to the height...

Section 120: Owner's obligation to make street while converting land as building sites.

Access to site | width of the street | paving | sewering

Section 127: Planting and preservation of avenue trees

(1) The council shall, at the cost of the municipal fund, cause trees to be planted at all convenient places on the sides of all public streets and municipal roads and make adequate arrangements to preserve such trees.

(2) The council may grant licence every year for the collection of usufructs of roadside trees maintained by the municipality in such manner as may be prescribed.

Section 128: Power to remove encroachment from public place

(1) The Commissioner may,

(a) remove without any notice any movable temporary structure, enclosure, stall, booth, any article whatsoever hawked, exposed or displayed for sale or any other thing whatsoever by way of encroaching street or public place or the land belonging to or vested with the municipality with the municipal limit

b) remove any immovable structure whether permanent or of temporary nature encroaching the street or public place or the land belonging to or vested with the municipality within the municipal limit, after issuing a show cause notice for such removal, returnable within a period of seven days from the date of receipt thereof...

(2) Whoever makes any encroachment in any land or space (not being private property) in any public street or any land belonging to or vested with the municipality within the municipal limit, shall, on conviction, be punished with imprisonment which shall not be less than one year but which may extend to three years and with fine which may extend to fifty thousand rupees...

Section 130: Collection of fees on parking vehicles

(1) Subject to the approval of the council, the Commissioner may reserve any portion of a public street or public place, and declare it as a parking area and collect parking fees from the owners of the vehicles at such rate for such period and in such manner as may be prescribed.

(2) The Commissioner may grant licence to any private person or organisation or establishment for collecting parking fees in such manner as may be prescribed.

Section 137: Clearing of fallen trees, structures building material, etc., in street

If any obstruction is caused in any street by the fall of trees, structures or fences or by stacking of building material, the owner or occupier of the building concerned shall, within twelve hours of the occurrence of such obstruction or within such further period as the Commissioner may by notice allow, clear the street of such obstruction. If the owner or the occupier of the building fails to comply with the notice, the Commissioner shall clear the street of such obstruction and recover the cost of removal from the owner or the occupier as an arrear of land revenue.

The Commissioner may also impose a fine not exceeding two thousand rupees for having caused such obstruction in the street.

The Tamil Nadu Urban Local Bodies Rules, 2023.

Section 294: Licensing of stand and shelter for vehicles

(1) Where the municipality provides a public halting place including car or two-wheeler parking stand, bus stand, lorry stand, cycle stand, taxi or auto stand, the Commissioner may prohibit the use of any public place or the sides of any public street for the same purpose by any person within such distance thereof as may be determined by the Commissioner.

(3) The council may arrange to collect the fees departmentally or may outsource the collection of such fees.

(6) Once a bus stand has been established by the municipality, no operator of a bus shall allow the boarding or alighting of passengers in any place within municipal limits other than the bus stop and bus terminus established by the municipality...

The Tamil Nadu Town and Country Planning Act, 1971

Section 17. Master plans:

The master plan may propose or provide for all or any of the following matters, namely:–
...(d) the making of provision for national highways, arterial roads, ring roads, major streets, lines of communication including railways, airports and canals;
(e) the traffic and transportation pattern and traffic circulation pattern;
(f) the major road and street improvements;...

Section 20: Contents of detailed development plan

(1) detailed development plan may propose or provide for all or any of the following matters, namely:–
...(b) the construction, diversion, extension, alteration, improvement or closure of lanes, streets, roads and communications;
...(k) the allotment or reservation of land for streets, roads, squares... and public purposes of all kinds;
...(n) the imposition of conditions and restrictions in regard to... building or control lines for roads... and the provision and maintenance of sufficient open spaces about buildings.

(2)... every detailed development plan shall contain the following particulars, namely:-
(a) the plan showing the lines of existing and proposed streets;
(b) the ownership of all lands and buildings in the area covered by the plan;

... (g) the zoning regulations and regulations for enforcing or carrying out the provisions of the plan.

Section 37: Power to purchase or acquire lands specified in the development plan.-
(1) Where after the publication of the notice ... any land is required, reserved or designated in such plan, the appropriate planning authority may ... acquire such land under the Land Acquisition Act, 1894.

Section 122: Power to make rules
(1) The Government may make rules to carry out the purposes of this Act.

(2) In particular and without prejudice to the generality of the foregoing power, such rules may provide for-
... v) the specification of particulars of works or improvements relating to streets or roads provided for in any development plan that have to be made or carried out at the expense of the planning authority, the owners of the property or both;

(w) the procedure to be adopted by the planning authority or any other authority or person, in cases where owners commit default or delay in the carrying out of works or improvements, for carrying out such works or improvements and for recovering the cost from the owners liable therefore...

The Tamil Nadu Combined Development and Building Rules, 2019

Section 47: Layout and sub-division Rules

... (a) The minimum width of the public street or road on which the site abuts or gains access shall be 7.2m. for residential layout developments and 9m. for industrial layout developments...

Off Street Parking Standards | Transferable Development Rights (TDR)

Parking Policy – Strategy and Action Plan for the Chennai Metropolitan Area, 2025

3.2.2 Prepare Area-Level Parking Management Plans

... 4. On-street parking shall be allowed/provided on streets with right of way (ROW) 9m and above. When provided, parking rules shall be defined for every 100m segment of the total block face length, as the parking scenario may vary.

... 6. On-street parking shall be discouraged on arterial streets, except on service lanes, if present. This is to ensure a smooth flow of traffic...

3.2.5 Implement Regional-Level, and Area-Level Urban Freight Management Recommendations

...2. On-street parking of HCVs and MCVs (including construction vehicles) shall not be allowed, as it shall occupy a lot of road space and block the visibility of pedestrians on footpaths.

3.4.1 Parking Revenue

Manage parking revenue to ensure that the surplus receipts (after paying for all operating expenses, share of ULB's, Vendors, etc.) are ring-fenced and utilised for local-area improvements such as better footpaths, cycling facilities, public spaces, road surfacing, and public transport services.

The Tamil Nadu Street Vendors (Protection of Livelihood and Regulation of Street Vending) Scheme and Rules, 2015

Rule 11: Constitution of the Town Vending Committee

(1) ln each local authority, one Town Vending Committee shall be constituted by the Government with the Municipal Commissioner or the Chief Executive Officer as Chairperson of the Committee...

(2) Each Town Vending Committee shall consist of fifteen members, inclusive of the Chairperson and its composition shall be as follows:

A Medical Officer of the local authority – 1 | Police officers including Police incharge of Traffic – 2 | An Officer from the local authority concerned – 1 | Representatives of street vendors – 6 | Representatives of Traders Associations – 1 | Representatives of Non-Governmental and Community based organisations – 2 | Representatives of Resident welfare association - 1

Rule 20: Functions to be discharged by Town Vending Committee

a) to conduct surveys within the area of its jurisdiction to identify street vendors in the area and arrange for their accommodation in accordance with the norms, plan and the holding capacity within the area of its jurisdiction;

(d) to recommend the local authority to declare an area in its jurisdiction to be a non-vending area;

(e) to identify sites and spaces for vending and hawking;

(f) to regulate timings for vending to ensure non-congestion of public spaces;

(g) to ensure enforcement of corrective mechanism against defiance by street vendors;

Scheme 13: Relocation of Street Vendors

(4) ... Projects such as creation of road infrastructure, under or over bridges, expansion of roads, pathways, pedestrian plazas, provision for bus stops, parking places for motor vehicles, and such other similar activities shall deemed to be public purposes for which the vendors may be relocated...

Scheme 14: Manner and method of eviction of vendors, seizure and disposal of goods

(1) A street vendor, whose Certificate of Vending is cancelled ... or who vends without a certificate of vending or who vends in a no-vending zone shall be liable to be evicted immediately from his place of vending and his vending articles and goods shall be seized by the local authority and kept in its custody.

Scheme 17: Maintenance of cleanliness...

(1) Every street vendor shall be responsible for the cleanliness of the immediate surroundings of the area allocated to the vendors in a vending zone.

Scheme 20: Identification of Vending zones

(1) The Town Vending Committee shall within a period of six months from the date of the publication of this Scheme identify the 'vending zones' and the 'No vending zones' for street vending...
2) (a) The 'vending zones' and 'No vending zones' shall be identified based on the width of the street, volume of traffic and the number of pedestrians passing through the street and such other factors as may be material to identify the said zones in such a way that no or minimum inconvenience is caused to the general public using the street as well as the residents of the street...

Scheme 21: Preparation of Street Vending Plan

The Town Vending Committee shall prepare a street vending plan. The holding capacity of the street vendors of any particular area or locality shall be limited to 2.5% of the population of ward, zone or city, as the case may be.

The Town Vending Committee, shall, identify the vending areas, based on the holding capacity, space available, number of vendors etc.,...

Scheme 22: Vending on time-sharing basis

The Town Vending Committee concerned shall, when it is necessary and expedient in order to accommodate more number of vendors or in case the nature of businesses is such that the vendors carry on their vending only during certain time of the day or certain days of the year or month or week, form Time Restricted Vending Zones, where the vendors shall be issued the Certificates of Vending specifically stating the hours or days or such other periods of business...

Highways Act

Chapter II - 3. Declaration of roads, ways or lands as highways

On the recommendation made by the State Highways Authority, the Government may, by notification, declare any road, way or land to be highway and classify it as any one of the following, namely:- '

(i) a State Highway; (ii) a major district road; (iii) other district road; or
(iv) a village road:

Chapter III - 8. Power to fix highway. boundary. building line, control line, etc.

8. (1) The Highways authority of any division may, by notification, in relation to any highway or any area in that division, where the construction or development of a highway is undertaken or proposed to be undertaken, fix--

(a) the highway boundary, building line, or control line; or
(b) the highway boundary and the building line; and
(c) the building line and the control line:

Chapter V : 28. Prevention of Encroachment

(2) The Highways authority or any person authorised by it in this behalf, may--

(i) remove, without any notice, any movable temporary structure, enclosure, stall... whatsoever by way of encroaching the highway or in any area where the construction or development of a highway is undertaken or proposed to be undertaken;

(ii) remove any immovable structure, whether permanent or temporary in nature, encroaching the highway or in the area vested with Government under this Act, after issuing a show cause notice against such removal, returnable within a period of seven days...

29. Recovery of cost of removal of encroachment

(1) Whenever any encroachment is removed or any protective work is carried out in respect of any encroachment, the cost thereof shall be recovered from the person responsible for the encroachment, as if it were an arrear of land revenue.

Chapter VIII - 42. Highways authority to regulate traffic when Highway is declared unsafe.

If at any time it appears to the Highways authority that any highway in its division or any portion thereof is or has been rendered unsafe for vehicular traffic or pedestrian traffic by reason of damage or otherwise. it may.... either close the highway or the portion of it to all traffic or to any class or traffic or regulate the number and speed or weight of the vehicles using such highway.

Highways and Minor Ports Department – Citizen's Charter, 2020

3. Mission

d. To protect all road and bridge infrastructure of Highways Department and to be vigilant against unauthorized encroachments which cause hindrance to the public at large and thereby ensure citizen friendly approach.

4.1 Key activities of Highways Department

The Highways department is implementing the various road infrastructure projects such as Widening or Improvement of roads, construction of new bypasses/ ring roads, construction of river bridges, grade separators at road junctions and road over/ under bridges in lieu of railway level crossing to ensure better, safer, mobility and riding comfort to the travelling public.

The Department is implementing following projects to preserve, maintain and upgrade the road infrastructure already created and construct new infrastructure.

1. Widening and strengthening of roads, construction of bridges, culverts, protective works, center medians, drains and road safety works under Comprehensive Road Infrastructure Development Programme.
2. Road Safety works to reduce the fatalities and to reverse the trend in rate of accidents under various schemes.
3. Roads, Bridges, Grade Separators, Elevated Corridors and Pedestrian Facilities under Traffic and Transportation improvement Programme.

7. Operational Guidelines

... As a part of road safety measure, Road Accident Data Management System has been developed in coordination with Police and Transport Department. This helps in identification and analysis of black spots to arrive at proper engineering road safety measure.

8. Our expectations

f) Public should co-operate with the Department by not resorting to encroachments of the Department's property or roadsides and help in the speedy movement of the traffic. During removal of encroachments by the Department, the public and the road-users should come forward to extend full co-operation.

Annexure H

Asset Data Creation

Effective asset data management is essential to plan, implement, monitor, and maintain high-quality streets. A structured and regularly updated database helps ULBs and the Healthy Streets Cell make informed decisions on budgeting, prioritisation, and lifecycle management.

Data Fields

Each asset should have the following minimum attributes:

A. Identification

- Asset type
- Unique asset ID
- Location (GIS coordinates; street name; chainage, LHS/RHS)
- Zone/ward

B. Specifications

- Dimensions (length, width, height, area)
- Material type
- Installation date
- Vendor/contractor information

C. Condition & Performance

- Current condition rating (Good / Fair / Poor)
- Date of last inspection
- Maintenance history
- Defects noted

D. Financial

- Installation cost
- Estimated replacement cost
- Annual O&M cost

E. Photos / Drawings

Pre-implementation
Post-implementation
Latest condition image

Data Collection & Update Process

- **Baseline survey:** Conduct a comprehensive asset mapping survey before project implementation using mobile/GIS tools.
- **As-built verification:** Update database after construction completion.
- **Routine inspection:** Major corridors: quarterly | Other streets: bi-annually
- **Real-time updates:** When assets are repaired, replaced, or upgraded.
- **Geo-tagging:** All assets must be geo-referenced.
- **Department integration:** Integrate with Electrical, Storm water, Parks, Water Supply, Sewerage and Traffic Police databases. (data to be collected as per Road Owning Agencies' chainage reference).

Quality Assurance & Standardisation

- Use standard data formats, standardised naming conventions for IDs, Data collection digital tools and a centralised dashboards (Provided by Healthy Streets Cell).
- Define mandatory fields for each asset category.
- Ensure contractor compliance in asset handover.
- Periodic data validation by the ULBs and ROAs

Roles & Responsibilities

- Healthy Streets Cell: overall management, templates, compliance audits, field surveys, updates, and verification, construction and handover documentation.
- ROA/ Other Department GIS/ICCC Cell: data storage, dashboard, integration with other systems.
- Consultant/Contractors: submit DWG/GIS-based as-built asset lists.

Data Storage & Platforms

- Use a centralized ULB's GIS platform for Asset Management System compatible with GIS mapping.
- Cloud-based or server-based storage with regular backups.
- Mobile data collection app for field teams.
- API Integration with existing systems (ULB-ICCC, e-governance portals).

Reporting & Dashboard

The database should support:

- Ward-wise asset counts
- Condition-based prioritisation
- Maintenance schedule
- Budget forecasting
- Alerts for assets nearing end-of-life
- Maps of street assets
- Performance indicators (e.g., % of footpaths in good condition)

Lifecycle Management

- Define lifecycle periods for each asset (e.g., pavement – 5 years; signage – 3 years).
- Set replacement and maintenance cycles.
- Budget annual O&M based on asset lifecycle data.

Compliance & Governance

- Database updates must be part of project closure.
- Periodic audits by Healthy Streets Cell.
- Mandatory digital submission of as-built drawings and asset lists.

Note: Healthy Streets Cell shall prepare necessary SoP and template for Master Asset Inventory for Data collection and record maintenance.

Annexure I

Funding and Financing

National- or State-level Funds

These are one-time/recurring large-scale budget allocations for capital investments on urban infrastructure/sustainable mobility interventions from the national- or state governments.

Examples of National-level funds: • Smart Cities Mission Fund • National Clean Air Programme Fund (NCAP) • Nirbhaya Fund • Gati Sakthi Scheme • Urban Challenge Fund (UCF)

Examples of State-level funds: • Urban Road Infrastructure Fund (Tamil Nadu) • City Infrastructure Development Fund (Assam) • Urban Infrastructure Fund (Maharashtra)

Healthy Street Fund

Set up a Healthy Street Fund as part of your city's annual budget. Prioritise recurring funding allocation for roads and related amenities, from your city's own tax revenue or partly redirect funds from the state department for road construction.

Example of city-level Healthy Street funds:
Chennai's Bus Route Roads Department was allocated ~90 crores was spent on implementing footpaths in 2019-20.

Over the last 7 years through a dedicated fund, Chennai has implemented 150+ km of footpaths across the city.

Revenue from Travel Demand Management (TDM)

Progressive TDM policies should be based on incentivizing sustainable mobility, as much as disincentivizing polluting private modes. Pricing-based regulation could persuade long-term behaviour change, while offering short-term revenue source for strengthening street infrastructure.

Examples: • Parking charges (Conservative estimates show that Bengaluru can unlock approx. Rs. 300 cr/year through effective on-street parking management) • Congestion pricing • Green Tax

Grants from Development Agencies

Grants from development agencies are generally available and allocated to a limited number of cities or projects with focused goals.

Examples:
City Investments to Innovate, Integrate and Sustain (CITIIS) Challenge - 2018 offered grants for procuring technical assistance

Cities including Amritsar, Dehradun, and Hubballi Dharwad optimised on CITIIS Challenge - 2018 to implement high-quality sustainable mobility projects.

Opportunities from Global Development Sector

Other than grants routed through the national/state departments, various global development agencies also offer opportunities for capacity building and technical support through direct 'call for proposals'.
While the funding sum could be limited, they enable access to expertise and could showcase your work at an international forum to attract more investments in the future.

Examples: • GDCI's Streets for Kids - Leadership Accelerator Program • Bloomberg Initiative for Cycling Infrastructure

Development Funds from Political Reprsentatives

Every ward councillor and constituency representative (MLA/MP) shall have access to a dedicated, recurring annual development funds.

While these may not be sufficient for projects that require complete reconstruction, it could be optimised for complementary interventions: street lights, traffic calming measures, etc.

Examples:
• Member of Legislative Assembly Constituency Development Scheme (MLACDS) in Tamil Nadu - available as Rs. 3 Cr/ yr
• Member of Parliament Local Area Development Scheme (MPLADS) - available upto Rs. 5 Cr/ yr
• Councillors' Ward Development Fund in Chennai - Rs. 35 lakhs / yr

Image Source: Flickr

Land Value Capture (LVC) Mechanisms

Land value capture can promote inclusive and equitable urban development, by accounting the increase in property value due to public infrastructure, levying relative charges, and reinvesting them for highquality public infrastructure.

The impact of street transformation projects are not only is limited to the right-of-way, but extends to change business activities, service access for residents, and change the lives of people in that neighborhood.

Examples: • Infrastructure and Amenities Charges • Station Connection Fees • Betterment Charges • Impact Charges

Contributions from Non-Governmental Partners

This reduces the dependency on city budgets for small-scale neighbourhood-level interventions. This also provides the opportunity for catalysing community-driven transformation.

Contributions from non-governmental partners could be tapped into for intersection redesign, tactical urbanism tests, place-making projects, and pilot street segments.

Examples: • Corporate Social Responsibility Funds • Public donations

Market-Based Financing Mechanisms

Market-based tools will help cities increase and diversify own-source revenues. It gives direct access to capital market and avoid unplanned growth or deficient infrastructure supply.
Note: A total of Rs 1,747 Crores ($291 Million) of debt across 27 projects has been raised by municipalities in India since 1997. (Source: Janaagraha)

Examples: • Public Private Partnership based on Out-of-Home advertising potential • Municipal Bonds & Credit rating: Debt securities issued by the cities directly or pooled by state government • Carbon Credits and trading

Low- or Zero-Interest Loans (Soft loans)

Low- or zero-interest loans could help in increasing the capital investments for resilient urban infrastructure. This also opens up opportunities to collaboratively work with Development Banks and tap into international expertise.

Examples: • City Investments to Innovate, Integrate and Sustain (CITIIS) Challenge- 2018 (Agence Française de Développement (AFD) and the EuropeanUnion (EU)• Chennai City Partnership (World Bank) • Project Readiness Financing (PRF) loan - Nagaland (Asian Development Bank)


VVD Main Road, Thoothukudi


CAFE