OUTLINE TERMS OF REFERENCE FOR CONSULTANTS
Consulting Service for Multimodal Interchange, Last-mile Connectivity and Placemaking

A. The Investment Program and Technical Assistance

1. A multitranche financing facility in the amount of $780 million for the Chennai Metro Rail Investment Project (the investment project) is proposed to support the government, through the Chennai Metro Rail Limited (CMRL) in the development of Chennai Metro Phase II, comprising lines 3, 4 and 5. The loans from the Asian Development Bank (ADB) will be used to finance civil works for lines 3 and 4, and system components of lines 3 and 5. The investment in the metro infrastructure will be combined with measures to improve integration with urban development initiatives along the corridors, enabling transit-oriented development (TOD) and non-farebox revenue generation through land-value capture (LVC) financing.

2. A technical assistance is attached to the investment project to assist the CMRL and other urban development stakeholders to improve the overall urban resilience, inclusivity, and livability of the Chennai Metropolitan Area (CMA). It will increase multi-modal connectivity, enhance ridership and non-farebox revenue of the metro rail system. The TA will contribute significantly to the final project design by bringing together ideas and innovative approaches, using studies, analysis and pilot programs conducted under the TA to integrate transport and land use development, such as TOD linked with LVC. This initiative which will not only bring about inclusive socio-economic benefits in the CMA, but also help the CMRL sustain the metro operations.

3. As part of the overall TA activities, a non-governmental organization in urban development will be engaged to perform an application-based data collection and study to improve multimodal connectivity, inclusivity and first- and last-mile connectivity of the metro system, and to prepare concept designs to transform multimodal interchange (MMI) into public amenities (placemaking).

B. Outputs and Key Activities

4. The investment project will construct 18 metro stations, comprising 9 elevated metro stations along line 3 from Sholinganallur to SIPCOT and 9 underground metro stations along line 4 from Lighthouse to Meenakshi College. These metro stations will be constructed in integration with facilities for other modes, such as bus services, feeder service, and drop-off and pick-up area, forming an MMI in and around the metro stations. Four (4) stations will be selected for enhancement measures in terms of inclusivity, resilience, and socio-economic regeneration to enable TOD. The consultant will (i) identify first- and last-mile connectivity needs for significant slum and low-income population, with targeted urban development initiatives; and (ii) explore and recommend inclusive design concepts and an action plan to regenerate station areas into socio-economic activity centers which enable TOD (placemaking).

5. **Multimodal interchange and first- and last-mile connectivity improvement.** The consultant will collect data on travel patterns, behavior, user’s preference towards the MMI and first- and last-mile connectivity at the proposed locations for the 4 selected new metro stations, and recommends improvement measures to enhance inclusivity and in turn improving the overall urban resilience.

6. The activity will therefore cover the following, but not limited to:

   (i) Conduct a study, involving survey and data analysis on MMI and inclusivity at the 4 locations proposed for the selected new metro stations. The study will focus on
the needs for significant slum and low-income population, with targeted urban development initiatives around these locations;

(ii) Based on the study, review the existing MMI design and first- and last-mile connectivity design prepared by the CMRL and identify any potential design improvement in addressing the needs for inclusivity, and urban resilience.

(iii) Develop and propose a suitable MMI improvement strategy for the 4 stations. The MMI strategy should promote inclusivity and contribute to a comprehensive urban mobility solution that empowers all communities and user groups (particularly women, differently abled, transgender, and elderly).

(iv) Based on the study, establish first- and last-mile connectivity enhancement plan for the same 4 new metro stations. The plan will be focused on the provisions for the poor and enhancing resilience by incorporating climate resilient design principles and EWCDT-responsive features. The climate resilience features will include, but not limited to, reduce the flood hazard by identifying inundated areas in the access from the poor communities to the MMI.

(v) Perform at least 5 sensitization workshops for decision makers and capacity building programs and/or exposure visits for operational staff of the CMRL and related agencies (at least 30% are women). The consultant will prepare the workshop programs in consultation with the CMRL and ADB.

7. **Placemaking demonstration program.** To create enabling environments for TOD, a thought-out strategy for placemaking activities supported by suitable concept designs will be proposed for the 4 selected new metro stations. To prepare the concept designs, the consultant will require to conduct a demonstration program at the Alandur station, which is an existing MMI in line 1. The placemaking concept designs may cover both physical and non-physical aspects and focus on transforming the MMI into public amenities which attract visitors and in turn induce socio-economic activities in the station areas. The placemaking measures will enable the MMIs to play two essential functions, as a passenger interchange which provides seamless and enjoyable transfer between modes of transports, and as a destination which offers various socio-economic benefits. The demonstration program is also expected to raise awareness for the city of the placemaking schemes and its associated impact to the surrounding areas.

8. The activity will therefore cover the following, but not limited to:

   (i) Review of existing studies and successful placemaking interventions design in India or any urban areas with similar context.

   (ii) Based on the review, observation, and consultations with the CMRL and other key stakeholders, prepare design concept and strategy for placemaking at the Alandur station as a demonstration program. The recommended concept design for the Alandur station will consider the use of environmentally friendly features, such as solar powered lighting, climate and disaster-proof design features for enhancing resilience, and any other relevant features for placemaking that will not result in significant irreversible environmental impacts. Similarly, the recommended concept design will be prepared in such a way to avoid displacement of people or land acquisition. The concept design may assess any possible flood hazard and propose suitable adaptation measures, such as stormwater drain, freeboard, etc.

   (iii) Implement the placemaking design concept at the Alandur station with close coordination with the CMRL.

   (iv) Conduct demonstration project evaluation and identify lessons learned, which may include stakeholder consultation and user interviews. The consultant is required to
prepare the evaluation criteria, in view to provide basis for developing recommendations for placemaking at new metro stations.

Based on the evaluation from the demonstration program at the Alandur station, develop strategy, guidelines and concept design for the placemaking features at the 4 selected new stations under the investment project. Close consultation with the CMRL and other relevant agencies on the placemaking design features will be required, such as with the Chennai Metropolitan Development Authority and Metropolitan Transport Corporation Ltd.

C. Key Experts

9. The key experts for the study and the associated preferred qualifications as shown in Table 1 below.

<table>
<thead>
<tr>
<th>No.</th>
<th>Position</th>
<th>Key responsibility</th>
<th>Academic qualification</th>
<th>Experience</th>
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<tbody>
<tr>
<td>1</td>
<td>Urban transport specialist cum Team Leader (national, 6 person-months)</td>
<td>Team leadership; data analysis; stakeholder and public consultation; recommendations on inclusive MMI and last-mile connectivity design and placemaking activity</td>
<td>Master’s degree in civil engineering, transport planning and engineering, geography, or similar fields.</td>
<td>At least 15 years of experience in transport data analysis, public transport interchange design; public consultation, policy dialogues and inclusiveness related study. Team leadership in at least 2 transport studies.</td>
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<tr>
<td>2</td>
<td>Project analyst (national, 6 person-months)</td>
<td>Data collection and analysis, mapping, provide input of analysis results for the recommendations; data presentation; data reporting</td>
<td>Bachelor’s degree in geodetical engineering, GIS and remote sensing, information technology or similar fields.</td>
<td>At least 10 years of experience in managing and performing data collection using GIS tools; digital mapping; data analysis; stated preference surveys or similar socio-economic studies.</td>
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<tr>
<td>4</td>
<td>Urban designer (national, 6 person-months)</td>
<td>Lead and coordinate resources for placemaking demonstration program; prepare concept design enhancement of MMI; implementation and evaluation; contract management and procurements for demonstration program; preparation of scheme documents for roll out.</td>
<td>Master’s degree in architecture, urban design, transport planning or similar field.</td>
<td>At least 15 years of experience in urban design, planning or urban transport projects, or related fields. Experience in projects related to MMI and TOD will be additional advantages.</td>
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<tr>
<td>10</td>
<td>Safeguard and gender specialist (national, 2 person-months)</td>
<td>Support for placemaking demonstration program planning, design and implementation monitoring in terms of social and environmental safeguards. Provide inputs on gender related components.</td>
<td>Master’s degree in environmental or social science, or related fields.</td>
<td>At least 10 years in environmental safeguards, preferably in donor funded projects. Additional experience in social safeguard-related activities will be an advantage.</td>
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<tr>
<td>11</td>
<td>Project Coordinator</td>
<td>Support for demonstration program planning and implementation; assist in procurements for the</td>
<td>Bachelor’s degree in civil engineering, architecture, or similar fields.</td>
<td>At least 10 years of hands-on experience in procurement of at least small works and contract management.</td>
</tr>
</tbody>
</table>
D. **Indicative Implementation Arrangement and Reporting**

10. **Implementation arrangement.** The study will be carried out for 15 months. The consultant will work under direct supervision of ADB project officer in coordination and consultation with the project management unit for the TA within the CMRL. Continuous consultation with the project management unit, and regular reporting to ADB and CMRL’s management will be required through meetings, or otherwise agreed depending upon the amount of TA activities.

11. **Reporting.** The consultant team will report their findings and recommendations to ADB, including data collection, method, analysis results, assessment, etc., into the following reports, which will be presented to the CMRL in Chennai for their view and concurrence before submission to ADB:
   
   (i) Inception report, to be 1 month after mobilization;
   
   (ii) MMI and last-mile connectivity improvement report, during TA implementation; and
   
   (iii) Placemaking demonstration project report, at the end of contract;

12. **Procurements.** The consultant will be required to conduct procurements of small works and goods as may be required by the concept design for the placemaking demonstration program at the Alandur metro station. A provisional sum in the amount of $200,000 will be included in the contract for this purpose. The procurement of small works and goods, as required, will be done in accordance with ADB Procurement Policy (2017, as amended from time to time) and Staff Instructions.
A. The Investment Program and Technical Assistance

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2. A technical assistance is attached to the investment project to assist the CMRL and other urban development stakeholders to improve the overall urban resilience, inclusivity, and livability of the Chennai Metropolitan Area (CMA). It will increase multi-modal connectivity, enhance ridership and non-farebox revenue of the metro rail system. The TA will contribute significantly to the final project design by bringing together ideas and innovative approaches, using studies, analysis and pilot programs conducted under the TA to integrate transport and land use development, such as TOD linked with LVC. This initiative which will not only bring about inclusive socio-economic benefits in the CMA, but also help the CMRL sustain the metro operations.

3. As part of the overall TA activities, an international firm will be engaged to assist the CMRL in developing recommendations to prepare strategy and action plan to develop enabling environments for private investment through TOD mechanism, and to assist the CMRL in enhancing current practice in non-farebox revenue generation, including through innovative approaches such as exploring opportunities for LVC linked with TOD.

B. Outputs and Key Activities

4. This assignment comprises two main components: (i) strategy and action plan for TOD, and (ii) enhancement of non-farebox revenue and LVC.

Component 1: Supporting strategy and action plan for TOD. For the Phase II metro development, the investment project will construct 18 metro stations, comprising 9 elevated metro stations along line 3 from Sholinganallur to SIPCOT and 9 underground metro stations along line 4 from Lighthouse to Meenakshi College. These metro stations will be constructed in integration with facilities for other modes, such as bus services, feeder service, and drop-off and pick-up area for taxi and private vehicles, forming a multimodal interchange (MMI) in and around the metro stations. As part of the TA, a thought-out strategy for placemaking activities supported by suitable concept designs will be proposed and established at 4 stations (by a non-governmental organization, to be engaged separately), in view to regenerate the station areas and create vibrant and inclusive urban environments, which facilitate TOD. In this context, strategy and action plan for TOD, which include review and recommendations on the institutional and regulatory framework, will be proposed to assist the CMRL and relevant development authorities make the preparatory activities to enable the implementation of TOD, either by public or private sectors.

5. Component 1 of the study will cover the following key activities, but not limited to:
Prepare a TOD strategy, which include an integrated institutional and regulatory framework for TOD along the corridor to create vibrant and inclusive neighborhoods that safeguard public health and ensure safety.

Prepare action plan for TOD, with gender equality and social inclusion measures and climate and disaster resilient features (especially flood disaster). This will be reported in a TOD strategy and action plan report.

Advisory support for implementation of TOD action plan.

Perform 5 training sessions and workshops on TOD for operational staff of the CMRL and related agencies (at least 30% are women).

6. **Component 2: Enhancement of non-farebox revenue and LVC.** This component is to assist the CMRL enhance the current practice of non-farebox revenue generation with innovative approaches, promote gender inclusiveness, and adopt suitable practices being implemented elsewhere, including in other countries. In particular, the study will explore opportunities for LVC, linking with the TOD measures and prepare the supporting strategies and identify suitable mechanism, including regulatory and institutional aspects, to guide the implementation by the CMRL or relevant authority in the Chennai Metropolitan Area.

7. Component 2 of the study will cover the following key activities, but not limited to:

(i) Conduct review of existing strategy and practice of the CMRL in non-farebox revenue generation, and recommend any enhancement measures, including adoption of innovative approach and best practice from different metro systems. The task will include preparatory of any associated regulatory and legal frameworks for such enhancement measures. The enhancement measures will include provisions to promote gender inclusiveness.

(ii) Prepare business strategy for the enhanced non-farebox revenue generation measures, including action plan for LVC which may be explored as a result of the implementation of the TOD strategy.

(iii) Conduct workshops on the LVC plan for decision makers and stakeholders such as Chennai Metropolitan Development Authority, Greater Chennai Corporation and the Revenue Department of the Government of Tamil Nadu, etc, and exposure visit for operational staff of CMRL and related agencies (at least 50% are women). The consultant should first identify which LVC strategy is suitable for Chennai, for example, tax-based LVC or development-based LVC. This exercise will require intensive consultation with relevant agencies, as it will require coordination within the government agencies in terms of masterplan, land-use regulation, zoning system, etc.

(iv) Advisory support for implementation of the enhanced non-farebox revenue generation business strategy and LVC action plan.

(v) Prepare a draft knowledge product (in the form of books, leaflets, technical note, etc, which will be determined in consultation with ADB during the TA implementation), for publication by ADB and the CMRL. It will cover key aspects of the TOD action plans and mechanism to link up the TOD action plan with LVC. The knowledge product should be prepared to facilitate other agencies or authorities to replicate the TOD and LVC strategy.

C. **Key Experts**

8. The key experts for the study and the associated preferred qualifications for both Components 1 and 2 are shown in Table 1 below.
<table>
<thead>
<tr>
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<tr>
<td>1</td>
<td>Market Analyst cum Team Leader (national, 10 person-months)</td>
<td>Team leadership for overall team; preparation of non-farebox revenue generation enhancement strategy; prepare recommendations on LVC initiatives; training coordination and planning.</td>
<td>Master’s degree in business and commercial sciences, economic and financial sciences or similar field.</td>
<td>At least 15 years practice in commercial activities, marketing strategy development, entrepreneurship, or similar. Team leadership in at least 3 projects with similar activities.</td>
</tr>
<tr>
<td>2</td>
<td>Urban Planner cum LVC Specialist (international, 3 person-months)</td>
<td>Overview of LVC regulation and institutional frameworks; gap analysis on LVC aspects; recommendation for LVC planning and implementation</td>
<td>Master’s degree in architecture, urban planning, transport planning or similar field.</td>
<td>At least 20 years of experience in urban development projects, with at least 5 years in developing countries; experience in LVC will be additional advantages.</td>
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<tr>
<td>3</td>
<td>Urban Transport Planner cum TOD Specialist (international, 3 person-months)</td>
<td>Overview of TOD potential in the Chennai Metropolitan Area; provide inputs on TOD strategy development; advisory role for TOD measures.</td>
<td>Master’s degree in architecture, urban planning, transport planning or similar field.</td>
<td>At least 20 years of experience in urban transport development projects, with at least 5 years in developing countries; experience in MMI and or TOD will be additional advantages.</td>
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<tr>
<td>5</td>
<td>Real Estate and Property Specialist (national, 6 person-months)</td>
<td>Input on non-farebox revenue related to rental of station space and land parcel development; preparation of the marketing strategy and implementation</td>
<td>Master’s degree in architecture, interior design, urban planning, or similar field.</td>
<td>At least 5 years of experience in property development, marketing, design interior and commercial activities.</td>
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<td>6</td>
<td>Financial Expert (national, 4 person-months)</td>
<td>Recommends and develop funding flow and auditing mechanism for LVC; consultations and coordination with public sector institution for LVC; working in coordination with the LVC specialist.</td>
<td>Master’s degree in business and commercial sciences, economic and financial science or similar field.</td>
<td>At least 15 years of experience in financial and commercial activities, funding flow of public and private institutions, auditing related assignment, experience in LVC project or similar.</td>
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<td>7</td>
<td>Legal Expert (national, 2 person-months)</td>
<td>Review of current legal setting in relation to TOD and LVC initiatives; provide legal input and recommendations to public agencies for implementation of TOD and LVC initiatives.</td>
<td>Master’s degree in law or related fields</td>
<td>At least 10 years of experience and practical expertise in planning legislations, transfer of development rights and byelaws.</td>
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<td>8</td>
<td>Gender specialist (national, 2 person-months)</td>
<td>Input in gender and inclusiveness component in the TOD strategy and action plan and non-farebox revenue generation activities; training program related to gender and social inclusion.</td>
<td>Master’s degree in economics, social science, or related fields.</td>
<td>At least 10 years of experience in gender related development and project promoting social inclusiveness. Experience in infrastructure design and implementation will be an additional advantage.</td>
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<td>9</td>
<td>Communication specialist (national, 4 person-months)</td>
<td>Input on non-farebox revenue related to advertisement rights; electronic media communications for non-farebox revenue enhancement measures; support for implementation</td>
<td>Master’s degree in economics, social science, or related fields.</td>
<td>At least 10 years in advertisement of commercial activities and proposal developments, or similar. Experience in transport sector will be an advantage.</td>
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LVC = land value capture; MMI = multimodal interchange; TOD = transit-oriented development
Source = Asian Development Bank.

D. **Indicative Implementation Arrangement and Reporting**

9. The study will be carried out for 15 months. The consultant will work under direct supervision of ADB project officer in coordination and consultation with the project management unit for the TA within the CMRL. Continuous consultation with the project management unit, and regular reporting to ADB and the CMRL’s management will be required through meetings, or otherwise agreed depending upon the amount of TA activities.

10. **Reporting.** The consultant team will report their findings and recommendations to ADB, including data collection, method, analysis results, assessment, etc., into the following reports, which will be presented to the CMRL in Chennai for their view and concurrence before submission to ADB:

    (i) Inception report, to be 1 month after mobilization;
    (ii) TOD strategy and action plan report, during TA implementation;
    (iii) Non-farebox revenue and LVC preparatory report, at the end of contract; and
    (iv) Draft knowledge product to link up TOD strategy and LVC, at the end of contract.
A. The Investment Program and Technical Assistance

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2. A technical assistance is attached to the investment project to assist the CMRL and other urban development stakeholders to improve the overall urban resilience, inclusivity, and livability of the Chennai Metropolitan Area (CMA). It will increase multi-modal connectivity, enhance ridership and non-farebox revenue from the metro rail system. The TA will contribute significantly to the final project design by bringing together ideas and innovative approaches, using studies, analysis and pilot programs conducted under the TA to integrate transport and land use development, such as TOD linked with LVC. This initiative which will not only bring about inclusive socio-economic benefits in the CMA, but also help the CMRL sustain the metro operations.

3. As part of the overall TA activities, a national individual consultant will be engaged as a technical advisor to support the CMRL review, oversee and monitor the works by the consulting firms regarding the preparatory and implementation of the placemaking pilot project and the first- and last-mile connectivity enhancement measures. The advisor will also provide long term support to the CMRL in the implementation of MMI strategy, TOD and LVC related activities.

B. Outputs and Key Activities

4. For the Phase II metro development, the investment project will construct 18 metro stations, comprising 9 elevated metro stations along line 3 from Sholinganallur to SIPCOT and 9 underground metro stations along line 4 from Lighthouse to Meenakshi College. These metro stations will be constructed in integration with facilities for other modes, such as bus services, feeder service, and drop-off and pick-up area, forming a multimodal interchange (MMI) in and around the metro stations. A non-governmental organization is engaged under this TA to study and recommend measures to improve multimodal interchange (MMI) in terms of inclusivity and resilience and to conduct a placemaking demonstration program at the Alandur station. Findings, lesson learned and recommendations from this demonstration program will be used to inform the design of placemaking at 4 selected new stations. An international consultant is also engaged to prepare TOD strategy and action plan to create enabling environment for transit-oriented development (TOD), and to prepare suitable mechanism for land value capture (LVC).

5. The technical advisor is engaged (i) to provide hands-on technical support to the CMRL to review the above consultants’ plans and methodologies, outputs and recommendations; (ii) assist the CMRL or other relevant agencies in the implementation of MMI strategy, TOD and LVC related activities. The technical advisor may also provide recommendations for any practical improvements to these during implementation.
C. Key Experts

6. The technical advisor should be a national senior level urban mobility specialist or transport planner with at least 20 years of general experience, of which at least 10 years are in urban transport sector. Experience in engineering, regulatory and institutional aspects of MMI, TOD and LVC will be preferred. The candidate shall have at least a master's degree or equivalent in civil engineering, transport planning, architecture, urban planning or similar fields.

D. Indicative Implementation Arrangement and Reporting

7. The consultant’s input will be required intermittently for a total of 8 person-months of field inputs.\textsuperscript{1} Even though the technical advisor is engaged by ADB, he or she should maintain close communication and coordination with the project management unit for the TA within the CMRL project team.

\textsuperscript{1} Unless the consultant is based in Chennai, field input refers to works to be undertaken in Chennai.