I. Introduction

1. A World Bank mission visited demo projects and held discussions on the Project to review overall project progress and performance. The Mission met with the Project Management Unit (PMU) within the MoUD, visited Naya Raipur, Pimpri-Chinchwad, Hubli-Dharwad, held discussions with Mysore KSRTC officials and Mysore PBS officials in Bangalore and with Indore AICTSL officials in Delhi. During the meetings, the mission had an opportunity to interact with the MoUD and state officials, city Project Implementing Units (PIU) as well as various consultants, contractors and NGO’s assisting the PIUs with project preparation and implementation. The mission would like to express its appreciation for the hospitality extended and the useful discussions arranged during the field visits.

2. The main mission objectives included the following:

- Review Technical Assistance activities under the Capacity Building Component
- Review progress on City Demonstration Projects in Pimpri Chinchwad, Naya Raipur, Hubli Dharwad, Indore, Mysore ITS and Mysore PBS:
  - Review overall project implementation progress and timelines for launch
  - Review progress with procurement and awarded civil works packages
  - Review progress with land acquisition and resettlement issues and environment aspects

3. Draft AM of the Mission was shared with the National Project Director Mr. M.K. Sinha, OSD (UT & MRTS), MoUD and National Project Manager, Mr. I.C. Sharma and his team and the wrap up is scheduled on 17 August 2016 for a detailed discussion. Subsequently, Mr. Bhaskar Dasgupta, Director DEA, will also be debriefed. The summary of Mission highlights include the following:

- **Overall Project** - Over 80 percent of the IBRD funds are committed and roughly 20 are in various stages of bid evaluation in Hubli Dharwad. Land acquisition is progressing in Hubli Dharwad and requires careful attention for completing the balance difficult sections. In Pimpri-Chinchwad, meanwhile, there is some progress with resettlement of displaced persons and payment of compensation assistance to landowners, however, there is still a long way to go. Safeguards rating is accordingly retained at ‘Unsatisfactory’ and will be considered for an upgrade once these have been tended to. Naya Raipur BRT Lite and Mysore PBS are likely to launch within this year. Pimpri Chinchwad may also be able to launch the second Bank supported BRT corridor by early next year provided the LA R&R issues are addressed and the Empire Estate package progresses as per schedule. The implementation progress rating is therefore pegged at ‘Moderately Satisfactory’

- **Component IB** - The TA and training activities are progressing satisfactorily and several of the Guidance documents have been finalized and would be released by MoUD after due process.

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1The mission comprised of Nupur Gupta (Sr. Transport Specialist and Task Team Leader), I. U. B. Reddy (Sr. Social Development Specialist), Riham Hussein (Financial Management Specialist), Satyanarayan Panda (procurement Specialist), Gaurav D. Joshi (Sr. Environmental Specialist), Raman V. Krishnan (Sr. ICT Policy Specialist), Sujit Das (Consultant - Transport Engineer), Gerhard Menckhoff (Consultant - BRT) and Genevieve M. Dutta (Program Assistant).
• **Pimpri-Chinchwad** – The launched BRT Corridor 2 and Corridor 3 continue to show strong ridership. However, the need for focus on identified operational issues (passenger access, traffic engineering and traffic signal phasing, bus bunching etc.) remains for ensuring successful BRT operations and launch of the most complex Corridor 1. The contract performance of Empire Estate grade separator on Corridor 4 has improved and it is likely that the flyover would be completed by last quarter of 2016, however, the launch of the Corridor is unlikely until the LA R&R issues are fully addressed.

• **Naya Raipur** – NRDA expects to start receiving delivery of buses by early August 2016 and the procurement of the operator is also expected to be finalized in the same timeline. Strong efforts would be required for completion of remaining construction works which continue to lag and sequencing of multiple activities if the BRT Lite launch is to happen by end of 2016.

• **Hubli-Dharwad** – Bid evaluation is ongoing for station doors and Dharwad Terminal and under finalization for ITS and depot equipment. There is steady progress in land acquisition, however, the payment of compensation and shifting of affected parties needs to be expedited for encumbrance free work fronts for corridor road works. The progress on works packages is a matter of concern and requires high level monitoring and attention.

• **Indore** - In Indore ITS bid evaluation is ongoing.

• **Mysore ITS** – The ITS Project in Mysore is fully stabilized barring minor issues. The Second Knowledge Exchange Workshop on ITS in Public Transport was held in Mysore on 30-31 May, 2016, and was well received. KSRTC needs to now finalize the balance activities.

• **Mysore PBS** – PBS implementation is ongoing and it is proposed for pilot launch by August 2016.

• **Project Management** –The procurement of the PMC at MoUD until project completion is ongoing and behind schedule. It must either be completed prior to September 30, 2016, or the current contract extended to ensure continuity of services.

### II. Key Project Data

<table>
<thead>
<tr>
<th>Key Project Data</th>
<th>Current Ratings and Flags</th>
<th>Previous</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board Date</td>
<td>Dec 08, 2009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effectiveness Date</td>
<td>May 05, 2010</td>
<td>Development Objectives</td>
<td>MS</td>
</tr>
<tr>
<td>Closing Date</td>
<td>March 31, 2018</td>
<td>Implementation Progress</td>
<td>MS</td>
</tr>
<tr>
<td>GEF Grant</td>
<td>US$ 18.45 mn</td>
<td>Project Management</td>
<td>MU</td>
</tr>
<tr>
<td>IBRD</td>
<td>US$ 105.23 mn</td>
<td>Safeguards</td>
<td>U</td>
</tr>
<tr>
<td>Disbursed Amount</td>
<td>US$ 10.29 mn</td>
<td>Procurement</td>
<td>MS</td>
</tr>
<tr>
<td>GEF</td>
<td>US$ 47.65 mn</td>
<td>Financial Management</td>
<td>MS</td>
</tr>
<tr>
<td>IBRD</td>
<td></td>
<td>Problem Flags</td>
<td>Two</td>
</tr>
</tbody>
</table>

**HS**=Highly Satisfactory; **S**=Satisfactory; **MS**=Moderately Satisfactory; **MU**=Moderately Unsatisfactory; **U**=Unsatisfactory; **HU**=Highly Unsatisfactory; **NA**=Not Applicable; **NR**=Not Rated

### III. Key Agreed Actions

4. The following actions have been discussed and agreed:

<table>
<thead>
<tr>
<th>Actions to be Completed</th>
<th>By when</th>
<th>By whom</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submit internal audit reports for FY14-15</td>
<td>Aug 31</td>
<td>PMU/MoUD</td>
<td></td>
</tr>
<tr>
<td>Submit Progress Reports; Contract wise physical &amp; financial progress</td>
<td>Jul 10, Aug 22, Sep 22</td>
<td>PMU &amp; PIUs</td>
<td></td>
</tr>
<tr>
<td>Component IB</td>
<td>By when</td>
<td>By whom</td>
<td>Status</td>
</tr>
<tr>
<td>--------------</td>
<td>---------</td>
<td>---------</td>
<td>--------</td>
</tr>
<tr>
<td>(i) Finalise Guidance Docs for PCIB1, PCIB2, PCIB3</td>
<td>Sep 30</td>
<td>MoUD/ PMU</td>
<td></td>
</tr>
<tr>
<td>(ii) GHG Emissions Study for Mysore PBS initiated; Revised Reports for SUTP cities</td>
<td>Aug 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iii) Initiate Procurement of Accessibility Study</td>
<td>Aug 15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corr 2: Redesign geometrics and traffic signal control on key intersections and improve pedestrian access</td>
<td>Aug 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corr 3: Submit traffic management plan for Bhonsari Terminal</td>
<td>Aug 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corr 1: Submit intersection traffic engineering designs including signal phasing &amp; geometrics</td>
<td>Sep 30</td>
<td></td>
<td></td>
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<tr>
<td>Compete ETM installation at depots</td>
<td>Sep 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submit Acceptance Test Plan/ Complete ITS operational acceptance</td>
<td>Jul 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initiate off board fare collection study procurement</td>
<td>Aug 31</td>
<td>PCMC</td>
<td></td>
</tr>
<tr>
<td>Extend PMC contract for Corridor 3 &amp; 4</td>
<td>Immediate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submit revised design options for 2 ramps at Empire Estate intersection</td>
<td>Aug 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Close monitoring of Empire Estate contract – ensure Railway clearance to RoB erection plan and time block</td>
<td>Aug 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete shifting of transit camp PAPs to permanent houses</td>
<td>Sep 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completion allotment of EWS housing to all eligible people and decide on support to those ineligible people for EWS housing and affected small businesses</td>
<td>Sep 15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ensure compensation disbursement (court deposit) to all titleholder on Corr 3&amp;4 where general award was passed</td>
<td>Aug 15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ensure compensation/ TDR issuance to those landowners directly negotiated with PCMC</td>
<td>Sep 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete all LA R&amp;R activities</td>
<td>Oct 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share test results of post epoxy grouting treatment on deck slab in NMT package</td>
<td>Aug 31</td>
<td>NRDA</td>
<td></td>
</tr>
<tr>
<td>Define itemized schedule and action plan to complete works at and around Railway Stn</td>
<td>Aug 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Define itemized schedule and action plan to complete works at and around Old Sect</td>
<td>Aug 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submit designs for pedestrians and traffic south of BRT stn @ Railway Stn; pedestrian crossing on GE Road; improved accessway from GE Rd to Old Sect</td>
<td>Aug 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actions to be Completed</td>
<td>By when</td>
<td>By whom</td>
<td>Status</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------------</td>
<td>---------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Share review of access roads &amp; circulation plan at Old Secretariat</td>
<td>Sep 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submit timed action plan for construction of Telibandha station</td>
<td>Aug 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete procurement of bus operator/ fare collection agency</td>
<td>Aug 15/ Sep 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete works, ITS installation per plan</td>
<td>Sep 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submit draft Business Plan</td>
<td>Aug 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submit revised BRT Lite implementation schedule</td>
<td>Aug 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop a Communications &amp; Outreach Plan for BRT Lite</td>
<td>Aug 16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete social impact assessment and mitigation for Old Secretariat site</td>
<td>Aug 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete outstanding environment issues highlighted</td>
<td>Sep 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Invite bids for balance Package 9 work</td>
<td>Aug 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finalise BER and complete Award for ITS</td>
<td>Aug 13/ Sep 30</td>
<td>Aug 31</td>
<td></td>
</tr>
<tr>
<td>Submit select intersection traffic engineering and signal design plans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submit station door BER</td>
<td>Aug 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submit design options for BRT stn at Hubli Railway Stn (#1)</td>
<td>Oct 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approval and disclosure of RAP Addenda for Mitra Samaj</td>
<td>Aug 13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submit BRT Service Plan options</td>
<td>Aug 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extend consultancy contracts for (i) construction PMC (ii) ITS PMC (iii) Comm &amp; Outreach</td>
<td>Aug 22</td>
<td></td>
<td>HDBRTS</td>
</tr>
<tr>
<td>Submit monthly works packages progress</td>
<td>Continuous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expedite water pipeline laying on MTL – 10km/ All</td>
<td>Sep 30/ Oct 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete pending land acquisition and compensation and R&amp;R assistance for PAPs affected by Mixed Lanes</td>
<td>Aug 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implementing RAP for Dharwad Bus Terminal</td>
<td>Sep 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submit &amp; Disclose Env Audit Report</td>
<td>Aug 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete hiring of Env Officer</td>
<td>Aug 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finalize driving simulator bid</td>
<td>Aug 31</td>
<td></td>
<td>Mysore</td>
</tr>
<tr>
<td>Finalize Communications &amp; Outreach consultants</td>
<td>Oct 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submit update on compliance</td>
<td>Weekly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submit ITS BER</td>
<td>Aug 31</td>
<td></td>
<td>Indore</td>
</tr>
<tr>
<td>Follow up for scheduling of audit for FY15-16 of PIU of MCC with state AG</td>
<td>Aug 31</td>
<td></td>
<td>DULT/MCC</td>
</tr>
<tr>
<td>Submit Acceptance Test Plan</td>
<td>Aug 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Launch PBS</td>
<td>Aug 31</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### IV. Project Development Objectives

5. The project’s development objective (PDO) is to promote environmentally sustainable urban transport in India and to improve the usage of environment-friendly transport modes through demonstration projects in selected cities. The key overall indicators to measure performance in achieving the project development objective are:
6. The activities under Component IB are well advanced. The Leaders in Urban Transport Planning training, introduced in CEPT University as well as those taking place in Singapore, Seoul and Dubai have been well received and 270 officials have been trained so far. The technical assistance activities in regard to assistance with implementation of reforms, and development of a Research Facility within MoUD, are ongoing. Under the TA activities, Indian cities have received hands on technical assistance in areas such as creation of UMTA and UTF (8 cities), Transit-oriented development, NMT Master planning and Public Bike Sharing (6 cities), Traffic Management and Information Centers and National Urban Transport Helplines (5 cities), contracting of private operators in city bus services (3 cities) etc. All these activities are expected to result in an improved planning process for urban transport and adoption of good practices and approaches in Indian cities.

7. Among the city demonstration projects, the Mysore ITS project implementation is complete and they are using the available data for improving the operating performance of the service and providing timely information to users on expected time of arrival. The other city demonstration projects, Pimpri-Chinchwad, Naya Raipur, Hubli-Dharwad and Indore are in various stages of implementation. BRT operations are ongoing on Corridor 2 and 3 in Pimpri-Chinchwad and Corridor 1 is proposed for launch by end of 2016, however, Corridor 4 is likely to be delayed to early 2017; In Naya Raipur, the BRT Lite is expected to be launched by end 2016; In Indore, with rebidding and roughly a year to implement the ITS, mid 2017 is likely date of completion; HDBRTS will require additional time for completion until end 2017; Mysore PBS implementation is expected by end of Q3 2016. The PDO is expected to be achieved within the extended closing timelines. The PDO risk rating is accordingly rated ‘Moderately Satisfactory’.

V. Current Implementation Progress

8. Overall Status: The Mission rates the overall project progress as Moderately Satisfactory. The capacity building component is well advanced, the procurements for the city demo projects are substantially complete, land acquisition and resettlement is also substantially complete in Hubli-Dharwad with still remaining issues in Pimpri-Chinchwad, implementation is complete in Mysore ITS and for one of the BRT corridors at Pimpri-Chinchwad which is operational, and well advanced in Mysore PBS and Naya Raipur. The progress on awarded construction contracts in Hubli Dharwad requires attention.

| Status of Contract Award and Procurement in Numbers and Value in US$mn for IBRD |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                 | Awarded | Under Procurement | To be Initiated | Total |
| PCMC                            | 2       | 36                | 0               | 0     | 0               | 2               | 36              |
| NRDA                            | 3       | 14                | 0               | 0     | 0               | 3               | 14              |
| HDBRTS                          | 9       | 36                | 3               | 20    | 0               | 12              | 55              |
| Total                           | 14      | 86                | 3               | 20    | 0               | 17              | 105             |

|                                 | 81%    | 19%    | 0%    | 100% |

9. The city-wise status of disbursement under the loan and grant is provided below.
### Disbursement Status (US$ million)

<table>
<thead>
<tr>
<th>City</th>
<th>Amount Disbursed (Loan)</th>
<th>% disbursed</th>
<th>Amount Disbursed (GEF)</th>
<th>% disbursed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component 1B</td>
<td>-</td>
<td>-</td>
<td>3.39</td>
<td>55.12%</td>
</tr>
<tr>
<td>Pimpri-Chinchwad</td>
<td>30.19</td>
<td>84.85%</td>
<td>1.31</td>
<td>68.95%</td>
</tr>
<tr>
<td>Naya Raipur</td>
<td>8.30</td>
<td>59.52%</td>
<td>1.28</td>
<td>67.37%</td>
</tr>
<tr>
<td>Indore</td>
<td>-</td>
<td>-</td>
<td>0.82</td>
<td>42.93%</td>
</tr>
<tr>
<td>Mysore KSRRTC</td>
<td>-</td>
<td>-</td>
<td>2.24</td>
<td>89.96%</td>
</tr>
<tr>
<td>Hubli-Dharwad</td>
<td>10.08</td>
<td>18.91%</td>
<td>1.24</td>
<td>49.60%</td>
</tr>
<tr>
<td>Mysore MCC</td>
<td>-</td>
<td>-</td>
<td>0.23</td>
<td>14.38%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>48.57</strong></td>
<td><strong>46.16%</strong></td>
<td><strong>10.51</strong></td>
<td><strong>56.96%</strong></td>
</tr>
</tbody>
</table>

**Component 1B**

Implementation Progress: **Moderately Satisfactory**

10. Component 1B covers a very large set of technical assistance activities in cutting edge areas in urban transport planning and implementation. Its progress is slowed down by the fact that draft guidance documents developed are required to be tested in a subset of cities prior to finalization and this adds substantially to the time and effort involved. At the same time it also adds far greater value to the process and resultant capacity building. MoUD and the PMU have been taking keen interest in furthering these activities. The mission reviewed the progress on the capacity building component and this is updated in the table below.

### Status of Activities under Component 1B

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Activity</th>
<th>Committed Amount (Rs. Million.)</th>
<th>Status Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Development of a structure and an operations manual for UMTA; Business Plan for Urban Transport Fund</td>
<td>24,150,000</td>
<td>Final document submitted and under review of MoUD.</td>
</tr>
<tr>
<td>2</td>
<td>Development of a standard architecture and plan for ITS and Traffic Management Center</td>
<td>20,070,000</td>
<td>Final document submitted and under review of MoUD.</td>
</tr>
<tr>
<td>3</td>
<td>Development of a model NMT action plan, bike sharing plan and TOD Guidelines</td>
<td>27,830,000</td>
<td>Final document submitted and under review of MoUD.</td>
</tr>
<tr>
<td>4</td>
<td>Development of a Research Program</td>
<td>5,530,000</td>
<td>Final operations manual approved by MoUD but no further action on operationalisation.</td>
</tr>
<tr>
<td>5</td>
<td>GHG Emissions reduction assessment</td>
<td>28,650,000</td>
<td>City specific Draft Final Report under review. Emission estimates being revised. Mysore PBS yet to be added to scope.</td>
</tr>
<tr>
<td>6</td>
<td>Leaders Program</td>
<td>135,000,000</td>
<td>270 officials trained</td>
</tr>
<tr>
<td>7</td>
<td>Impact Evaluation Study for the Bus Procurement under JnNURM</td>
<td>33,300,000</td>
<td>Activity excessively delayed; serious quality issues; notice issued to consultants</td>
</tr>
<tr>
<td>8</td>
<td>Model Contract Agreements with Private Bus Operators &amp; Guidelines for City Bus Services</td>
<td>5,400,000</td>
<td>Final document submitted and under review of MoUD.</td>
</tr>
<tr>
<td>9</td>
<td>Preparation of GEF5 Project</td>
<td>11,230,000</td>
<td>Activity extension processed; documents still not finalized</td>
</tr>
<tr>
<td>10</td>
<td>National Communications Campaign on Sustainable Urban Transport</td>
<td></td>
<td>Activity under review</td>
</tr>
<tr>
<td>11</td>
<td>Accessibility Study</td>
<td>25,000,000</td>
<td>ToR under review; procurement yet to be initiated</td>
</tr>
<tr>
<td>12</td>
<td>Workshops</td>
<td>30,000,000</td>
<td>Ongoing</td>
</tr>
</tbody>
</table>

11. In summary:
The Research Program design and operations manual has been finalized and approved, however, MoUD is yet to formally initiate the Research Program.

Guidance Documents covering seven topics (UMTA, UTF, ToD, NMT Masterplan, TMICC, NUTH, contracting Private Bus Operations) have been more or less finalised, and will be processed for internal approval of MoUD.

The Impact Evaluation Study on the Bus Funding scheme is excessively delayed and there are serious quality issues. PMU has issued notice to Consultants. It is proposed to hire again for the balance work.

The quality of the GHG emissions study also requires improvement and the Mysore PBS project is yet to be included into the scope of the consultants.

The procurement of the Accessibility Study is delayed and needs to be expedited.

Component IA

12. Activities under this component are supported / funded by UNDP. These mainly include:
- Business Plan for IUT - Completed
- 10 Urban Transport Planning Manuals - Completed
- 10 Training Toolkits - Completed
- Dissemination Activity - Ongoing
- Development of the National Urban Transport Knowledge Management Centre - Ongoing

13. The development of the Urban Transport Knowledge Management Centre is substantially complete. The data population for all the 50 cities for which CMPs are available has been completed. Simultaneously, data validation is being done at the Institute of Urban Transport (IUT). The license agreement between MoUD and SAP in now in place. However, the team in IUT is not in place to take over the KMC from UMTC. The Bank remains concerned about the following outstanding issues:
- Revenue or Business Model in place for operating the KMC i.e. what will it cost on an annual basis to sustain the KMC operation including for data updation. The Bank understands that this exercise has still not been undertaken.
- Data updation. The model for regular data updation has not been discussed or finalized. Without this critical activity the KMC could well loose its utility. The Mission was informed that MoUD will take a final call on this by probably linking it to its existing urban schemes.
- Responsible Entity. Who will operate, update and maintain the KMC. With the closing the UNDP component, the salaries of IUT staff would also be affected.

Component 2: City Demonstration Projects

Implementation Progress: Moderately Satisfactory

<table>
<thead>
<tr>
<th>Project Rating: Implementation Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pimpri</td>
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<td>Overall Project</td>
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(i) Pimpri-Chinchwad: Physical progress of works in BRT Corridor 3 is about 93%. BRTS has been commissioned in this Corridor on November 28, 2015. The BRT lane is exclusive except for a length of 260 m where construction works are ongoing. Pedestrian Facilities for travel between ground
level on Mumbai-Pune Highway (NH4) and Corridor 3 at higher level are awarded and likely to be ready not earlier than early-2017 which means that this important connection may not be available at the time of launch of Corridor 1. The remaining Ramp 2 under this contract (delayed due to non-availability of land and subsequent design changes) is likely to be completed by early-2017. Meanwhile, it will be important for PMPML to increase the number of routes and buses plying on this corridor for its potential to be achieved.

Physical progress of all contracts combined together in BRT Corridor 4 is about 75%. Land is yet to be available for about 1.06 km of length. There is no likelihood of the full length of BRT Corridor being available for plying of Buses prior to early-2017. Progress in the Bank-financed Contract III (Empire Estate Flyover) has been unsatisfactory but appears to be picking up. The progress in this contract can be assessed as about 67% of the Value of Works. The Contractor has targeted to complete all works except the two Ramps by October 2016. PCMC needs to resolve all remaining land issues. Timely completion of land acquisition and resettlement activity and management of the Empire Estate contract are the two critical items holding up this corridor.

(ii) **Naya Raipur:** Works progress in the contract for Construction of BRT Bus Shelters, Pick-up Points, BRT Workshop Depot and Control Centre, started in December 2013 with 15 months completion period, is about 82% of likely Completion Cost. The Contractor’s progress remains slow. However, they now propose to complete the works by October 31, 2016. The delivery of buses is expected to commence in August and the bus operator contract is also expected to be completed in the same timeline. Works progress in the contract for Non-Motorized Transport Infrastructure (Construction of Cycle Tracks, Walkways, etc), started in March 2014 with a 15 months completion period, is at about 81% of the likely Completion Cost. It would require until September 30, 2016 for completion. It should be possible for NRDA to launch the BRT Lite by end 2016, provided they ensure timely completion of civil works, ITS installation, and hiring of private operator and fare collection agency.

(iii) **Mysore:** The ITS system for Mysore city bus is performing well.

(iv) **Indore:** Bid for ITS have been received and are under evaluation. The MU rating for implementation progress shall be considered for an upgrade once contract award is concluded.

(v) **Hubli-Dharwad:** About Indian Rupees (INR) 700 million worth of works (about 35%) out of total about INR1990 million of works (being financed by the Bank) has been carried out in 10 contracts of Depots, Workshops, Terminals, Bus Stations, Foot Overbridges, Walkways, etc being implemented by HDBRTS Co. One contract has been terminated, bids for remaining works thereof will be invited shortly. Eight contracts are ongoing, and their progress varies between 70% and 8%. Progress of all ongoing contracts is slow, overall about 5% only in last 3.5 months (April to mid-July 2016). There are still several issues related to finalization of construction locations, traffic diversion plan in consultation with Traffic Police, finalization of drawings and poor contractor resourcing and performance. Contract PW-8 is performing specifically poorly. Bids for the tenth one (Construction of Terminal at Mitra Samaj) have been received in July 2016.

Road works along Hubli-Dharwad BRT Corridor are being implemented through Karnataka Road Development Corporation Limited (KRDCL), not financed by the Bank. KRDCL is now implementing remaining about 8.7 km of 4-laning works (exclusive BRT Corridor), construction of Mixed Traffic Lanes, Three Flyovers and Two Road over Rail Bridges (RoBs) along the Corridor of total worth about INR2808 million under Four contracts. All four contracts are ongoing, two of which have started recently and having nil progress until now. Parts of sites could not be handed to the Contractors yet due to encumbrances. At the current pace of progress, the works cannot be completed before end-2017.
(vi) **Mysore PBS:** The implementation is ongoing and the trial run is expected to be launched by next month.

Details of the discussions with each of these cities are provided in Annex 2-7.

**VI. Key Implementation Issues, Risks and Priority Actions**

The key issues that need careful attention and close monitoring are:

14. **Pimpri-Chinchwad - Land Acquisition and resettlement impacts.** The resettlement of those residing in Transit site has commenced after four years of their original shifting date of July, 2012 and there is also some momentum in payment of compensation to those who gave their lands on advance possession. Transferring of compensation amounts to court in case of those who are not available to receive is also commenced. However, there is still a long way to go before all pending land acquisition and resettlement issues are resolved. The key challenges still to be tackled by PCMC include: (i) shifting of remaining people from Transit site and dealing with those in-eligible people living in the transit site; (ii) resolving the compensation issue for about 20 land owners who are still residing in Corridor-4; (iii) completion of associated land acquisition for a stretch of about 1.0 Kms at Khaledwadi along corridor 4; (iv) completing pending compensation payment for those who have given lands on advance possession; (v) depositing the compensation amounts in the courts in case of those who are not available to receive compensation amounts; and, (vi) dealing with shifting of industrial units in MIDC land which is still a long way to go since the approval of tripartite agreement delayed by more than 3 years and thereafter the court directives is required to move with rehabilitation of affected industrial units.

15. The two key decisions that are urgently required to be taken by PCMC to resolve some of the above issues is: (i) making PAPs eligible for alternative houses in case those who have alternative house, since in reality most of these people do not have a second home as they have either sold out or being affected by other projects; and, (ii) paying uniform solatium of 100% for all those losing lands in line with new land acquisition act. Currently in case of those who lose land more than 300 Sq. Meter, the solatium is limited to 30% as per PCMC council’s resolution. The Commissioner informed to the mission during the wrap-up meeting that MUTP policy provisions will be followed in case of those who are displaced in allotment of alternative houses. Further, during field visit to Transit site, some of the people whose names are not in the list of PAPs shifted to Transit site mentioned that they have submitted written request to PCMC for verification of their claims of eligibility. In addition, there are few old women who do not have co-applicants and finding it difficult to apply for Bank loans and PCMC indicated to consider in meeting the beneficiary contribution due to the difficulties faced by them. The safeguards management rating is retained as “Unsatisfactory” until outstanding issues are addressed. PCMC has committed to completing all LA R&R issues by October 31, 2016.

16. **Pimpri-Chinchwad – Ramps on Flyover contract on Corridor 4 (Kalewadi Phata-Dehu Alandi Road):** The Empire Estate grade separator has two ramps on either side for traffic wanting to turn either right or left on the Mumbai Pune Expressway. These are important connections and the alternative would be to cross over to the other side and then take a U-turn, come back and then turn right or left, not only using up valuable time but also creating further congestion upstream. However, it appears that the residents of Empire Estate have objected to the descending ramps which it is felt would create undue congestion within the residential complex and inconvenience to the residents. Technically speaking, these ramps are unlikely to create congestion for the residents. Suitable safeguards can also be employed to ensure minimization of noise and other negative externalities. PCMC had sought the technical opinion of IIT Mumbai on the need for constructing the ramps and have received an affirmative response. PCMC is
however undecided on the matter as it is concerned that the matter maybe taken up during the upcoming municipal elections. PCMC is considering removing the ramps from the scope of the Gammon contract and then retendering at a later date post elections. The Mission advised PCMC to reconsider doing this as not completing the ramps now may only defer their construction indefinitely resulting in a lot of inconvenience to the travelling public and large escalations in cost. PCMC agreed to review the matter and revert to the Bank and PMU.

17. **Pimpri-Chinchwad – BRT Safe Access and Operational Performance:** Two BRT corridors have been launched in Pimpri-Chinchwad – Corridor 2 in September, 2015 and Corridor 3 in November, 2015. While overall there has been a strong positive public response to the launched BRT corridors, the ridership remains strong and there is a sense that there are time savings, there are still several issues that require attention to improve the overall performance of the system and the experience of the users. These are in the areas of (i) Traffic signal phasing which is resulting in lack of priority to the BRT and therefore longer wait times (ii) major intersections with poor geometry making passenger access unsafe (iii) issues of bus bunching (iv) large gaps in bus docking, (v) poor pavement quality and road markings in several sections and issues of cleanliness around stations and (vi) need for fare rationalization, launch of e-ticketing and off board fare collection, etc. Traffic flow at most intersections is chaotic, and conditions for pedestrians (including passenger access to BRT stations) are deplorable. Suggestions of previous Bank missions have generally not been implemented. The geometric design of intersections favors motor vehicles at the expense of pedestrians. Large radii at corners and the scarcity of refuge islands encourage the quick movement of cars and two-wheelers and contribute to the risk of pedestrian accidents. Signal cycles are still too long and differ from previous agreements between PCMC and the World Bank (90 seconds as a rule, up to 120 sec at very busy intersections, much less during off-peak hours). This slows down the BRT travel speed, creates long queues of mixed traffic, contributes to the bunching of BRT buses, and implies long waiting times for pedestrians wanting to cross the street (one of the reasons why pedestrians disobey the red light). The resolution of these will require the concerted efforts of different departments (engineering and electrical) within PCMC, PMPML and the Traffic Police to work together. The Mission expressed concern at the lack of any noticeable progress on these highlighted matters from previous missions. This lack of attention to details may be especially costly for Corridor 1 which is the most highly trafficked and the most complex of all four corridors and proposed for launch next. In regard to the issues of bus docking and off board fare collection it was agreed with PMPML to proceed with the identified actions at the earliest. Traffic Police also provided their consent to considering shorter signal phases and slip phases for the BRT provided PCMC can share the proposed design.

18. **Hubli-Dharwad – Land Acquisition & Resettlement Progress:** Though land acquisition has progressed substantially, but the remaining small private land (about one acre) is taking long time since it involves medium size shops and Dharga/temple. The key challenges remaining are: (i) completion of awarding remaining one acres of private lands involving shopkeepers in Dharwad and Dharga/temple; (ii) shifting of all affected temples as there is no resolution on shifting of a Dharga and 3 other temples; (iii) handing over of complete road length to the contractor of mixed traffic lanes construction; (iv) shifting of affected lease shopkeepers at Dharwad bus terminal; and, (iv) seeking additional budget of about INR. 800 million for the remaining land acquisition from the Government. More details are provided in Annex 2.

19. **Works Contract implementation progress:** The progress on the awarded works packages is extremely slow at about 35 percent financial progress for Bank funded packages. The progress was only about 5% in the last 3.5 months which is still far short of the expected 10% per month. At this pace of progress there is a serious likelihood of the works not being completed and BRT launched by the Project closing date of March 31, 2018. On contracts PW-8 and PW-9 (same Contractor) which were performing very poorly, HDBRTS has taken action and issued termination notice for Package 9 and will be inviting bids for balance work. On Package 8 a subcontractor has been mobilized for taking up specialized works, however, critical electrical works are still to be executed by the main contractor which may become a bottleneck unless this Contractor revamps its sites urgently with required resources. The packages being handled by KRDCL, especially the mixed traffic lanes is progressing very slowly with a progress of less
than 8% in a year and a half. Presently, the main issues are: (a) Completion of Land Acquisition / Transfer and Resettlement, and Relocation of Utilities, this is especially holding up the progress of works on the mixed traffic lanes (b) Approval of Design and Drawings for the RoBs from the Railways and payment of Supervision and Maintenance charges to Railways, and faster progress by contractor (c) Award of Works Contract for Construction of Terminal at Mitra Samaj and invitation of bids and award for construction of balance Package 9, (d) resolution of design and location of bus station 1 in Hubli, (e) Timely decision and issuance of drawings by HDBRTSCL and its Design Consultant, and (f) all Contractors required to vigorously progress the works for early completion. The IP rating shall be considered for a downgrade unless the situation improves.

20. **Launch of the BRTS.** Presently, the main issues which need to be addressed in order to be able to complete the BRT corridor in a timely fashion include: (a) Completion of Land Acquisition / Transfer and Resettlement, (b) Relocation of Utilities on main corridor, (c) Award of Works Contract for Terminal at Mitra Samaj, (d) progress as per schedule for RoB and construction of remaining 8.7 kms of 4-laning (exclusive BRT Corridor), (e) all Contractors required to vigorously progress the works for timely completion. (g) preparation of Traffic signal designs for all major intersections and their implementation, (h) completion of hiring of ITS vendor and mobilisation. Based on current assessment the BRTS cannot be completed before end 2017.

21. **Naya Raipur - Launch of BRT Lite:** The launch of the BRT Lite service is now proposed by November 2016. For this to be possible, NRDA needs to ensure that the ongoing civil works for BRT infrastructure (stations, pick up points, depot & control room) are expedited. Without the control room and stations being available ITS installations are also likely to be held up. NRDA expects to start receiving the delivery of buses from early August and plans to handover the Control Room and initial set of buses to the ITS vendor by mid August. The procurement of BRT operator is well advanced and expected to be finalized in August so the operator can come on board by September 2016 (which may be somewhat difficult to achieve). The tender for fare collection agency has not received any response and will need to be bid again. In addition, access improvements need to be taken up around the major pick up points, a new station developed at Telibandha chowk, and city bus station brought closer to the old Secretariat pick up point on GE Road. Finally, the promotion and outreach activities need to commence at the earliest. The Mission advised NRDA to create a BRT implementation schedule, identifying the multiple activities to be coordinated and managed for the BRT Lite service to be launched by year end.

22. **Indore BRT ITS Delays:** Bids have been received for ITS at Indore BRT on July 14, 2016, several months behind schedule. The evaluation is currently ongoing and expected to be concluded not earlier than August 31, 2016. If this timeline can be adhered to the earliest the vendor can be on board is by October 2016, very close to the timeline of March 2017 available for accessing Government of India funding.

### VII. Safeguards – Environment and Social Management

Safeguards Rating: **Unsatisfactory**

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**Environment Management**
23. The project performance on environmental aspects continues to be rated as Moderately Satisfactory due to a mixed picture on environmental aspects. There are some improvements in the situation in Pimpri-Chinchwad like improved handling of the Pavana river bridge site. However, issues around environmental aspects of construction management, as well as safety of both workers and other users of the facilities in Hubli-Dharwad continue to affect full implementation of the EMP. City-wise summaries follow with details in respective city-wise Annexes.

24. **Naya Raipur**: For the NMT works, it was confirmed that disposal of waste concrete and wash water from the mixers and mixing of asphalt and soil where new cycle track is being laid was being properly handled and disposed.

25. At the pick-up point in the old Mantralaya site, NRDA confirmed that the arrangements have been made for safe disposal of asbestos sheets that are used as wall material by the contractor for storage at the edge of the bus station site.

26. The Regional Mobility Plan study report has been updated with latest data on air pollution. The changes to the results need to be discussed in the report with recommendations to factor in this potential impact of GHG emission reductions early in the decision making process. It was also agreed that the new set of assumptions made for the modeling undertaken would be explicitly stated in the documentation with the report to allow readers to make informed judgments.

**Hubli Dharwad**

27. **Site and Workers’ Safety.** The simultaneous opening of several sites, through different contractors, along the main BRTS corridor is showing variable performance on safety issues – both of workers on site, and other road users along this very busy road. Flyover sites need to be properly barricaded to avoid any mishaps with the plying traffic or other users of the road space. Deployment of personal protective equipment for workers also needs immediate improvement.

28. **Plantation and Landscaping.** There has been a systematic effort at plantation this year in light of the good monsoon rains. About 11,000 saplings will be planted during the rainy season, mostly at the Navalur site spread over 11 acres. This will help ameliorate the loss due to damage over the past years (survival percentages currently stand at 36% and 78% respectively for plantation undertaken in 13-14 and 14-15). It will also require amendment to the contract with the Forest Department for covering the maintenance of plantation undertaken in subsequent years. The mission also discussed the strategy to be adopted for landscaping in the context of the plantation. It was agreed that once the DULT/HDBRTS Co approval is accorded, the consultants will prepare plantation plans so that next year’s procurement of saplings is duly informed. The mission also advised HDBRTS Co to actively review the final design to explore the possibility of saving trees that are beyond the Mixed Traffic Lanes as their shade may make the footpaths more attractive than young saplings. It has been agreed that this will be undertaken and finalized in advance of construction.

29. **Environmental Audit.** The environmental audit has found several deficiencies in the implementation of the EMP which need to rectified and responded to. Most of these are with the contractors – obtaining statutory clearances, for example, and maintaining safe work environment in construction. These need to be rectified and a response should be shared with the auditors for them to finalize their report.

30. **Reuse of Material.** About 8,000 cu. m. of construction waste from the other BRTS contracts will be used in the embankment for the Rail Over Bridge. This has been done following confirmation that this material has appropriate engineering properties.

31. **Implementation Institutional Arrangements.** The contractor performance on environmental aspects can be improved if the advice and instruction from Engineer to each contract is consistent. Since there is
no provision of environmental expertise in the management of flyover contracts, it has been agreed that the KRDCL and contractors employed for the project by them, will work with HDBRTSCo and their PMC to ensure proper implementation of the EMP. The full-time environmental specialist in the HDBRTSCo has been interviewed and the incumbent should be on board by August 1, 2016.

32. **Pimpri Chinchwad.** The contractor has removed almost all the material used to create the temporary access for building the piers in the Pavana river. This has resulted in most of the waterway being available for passage of flood without affecting areas downstream. Some material still needs to be removed to restore the pre-project implementation condition, but that is easily manageable as it is on the side where the contractor establishment is located. Disposal of this material is proposed for the Green Belt designated on the river bank. This needs to be properly handled through planning and adequately draining slopes so that there are no issues in the future. This should be completed by 31st August 2016.

33. Roadside plantation has a survival rate of over 90% and the block plantation has exhibited survival rate of 83%. The mission requested that these substantial achievements should also be publicly disclosed. It was agreed that the data would be available on PCMC website along with the EA documentation.

34. **Mysore PBS.** The mission was informed that a small trial run of the Public Bike Sharing scheme will begin with 6 locations being provided with cycle stations. The design has been modified to avoid having to dig the foundation into the soil. Some locations have been changed from the original plan to suit site conditions. During the next mission, once all the stations are installed, and the scheme is functional, the mission would undertake a site visit.

**Social Management**

35. **Pimpri-Chinchwad:** The progress noticed since last supervision mission in April, 2016 includes: (i) shifting of 45 families from Transit site to permanent housing; (ii) Depositing compensation amount of 60 lands owners in court; (iii) payment of compensation to 10 out of 137 land owners who gave advance possession of their lands, and (iii) substantial completion of repairs and other improvements to alternative houses at Vittal Nagar. Due to the non-compliances associated with payment of compensation and pending shifting of remaining people from Transit site to permanent housing, the safeguards management is retained as “Unsatisfactory”. In order to address the non-compliances, the Bank Team has agreed a time bound action plan which is summarized in Annex 3A. In the event that these non-compliances are not rectified in the agreed timeline further action may be taken.

36. **Hubli-Dharwad:** The progress noticed since last supervision mission in April, 2016 includes (i) acquisition of 3 acres of additional private land, (ii) Finalization of RAP for Dharwad Bus Terminal; and (iii) advancing with relocation of few temples. However, the issue of Income tax deduction from compensation amounts is not yet resolved. As a result, the land owners are required to pay a substantial amount towards income tax thus reducing their net compensation to below replacement costs. In addition, there is also no progress in comparison of negotiated compensation amount with compensation payable under RTFCTLARR Act to conclude that the compensation under negotiations is more than compensation payable under new Act. The overall social safeguard management is retained as “Moderately Satisfactory” and will be reviewed during next mission based on the further progress and compliance with policy provisions.

37. **Naya Raipur:** The entry and exit points at old Mantralaya pick-up points will have some resettlement/livelihood impacts. In case of Entry point, 3 small shops will be affected and NRDA confirmed that these shop keepers will be provided alternative pre-fabricated shops at the same site itself to ensure that their livelihood is maintained. In case of exit point, NRDA indicated that it require 7.1 Meters for traffic movement and some additional space will also be required from safety point of view. The preliminary assessment indicated that about 6-8 residential huts on right side and some encroached portion of a hospital and temple will be affected on the left side. NRDA also indicated the possibility of them resettling under
ongoing Government housing scheme. NRDA should prepare a brief RAP by including the baseline socio-economic characteristics of PAPs, tenural status and proposed mitigation measures in line with ESMF/World Bank’s involuntary policy provisions. In case these people are resettled under Government program, the differential allowance/ assistance between ESMF and World Bank policy provisions should be proposed. Appropriate consultations and grievance mechanism should also be described. The RAP will be reviewed by the Bank and require approval and disclosure from NRDA. The timing of shifting of these families and payment of compensation/assistance should be completed prior to shifting of these people and commencement of bus services.

38. **Results Framework Indicators and Monitoring.** Following the restructuring of the project in November, 2015, two indicators related to land acquisition and resettlement were incorporated in the results Framework Matrix. The progress in implementation of these indicators is summarized below.

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<th>Indicators</th>
<th>Baseline</th>
<th>End of project Target</th>
<th>Current status (June 30, 2016)</th>
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<tr>
<td>PCMC: Percentage of Displaced families that are resettled in alternative houses</td>
<td>219*</td>
<td>100.00%</td>
<td>68.00% (149 PAFs)</td>
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<tr>
<td>HDBRTS: Percentage of PAPs received compensation and R&amp;R assistance</td>
<td>1,145*</td>
<td>100.00%</td>
<td>85.34% (977 PAPs)</td>
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*current target and subject to change

VIII. **Procurement, Expenditures and Disbursement Plans**

39. **Procurement.** Mission noted that revised procurement plan from HDBRTS is received in Nov 2015, which is reviewed and returned with comments. During current mission, it is noted that a lot of changes in packages are done and therefore HDBRTS is requested to submit their revised procurement plan after incorporating all changes at the earliest, which they have agreed to submit within a week. Other IAs who had plan for new activities may submit their revised procurement plans after inclusion of the same and then initiate the procurement process.

- MoUD as implementing agency has already finalized all consultancy contracts at their level. They need to monitor these contracts for timely completion.
- For PCMC, all the contracts are already awarded. However, due to inordinate delay in contract execution by Gammon India, the client had issued a show cause notice after which performance improved. PCMC will require strong contract management.
- KSRTC has given the certificate of operational acceptance to the Mysore ITS vendor since Oct 1st 2015. During mission, KSRTC has presented performance indicators for ITS with SLA requirements. It is noted that though the vendor is making every effort to achieve the SLA requirements, the SLAs are not fully met. Further KSRTC is in the process of finalizing the tender for driving simulator and expected to award the contract in a fortnight. Besides they are in the process of procuring the consultancy contract for communication and outreach program and extend the M&E contract.
- For Mysore city, the procurement for public Bike Sharing Project have been completed and pilot launch is expected next month.
- For Naya Raipur, all the contracts are already awarded including the procurement of ITS. In civil works execution the progress is slow and again completion date is deferred to end of September 2016 against the earlier agreed timeline of June 2016. Close monitoring from project side is required for their timely completion.
- HDBRTS has opened the tender on 30th Mar 2016 for rebid for ITS and the same is in advance stage of finalization. The project needs to process the case expeditiously for early award of contract. The remaining procurements for Dharwad Terminal and stations doors also need to be finalized.
- Similarly AICTSL has opened the tender for rebid for procurement of ITS for Indore city and is expected to conclude the contract shortly. Besides few consultancy contracts need to be finalized on priority by them.
40. For PPR16, the PPR report is shared with the client for complying with the comments. The reply from client received. For PPR 17, the list of contracts for post review will be sought in the month of August 2016.

### Project Rating: Procurement

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**Financial Management**

41. The disbursements (excluding advance) stands at 45.28% and 55.78% against IBRD and GEF respectively. The IUFR submission (last submitted till March 2016) is timely. The next IUFR is expected to be submitted before August 15, 2016. There should be no delays for the statutory audits for all PIA’s for FY 15-16. Entrustment of the audit for Mysore was done and other PIU audits are already underway. Draft internal audit reports were provided but final reports are yet to be submitted.

42. The overall rating of the project is retained at MS.

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**X. Project Management**

43. *Project Management & Staffing*. The overall slow progress of the city demonstration projects is symptomatic of weak project management and staffing of PIUs. The rating for Project Management is accordingly retained at MU as major issues around land acquisition & resettlement, procurement, contract management and slow works progress continue. While the Mission understands that the UNDP executed component covering project management costs has been extended, there is now a need to revise the fund flow arrangements which may impact the PMU. The procurement for PMC contract which now closes on Sept 30, 2016, has been initiated and must be completed prior to the current closing date.

44. *Annual Meet*. It is proposed to organize the next Annual Meet at Pimpri-Chinchwad where the BRT corridors are now operational and the next Asia BRTS is proposed to be held. The tentative dates for the international conference are 1-3 December 2016, and all SUTP cities would benefit from the knowledge exchange.
XII. Next Mission for Bank’s Implementation support

45. The next mission is proposed to take place between November 14-25, 2016.
Annex 1

INDIA: GEF-World Bank-UNDP: Sustainable Urban Transport Program (SUTP)

List of Officials Met

1. Mr. M.K. Sinha, OSD (UT & MRTS), MoUD
2. Mr. R.K. Singh, Director (UT), MoUD
3. Mr. I. C. Sharma, National Project Manager, SUTP Project Management Unit, MoUD
4. Ms. Rana Amani, Deputy Project Manager, SUTP PMU, MoUD
5. Mr. Dinesh Waghmare, Commissioner, Pimpri Chinchwad Municipal Corporation
6. Mr. Rajan Patil, Joint City Engineer, Pimpri Chinchwad Municipal Corporation
7. Mr. Shrikant Savane, Executive Engineer, Pimpri Chinchwad Municipal Corporation
8. Mr. Rajat Kumar, CEO, NRDA
9. Mr. Salil Srivastava, Chief Engineer, NRDA
10. Mr. Sandeep Soni, CEO, AICTSL
11. Mr. Rahul Shrouti, Manager Technical, AICTSL
12. Ms. V. Manjula, Commissioner, Directorate of Urban Land Transport, Govt. of Karnataka
13. Mr. Ramandeep Chowdhury, IAS, Managing Director HDBRTS
14. Mr. Vishwanath, GM, Traffic, KSRTC
15. Mr. Ramamurthy, DC, MCTD, KSRTC
16. Mr. Gururaj, Statistics Officer, KSRTC
INDIA: GEF-World Bank-UNDP: Sustainable Urban Transport Program (SUTP)

Hubli-Dharwad

1. A World Bank mission visited Hubli-Dharwad on July 23 and Bangalore on July 24, 2016 to discuss the implementation of the Hubli-Dharwad BRT project. The meetings were attended by Ms. V. Manjula, Commissioner, DULT (July 24); Ramandeep Chowdhury, IAS, Managing Director, HDBRTS Company; their teams and consultants; and representatives of the PMU and PMC.

2. **BRT Project:** The HDBRTS Project aims at improving bus services in the Hubli and Dharwad twin cities including the implementation of a 22.3 km BRT line, consisting of the 11.8 km long corridor between the two cities and extensions into their central districts. BRT operations are expected to commence by mid-2017. Proposed project components include:
   - Segregated central bus lanes with median bus stops.
   - Trunk and feeder services; off-board fare collection system, with integrated ticketing of trunk and feeder services.
   - The trunk fleet will initially consist of 110 standard (12m) and 30 articulated buses, with a floor height of 900 mm above ground level.
   - Level boarding and alighting.
   - ITS for BRTS and ATCS for traffic management along the corridor.
   - Comprehensive development of the city transport infrastructure including depots, workshops, terminals both for BRT and feeder buses; ITS for BRT and traffic management; and last-mile connectivity.
   - Interchange facilities between the BRT and suburban & city services.

**Technical Discussions**

3. **BRT Terminal in Dharwad:** The transfer terminal at the northern end of the BRT will provide an operational turnaround for BRT buses and a final BRT station. Feeder buses will mostly use the nearby CBT and OCBS terminals. About 20% of the BRT buses may branch off and continue in mixed traffic towards the NWKRTC Regional Bus Terminal and thus provide a link with non-urban bus services. Some of those BRT buses could continue from there and serve the Agricultural University.

4. The selected terminal option will provide six loading bays (two for alighting, two for boarding, and two for both). In addition, there will be space in the same complex to permit the layover of four BRT buses. CEPT’s design envisages two levels for the terminal, due to the differential in terrain levels. The mission agrees that the proposed terminal could handle the expected demand, provided buses are operated efficiently. As the terminal must be in place when BRT operations start (second semester of 2017), there is an urgency to award the contract and begin implementation. The Mission was advised that bids have been received on July 15 2016 and would be evaluated and finalized by **August 31, 2016.**

5. As the origin or final destination for many passengers is expected to be CBT and OCBS terminals the mission again raised the issue of designing a convenient last mile connection between the BRT terminal and these locations which are roughly 250-500m away. It was agreed that DULT and HDBRTS would review the possibility of accommodating the 2 km balance pedestrian facilities from Package 4 here.

6. **Traffic Signal Designs:** The BRT corridor will have traffic signals at 29 intersections and 10 mid-block locations (for pedestrian access), i.e. on the average there will be traffic signals every 560 meters. The placement of signals and the timing of the signal phases will affect both traffic safety and the efficiency of mixed-traffic flow and BRT operations. If done well, it will contribute substantially to the success of
the entire scheme; if not, it may detract from the perception that the BRT project has been a useful investment. (In addition 14 non-BRT intersections will be signalized in the central districts of Hubli and Dharwad).

7. It had been decided some time ago that the Centre for Development of Advanced Computing (CDAC) will carry out the detail design of both the physical layout and the phasing/timing of the signals, and subsequently be responsible for supplying and installing the signals. CDAC has experience in this field, and among its projects has been the installation of traffic signals along the BRT corridor in Indore. Its proposal to DULT, dating back more than half a year, includes the signal layout and phasing for a typical four-legged intersection, and one for a typical mid-block location. The phasing proposed for the intersection implies a five-phase operation (four for each mixed-vehicle approaches and one for the BRT), which the mission considers less than optimal for a BRT corridor – especially where there are relatively few mixed-traffic right turns from the main corridor. Much more green time can be given to the BRT when it operates in parallel with the straight mixed-traffic flow, while right-turning vehicles would receive relatively short green times. Controlling the right turns, however, requires additional signal indications which are not yet included in CDAC’s typical design.

8. Designs for typical intersections are useful at an early stage of signal planning, but it is important to remember that few intersections along the BRT corridor are “typical”; thus, the final signal designs must be prepared case by case on plans that are to-scale. It was agreed during this and previous missions that CDAC should seek approval for each signal design before proceeding with the installation. Given that there are few BRT systems in India, the mission wishes to highlight two elements which are specific to BRT and should be factored in when preparing the designs:

- How best to control right-turns by mixed traffic across the segregated busway; and
- How to minimize signal delays to BRT buses and avoid bus bunching at intersections, as this could severely undercut the objective of achieving reliable bus services and high commercial bus speeds.

9. Most of all, a traffic signal layout should be part and parcel of a traffic engineering analysis – balancing the objectives of flow efficiency and traffic safety (see next paragraph for specific elements to be included in this work). While it is recognized that CDAC has prepared the traffic signal designs for the BRT corridor in Indore, it is worth noting that the Hubli-Dharwad BRT will have higher bus frequencies than the one of Indore. Also, especially in the built-up areas of Hubli and Dharwad, the intersections are much more complex. It is therefore strongly recommended that the signal designs be based on professional traffic engineering analyses and reviews.

10. It has been agreed during this and previous missions that signal design plans, including the signal phasing and timing, should be designed case by case. These plans should be developed at an appropriate scale, probably 1:500, and should include all elements of traffic engineering such as the locations of mixed-traffic, BRT and pedestrian signals, refuge islands, pedestrian barriers, lane markings, zebra crossings, bollards, traffic signs, the phasing and timing of the traffic signals, and – where required – proposed modifications of the geometric design of the intersection. As was agreed with the technicians present at previous mission meetings, the signal cycle (probably uniform for all signals) should not exceed 90 seconds, and bus-actuated skip phases might be considered to minimize BRT delays and bunching.

11. On July 23, the mission had an opportunity to have technical discussions with CDAC, together with DULT staff and consultants. It was agreed that CDAC incorporate the above elements in their work, in particular the revision and possible modification of the geometric design of the intersections. As traffic should be stopped by signals only where and when it is justified for safety or capacity reasons the discussions covered the following additional point: During off-peak hours, the traffic demand may not be sufficient to warrant full signal control. Thus:
• The signal control should vary between peak and off-peak periods, i.e. shorter signal cycles should be programmed for the hours of light demand, or the signals might switch to flash operation.

• At the mid-block pedestrian crossings to BRT stations, push buttons should be installed so traffic would receive a red signal only when requested by a pedestrian wishing to cross the road.

12. The signing of the contract with CDAC has been held up as the procuring and installation of traffic signals can only be initiated when the mixed-traffic roadway has been completed, or at least is in advanced stage of construction. However, there are no reasons why the traffic engineering work and the design of signals and phasings could not start right now. It was agreed that the contract with CDAC (still in draft) would now include design phase of at least three months at the very beginning of the work plan, prior to the procurement of the signal equipment. **DULT advised the mission** that it intended to modify the existing text as needed and have the contract signed **before the end of July 2016.**

13. **DULT and CDAC also agreed** that some signal design plans, including any geometric design revisions that may be needed, be produced quickly (for a sample of about 5-10 locations) and forwarded to the PMU and the World Bank **by August 31, 2016.**

14. **BRT Service Plan:** CEPT was planning to carry out traffic surveys to update previous demand forecasts and to establish the data base for evaluating possible BRT service plans. These will consist of alternative combinations of bus size, express versus all-stop services, and terminal points (such as Chennama vs CBT in Hubli, and Regional Bus Terminal vs Dharwad BRT terminal. For lack of time, this element was not discussed during the current visit, and thus **the mission repeats its earlier recommendation** that the main service plan options be defined soon and sent to the PMU and World Bank, desirably **by August 31, 2016.**

15. **Pedestrian Facilities:** In central Hubli, it had been proposed to reduce footpath widths to about 2 meters in order to have space for 7.5 meter wide mixed-traffic carriageways. The current mission and HDBRTS staff visited the locations near Rani Chennama. As pedestrian demand is heavy at many locations, the mission continues to be of the opinion that the standard 7.5 m width normally used to design high-speed roads is not appropriate here, especially not at the expense of pedestrian space. **It repeats its previous recommendation** to reconsider this design and provide footpaths of at least 3 meters width, and advise the PMU/Bank of the final decision **by August 31, 2016.**

16. **Flyover in central Hubli:** The mission was advised that the Highway Department was considering the construction of an elevated road viaduct between Hosur Cross and Chennama. Not only would such a structure be unsightly and ineffective in resolving traffic congestion in central Hubli, it could severely jeopardize the entire BRT concept which depends on a terminal at Chennama. **The mission recommends** that the PMU and the Bank be advised as a matter of urgency of any government decisions to go ahead with that flyover.

17. **BRT station near Hubli Railway Station:** The previously agreed design of that important BRT station was recently put in question by a group of private interests who wish to extend. Alternative station locations –none of them satisfactory – were discussed with the mission. One of these alternatives would affect some land in front of the railway station. **The mission recommends** that DULT and its consultants (CEPT) prepare a coherent evaluation of possible options and advise the PMU and the World Bank of the preferred solution by **October 31, 2016,** so this can be discussed when the next mission visits Karnataka. The construction of this station is likely to be delayed, which would probably mean that all BRT buses would turn around at Chennama Circle when the first phase starts operation.
ITMS

18. The Bank mission discussed the Bid Evaluation Report for procurement of ITS and shared its comments with DULT/HDBRTS. It was agreed that the revised BER including a clear recommendation would be submitted to the Bank and PMU by August 8, 2016.

19. It was understood that NWKSRTC would become the Operations Agency responsible for operating the ITS. The operations team will need to be staffed with requisite resources and have the right technical expertise. The Bank mission encourage HDBRTS to notify senior management at NWKSRTC about this need and urged the ITS PMC to ensure that the ITS Systems Integrator would provide requisite training and build the capacity of the Operations Agency.

20. The MoU with CDAC for provisioning of Traffic Signals calls for a total of 27 months of engagement including 12 months of post-installation support. The Bank mission encouraged HDBRTS to consider a longer term maintenance and operational support plan beyond the 27-month period that would include provisions for replacing damaged/malfunctioning signals, software upgrades etc.

21. Passenger Sliding Door (PSD) had been removed from the ITS tender following feedback from vendors is proposed to be procured separately. Bids were received on June 29 and are currently under evaluation. HDBRTS agreed to submit the BER by August 31 to the Bank and PMU.

22. Finally, since the contract for ITS PMC has ended, a proposal for extension has been received by HDBRTS and is currently under review. The Bank mission again advised HDBRTS to expedite the extension to ensure continuity in the PMC services.

TA Activities

23. *HD City Plan.* The Bank team had shared detailed comments on the Inception Report and now awaits the submission of the next deliverable.

24. *SOP Study.* The SoP consultants are also on board and have completed a comprehensive mapping of all the existing critical processes at NWKRTC. The next step would be to evaluate international experience in this regard and come up with recommendations for streamlining and improving the process flows through ITS.

25. *Communications & Outreach.* The contract of the communications consultants has come to an end but given the delay in progress some key deliverables, especially the Pre-Launch and Launch Campaigns, remain unmet. HDBRTSCo has received a proposal from the consultants for extensions and is currently reviewing the same. The mission again advised DULT/HDBRTS to expedite the contract renewal as there are several aspects that need to be addressed through proactive stakeholder communications:

- General Award to some Dharwad residents/shopkeepers: This could be potentially sensitive in the event that the government has to exercise its right to eminent domain. It would be useful to utilize the communications consultants to ensure that the context in which this General Award is being made (the various design options explored, the impact on project progress, the generous compensation being offered etc) is clearly understood by all stakeholders, including the media.
- Adverse media reporting, especially of late in regard to survival of tree plantations and CNG buses instead of diesel buses, needs to be proactively tracked and responded to.
- Continuing proactive communications with critical stakeholder groups: Outreach to stakeholder groups who will be critical to the success of the BRT operations has begun with information-sharing sessions for KRDCL staff and traffic police staff. Similar sessions at regular intervals updating these stakeholders about project progress will help increase their involvement and engagement with the project. It will also be important to extend the outreach, at the appropriate time, to other important groups like auto-drivers and the private bus operator in order to ensure that any
apprehensions they might have about the impact of the BRT operations on their livelihood are allayed.

- Increasing communications around project progress: It will be useful to convey a sense of progress to the general public and to key stakeholders by utilising channels such as the project website, newsletter and Facebook. Small updates (with appropriate site photographs) can help convey a sense of momentum, as will quarterly briefings to the city media.

**Works being implemented by HDBRTSCo (financed by the Bank)**

26. **About 35% (in monetary terms) of the works** being financed by the Bank, has been carried out in 10 contracts being implemented by HDBRTSCo. One contract has been terminated, and bids will be invited for implementing the remaining works thereof. Eight contracts are ongoing, and their progress varies between 70% and 8%. Progress of the contracts overall about 5% in last Three and Half months (April to mid-July 2016) in comparison to overall 9% in earlier Four months (December 2015 to March 2016), as reported by HDBRTSCo. Such progress (about 1.5% per month) is very poor at this stage, while about 7-8% overall progress per month (assuming about 9 to 15 months completion period) is desirable. Bids have been received for the tenth one (Construction of Terminal at Mitra Samaj) in July 2016. The Table at the end gives the overall status of all contracts.

27. HDBRTSCL needs to monitor the Contractors' performance together with finalizing location of facilities, land / site handing over, relocation of utilities, finalizing traffic diversion plans in consultation with Traffic Police and issuance of final drawings closely. In general, the Contractors’ technical capability is low. All Contractors are required to vigorously progress the works for early completion by augmenting their resources. Although Contract PW-8 has mobilized 2 approved Sub-Contractors implementing about 25% of contract works, the main Contractor (having very poor performance for 31 months since start of the contract in December 2013) is required to carry out remaining about INR280 million of works. Unless the Contractor can establish shortly a satisfactory arrangement for carrying out about INR280 million worth of works, HDBRTSCo may have to consider taking contractual remedial action. Contractual Works Completion Period has expired for Four works contracts. HDBRTSCL is required to extend the Works Completion Periods with conditions if any. Optimistically, all works being implemented by HDBRTSCo are likely to be excessively delayed.

28. **PW-1**: This contract for Construction of four numbers of BRTS Bus Stations (BS) including Concrete Pavement at those locations and 1 km long Pedestrian Walkway between Hosur Cross and Hubli Railway Station started on 04 April 2015 with 12 months works completion period. Progress is about 13% of increased contract amount including the electrical works discussed hereinafter. The Contractor has completed 700m of Pedestrian Walkways but can do the remaining length of 300m after underground electric cables are laid and electric poles are relocated. Following interaction with Hubli Electric Supply Company (HESCom), HDBRTSCo has decided to issue Variation to this contract for the Contractor carrying out the Electrical works worth INR7.1 million. The works cannot start at BS-01 (at Pinto’s Circle) until the Location is finalized in consultation with all stakeholders. The Contractor will be able to start the works at BS-02 after HDBRTSCo constructs the Diversion and Footpath expectedly within 2 months and also the final location drawing (in view of change in location) is received from the Design Consultant. The Contractor can start the works for BS-03 near Rani Chennamma Circle after the new Location is finalized. Roof works have been completed at BS-04.

29. **PW-2**: Two bids have been received on 15 July 2016, for Construction of Terminal at Mitra Samaj in Dharwad with Works Completion Period of 12 months. Land acquisition process is ongoing. On possession of the land, the buildings therein are to be demolished. ‘Good for Construction’ (GFC) drawings are yet to be received from the Design Consultant. HDBRTSCo has now target of completing these works by September 2017.
30. **PW-3A**: The contract for Construction of Four FoBs started on 06 November 2015 with 9 months works completion period. ‘Good for Construction’ drawings were issued in February 2016. Works are progressing very slowly. Progress is only 8% of contract amount. There does not appear to be any urgency by any party to accelerate the progress of works. More than 3 months have passed in processing the Excise Duty exemption Certificate to be issued to the Contractor for procurement of Steel materials. Detailed drawings of the steelworks have not been received from the Design Consultant. Drawing with final location of FoB near Rani Chennamma Circle needs to be issued and the Site to be handed to the Contractor. Works at Hosur Interchange location are ongoing at foundation level. Drawing for the Footing common with PW-10, to be constructed under this contract, has been received about a month back, and the Footing to be constructed in coordination with PW-10 works. Works at Prerana College site are ongoing below ground level. Drawing showing changed location(s) of staircases has been received on 24 June 2016. At Unakal Lake site, works are ongoing below ground level.

31. **PW-3B**: The contract for Construction of Four FoBs, won by the same Contractor for PW-3A, started on 06 November 2015 with 9 months works completion period. One FoB has been dropped from the scope. Progress is only 8% of contract amount. Works have started at Navanagar site, but the works for the central structure can be taken up after the traffic can be diverted. Works at Rayapur site are ongoing below ground level. At the site for Dharwad Court Circle, Transformer has been recently shifted and works can be started at Left structure. Works for the central structure cannot be started because of traffic diversion issue and works for Right structure cannot be started until Electric pole and Cable are removed.

32. **PW-4** comprising Drains, Walkways, Street Lights, Bollards, Sitting Benches, etc for a total length of 3 km in Dharwad, Navanagar and Hubli (following changes in the scope of works) started on 10 November 2014 with 9 months completion period. Works Completion Period was extended until 30 June 2016. Present progress is about 42% of increased contract amount including electrical works discussed hereinafter. The Contractor has completed all Drain works (including at Hubli). The Contractor had completed Walkways and new Street Light Pole foundations on one side in Navanagar. The Walkways and Street Lighting works on the other side in Navanagar can be carried out after underground cables are laid. Following interaction with the HESCom, HDBRTSCo has now asked the Contractor to carry out the works worth INR 7.6 million of laying underground low tension electricity cables (to be done together with HESCom laying underground high tension cables), relocation of Transformer and removal of old electric poles, as Variation to this contract. In 1.3 km in Dharwad, as because Walkways cannot be laid until the road works and utility ducts are laid under another project, proposal is being prepared for alternative stretch(es) for construction of Walkway.

33. **8. PW-5** comprising Construction of 13 Bus Stations (BS) at middle of the BRT Corridor width, started on 15 October 2014 with 12 months completion period. Physical progress of this contract has been about 70% of contract amount. The Works Completion Period of this contract was extended until 20 June 2016. The Contractor has completed the structure works up to Roof Sheeting at Eleven locations, completed up to Roof Beam at Unakal Village (BS-10) and up to Platform level at Unakal Lake (BS-11). Besides structure works at BS-10 and BS-11, the Contractor is required to complete the Wooden False Ceiling, Flooring, Stainless Steel works, Rolling Shutters, Electrical Fittings, Silicon Paint on Walls, Advertisement Boards, Ticketing Booths, Sitting Benches and all Finishing works at all BSs. The Mission noted that fixing of the last piece of roof sheeting at outside edges may deform the geometry. This requires high quality workmanship as well as some sort of support to maintain the geometry. These are also applicable for all BSs under PW-1 and PW-6. The Mission was informed that the Contractor has applied for an extension of Works Completion Period until 31 March 2017. There is however no reason for the Contractor to take such long time to complete the remaining works. It’s understood that HDBRTSCo has withheld about INR59 million of payments to the Contractor on quality issues, and thus the Contractor is facing cash flow problem, reduced its manpower resources and has asked for such long time period for completion of remaining works. The Mission suggested that the Contractor should rectify the works as required on an emergency basis and get the payments.
34. The Roof structure of the BSs is extending beyond the BS Platform towards the Bus Corridor by about 1.7 meters and the clear height of the lowest point of the roof truss above the road pavement is about 4.3 meters, thus susceptible to damage caused by movement of vehicle with tall load if enters the BRTS Corridor. The Mission suggests to put retro-reflective paint and red flasher light at the approach sides of the roof for cautioning approaching vehicles. In addition, HDBRTSCo may consider erecting sturdy physical barrier at the entry locations of the BRTS Corridor in order not to allow any vehicle with tall load to enter the Corridor. These are also applicable for all BSs under PW-1 and PW-6.

35. **PW-6** comprising Construction of 11 Bus Stations (BS) in the middle of the BRT Corridor width, started on 15 September 2014 with 12 months completion period. Two more BS (at NTTF and at Jubilee Circle) at a cost of INR19.8 million have been added to this contract, totaling 13 BS. Physical progress of this contract is about 48% of increased contract amount. The Works Completion Period of this contract has been extended until 31 July 2016. The Contractor has completed structure works up to Roof Sheeting at Eight locations, completed up to roof beam at BS-30 (Bagalkot), roof beam under progress at Jubilee Circle, works up to Plinth level under progress at NTTF & Court Circle and Foundation works completed at BS-29 (Toll Naka). The Mission noted that fixing of the last piece of roof sheeting at outside edges has deformed the geometry at several places. This requires high quality workmanship as well as some sort of support to maintain the geometry. Besides the structure works, the Contractor is required to complete the Wooden False Ceiling, Flooring, Stainless Steel works, Rolling Shutters, Electrical Fittings, Silicon Paint on Walls, Advertisement Boards, Ticketing Booths, Sitting Benches and all Finishing works at all BSs. Progress in first Eight BSs is slow and the Contractor’s target of completing these Eight has shifted from April 2016 to July 2016 and now to December 2016. The Roof Structure (extending beyond the BS Platform towards the Bus Corridor) at remaining Five locations (where presently the carriageway width is restricted) should only be erected with some temporary barricading so that the Roof Structure is not susceptible to damage by vehicle movement with tall load.

36. **PW-8** comprising Depot and Divisional Workshop in Hubli and the Depot in Dharwad, started on 20 December 2013 with 15 months completion period, is progressing very slowly. Physical progress has been only about 34% of contract amount. Hubli and Dharwad Depot sites were practically abandoned and no work has been carried out at these two sites since 01 April 2016, whereas reasonable progress has been made at Divisional Workshop site through a Sub-Contractor. There is no authorized Project Manager of the Contractor stationed at site since March 2016. HDBRTSCo has approved two Sub-Contracting arrangements totaling less than 25% limit of the contract amount: (1) Swarna Techno Construction Private Limited carrying out Civil and Structural works at Divisional Workshop amounting about INR 70 million, and (2) Suresh Enterprises Private Limited to carry out Dry Lean Concrete (DLC) and Pavement Quality Concrete (PQC) works at Hubli and Dharwad Depots amounting INR 64.9 million.

37. The main Contractor itself needs to carry out all remaining works amounting about INR 280 million, for which the Contractor could not present any plan how it would carry out these works in remaining 5 months. Presently, no machinery is available and practically nil manpower available at Hubli and Dharwad Depot sites. The Mission was informed that the Sub-Contractor 2 would mobilize at both Hubli and Dharwad Depot sites shortly. The Sub-Contractor 2 is required to submit its Methodology and Mix Designs for the DLC and PQC works urgently. Parallely, the main Contractor is required to rectify and relay the Granular Sub Base (GSB), lying incomplete and unattended for several months, as base for laying of DLC by the Sub-Contractor 2. The main contractor is also responsible for the electrical works for which no orders have been placed thus far. Non-availability of any plan and program by the main Contractor for carrying out about INR 280 million worth of works and its having the background of poor cash flow and low availability of Manpower and Materials during 31 months of the contract, is a matter of concern. The Works Completion Period has been extended until 31 December 2016. Unless the Contractor can establish shortly a satisfactory arrangement for carrying out about INR280 million worth of works, HDBRTSCo may have to consider taking contractual remedial action.
38. **PW-9** for Re-construction of OCBS (Old Central Bus Station) at Dharwad, started on 05 September 2014 with 12 months completion period, had progressed 19% of the increased contract amount (with variation of INR18 million worth of works). In view of continuance of poor progress of works, **HDBRTSCo terminated the contract on 02 July 2016**. HDBRTSCo is now preparing the Documents for Invitation of Bids for remaining works and has scheduled the Invitation of Bids to be made on 21 August 2016. Assuming that the contract can start from December 2016 with 9 months works completion period, earliest completion of all works under this contract can be expected by end-August 2017.

39. **PW-10** for Construction of Hosur Interchange started on 15 May 2014 with 18 months completion period. Reportedly, its physical progress has been about 53% of contract amount. The contract was extended until 30 June 2016. The Contractor has neither submitted a revised Work Program (its latest program was for completion by 30 June 2016) nor an application for further extension of Works Completion Period. Presently, the most critical activity is fabrication of Mushroom Columns. The efforts by the Contractor for having accepted an alternative simpler detail for the Columns have not met with success. The Contractor has gone back to produce the Columns as per the original details. 5 Columns have been erected, and the Mission was informed that 7 were nearing completion of fabrication and testing and skeletons for 10 more were done. The Contractor has plan of completing these 22 in totality, and by that time its fabrication and erection workers (presently 19 in number) would be fully conversant with this specialized work. The Contractor informed that it expects to complete the first 22 in another one month and thereafter 12 Columns per month with its present strength of 19 workers. With this rate of progress, all 83 Columns may get erected by end of January 2017. However, the Mission observed that the rate of production (12 Columns per month with 19 workers) presented now for original details requires substantially less number of person-days than what was required for production of Columns with simpler details as was presented during April 2016 Bank Mission. Thus, only time will demonstrate whether 12 Columns with satisfactory quality can be produced by the 19 workers in a month or the Contractor may be required to increase its team strength for early completion of all Columns.

40. The Mission was informed that about 1450 cum of PQC works have been done out of about 9300 cum to be laid. With its output of maximum 100 cum in a day (as reported), laying of PQC may not be a critical activity. The Contractor informed that its target is now to complete all works in all respects by March 2017. The Contractor is having another 2 contracts (PW-05 and Flyovers under KRDCL), and it’s sharing some of its resources among these 3 contracts which sometimes is affecting planning and progress of the works in this contract. The Mission was informed that some payments have been withheld by HDBRTSCo for non-submission of detailed Resource-Based Work Program and Non-Compliance of Observations by the Architect. The Contractor should comply with these requirements on an urgent basis in order to have a better cash flow.

41. **Project Management Consultant (PMC)’s Services.** Original contract period for the PMC’s Services expired in February 2016, and discussions were going on for extending their Services. A Revised Proposal for extending the PMC’s Services (include ‘Mixed Traffic Lanes’ contract under KRDCL) until March 2017 is presently under consideration. This includes mobilization of about 11 additional technical personnel, out of which the PMC has already mobilized 6. HDBRTSCo and the PMC may agree to mobilize more additional technical personnel if considered necessary, while the Contract Extension Proposal is being reviewed and finalized.

42. It was brought to the notice of the Mission about unsatisfactory services being provided by the PMC. It’s of concern that, in spite of strengthening the PMC’s Team with additional staff including a Deputy Team Leader, the PMC’s services is reportedly below expectations. The Mission was informed that the PMC’s making Recommendations for Decision Making by HDBRTSCo is not efficient, there are Delays in Processing of the Contractor’s Interim Payment Requests and Delay in making Recommendations towards Approval of Technical Proposals made by the Contractors. The PMC is required to live up to the requirements of their Services satisfactorily.
Works being implemented through Karnataka Road Development Corporation Limited (KRDCL)
(not financed by the Bank)

43. Complete length of about 19 km long BRT corridor along Hubli-Dharwad Highway is being implemented through KRDCL, except the Bus Stations and Foot Over Bridges (FoB) therein. Optimistically, the works can be completed towards end-2017.

44. 4-laning works of Hubli-Dharwad Highway (the BRT Corridor) had started in September 2012. Effectively, the 4-laned Highway will become the exclusive BRT corridor after completion of the full width of the Highway comprising both exclusive BRT corridor and Mixed Traffic Lanes being constructed under a separate contract. 2 x 7.5 km of Concrete Pavement was constructed, out of 2 x 11.75 km of Concrete Pavement proposed. Concrete Pavement could not be laid in length of about 1.9 km due to proposed Flyovers, in about 1 km for RoBs at Navlur and in about 1.6 km (Gateway Hotel to Sena College) due to land and utilities issues. Widening of pavements to 4-lanes in Hubli and Dharwad city areas could not be done because of non-availability of encumbrance-free land due to difficulties in relocating existing utilities pending acquisition of land required for construction of full-width Road. This contract has been closed. Remaining works are being taken up under a separate contract described in the following paragraph and Flyovers and RoBs are being taken up under separate contracts as described hereafter.

45. Works contract for Remaining 4-laning works of Hubli-Dharwad Highway in about 1.6 km from Gateway Hotel to Sena College and in about 7.09 km in Hubli and Dharwad city areas (exclusive BRT corridor) has started on 01 July 2016. Underground sewer and water supply lines and electrical poles are being relocated in the contract stretches. About 1.64 kms length in two stretches has been handed to the Contractor on 01 July 2016, wherein still underground utilities exist in 600 m length on one side. No permanent work has started yet. KRDCL has engaged a Consultant for Supervision and Management of the works contract.

46. The Contract for Construction of Mixed Traffic Lanes on Hubli-Dharwad Highway (SH-73) started on 23 March 2015 with 18 months completion period. KRDCL has handed to the Contractor 1st Milestone stretches (4.32 kms on Left and 5.511 kms on Right) on 23 March 2015, 2nd Milestone stretches (4.87 kms on Left and 3.07 kms on Right) on 22 August 2015 and 3rd Milestone stretches (2.765 kms on Left and 3.11 kms on Right) on 03 May 2016. The Contractor has carried out works worth only about 8.6% of the contract amount in 16 months. Presence of Trunk Water Main on Left, Underground Sewer Pipes, Electrical Poles, Structures and non-availability of land & final drawings for Retaining Walls were hampering progress of the works in the handed stretches. In addition, domestic water pipelines are being realigned on both sides. The Contractor is also moving slow even in the encumbrance-free stretches. Within the handed stretches, 3.075 kms of Trunk Water Main are yet to be replaced, replacement of Underground Sewer Pipes is still ongoing in 300 m length on Left and in 2.12 kms on Right, final drawings of Retaining Walls for 1.88 kms on Left and for 2.99 kms on Right are still not available, and there are land availability issues in a length of 255 m on Right. Until now, the Contractor has started works in about 4.73 kms on Left and 5.65 kms on Right.

47. Contract for Construction of Three Flyovers started on 05 November 2014 with 14 months completion period. July 2015 Mission was informed that Encumbrance-free site for Flyover at Navanagar was handed to the Contractor on 02 February 2015 and the ‘Good for Construction’ drawings were issued to the Contractor on 05 May 2015, after which the Contractor had started the works at this site from 21 May 2015. There has been good progress in construction of the viaduct structure. Road works are at Subgrade level in the length of RE Walls, progress of which is likely to be hampered during the ongoing monsoon season. All works for this Flyover are now targeted to be completed by September 2016. Site for the Flyover at Unakal Lake was handed to the Contractor on 14 September 2015. Due to presence of private properties, buildings, temples and electric poles, construction of the Diversions for vehicular traffic movement at Unakal Lake site got delayed. On diverting the vehicular traffic to the newly-constructed...
Diversions on clearance from the Traffic Police, the Contractor has started the permanent works since 12 June 2016. Gas pipeline is now targeted to be relocated by September 2016. The Flyover at Unakal Lake is now targeted to be completed by March 2017. The site for Unakal Cross was handed to the Contractor on 28 April 2016. Works for Diversion are ongoing on both sides and likely to be completed by mid-August 2016. KRDCCL and the Contractor both expect to start the permanent works for Flyover at Unakal Cross from 01 September 2016 and complete in 12 months by August 2017.

48. 2-lane wide Road over Rail Bridge (RoB) is proposed to be constructed on both sides of the existing 2-lane RoB near Navalur. The works contract has started on 23 May 2016 with 14 months completion period. The Contractor is presently carrying out preparatory works. Detailed designs and drawings of the RoBs are yet to be cleared by the Railways. KRDCCL has asked the Design Consultant to revise the design of the Approaches with increase in length of RE Walls by decreasing the number of viaduct spans. Relocation of Bulk Water Main is ongoing in 300 m length and 4 Structures are to be removed from the Approach areas. KRDCCL needs to pay Supervision and Maintenance charges for the RoBs to the Railways. KRDCCL has engaged a Consultant for Supervision and Management of this works contract. The mission was informed that there maybe a requirement for revisiting the designs as the initial soil test results differ from those by the design consultants. The mission noted that the RoB was a critical infrastructure for the BRT and it was already behind schedule. Completion of all works under this contract is presently targeted by October 2017.

Environment

49. The mission visited select sites along the BRT corridor and plantation undertaken on the hill side near Navalur village along the corridor. It discussed its observations with the HDBRTSCo team, their consultants and KRDCCL representatives to confirm the status of the project, and the agreements on next steps to improve EMP implementation. It also attended meetings arranged by DULT, GoK and HDBRTSCo in Bengaluru, where presentations on other project aspects were made.

50. Site and Workers’ Safety. The simultaneous opening of several sites, under various contracting arrangements – supervised by HDBRTSCo with PMC support, as well as others supervised by KRDCCL with support from another PMC team, for bus stations, and mixed traffic lane construction, flyovers, along the main BRTS corridor is showing variable and declining performance on safety issues – both of workers on site, and other road users along this very busy road. Flyover sites need to be properly barricaded to avoid any mishaps due to unrestricted access to the plying traffic or other users of the road space. Deployment and use of personal protective equipment for workers also needs immediate improvement, especially for contracts being supervised by KRDCCL with help from PMC other than the one supporting HDBRTSCo. Rail Over Bridge site needs better control to limit access to the construction area.

51. Plantation and Landscaping. There has been a systematic effort to intensify plantation this year in light of the good monsoon rains. About 11,000 saplings will be planted during the rainy season, mostly at the Navalur hill side site spread over 11 acres. This will help ameliorate the loss due to damage over the past years (survival percentages currently stand at 36% and 78% respectively for plantation undertaken in 13-14 and 14-15). And out of the about 27,000 total plantation under the project, more than 50% would be complete now. Survival of the replacement plantation would need to be confirmed to meet the project target of 80% of planted saplings to survive after 3 years. It will also require amendment to the contract with the Forest Department for covering the maintenance of plantation undertaken in subsequent years.

52. In Bengaluru, the mission also discussed the strategy to be adopted for landscaping in the context of the plantation. It was agreed that once the DULT/HDBRTSCo approval is accorded to the concept plans, especially in the BRT infrastructure locations, the consultants will prepare plantation plans so that next year’s procurement of saplings is duly informed. This would be completed in 1.5 months or by September 15, 2016, and final concept designs would be completed by November 30, 2016.
53. **Innovative Design/Implementation Support for Environmental Performance.** The mission also advised HDBRTSCo to actively review the final design to explore the possibility of saving trees that are beyond the Mixed Traffic Lanes as their shade may make the footpaths more attractive than young saplings. It has been agreed that this will be undertaken as a joint effort of PMC, HDBRTSCo, and the Contractor, and finalized in advance of construction.

54. The approaches for the Rail Over Bridge will be constructed using debris removed from the road expansion works. About 8,000 cu. m. of material with suitable engineering properties is likely to be permanently disposed of without need for any additional land. This is a welcome initiative and should be replicated wherever such reuse opportunities can be identified.

55. **Environmental Audit.** The environmental audit has found several deficiencies in the implementation of the EMP which need to rectified and responded to. Most of these are with the contractors – obtaining statutory clearances, for example, and maintaining safe work environment in construction. While the PMC may have legitimate responses to explain the observed situations, the reasons need to be formally documented. Deficiencies with respect to statutory requirements need to be addressed immediately. Others also need to be rectified and a response should be shared with the auditors for them to finalize their report. Once the final report is available, it should be shared with the Bank, and uploaded on the HDBRTSCo website.

56. **Implementation Institutional Arrangements.** The contractor performance on environmental aspects can be improved if the advice and instruction from Engineer to each contract is consistent. For example, the same contractor, in one contract supervised by KRDCL provides much inferior lodging facilities to workers in the project than for the site supervised by HDBRTSCo. Since there is no provision of environmental expertise in the management of flyover contracts, it has been agreed that the KRDCL and contractors employed for the project by them, will work with HDBRTSCo and their PMC to ensure proper implementation of the EMP. It was agreed that this arrangement will start with the next weekly coordination meeting and continue throughout the project life.

57. The full-time environmental specialist position in HDBRTSCo is being filled up following interview and selection of a suitable candidate. It would be very useful if the selected incumbent starts working on the audit response and with the PMC’s environmental specialist. It was agreed that this would begin latest by August 1, 2016.

**Social**

58. The key progress in land acquisition and R&R Implementation as of June 30, 2016, is summarized below.

<table>
<thead>
<tr>
<th>No</th>
<th>Activity</th>
<th>Current Target</th>
<th>Progress</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Private Land acquisition (in acres)</td>
<td>26.35</td>
<td>25.23 (95.75%)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Government land Transfer (in acres)</td>
<td>45.94</td>
<td>45.94 (100.00%)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>No. of land owners received compensation</td>
<td>575</td>
<td>479 (82.58%)</td>
<td>Updated details are not available</td>
</tr>
<tr>
<td>4</td>
<td>No. of Non-title holders/ Tenants received assistance</td>
<td>570</td>
<td>498 (87.37%)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Assistance for relocation/reconstruction of religious structures</td>
<td>17</td>
<td>9 ((52.94%)</td>
<td>Resistance from 4 structures.</td>
</tr>
<tr>
<td>6</td>
<td>Financial Progress (INR. In Millions)</td>
<td>2,400</td>
<td>2,466 (102.75%)</td>
<td>Additional budget is sought from the Government</td>
</tr>
</tbody>
</table>
59. **Land Acquisition.** The project has come a long way in completing the land acquisition and 96% of private land acquisition is completed. The remaining land acquisition is a challenge since it is mostly in the cities of Hubli and Dharwad and the land affected by Dharga/temple. The comparison of compensation paid under consent award with compensation due under new act is not yet completed to conclude that compensation paid under consent award is not lower than compensation due under new Act and it was informed that this will done once the remaining land acquisition is completed. As on date 400 land owners were given stamp duty exemption certificate to enable them to get exemption if they purchase property from the compensation duty. It was decided that HDBRTS will approach the Stamps and Registration department to gather how many of those have sought exemption so far.

60. **Budget Availability.** Out of the total budget of INR. 2400 Million available for land acquisition and resettlement, and this amount is now spent and HDBRTS is awaiting for additional budget support from the Government.

61. **R&R Impacts.** As on date 87% of 570 non-title holders including tenants were paid R&R assistance. In addition, The remaining who are mostly tenants from Dharwad area will vacate the sites when their corresponding land owners get vacated.

62. **Impact on Religious Structures** As many as 17 religious structures will be affected either fully or partially. As on date 9 structures (53%) are fully shifted and alternative arrangements have been made for their relocation. In case of some of the structures, the compensation awards are being processed. There continues to be resistance in case of Dargha and three other temples. The satisfactory relocation of Dharga and few other temples will remain to be a challenge and requires to be dealt in an amicable manner to avoid litigation and thus avoiding the risk of inordinate delays in road construction.

63. **RAP for Dharwad Bus Terminal.** The impacts for development of Dharwad Bus Terminal include about 1 acres of land including about 0.20 acres of private land belonging to one land owner. In addition, one lease holder, 25 sub-lease holders, 5 Squatter shops and 3 Kiosk allotted by HDMC will be affected. The Bank has provided No objection to the draft RAP and suggested to strengthen the draft to reflect with additional details such as negotiated compensation private property should not be less than the compensation payable under RTFCTLARR Act, providing adequate notice time to enable PAPs to make their alternative shifting arrangements, ensuring linking with ongoing Government programs for rehabilitation of vulnerable shopkeepers, providing alternative sites to affected licensed vendors before their shifting, apportionment of compensation amount between lease and sub-lease holders, and providing income tax concessions as per RTFCTLARR Act. The proposed budget (INR. 32.10 Million) for implementation of this RAP needs to be obtained from the Government.

64. **BRT Implementation Schedule:** The Mission reviewed the sub activities and their likely completion dates and noted that many of the activities timelines were off track and needed to be revisited for a realistic assessment.

- Complete all land acquisition – Behind schedule (June 2016) – Sept 2016
- Shifting of Utilities – Behind schedule (June, 2016) – Oct 2017
- Balance work on BRT corridor – June 2017
- Construction on mixed traffic lanes - Aug 2017
- Construction of all three flyovers – Feb, Mar, Oct 2017
- Construction of ROB – Oct 31, 2017
- Construction of BRT bus stations – Mar 2017
- Construction of Depots and Workshop to be over by Mar, 2017
- Construction of OCBS and terminal – Aug 2017
- Completion of work on NMT facility – June 2017
11. Constructions of BRTS station and pedestrian infrastructure between Hosur to Railway station – Dec 2016
12. Dharwad Terminal – Aug 2017
13. Installation of ITS – August 2017
14. Delivery of standard buses – June 2017
15. Delivery of articulated buses – June 2017

65. **Key Agreed Actions**

- Sign MoU with CDAC – July 31, 2016
- Submit detailed traffic signal and traffic engineering designs for 5-10 sample locations along the BRT corridor – August 31
- Define BRT service plan options and send to the PMU and the World Bank – August 31
- Advise the PMU and the World Bank of sidewalk width in central Hubli – August 31
- Submit to the PMU and the World Bank evaluation of possible design options for the BRT station near Hubli Railway Station, – October 31
- Submit BER for ITS – Aug 13
- Finalise evaluation for depot equipment and award contract – Aug 31
- Finalise evaluation of station doors – Aug 31
- Award construction contract of Dharwad BRT terminal – Aug 31
- Finalise design options for connectivity between BRT Terminal at Dharwad and CBT and OCBS – Oct 31
- Finalise designs for additional 2 km pedestrian facility – Sep 30
- Invite bids for balance work on package 9 – Aug 31
- Extend contracts for (i) Construction PMC, (ii) ITS PMS, and (iii) Communications & Outreach consultants – Jul 31
- Submit next deliverable for HD City Plan and SoP Consultants – Sep 30
- Ensure engagement with media editors/press releases on (i) HDBRTS progress (ii) Green BRTS Implementation plan, status and survival, (iii) Procurement of Buses and their fuel type – Continuous
- Approval and disclosure of RAP Addendum for Mitra Samaj – Aug 13
- Submit final Env Audit Report & Disclose – Aug 31
- Complete pending land acquisition and compensation and R&R assistance for PAPs affected by Mixed Lanes – Aug 31
- Implementing RAP for Dharwad Bus Terminal Completion of all LA R&R – Sep 30
### Annex 2A

**SUTP : Hubli-Dharwad : Status of Civil Works Contracts under the World Bank Funding (March 2016)**

<table>
<thead>
<tr>
<th>Package</th>
<th>Name of Works</th>
<th>Contractor</th>
<th>Contract Amount / Estimated Amount (INR Millions)</th>
<th>Works Start Date</th>
<th>Original Works Completion Date</th>
<th>Extended Works Completion Date</th>
<th>Value of Works Done (INR Millions) (as reported by HDBRTSCL)</th>
<th>Physical Progress % of Contract Amount</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>PW-1</td>
<td>Bus Stations (4 numbers) and Pedestrian Infrastructure (Hosur Cross to Hubli Rly Stn)</td>
<td>Suprada Construction Company, Dharwad</td>
<td>86.5 + 7.1 (additional electrical works)</td>
<td>04Apr15</td>
<td>03Apr16</td>
<td></td>
<td>12.3</td>
<td>13.1%</td>
<td>Works could not start at 3 Bus Stations and for 300m of Walkways for various reasons</td>
</tr>
<tr>
<td>PW-2</td>
<td>Construction of BRTS Terminal at Mitra Samaj, Dharwad</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Two bids received on 15 July 2016. Land acquisition process is ongoing. On possession of the land, buildings therein are to be demolished. ‘Good for Construction’ (GFC) drawings are yet to be received from the Design Consultant.</td>
</tr>
<tr>
<td>PW-3A</td>
<td>Foot Over Bridges (4 numbers)</td>
<td>Swarna Techno Construction Private Limited, Hubli</td>
<td>100.8</td>
<td>06Nov15</td>
<td>05Aug16</td>
<td></td>
<td>8.0</td>
<td>7.9%</td>
<td>Final location drawing and site for one FoB to be handed. Excise Duty Exemption Certificate to be issued.</td>
</tr>
<tr>
<td>PW-3B</td>
<td>Foot Over Bridges (4 numbers)</td>
<td>Swarna Techno Construction Private Limited, Hubli</td>
<td>118.2</td>
<td>06Nov15</td>
<td>05Aug16</td>
<td></td>
<td>9.5</td>
<td>8.0%</td>
<td>One FoB dropped. Works cannot be done at 3 structure locations out of 6 locations at 2 sites.</td>
</tr>
<tr>
<td>PW-4</td>
<td>Non Motorized Transport (3.2 km long in Dharwad and at Navanagar)</td>
<td>Suprada Construction Company, Dharwad</td>
<td>124.2 + 7.6 (additional electrical works)</td>
<td>10Nov14</td>
<td>09Aug15</td>
<td>30Jun16</td>
<td>55.4</td>
<td>42.0%</td>
<td>Original works on hold, until alternative stretches for Walkways in Dharwad are finalized and electrical works are complete at Navanagar</td>
</tr>
<tr>
<td>PW-5</td>
<td>Bus Stations (13 numbers)</td>
<td>Rajdeep Buildcon Private Limited, Ahmednagar, Maharashtra</td>
<td>140.7</td>
<td>15Oct14</td>
<td>14Oct15</td>
<td>20Jun16</td>
<td>98.1</td>
<td>69.7%</td>
<td>Contractor is required to comply with the quality requirement, in order to get withheld payments</td>
</tr>
<tr>
<td>Package</td>
<td>Name of Works</td>
<td>Contractor</td>
<td>Contract Amount / Estimated Amount (INR Millions)</td>
<td>Works Start Date</td>
<td>Original Works Completion Date</td>
<td>Extended Works Completion Date</td>
<td>Value of Works Done (INR Millions) (as reported by HDBRTSCL)</td>
<td>Physical Progress % of Contract Amount</td>
<td>Remarks</td>
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</tr>
<tr>
<td>PW-6</td>
<td>Bus Stations (11 numbers) + 2 numbers added</td>
<td>Suprada Construction Company, Dharwad</td>
<td>115.8 + 19.8 (variation)</td>
<td>15Sep14</td>
<td>14Sep15</td>
<td>31Jul16</td>
<td>65.0</td>
<td>47.9%</td>
<td></td>
</tr>
<tr>
<td>PW-7</td>
<td>Depots at Hubli and Dharwad and Divisional Workshop at Hubli</td>
<td>Shreehari Associates Private Limited, Aurangabad, Maharashtra</td>
<td>564.5 + 11.7 (variation)</td>
<td>20Dec13</td>
<td>19Mar15</td>
<td>31Dec16</td>
<td>197.5</td>
<td>34.3%</td>
<td>2 approved Sub-contractors mobilized. Main Contractor is having practically no mobilization except some materials, and needs to carry out another INR280 million works.</td>
</tr>
<tr>
<td>PW-8</td>
<td>OCBS (Old Central Bus Station) at Dharwad</td>
<td>Shreehari Associates Private Limited, Aurangabad, Maharashtra</td>
<td>148.7 + 18 (variation)</td>
<td>05Sep14</td>
<td>04Sep15</td>
<td>10 Dec 16</td>
<td>31.7</td>
<td>19.0%</td>
<td>Terminated on 02Jul16. Bids for remaining works to be invited.</td>
</tr>
<tr>
<td>PW-10</td>
<td>Hosur Interchange</td>
<td>Rajdeep Buildcon Private Limited, Ahmednagar, Maharashtra</td>
<td>416.5</td>
<td>15May14</td>
<td>14Nov15</td>
<td>30Jun16</td>
<td>221.0</td>
<td>53.1%</td>
<td>Production of Mushroom Columns is the critical activity</td>
</tr>
</tbody>
</table>
### Annex 2B

#### Status of Works being / to be implemented through KRDCL and not financed by the Bank (March 2016)

<table>
<thead>
<tr>
<th>Name of Works</th>
<th>Contractor</th>
<th>Contract Amount / Estimated Amount (INR Millions)</th>
<th>Works Start Date / Expected Start</th>
<th>Works Completion Period (months)</th>
<th>Works Completion Date</th>
<th>Value of Works Done (INR Millions)</th>
<th>Physical Progress % of Contract Amount</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-laning of Hubli-Dharwad Highway (about 19 km long) (exclusive BRT Corridor)</td>
<td>GVR Infrastructure, Hyderabad</td>
<td>1191</td>
<td>Apr11 (actual start in Sep12 to accommodate BRTS)</td>
<td>24</td>
<td>349</td>
<td>29.3%</td>
<td>29.3%</td>
<td>Works could not be completed due to encumbrances and Structures to be constructed. Contract closed.</td>
</tr>
<tr>
<td>Remaining works of 4-laning of Hubli-Dharwad Highway in about 8.7 kms length (exclusive BRT Corridor)</td>
<td>RNS Infrastructure Limited, Hubli</td>
<td>496.2</td>
<td>01Jul16</td>
<td>12</td>
<td>30Jun17</td>
<td>Nil</td>
<td>Nil</td>
<td>Underground sewer and water supply lines and electrical poles are being relocated in the contract stretches. 1.825 kms on Left and 1.45 kms on Right handed to the Contractor, but some utilities still exist therein.</td>
</tr>
<tr>
<td>Construction of Mixed Traffic Lanes on Hubli-Dharwad Highway (SH-73)</td>
<td>RNS Infrastructure Limited, Hubli</td>
<td>1469.3</td>
<td>23Mar15</td>
<td>18</td>
<td>22Sep16</td>
<td>126.3</td>
<td>8.6%</td>
<td>About 11.8 kms length (out of about 17.64 kms to be constructed) handed to Contractor. Presence of Underground Utilities and non-availability of land (255 m) and final drawings of Retaining Walls are still hampering progress of works in handed stretches. Remaining stretches to be handed to Contractor involve Land Acquisition, R&amp;R and Relocation of Utilities.</td>
</tr>
<tr>
<td>Flyovers at Unkal Cross, Unkal Lake and Navanagar</td>
<td>Rajdeep Buildcon Private Limited, Ahmednagar, Maharashtra</td>
<td>359.5</td>
<td>05Nov14</td>
<td>14</td>
<td>04Jan16 (Extension until 15Jun17 under consideration)</td>
<td>130.2</td>
<td>36.2%</td>
<td>Flyover at Navanagar is now targeted to be completed by Sep16. Permanent works for Flyover at Unakal Lake started on 12Jun16. Construction of Diversions for Unakal Cross site is ongoing and permanent works likely to start from 01Sep16. Present target of completion of all works under this contract by Aug17.</td>
</tr>
<tr>
<td>Name of Works</td>
<td>Contractor</td>
<td>Contract Amount / Estimated Amount (INR Millions)</td>
<td>Works Start Date / Expected Start</td>
<td>Works Completion Period (months)</td>
<td>Works Completion Date</td>
<td>Value of Works Done (INR Millions)</td>
<td>Physical Progress % of Contract Amount</td>
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<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Two Road over Rail Bridges (RoBs) including Approaches</td>
<td>KMV projects Limited, Hyderabad</td>
<td>483.3</td>
<td>23May16</td>
<td>14</td>
<td>22Jul17</td>
<td>Nil</td>
<td>Nil</td>
<td>Detailed designs and drawings of RoBs yet to be cleared by Railways. KRDCL has asked the Design Consultant to revise the design of Approaches. Relocation of Bulk Water Main ongoing in 300 m and 4 Structures to be removed from Approach area. All works now targeted to be completed by Oct17.</td>
</tr>
</tbody>
</table>
INDIA: GEF-World Bank-UNDP: Sustainable Urban Transport Program (SUTP)

Pimpri-Chinchwad

1. A World Bank Mission visited Pimpri-Chinchwad Municipal Corporation (PCMC) on April 6 and 7, 2016 to discuss the implementation of the Pimpri-Chinchwad component of SUTP. It met with Mr. Rajeev Jadhav, Commissioner of PCMC; Mr. Abhishek Krishan, CMD, PMPML; Mr. Rajan Patil, Joint City Engineer; and PCMC’s staff and consultants; also present were Mr. I.C. Sharma, National Project Director of SUTP and his Project Management Consultants, and ITDP which is providing assistance with the BRT Project. The mission also carried out site visits along Corridor 1 and 2, as well as corridor 4 which is still under construction.

Proposed BRT Program in Pimpri-Chinchwad:

2. The following four BRT corridors are being implemented:

   (1) Old NH-4 (Mumbai-Pune road),
   (2) Aundh-Rawet road,
   (3) Nashik Phata to Wakad road,
   (4) Kalewadi to Dehu-Alandi road,

3. The first two corridors were sanctioned initially by JnNURM, and road construction has been completed since some time. Corridors 3 and 4 are implemented under the World-Bank supported SUTP. Out of the four corridors, BRT services are now operating along Corridors 2 and 3. Launch of Corridor 1 is expected in the second semester of 2016, and Corridor 4 in 2017.

World Bank Supported Project

Corridor 3 (Nashik Phata - Wakad): Construction Progress

4. This BRT Corridor of about 8 km length is being constructed under 8 works contracts, of which only Contract I (costing about 48.6% of total cost of 8 contracts) is being financed by the Bank. The Table hereafter presents the overall status of the 8 contracts in this corridor. **Overall progress is about 89.5%** of likely total cost of eight contracts. **BRTS has been commissioned in this Corridor** in November 2015. However, there is no exclusive BRT Corridor for a length of 260 m, where construction works are yet to be completed. Ramp 2 connecting the Nashik Phata Flyover and Mumbai-Pune Highway (NH4) is likely to be completed by December 2016, and the Pedestrian Facility for travel between ground level on NH4 and Corridor 3 at higher level are likely to be ready not earlier than mid-2017.

5. **Contract I: Interchange at Nashik Phata (Bank-financed):** Progress of this contract was satisfactory. All works except Ramp 2 were completed in May 2014. In view of non-availability of required additional land, alternative layout (by deleting footpath) was prepared for Ramp 2. Modified General Arrangement Drawing (GAD) incorporating a Pedestrian Underpass as demanded by the local people on Right Side (Pune side) was approved / issued on 14 August 2015. The Works Completion Period was extended until 31 December 2016. The Contractor has completed up to Pile Cap at Seven locations and Piling at remaining one location, erected pre-cast girders in one span, cast two-cell Underpass, and presently doing foundation works for RE Walls on Right Side. In view of difficulty in acquiring private land, PCMC advised the Contractor on 04 April 2016 to construct 4.25m wide (instead of a minimum of 5.5m recommended by The Indian Roads Congress) Ramp on Left Side (Mumbai Side) considering that it’s a down-ramp, after which construction works started. On Left Side, the Contractor has completed up to Pier
Cap at Five locations and Piling works being done at one location out of a total Ten foundations. Both PCMC and the Contractor expect that all works can be completed by December 2016.

6. The Contractor had made several Claims, which were not agreed to by PCMC and thus Disputes arose. Dispute Adjudication Board (DAB) was not established under the Contract. The Contractor then notified, in June 2014, for resolution of the disputes through Arbitration. Arbitration Board was formed in February 2015. It’s understood that the Contractor’s total Claim is for an amount of INR 713.6 million of which INR 499.1 million is towards ‘Idling of Resources’ and INR 107.8 million is towards ‘Loss of Overhead and Profits’. The Contractor had submitted its ‘Statement of Claims’ in August 2015. Arbitration Board has granted extension up to 10 August 2016 for PCMC to submit its ‘Response’.

7. The Mission noted with concern that the PCMC Officials (instead of the Project Management Consultant whose services were not extended beyond 31 August 2015) are continuing supervision of the Contractor’s works.

8. **Contract II**: All contract works complete.

9. **Contract III**: All works have been completed except for 260 m length where required land on one side was not available. New contract for the works in that 260 m length has started on 3rd March 2016 with 9 months completion period. However, the additional land is not in physical possession of PCMC until now, and thus no works could be started.

10. **Pedestrian Facilities for crossing of BRT Corridor 1 on Mumbai-Pune National Highway 4 (NH4) as well as for travel between ground level on NH4 and Corridor 3 at higher level**: Unless these are constructed, both Corridor 1 and Corridor 3 BRT cannot be satisfactorily utilized by the public. The Works Contract for Construction of these Pedestrian Facilities has started on 29th February 2016 with 12 months completion period. But, ‘Good for Construction’ drawings are yet to be issued to the Contractor, and thus no works have started yet.

11. **Construction of Bus Stops**: 14 Bus Stops have been completed under two contracts, out of 15 planned.

12. **Dedication of Corridor**: The works for erecting Railing-type Separator to create completely physically separated exclusive BRT Corridor have been completed except for the 260 m length where the road works have not been completed.

**Corridor 4 (Dehu Alandi-Kalewadi Phata): Construction Progress**

13. This BRT Corridor of about 8 km length is being constructed in 8 works contracts, out of which only Contract III (costing about 43% of total cost of 8 contracts) is being financed by the Bank. **Overall progress is about 73% of total cost of eight contracts.** Land is yet to be available for more than a kilometer of length. Progress in the Bank-financed Contract III (Empire Estate Flyover) is about 71% of the Value of Works excluding two Ramps which are on hold now. Optimistically, full length of the BRT Corridor may be available for plying of Buses not earlier than mid-2017.

14. **Contract I**: All works are complete.

15. **Contract II**: On availability of about 400m length in this 1.4 km long contract, the original Contractor started the works in March 2016. **PCMC needs to arrange the remaining land in about 1km length.** The works may possibly be completed not earlier than mid-2017 assuming that the remaining land is available shortly.
16. **Contract III: Empire Estate Flyover (Bank-financed):** Progress of this contract is **unsatisfactory.** Since start in April 2011, the progress is only 64.5% (in monetary terms) of revised contract amount until 30 June 2016. Components 5 and 6, ascending and descending Ramps in Empire Estate stretch, costing INR 95.6 million, are presently on hold following objection by the Empire Estate community. Thus, **progress works out to 71.3% (in monetary terms)** of the Value of Works excluding Components 5 and 6. Even considering the delays caused due to changes in general arrangement made by PCMC and in handing over encumbrance-free lands to the Contractor, the progress by the Contractor has been very low. Reportedly, the slow progress has been mainly due to inadequate financial inflow for execution of works. The Contractor was suffering from financial problems since start of the contract.

17. The Contractor had made changes in its Contract Management Team around mid-November 2015, which resulted in recovery since January 2016. However, the Project Manager (PM) of the Contractor has left the site on 27 June 2016, and the contract is presently being run without any PM. Recent progress since the last Bank Mission towards end-March 2016 until end-June 2016 is however not very bad and is about 8.8% of the contract amount (excluding Components 5 and 6). It’s understood that although the Contractor is presently able to run the site with funds available, it has a large credit of about INR 90 million or so. Thus, there exists a risk unless the Contractor infuses additional funds to pay to its Creditors.

18. **Approach to Bridge across River Pawana** under Component 1 was handed to the Contractor in December 2013, the Contractor started the works therein towards end-March 2015 and stopped thereafter due to scarcity of resources. The March 2016 Mission was informed that the Land Owners were not allowing construction works (including for Abutment of the Bridge) and were asking for more compensation. The Mission visited the Approach site and noted that the Contractor has started the construction works. The Mission was informed that there exists no obstruction by the Land Owners since May 2016.

19. There has been reasonably good progress in the superstructure works for Bridge across River Pawana in last 3 months. Out of the 8 superstructure spans, 6 are completed now and formworks are in progress for the remaining 2 spans. One Pier Cap is remaining to be completed at the Abutment location. The works can progress well during the ongoing monsoon season also, because the remaining spans are in the shore.

20. **Road Over Rail Bridge (RoB),** the Contractor’s Erection Scheme for the Superstructures is yet to be cleared by the Railways including from Railway Safety wing. This has a potential of delay in completion of the RoB, if the Railways’ clearance for Superstructure Works cannot be obtained in time. It’s however understood that this Clearance by Railways is in advanced stage, awaiting clearance by the Chief Bridge Engineer and thereafter by the Safety Commissioner. The Contractor has completed all 16 Piers and targeted to complete the Sub-structure works by 15 August 2016. It has completed the Fabrication of 46 girders out of 64, remaining are ongoing, and it has programmed to complete all Fabrication works by 31 August 2016. The Contractor has planned for erection of girders by obtaining ‘Traffic & Power Block (Corridor Block)’ (required for 54 days) from the Railways, to be completed together with Deck works in September and October 2016.

21. The Contractor needs to complete the works of **Component 7 (Loop)** concurrently. PCMC is required to resolve the issue of obstruction / opposition created for works at P17 by a Land Owner.

22. The Contractor had submitted to PCMC in March 2016, a Work Program showing Completion (except for Components 5 and 6) by October 2016 and had sought Extension of Time (EoT) until October 2016. The Works Completion Period for the Contract was extended until 30 June 2016. It’s understood that the Contractor has now internally planned to complete all works (except Components 5 and 6) by December 2016. Completion in December 2016 may be difficult considering that about 29% of works are remaining. Early completion requires PCMC to resolve the land issue at P17, PCMC and the Contractor to obtain the Railways’ Clearance of its Superstructure Erection Scheme and Traffic & Power Block (Corridor
Block) for the RoB early and the Contractor to put emphasis on completing all miscellaneous items of works. The Project Management Consultant (PMC) expressed that dedicated manpower to be employed by the Contractor for various items like Gap Slabs, Bearings, Expansion Joints, Anti-crash Barriers, etc. The Contractor is also required to increase Excavators and Power Packs.

23. In November 2014, PCMC had informed the Contractor that it had sent the proposal of the Ascending and Descending Ramps (Components 5 and 6) to the Indian Institute of Technology (IIT) Mumbai for obtaining their opinion on provision of the Ramps and that the decision on construction of the Ramps would be taken on receipt of the Report from IIT. IIT has submitted in May 2016 its Report recommending the Need of the two Ramps. It’s understood that the Contractor is not interested to continue to construct these two Ramps at this stage, while it’s expecting to complete all other works by December 2016. It’s also understood that, in such circumstances, PCMC is considering releasing the present Contractor on completion of all works except these two Ramps (Components 5 and 6), and get these two Ramps constructed through another agency.

24. Written brief report on this contract presented to the Mission is inadequate and lacks key information required to review performance of the contract. The Mission has been requesting for some time now a complete Report containing, besides the information presently being provided, (i) important contract data, (ii) an S-curve showing month-wise and cumulative ‘planned target’ as per approved work program prevailing in the respective month and ‘achievement’ (both in terms of ‘total value of works’) since start of the contract, (iii) current issues together with PCMC’s and PMC’s recommendations, and actions agreed, (iv) Contractor’s available resources together with PCMC’s and PMC’s comments thereon, (v) information on variations, claims, disputes, if any, and (vi) annex the Minutes of Monthly Review Meeting.

25. Contract IV: Works are ongoing. Land is not available for a length of 60 m.

26. Contract V: All works under this contract are complete.

27. Construction of Bus Stops: Both the contracts are ongoing.

28. Dedication of Corridor: The works for erecting Railing-type Separator to create completely physically separated exclusive BRT Corridor are ongoing.

Technical Discussions on Rainbow BRT in Operation

29. BRT bus operations started on Corridor 2 (Sangvi Phata – Kilwale) on September 5, and on Corridor 3 on November 28, 2015. It goes to the credit of PCMC to have completed these BRT corridors, the first of which is probably the most heavily traveled in India. Previous missions inspected sections of the two corridors and, before that, the Bank’s BRT specialist visited Pimpri-Chinchwad October 5-9, 2015 and provided technical observations on Corridor 2. Below are the current mission’s observations, repeating selected elements of the previously shared comments which have not yet been acted upon.

Road and Station Infrastructure – Corridor 2

30. Traffic flow at most intersections is chaotic, and conditions for pedestrians (including passenger access to BRT stations) are deplorable. Suggestions of previous Bank missions have generally not been implemented. The geometric design of intersections favors motor vehicles at the expense of pedestrians. Large radii at corners and the scarcity of refuge islands encourage the quick movement of cars and two-wheelers and contribute to the risk of pedestrian accidents. The mission repeats its previous recommendation that PCMC define a time-bound action program to fix up these intersections and send it to the PMU/World Bank by August 31, 2016.
31. In particular, the previous mission flagged three intersections (Jagtap Dairy, Kalewadi Junction, and Dange Chowk) where the traffic engineering works had been implemented piecemeal, resulting in geometric layouts that are disjointed and hazardous, especially for pedestrians. PCMC indicated that action had been taken at the two latter junctions. The current mission visited the Jagtap Dairy and Dange Chowk junctions. While some improvements have been made since April, the traffic and pedestrian operation is still deplorable. The mission therefore repeats its previous recommendation that each intersection be redesigned as a unit and that modifications be made to the current curb alignments, traffic islands, crosswalks, pedestrian signals, and signal cycles. It recommends that PCMC send the designs to the PMU/World Bank by August 31, 2016.

32. Routine maintenance: A safety audit report prepared by IIT Bombay (September 2015) notes that “BRTS lanes are looking very untidy, markings are not visible, and it’s not properly maintained; overall it is not looking aesthetic. Therefore proper routine maintenance strategy is strongly recommended.” The mission repeats its previous recommendation that a routine maintenance strategy be prepared and that adequate funds be budgeted for the purpose in 2016 and subsequent years.

Traffic Signals and Other Traffic Engineering Elements – Corridor 2

33. Signal cycles are still too long and differ from previous agreements between PCMC and the World Bank (90 seconds as a rule, up to 120 sec at very busy intersections, much less during off-peak hours). This slows down the BRT travel speed, creates long queues of mixed traffic, contributes to the bunching of BRT buses, and implies long waiting times for pedestrians wanting to cross the street (one of the reasons why pedestrians disobey the red light). At a meeting with the Traffic Police arranged by PCMC on December 2, 2015, it had been agreed that the signal cycles would be reduced to 90-120 seconds to comply with previous agreements between the Bank team and the PCMC Electrical Department. The current mission was verbally advised that signal cycles had been shortened, but when visiting the junction at Dange Chowk, this was clearly not so (a signal cycle of 200 seconds was observed, to the surprise of even the PCMC staff accompanying the Bank team). The mission met with the newly posted Traffic Police official in-charge of Pimpri and again discussed the previous recommendations and agreements. It was agreed that the shorter signal cycles (upto a maximum of 120 seconds) along with slip phases for BRT could be implemented by Traffic Police on the corridor, the performance of traffic flows studied and further actions discussed and agreed once this data was available, perhaps within 3 months. The mission recommends that PCMC share the agreed designs with Traffic Police by July 31, 2016 and advise the PMU and the World Bank by September 30, 2016 on the actions taken and the performance so far.

34. When visiting Corridors 2 and 3, the mission noted that about half of all signal installations had been switched off or were operating in flashing-amber mode. The PCMC specialists accompanying the Bank staff did not know why this was so (and appeared not to have noted before that only about half of all signals were operating). The mission suspects that the police had decided to take many signals out of operation, as their poor design and timing had become more of a hindrance than help to traffic flow (a poor report card for those that were responsible for planning and implementing the signal control in the first place). The mission invites PCMC to inform the PMU and the World Bank by August 31, 2016 of the reasons why the signals were switched off or put on flash.

35. At some pedestrian signals giving access to BRT Stations, such as Aundh Hospital and several crossings north of Dange Chowk, the pedestrian demand is very low and does not warrant the stopping of motorized traffic during each signal cycle. Upon the suggestion of previous Bank missions, the PCMC Electrical Department recently installed a push-button actuated signal at Aundh hospital, as a pilot scheme which during office meetings was reported to have failed. When visiting the signal, the mission noted that most pedestrians did not use the push button – in part because it had been placed incorrectly. The PCMC Electrical Department agreed to rectify that error. As traffic at that place is quite fast, and drivers are not used to that type of pedestrian signal, most vehicles were observed to disregard the red signal when it
appeared. Obviously more is needed than merely installing push buttons and then hope that this would work on its own. Possible complementary measures would be the deployment of wardens helping pedestrians to cross when the light (for motor traffic) turns red, and the placement of speed bumps upstream from the crossing. Assuming that PCMC is interested in improving traffic safety, the mission recommends that PCMC advise the PMU and the Bank by August 31, 2016 what measures it plans to take to improve and learn from this pilot installation, and whether it intends to expand this approach to the pedestrian crossings north of Dange Chowk.

36. **Bhosari Terminal**: Traffic management elements and facilities for pedestrian movement are yet to be built at Bhosari Terminal. The Electrical Department told the previous mission that signal designs had been prepared and could quickly be made available. It now advised the current mission that it had not received a copy of the April aide-memoire, and that the proposed geometric changes to the road layout had yet to be approved by the Engineering Department before signal plans could be released. The mission urges PCMC to finally provide the designs for the geometric improvements, and the traffic signaling and phasing no later than August 31, 2016, and send them to the PMU and World Bank for information.

**Other Aspects of BRT Operations**

37. **Route number signs**: Bus number and direction panels are not visible from the right side of the bus, which makes it difficult for passengers to know to which route a bus belongs that has just arrived at a station platform. There are lit signs at the left side of the new buses, but these cannot be seen from the BRT platform which is to the right of the buses. The mission recommends that, in the future, lit signs also be specified for the right side of buses that run on the busway. For the short term, the mission recommends that PMPML paste large (cardboard or plastic) signs with the bus route numbers on two windows on the right side of the bus, which would be visible from the station platforms.

38. **Docking of buses.** In general, buses dock quickly, without touching the horizontal rollers installed at each station door. A traffic safety audit conducted by IIT Bombay in September 2015 highlights the poor docking as an important safety issue: “The clearance between the platform and the bus is more than acceptable limit”. Based on a survey carried out in February 2016 by the monitoring consultants (IBI), 90.2% of all observed gaps exceeded the maximum safe distance of 10 cm. This is not acceptable. Previous missions agreed that PMPML rectify this problem through more training, supervision and other possible measures. In particular, they agreed with the plan that PCMC add pavement markings at stations to assist drivers in properly aligning the bus. However, no such lines have been painted, and the current mission was told that such painted lines “do not work”. As such lines appear to work elsewhere, the mission recommends that PCMC and PMPML make an effort to experiment with pavement markings that would be effective in Pimpri-Chinchwad and develop a strategy to improve docking. It further recommends that PCMC and PMPML advise the PMU and the Bank by August 31, 2016 of the actions taken to reduce the docking gap to an acceptable level.

39. **Daily cleaning at stations**: PMPML entered into contracts with a private company to clean all BRT stations. The stations themselves look clean, including the immediate access ramps. However, much accumulated trash was observed on the pedestrian ways connecting the station ramps with the nearest crosswalk. These pedestrian ways are not included in PMPML’s cleaning contracts, as it is the responsibility of the local government body to keep them clean. The mission repeats its previous recommendation that PCMC follow up with the local government body to regularly clean the station accesses. The mission further recommends that PMPML’s station cleaning contract for the next BRT line
(Corridor 1) also include the accessway connecting the BRT station with the nearest crosswalk / intersection.

**Technical Discussions on Corridor 1 (Old Pune - Mumbai Road)**

40. In its reply to the previous mission’s recommendations, PCMC commented that several issues raised were “**out of scope of the World Bank**”. The mission wishes to point out that the Bank is involved in the implementation of a new BRT in Pimpri-Chinchwad, and that reviewing the quality of BRT operations, and traffic and pedestrian safety, are an important element of its due-diligence function. PCMC’s suggestion that its comments are “out of scope” are considered quite inappropriate and out-of-place. The following paragraphs repeat several recommendations of the previous aide-memoire, which PCMC did not respond to but which are relevant nevertheless; the deadlines have been updated.

41. **Time-bound Action Plan to Complete BRT Corridor 1:** This corridor is the most visible thoroughfare in the Corporation area, has the highest public transport demand, and thus is already served by many bus lines which will become BRT services in the future. It is therefore crucial that all elements be well planned and executed in order to result in a successful BRT operation. PCMC wisely completed Corridor 2 first, which makes it possible to learn from that experience before launching similar services on Corridor 1. *The mission recommends* that PCMC incorporate those lessons when completing the current BRT infrastructure on the Old Pune - Mumbai road and incorporate the advice available from its monitoring and access consultants, as well as ITDP, the Police Department, PMPML and some traffic safety proposals prepared in 2014 by IIT Mumbai. *The mission recommends* that PCMC update its action program to complete the remaining works, and send it to the PMU and the World Bank for their information, no later than **August 31, 2016**.

42. **Traffic Safety Audit:** About two years ago, IIT Mumbai carried out a traffic safety audit for Corridor 1. Some of their recommendations have been implemented, others not yet. *The mission recommends* that PCMC prepare, **by August 31, 2016**, a specific status report on IIT’s recommendations, detailing (a) those that have been implemented, (b) those that it plans to implement in 2016, (c) those that it decided to drop from IIT’s recommendations, and (d) any modified or additional traffic safety improvements that have been or will be implemented.

43. **BRT Stations at Pimpri:** The mission and staff of the PCMC Engineering Department visited the BRT stations already built in the block between Pimpri Chowk and Morwari Junction, just in front of the PCMC building. It fully agrees with the plan to add a second set of ramps at the northern sides of the stations, as well as build the footpaths needed to provide direct access to the BRT stations from the pedestrian bridges across the expressway lanes of the Old Pune-Mumbai Highway. However, it learned to its surprise that in this block no physical segregation is planned between the BRT busway and mixed traffic lanes, as this would not leave enough space for efficient mixed-traffic flow. *The mission observed* that there is probably more space to locate a segregated busway in this section (compared to most others of Corridor 1) and **strongly recommends** that a with-busway alternative be considered, made possible by changing the 45-degree parking with parallel curb parking, or perhaps by removing some parking altogether. *It recommends* that PCMC prepare **by August 31, 2016** preliminary at-scale designs for that stretch, with a segregated busway and access footpaths to the Pimpri BRT station, to ascertain the exact roadway width that would be left for mixed traffic, and also for the entire corridor to have a clear understanding of the segregated and non-segregated sections.
44. **Traffic Engineering and Signal Control:** During field visits of the corridor, previous missions noted that the signals of most major intersections operate in four phases, requiring rather long signal cycles (120 seconds or more). As it was decided to build the busway segregation all the way up to the intersections, additional signal phases will be required because right turning mixed-traffic movements, and U-turns, cannot be eliminated. With the current signal phasing approach, this would require yet longer signal cycles, resulting in excessive delays for both public transport and mixed traffic; it would also contribute to bunching of BRT buses – which must be avoided at all cost. As highlighted earlier, these problems have been observed at several junctions of Corridor 2 and will pose yet a greater challenge on Corridor 1 as it carries higher bus volumes.

45. **Traffic Engineering Consultants:** PCMC has been preparing Terms of Reference to carry out signal designs at all intersections of Corridor 1. It was advised, that these TOR also cover full traffic engineering designs, in addition to signal installations and phasing, including provision of pedestrian refuge islands, other geometric traffic channelization, lane and other road markings, traffic signs, pedestrian crosswalks, bollards and pedestrian barriers, curb ramps and tabletop crossings, etc., as may be required to facilitate efficient and safe traffic flow and pedestrian movement. The consultants were to be contracted by April 30, but this did not happen. The mission was advised that the procurement is now in its final stages and would awarded by July end. *The mission recommends* that PCMC confirm to the PMU and the World Bank by **August 31, 2016** that the consultants have finally been contracted, and send the technical work scope of his contract to the PMU and the World Bank for their information. *It also recommends* that PCMC send the PMU and the Bank, by **September 30, 2016**, the designs that the consultants have produced by that date.

46. **Traffic Engineering Cell in PCMC:** During the meeting with the (previous) Municipal Commissioner, the mission raised its concern about the lack of importance that PCMC is giving to traffic engineering. Going beyond the issues faced by SUTP, Pimpri-Chinchwad has now grown to a size that merits the creation of a professional traffic engineering cell. The previous mission encouraged PCMC to take the action necessary for the creation and staffing of that cell. *The current mission* learned to its surprise that such a traffic engineering unit did exist but was abolished a few years ago upon request of the City Engineer. *It recommends* that the new Commissioner consider the issue and advise the PMU / World Bank of his decision of whether or not to strengthen the traffic engineering function in PCMC, if possible by **September 30, 2016**.

47. **Passenger Access to BRT Stations:** Passenger access to the BRT stations is still one of the great shortcomings on Corridor 2 – this has been highlighted by this and previous missions and is also reflected in the monitoring data collected by IBI. IIT Mumbai made some general recommendations on how to provide safe pedestrian access. While containing some interesting suggestions, however, that audit did only make rudimentary proposals which are quite insufficient to assure modern access to the BRT stations. In the meantime, MVA has completed access plans for all BRT stations and intersections on Corridor 1 and would be ready with modified designs based on further comments provided in the previous mission. *The mission repeats its previous recommendation* that PCMC indicate by **August 31, 2016** which of MVA’s recommendations (a) have already been implemented, (b) will be implemented in 2016, and (c) will not be implemented in the foreseeable future.

48. **Passenger Transfers between BRT Corridors 1 and 3:** With the expected launch of BRT services on Corridor 1, it is high time to complete the passenger transfer facilities with Corridor 3, at Nashik Phata. The mission was advised that the construction contract for the FOBs connecting the two corridors had been awarded in April and would require one year for completion. *The mission strongly advised PCMC to ensure integration between the launch of Corridor 1 and completing the works on access, including the Corridor 3 BRT station on top of the flyover.*

**Intelligent Transport Management System:**
49. The mission was informed that the Control Centre was operational. The mission again expressed concern, however, that no reports were available from the PMC to explain the system performance as agreed in previous missions.

50. The Bank mission understood that with help from ITS vendor, PMPML has launched its official web page and a Smartphone App with journey planner application. Although the ETA is currently available only for BRT service, the application in general is quite unstable and needs to improve its accuracy.

51. The loss of ETA accuracy due to call-drop outs is still a persistent problem along certain routes in the network. The Bank team urged the ITS vendor to discuss and finalize the deployment of alternate modes of broadband connectivity including fiber optic cabling.

52. ETMs have been rolled-out at 6 of the 13 depots in the PMPML network. Corresponding Standard Operating Procedures (SoPs) have also been developed. The mission encouraged the ETM Consultant to provide guidance to PMPML in rolling out ETMs at the remaining 7 depots. Furthermore, the mission urged the ETM consultant to consider scale-up of ETMs as a result of the planned acquisition of new fleet and also outline the Acceptance Test Plan for deployment of "Mi" Smart Cards in the network starting Jan 2017.

53. The mission met with bus operators at Swargate Control center and understood that they would like for the ITS vendor to share the list of ITS inventory in their respective fleets on a regular basis. Such an update would empower the bus operators to maintain the On-Bus ITS installations with care. The operators also wanted the driver login feature to be implemented with only one login required per shift. However, the ITS vendor clarified that the driver would have to login each time the engine stopped and restarted. The Bank mission urged the ITS vendor to implement the driver login feature as soon as possible and requested the operators to provide to the vendor requisite driver credentials to be programmed into the system.

54. The Bank team discussed at length the benefits of receiving guidance from an expert to resolve the issues related to bus bunching. Consequently, the Bank team urged PMPML to draft a ToR to hire a consultant to provide expert advice. Furthermore, the possibility of connecting with ITS Mysore team for strengthening capacity was also recommended.

55. A new contract has been signed by PMPML for the provisioning of AVL (GPS) systems onboard a fleet of 1010 existing buses. Recognizing the need to integrate the new AVL units with those that are currently being deployed by the ITS vendor, the Bank mission urged the AVL and ITS vendors to establish and test a common protocol for integration. Specifically, the AVL vendor should provide shape files of non-BRT routes in the Keyhole Markup Language or *.KML format to ITS vendor. However, since the scope of contract with ITS vendor does not currently include integration of third party AVL system, the Bank mission encouraged PMPML to negotiate a change in scope that will enable integration of not only the existing 1010 buses but also of any additional AVL systems that PMPML may procure in future.

56. Given that the project is still in the deployment phase, the Bank mission urged PMPML and PCMC to facilitate payment of outstanding invoice(s) from ITS PMC and resolve issues related to extension of that contract. Furthermore, the mission encouraged the ITS PMC team to facilitate the acceptance testing of ITS, Control Center and also help resolve integration issues between AVL system vendors. The mission also requested the ETM Consultant to continue to help facilitate the acceptance testing of ETMs with the service provider.

Studies, Technical Assistance (TA) and Capacity Building:

57. BRT Passenger Access: The consultants (MVA) had submitted the detailed designs and implementation plan for Corridor 1 in September 2015. Following a workshop in January 2016 and upon instructions received from PCMC, MVA submitted a modified version of its original designs, keeping the
58. PCMC decided to reduce the scope of the improvements proposed by MVA and focus on footpaths and side street improvements in Phase 1, and pedestrian refuges and plazas and cross over facilities in Phase 2. Previous missions questioned this decision as there are several high priority interventions for improving passenger access and safety which require immediate attention. Following the review of designs, it was suggested during the April 2016 mission that MVA’s recommended designs be revisited from the following perspective:

- Dedicated cycle tracks along the main corridor, especially in view of negligible cycling traffic, and to the detriment of sidewalks may not be worthwhile in the first instance. The designs should thus be modified by deleting the without cycle tracks but wide and continuous footpaths. Also, removing existing trees along the footpath and designing the landscaping between the NMT lane and the MV lane may not be desirable.
- The designs should factor in access from both sides of the stations in case of select highly trafficked stations besides midblock stations.
- Review intersection designs.

Unfortunately, no MVA representative was present during the current visit of the World Bank team to present the revisited designs. The mission recommends that PCMC arrange to have the designs updated in line with above criteria, and send them to the PMU and the World Bank by September 30, 2016.

59. There are many BRT stations located mid-block, between major intersections. MVA has prepared layouts for these, and it was agreed that mid-block access improvement are of the highest priority. The mission repeats its previous recommendation that PCMC, based on MVA’s technical advice, send the PMU and Bank by September 30, 2016 complete designs for these mid-block locations, including the location of painted crosswalks, placement of bollards and pedestrian barriers, traffic signals, street lighting etc. (using then standards proposed by IIT).

60. Parking Policy and Master Plan: The contract was signed with UMTC in October 2013, the study commenced in November, and the Draft Report had been submitted and commented on by the Bank. It was agreed in the last review meeting on Sept 30, 2015, that the consultants (i) needed to revisit some of the parking policy principles and language to make it more transit friendly and geared towards disincentivising personal modes; (ii) need to separate out the recommended parking policy and implementation plan out of the detailed technical analysis; (iii) PCMC needs to organize discussions with key internal stakeholders such as Town Planning Dept, Traffic Police, Corporators etc. to gain consensus on the policy and implementation. It is understood that PCMC has organized consultation in each of the 6 wards of the city. The revised report is yet to be shared with PMU and the Bank.

61. Monitoring and Evaluation; the consultants (IBI Group) presented a “Review of Post-Launch Operations”, taking account of field surveys carried out between November 2015 and March 2016. Their key recommendations are:

- Increase BRT fleet size
- Re-route BRT routes with very low frequency, i.e. carry out a further route rationalization on Corridor 2.
- Increase routes on Corridor 3
- Improve bus headway adherence
- Several other operational improvements
- PMPML’s BRT cell should hire traffic/transport planners and communication experts
- Pedestrian safety and accessibility should be improved
- For Corridor 2, a study should be carried out to improve junctions and signal designs
The connectivity between Corridors 3 and 1 (i.e. the pedestrian bridge at Nashik Phata) should be expedited.

The mission discussed with PCMC and PMPML the actions taken (or to be taken) to implement the above recommendations and finds that there has been very little progress on any of these items. Discussions with the new CMD PMPML were positive and the mission was apprised of the decision to induct another 1500 buses by next year into PMPML fleet to take care of the growing deficit. They also agreed to move forward with other actions discussed elsewhere in this annex.

62. **Off-board fare collection:** Late in 2015, PMPML (through PCMC) submitted a draft terms of reference (TOR) to carry out a study of fare collection options. The Bank’s comments were discussed with PCMC and ITDP, and there was agreement that most suggested modifications would be incorporated in the revised text. There has not been much progress on this in recent months, but a few days after the mission’s visit to Pimpri, the World Bank received a new version of the TOR. The mission recommends that the text of a notice be drafted to request Expressions of Interest (EOI), and be sent to the PCMC, PMU and the World Bank as a matter of urgency, **no later than August 15, 2015.**

63. **Bus Bunching:** One of the main issues is the bunching of buses, which to some degree (but not entirely) is due to the long mixed-traffic runs in Pune before reaching the busway in Pimpri. The long traffic signal cycles also contribute to that phenomenon. As bus bunching severely affects the quality of the BRT service, previous missions recommended that PMPML give urgent attention to this problem. Other contributing factors would be irregular bus dispatching at depots, traffic signal timing, and driver behavior. Moreover, the data now being generated by the TMS systems are not yet being used to control bus headways. It was agreed that it would be useful to identify the key factors of bus bunching in Pimpri and to develop a strategy to reduce this phenomenon to the minimum possible. However, CMD PMPML requested assistance with creating an expert team to provide hands on support to PMPML BRT Cell covering all key functions such as traffic operations, intelligent transport systems, contract monitoring etc. This will not only bring in the required modern expertise but also help train PMPML staff for eventual take over. It was agreed that a draft terms of reference for such a comprehensive support would be prepared and shared with PMPML/ PCMC by **August 15, 2016.**

Discussions with PMPML

64. The mission met with PMPML team including the new CMD (PMC Commissioner) and OSD BRT Cell and held discussions on the performance of the two BRT corridors, previously agreed actions and the preparedness for launch of Corridor 1.

65. **Existing Corridors.** It was again highlighted that there was a need to improve the number of routes and buses on Corridor 3 which was currently underutilized. It was clarified that the detailed service plan for Corridor 3 was available and would provide ready reference to additional routes and fleet required to be deployed. PMPML agreed to immediately review the additional routes and bus requirement and propose an action plan for approval.

66. The issue of poor bus docking was discussed and the very delayed training program proposed for bus drivers using expert driving instructors. It was agreed that the procurement of the activity would be initiated without any further delay. The suggestion for pavement marking at the station to guide the drivers in proper docking was also discussed and it was agreed that PMPML and PCMC would action this recommendation immediately and ITDP would provide any technical support that maybe required.

67. In regard to absence of route number signs on the right side of the bus making it difficult for passengers to see the number from the BRT station, PMPML agreed to look into the matter and revert on how they could resolve this issue. The mission advised that future bus specifications for BRT corridors should include PIS boards on the right side of the bus as well. On ITS, the acceptance test plan was agreed
to be shared with the Bank and PMU by August 15, 2016. The Mission also advised PMPML/PCMC to expedite the pending payments of the PMC and initiate contract extension at the earliest as this was affecting the PMC’s involvement at this critical stage of the project.

68. The mission advised PMPML and they agreed to consider including cleaning of not merely the BRT station but also the immediate station area including entry into the security contract to ensure a clean image for the BRT. PMPML informed that the security contract was expected to be finalized within a months time and no later than August 2016.

69. PMPML discussed the possibility of hiring an expert team for professionally managing and supporting the operations of the BRT system in the initial months and also providing useful training to existing PMPML staff. The Mission concurred with the idea and agreed to help develop a ToR for hiring such a group of individuals/ firm.

70. Corridor 1 preparedness. The mission requested an update on the status of (i) buses to be assigned to the corridor, (ii) the availability of a service plan and (iii) the assignment of security to the stations for finishing works and ITS fitments to proceed. PMPML advised that roughly 300 buses were required for Corridor 1 but PMPML maybe able to deploy only about 250 buses from their existing fleet. They were planning to procure directly or through operators roughly 1500 new buses which would only be available by next year. The service plan would be finalized by ITDP, including any rationalization, and shared with the PMU and Bank by August 31, 2016. Finally, the station security & warden contracts were being finalized and would be in place shortly.

71. MIS Support to PMPML. During discussions PMPML expressed interest in Bank support and funding in modernizing PMPML through use of modern tools for management information systems and operations management including, bus scheduling, bus and crew rostering, inventory and maintenance management, fuel management, etc. It was agreed that PMPML would prepare a preliminary DPR and cost estimate for the activity for enabling further discussion. The Bank informed that under the present project PCMC had some savings under both the loan and grant component and these could be used towards these activities with the concurrence of PCMC.

Environment Management

72. The mission met with the PCMC team and their consultants supervising the construction of the Flyover along Corridor 4. It also visited select locations on the corridor where construction is underway to review the implementation of the EMP provisions, especially with reference to Pavana River and safety of workers and residents close to these areas.

73. Pavana River Bridge Site. In line with agreement during the previous mission, the contractor has removed almost all the material used to create the temporary access for building the piers in the Pavana river. This has resulted in most of the waterway being available for passage of flood without affecting areas downstream. Some material still needs to be removed to restore the pre-project implementation condition, but that is easily manageable as it is on the side where the contractor establishment is located. The removed material is currently stored in the plot adjacent to the construction site in heaps. Disposal of this material is proposed in this plot itself since it is part of the Green Belt designated on the river bank. This area needs to be properly drained to ensure that the risk of spread of disease through vector propagation is minimized. Final disposal needs to be properly handled through planning and adequately draining slopes so that there are no issues in the future. This should be completed by 31st August 2016.

74. Plantation Survival. The plantation as compensation and as part of road edge design was undertaken under the project from 2013 to 2015 rainy seasons. The roadside plantation comprised 1476 saplings along Corridor 3 – Nashik Phata to Wakad road, and 471 saplings along Corridor 4 – Kalewadi Phata to Dehul Alandi road. The survival rate of this plantation is over 90 %. For block plantation, several
locations were chosen, the most extensive plantation at Durga Tekri. Out of the 3398 saplings planted, about 83% have survived in these locations. The overall survival rate thus stands at around 86%.

75. **Key Agreed Actions**

- PCMC to inform the PMU/World Bank on the implementation plan and time schedule to achieve passenger transfers between Corridors 1 and 3 – August 15, 2016
- PMPML and PCMC to send EOI for off-board fare collection study – August 15
- PCMC to define a time-bound action program to improve pedestrian conditions at Corridor 2 intersections – August 31
- PCMC to redesign geometrics and signal control at Jagdap Dairy, Kalewadi Junction and Dange Chowk – August 31
- PCMC to advise on the actions it plans to take to keep traffic signal cycles within the previously agreed limits – August 31
- PCMC to advise why a large number of traffic signals on Corridors 2 and 3 have been taken out of operation – August 31
- PCMC to advise on revised pilot scheme to install push-button actuated pedestrian signals at Aundh hospital, and the potential expansion of pedestrian actuation in the BRT section north of Dange Chowk – August 31
- PCMC and PMPML to advise on the painting of lines at BRT stations and other measures to improve bus docking – August 31
- PMPML to draft TOR for addressing bus bunching issue – August 31
- PCMC to confirm the contracting of a traffic engineering consultant; also to send technical work scope for the information of the PMU and the World Bank – August 31
- PCMC to send traffic management plan for Bhosari terminal – August 31
- PCMC to prepare at-scale layout of busway segregation between Pimpri Chowk and Morwari Junction – August 31
- PCMC to advise on actions taken to implement IIT traffic safety audit – August 31
- PCMC to advise on the implementation of MVA access recommendations – August 31
- PCMC to send time-bound action program to complete works on Corridor 1 – August 31
- PCMC to send designs for pedestrian access to mid-block BRT stations and for select highly trafficked stations on Corridor 1 – September 30
- PCMC to send traffic engineering designs for Corridor 1, including signal phasing and possible geometric improvements – September 30
- PCMC to advise on the potential creation of a traffic engineering cell – September 30
- PCMC to update MVA access recommendations as required – September 30
- Complete ETM installation at depots – Sep 30
- Complete operational acceptance – Aug 31
- Submit the system acceptance test plan – Jul 31
- Complete construction of Ramp 2 on Nashik Phata – Dec 2016
- Submit the design options for the two ramps at Empire Estate intersection for Bank review – Aug 31
- Extend Corridor 3 and 4 PMC’s contract – Immediate
- Complete all LA R&R activities - Oct 31, 2016
  - Tripartite agreement on MIDC land – Sep 30
  - Compensation payments / TDR issuance to 148 PAPs where PCMC has negotiated settlement – Sep 30
  - Finalisation Compensation payment (or deposit in court) to titleholders on Corr 3 & 4 – Aug 15
  - Shifting of PAPs from Transit to permanent housing – Sep 30

47
Completion allotment of EWS housing to all eligible people and decide on support to those ineligible people for EWS housing and affected small businesses – Sep 15
### Status of Works Contracts

<table>
<thead>
<tr>
<th>Contract</th>
<th>Description</th>
<th>Length (km) of exclusive BRT corridor</th>
<th>Original Contract Amount (million INR)</th>
<th>Revised Contract Amount (million INR)</th>
<th>Work Start Date</th>
<th>Original Works Completion Date</th>
<th>Extended Works Completion Date</th>
<th>Approximate Value of Works Done (million INR)</th>
<th>Physical Progress (in financial terms)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Corridor 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-1</td>
<td>Interchange at Nashik Phata (Bank-financed)</td>
<td>0.9075</td>
<td>988.1</td>
<td>988.1 + 11.1 (adjustment to Contract Price) + 142.1 (variation) = 1,141.3</td>
<td>12 Jul 2010</td>
<td>13 Jan 2013</td>
<td>31 Dec 2016</td>
<td>880.8 + 11.1 + 142.1 + 27 (ongoing Ramp 2 works) = 1,061</td>
<td>93.0%</td>
<td>Works ongoing</td>
</tr>
<tr>
<td>3-2</td>
<td>Nashik Phata to Kasptewasti</td>
<td>4.85</td>
<td>571.1</td>
<td></td>
<td>25 Aug 2009</td>
<td>24 Feb 2011</td>
<td>31 Mar 2015</td>
<td>559.3</td>
<td>Complete</td>
<td></td>
</tr>
<tr>
<td>3-3</td>
<td>Kasptewasti to Wakad</td>
<td>2.28</td>
<td>288.7</td>
<td>400.1 (0.9 km length, not exclusive BRT corridor, added)</td>
<td>25 Aug 2009</td>
<td>24 Feb 2011</td>
<td>31 Aug 2013</td>
<td>364.4</td>
<td>Complete</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.26</td>
<td>62.1</td>
<td></td>
<td>04 Mar 2016</td>
<td>03 Dec 2016</td>
<td></td>
<td>Nil</td>
<td>Nil</td>
<td>Physical possession of part land not available</td>
</tr>
<tr>
<td></td>
<td>Pedestrian Facilities</td>
<td>99.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nil</td>
<td>Nil</td>
<td>‘Good for Construction’ drawings are yet to be issued</td>
</tr>
<tr>
<td></td>
<td>Construction of 8 Bus Stops</td>
<td>38.96</td>
<td></td>
<td></td>
<td>05 Mar 2014</td>
<td>04 Sep 2014</td>
<td></td>
<td>38.0</td>
<td>Complete</td>
<td>14 Bus Stops constructed</td>
</tr>
<tr>
<td>Contract</td>
<td>Description</td>
<td>Length (km) of exclusive BRT corridor</td>
<td>Original Contract Amount (million INR)</td>
<td>Revised Contract Amount (million INR)</td>
<td>Work Start Date</td>
<td>Original Works Completion Date</td>
<td>Extended Works Completion Date</td>
<td>Approximate Value of Works Done (million INR)</td>
<td>Physical Progress (in financial terms)</td>
<td>Remarks</td>
</tr>
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<td>------------------------------------------</td>
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<td>---------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Construction of 7 Bus Stops</td>
<td>34.09</td>
<td></td>
<td>07 Nov 2014</td>
<td>06 May 2015</td>
<td></td>
<td></td>
<td>33.5</td>
<td>Complete</td>
<td>Complete</td>
</tr>
<tr>
<td></td>
<td>Dedication of Corridor</td>
<td>49.83</td>
<td></td>
<td>12 Aug 2014</td>
<td>10 Nov 2015</td>
<td></td>
<td></td>
<td>46.2</td>
<td>Complete</td>
<td>Complete except in 260 m length</td>
</tr>
<tr>
<td>Corridor 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-1</td>
<td>Kalewadi Phata to Chinchwadgao n Bridge Phata</td>
<td>1.600</td>
<td>241</td>
<td>25 Aug 2009</td>
<td>24 Feb 2011</td>
<td>30 Sep 2013</td>
<td></td>
<td>238</td>
<td>Complete</td>
<td></td>
</tr>
<tr>
<td>4-2</td>
<td>Chinchwadgao n Bridge Phata to Pawana River Bridge Approach</td>
<td>1.400</td>
<td>198.9</td>
<td>14 Dec 2010</td>
<td>13 Jun 2012</td>
<td>31 Mar 2014</td>
<td></td>
<td>14.0</td>
<td>7.0%</td>
<td>Works ongoing. Land in about 1km length not available yet</td>
</tr>
<tr>
<td>4-3</td>
<td>Empire Estate Grade Separator (Bank-financed)</td>
<td>1.600</td>
<td>984.0</td>
<td>06 Apr 2011</td>
<td>10 Oct 2013</td>
<td>30 Jun 2016</td>
<td></td>
<td>640.4</td>
<td>64.5%</td>
<td>Works ongoing. PCMC needs to resolve site availability at P17</td>
</tr>
<tr>
<td></td>
<td>(excluding Components 5 and 6)</td>
<td>993.4</td>
<td>897.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>71.3%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(excluding Components 5 and 6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-4</td>
<td>Pawana River to KSB Chowk</td>
<td>2.080</td>
<td>372.9</td>
<td>28 Feb 2013</td>
<td>31 May 2014</td>
<td>31 Mar 2016</td>
<td></td>
<td>352.7</td>
<td>94.6%</td>
<td>Works ongoing. Land not available for 60 m length.</td>
</tr>
<tr>
<td>4-5</td>
<td>KSB Chowk to Dehu Alandi Road</td>
<td>1.450 (total length of contract 3.795 km)</td>
<td>370.7</td>
<td>25 Aug 2009</td>
<td>24 Feb 2011</td>
<td>31 May 2015</td>
<td></td>
<td>353.5</td>
<td>Complete</td>
<td></td>
</tr>
<tr>
<td>Contract</td>
<td>Description</td>
<td>Length (km) of exclusive BRT corridor</td>
<td>Original Contract Amount (million INR)</td>
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<td>Work Start Date</td>
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<td>-----------------------------------------------</td>
<td>------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td></td>
<td>Construction of 10 Bus Stops – Part I</td>
<td>50.5</td>
<td>05 Mar 2014</td>
<td>04 Sep 2014</td>
<td>47.9</td>
<td>94.9%</td>
<td>Ongoing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Construction of 10 Bus Stops – Part II</td>
<td>51.1</td>
<td>05 Mar 2014</td>
<td>04 Sep 2014</td>
<td>24.4</td>
<td>47.7%</td>
<td>Ongoing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dedication of Corridor</td>
<td>50.6</td>
<td>05 Mar 2014</td>
<td>04 Dec 2014</td>
<td>19.4</td>
<td>38.3%</td>
<td>Ongoing</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Social Management

Land Acquisition and Resettlement Implementation

1. The pending land acquisition continues to affect the construction of Corridor 4 and will have serious implications in completing the remaining construction due to the pending land acquisition and compensation payments. The two stretches that remain to be handed over to the contractor includes: 1 Km stretch at Khalewadi, where about 20-25 structures are still remaining on the corridor. This includes some houses and some shops and some of them have approached to the courts. The field visit to this stretch indicted there are some additional complexities in the site as some of the structures includes tenant residents and tenant shopkeepers who are also staying and the support to these affect people also need to be looked into. The other bottleneck is 60 meters MIDC land which is pending for more than 3 years for signing a tripartite agreement and court directives on rehabilitation of affected industrial units. The other issues includes inordinate delays in payment of compensation to those whose lands are acquired through an advance possession and inordinate delays in transferring the compensation amount to courts in case those who are not available to receive the compensation. The details of land acquisition and compensation payment summarize below.

Table 1: Land Acquisition Progress*

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Land Acquisition Target (in Ha)</th>
<th>Land Acquired through LA Act (in ha)</th>
<th>Land Acquisition through TDR/FSI (in Ha)</th>
<th>Total Progress (in Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasikphata-Wakad Road (Corridor-3)</td>
<td>29.28</td>
<td>8.58</td>
<td>19.81</td>
<td>28.39 (96.96%)</td>
</tr>
<tr>
<td>Kalewadi-Dehu Alandi Road (Corridor-4)</td>
<td>21.17</td>
<td>4.50</td>
<td>10.70</td>
<td>15.20 (71.80%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50.45 (100.00%)</strong></td>
<td><strong>13.08</strong></td>
<td><strong>31.51</strong></td>
<td><strong>44.59 (88.38%)</strong></td>
</tr>
</tbody>
</table>

*subject to update by PCMC

Table 2: Land Acquisition compensation payment Progress*

<table>
<thead>
<tr>
<th>Corridor</th>
<th>No of Title holder as per Compensation Award</th>
<th>No of title holders received compensation</th>
<th>No of title holder compensation deposited in courts</th>
<th>No of Titleholders opted for TDR/FSI</th>
<th>No of Titleholder received TDR/FSI certificates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasikphata-Wakad Road (Corridor-3)</td>
<td>3135</td>
<td>110 (3.51%)</td>
<td>60 (2.0%)</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Kalewadi-Dehu Alandi Road (Corridor-4)</td>
<td>3294</td>
<td>580 (17.60%)</td>
<td>0</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6429</strong></td>
<td><strong>996 (14.25%)</strong></td>
<td><strong>60 (0.93%)</strong></td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

*Subject to update by PCMC
** Only where compensation awards are made

2. Entitlements to different Impact groups. The payment of R&R assistance has been made to all those who came forward. The progress to date is as summarized below

Table 3: Status of Resettlement and payment of R&R assistance.

<table>
<thead>
<tr>
<th>No</th>
<th>Type of assistance</th>
<th>Target</th>
<th>Revised Target</th>
<th>Progress</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Transportation allowance</td>
<td>282</td>
<td>187</td>
<td>187 (100.0%)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Assistance for Vulnerable Families</td>
<td>76</td>
<td>54</td>
<td>54(100.0%)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Payment of subsistence allowance</td>
<td>68</td>
<td>35</td>
<td>35(100.0%)</td>
<td></td>
</tr>
</tbody>
</table>
4. **Subsistence allowance for Non-title holders**

| 4 | Subsistence allowance for Non-title holders | 72 | 5 | 5 (100.0%) |

5. **Allotment of EWS Houses**

| 5 | Allotment of EWS Houses (handover of house keys) | 257 | 123 | 104 (84.55%) |

| 6 | Allotment of alternative houses to affected squatter families | 144 | 96 | 45 (46.87%) |

PCMC indicated that 48 families have moved out. If any other eligible persons comes forward, they will provided alternative houses.

7. **Payment of Vulnerability assistance to Squatter families**

| 7 | Payment of Vulnerability assistance to Squatter families | 93 | 79 | 79 (100.0%) |

8. **Payment of additional subsistence allowance to shopkeepers**

| 8 | Payment of additional subsistence allowance to shopkeepers | 34 | 26 | 26 (100.0%) |

9. **Payment of R&R assistance to affected shopkeepers**

| 9 | Payment of R&R assistance to affected shopkeepers | 32 | 25 | 25 (100.0%) |

10. **MOUs with shopkeepers**

| 10 | MOUs with shopkeepers | 32 | 32 | 26 (81.25%) |

Shops will be allotted as and when ready.

---

3. **EWS Housing.** The allotment of EWS housing to eligible PAPs is at various stages. Out of those 123 identified as eligible and out of these, 104 families have moved into new houses and the remaining are waiting the allotment.

4. **Resettlement of those residing in the Transit camps.** After 4 years of original shifting date of July, 2012, the people from Transit site have finally moved to the new houses. So far 45 out of currently eligible list of 96 families (47%) have moved to the new site. The houses are repaired and the initial complaints related to repair of drinking water Tank, repair of water pump, cleaning of surrounding area, removal of garbage, etc. have been completed. The remaining people could not be shifted since the repairs to remaining houses is till progressing. The remaining major activities to be undertaken in the building includes: providing a separate access and a gate to the building, construction of a boundary wall to separate from other buildings, raising side boundary wall to protect from Electric Transformer and installation of a lift. PCMC assured that they are aware of these requirements and will be attending to them in the coming months.

5. **Consultations with PAPs.** The mission visited Vittal Nagar (where PAPs from Transit site are resettled). Transit site and Corridor-4 Khalewadi area to hear the PAPs on their view and concerns. In Vittal Nagar which is about 5 Kms from the original site, people who have moved in are settling down and responded that their initial complaints related to water Tank, cleaning of the surrounding area, repair of pump. From the discussions, it appears most of them satisfied, but reported about the leakages in the flats and intermittent supply of water. Though, men continue to engage their private works, most of the women are looking for alternative income earning opportunities in the new site. A compliant register is kept to report on the maintenance related complaints. PCMC responded that they will be attending on leakage complaints and looking into the water problems. The people once again reminded on their requirements related to boundary wall, separate access and lift.

6. In the Transit site, it was observed that most of the houses vacated have been dismantled and the remaining people are eagerly awaiting for their shifting once the remaining flats are ready to move in. Most of those who are waiting for allotments have mentioned that they have visited the new site. Some of the eligible people living in Transit have pleaded for considering their clime for allotment of alternative houses. Some of them have mentioned that they have already submitted the applications and some of them residing in Transit but not in the list, were also affected by Nashik-Phata road and would be submitting the documents for claiming their eligibility. The mission suggested that PCMC should the application on it merit and documents to allotment as appropriate. Some of the old women also
approached that they do not co-applicants to avail the loan and required PCMC to waive their contribution.

7. In khalewadi area of Corridor-4, the mission met few PAPs who are residing on the corridor. The discussion revealed that some of them have been residing prior to formation of DP road in 1985 and would be submitting the documents for claiming their structure compensation. It was also observed that presence of permanent houses and shops where tenant’s residents and shopkeepers will also be affected. Some of the people also mentioned that they have appealed to the courts and are awaiting the outcome. It appears that the remaining people who are living on the corridor is the most difficult cases involving large land owners with permanent houses and shops and amicable settlement for their compensation and resettlement is the need of the situation to tackle these difficult cases.

Follow-up actions.

8. The following actions were discussed and agreed with PCMC in order to complete the remaining actions and bring the compliance with OP 4.12 Involuntary resettlement to a satisfactory rating.

- **Pending compensation deposits in courts:** out of 12 cases, one is deposited, another 5 will be deposited by July 31, 2016 and the balance 5 by August 10, 2016;

- **Compensation awards:** Out of six pending cases, awards will be made for three cases by August 10, 2016; and in case of remaining three, the awards will be made by September 30, 2016.

- **Compensation payment for lands taken on advance possession:** Payment of compensation or issue of TDR certificates will be completed by September 30, 2016;

- **Transfer of MIDC land:** The approval of tripartite agreement is pending with MIDC Board and is expected to be approved shortly. On approval it will submitted to the Court and the shifting of units in MIDC lands will be completed in about 9 months from the time court gives its directive on rehabilitation of the units.

- **Shifting of people from Transit site:** The shifting of remaining people from Transit site will be completed by September 30, 2016 including considering the applications submitted by some of the people claiming their eligibility and the entire Transit site will be demolished by October 31, 2016;

- **Allotment of EWS housing:** The allotment of EWS housing to remaining eligible people will be completed by September 15, 2015; and,

- **Vittal Nagar Housing:** The major activities to be completed include: repairs to remaining flats, installation of a lift, and providing access and separate gate and construction of boundary wall to separate from other buildings. All these will be completed by September 30, 2016.
INDIA: GEF-World Bank-UNDP: Sustainable Urban Transport Program (SUTP)

Naya Raipur

1. A World Bank mission met Naya Raipur Development Authority (NRDA) officials on July 20, 2016, to discuss the implementation of the Naya Raipur component of the Sustainable Urban Transport Program (SUTP). The meetings were chaired by Mr. Rajat Kumar, CEO, NRDA and Mr Salil Shrivastava, Chief Engineer, NRDA and also present were their team, along with representatives of the PMU and the consultants working with NRDA on various activities.

Non-Motorized Transport (NMT)

2. Non-Motorized Transport Infrastructure (Construction of Cycle Tracks, Walkways, CD Structures): Scope of this contract comprises construction of Cycle Tracks, Walkways / Foot Paths, Cross-drainage Structures, and Road Furniture including Signage. This contract of INR 416.5 million with 15 months completion period started on 28 March 2014. Subsequent to modification of the proposed road cross-sections and detailed review of the proposed works, the value of proposed works increased substantially and presently it’s estimated that the Completion Cost of the contract is likely to be about INR 448 million. Physical progress has been about 81.5% of the likely Completion Cost.

3. The Contractor could not initially proceed on about 85% of contract works involving Road works because of NRDA’s review of the proposed Road Cross-Sections. Final Road Cross-Sections were issued to the Contractor on 10 October 2014 (about 6.5 months after contract start) and Final Road Levels (FRLs) were issued starting from 15 October 2014. The Mission was informed that about 36 kms of Cycle Tracks have been laid out of about 39 kms, 26 kms of Footpaths have been laid out of about 28.5 kms, 73 kms of Precast Kerbs have been laid out of about 78 kms and about 30 kms of Cast-in-situ Kerbs have been laid out of about 33.5 kms. Only about 225 meters of Table Top Pedestrian Crossings with Paver Block have been laid out of about 3.5 kms to be laid. This 3.5 kms include the Table Top Pedestrian (Bus Passenger) Crossings at the Bus Stations. Works of Shoulder Dressing, Rain Water Harvesting, Road Signs & Markings and Painting of Kerbs are remaining.

4. There were about INR 45 million worth of works for Cross-Drainage Structures comprising Six Minor Bridges, Five Box Culverts and 49 Pipe Culverts. The Mission was informed that all structure works including the Tiled wearing course for all structures have been completed and only the stone pitching works are remaining. In connection with extensive cracks in the deck slab of the Minor Bridge structure at Km 4.800 on Road No. 2 pointed by the July 2015 Bank Mission, the Mission was informed that the results of the tests carried out at Sriram Laboratory, Delhi, for Chloride Content in the Concrete, after the April 2016 Bank Mission, have been found satisfactory. Epoxy injection grouting has been done to seal the cracks, on 09 June 2016. However, post-grouting tests suggested by the April 2016 Bank Mission have not been carried out yet to check the efficacy of the grouting.

5. The Works Completion Period of the contract has been extended until 30 September 2016. The Contractor and the PMC both expressed that the contract works can be completed in all respects by October 2016.

Bus Rapid Transit (BRT) Lite

6. Three BRT corridors are planned:
   - Corridor 1: Raipur Railway Station – NH6 – Capital Complex in Naya Raipur (24.7 km)
   - Corridor 2: Kabir Nagar (Raipur) – NH43 – Capital Complex in Naya Raipur (37.5 km)
Corridor 3: Along the main east-west axis of Naya Raipur, between NH43 and NH6 (17.8 km).

7. **Construction of BRT Bus Shelters, Pick-up Points, BRT Workshop Depot and Control Centre.** Scope of this contract originally included construction of Bus Workshop Depot and Control Centre, Eight Bus Shelters, and a Pick-up Point near Old Mantralaya. The contract of Indian Rupees (INR) 298.9 million with 15 months completion period started on 31 December 2013. Subsequently, construction of another Pick-up Point at Raipur Railway Station of approximately INR 9 million was added to the contract as Variation. Presently, it’s estimated that the Completion Cost is likely to be about INR 247.3 million only. This reduction in contract amount is due to higher provision of quantity for several items in the contract as well as no requirement or non-execution of some items. Progress of works is about 82% of likely Completion Cost. Works Completion Period of the contract has been extended until 30 June 2016. The Contractor has submitted an application for Extension of Time (EoT) until 30 September 2016, which is under review.

8. At the **Pick-up Point near Old Mantralaya**, all major works have been completed. Remaining works such as Silicon Paint on Walls, Advertisement Boards, Louvre Fixing, Ticketing Booths, Sitting Benches, Light Poles, etc are to be completed. In addition, Pavement works at the Entry to the Pick-up Point (not included in this contract) are required to be carried out, which is discussed at paragraph 12 hereinafter. For the Exit route of the Buses from the Pick-up Point, NRDA is in touch with the Local Municipality to remove 6-7 residential huts and small encroachments by a Hospital and a Temple.

9. At the **Workshop, Depot and Control Centre** site, all structural and pavement works are completed. Internal painting, all fittings and all finishing works are to be carried out for all structures, all Signages to be finished, the Sub-station to be installed and Landscaping to be completed. Control Centre is required to be completed by 15 August 2016 to enable the ITS contractor to start its works. Wooden false ceiling, glass works, all fittings and all finishing works are remaining for the Control Centre. For the Workshop also, ceiling works, glass works, all fittings and all finishing works are to be completed. The Contractor of Naya Raipur Phase II has constructed the Service Road (of NRDA-1 / Expressway) abutting this Complex and one entry to / exit from this Complex is now connected.

10. The structures have been completed including the roofing for all Eight **Bus Shelters**. Remaining works such as False Ceiling, Silicon Paint on Walls, Advertisement Boards, Louvre Fixing, Ticketing Booths, Sitting Benches, etc are to be completed. The Roof Sheeting substantially extends towards the Bus Lane beyond the Road Median edges and is at a height of about 4.1 meter from the pavement top, thus susceptible to damage caused by movement of vehicle with tall load. The Mission suggested to put retro-reflective paint and red flasher light at the approach sides of the roof for cautioning approaching vehicles. In addition, Pavement works (not included in this contract) are required to be carried out, which is discussed at paragraph 12 hereinafter.

11. At the **Pick-up Point at Raipur Railway Station**, all major works have been completed. Remaining works such as Silicon Paint on Walls, Advertisement Boards, Louvre Fixing, Ticketing Booths, Sitting Benches, etc to be completed by the Contractor. In addition, Pavement works (not included in this contract) are required to be carried out, which is discussed at paragraph 12 hereinafter.

12. The Contractor assured that it would complete all works in all respects by September 2016. The Contractor and the Project Management Consultant (PMC) together need to list all remaining works and the Contractor is required to systematically complete all remaining works so as to meet the target of completing all works in all respects by 30 September 2016.

13. The Contractor has made some Claims amounting to about INR 35 million, on which Dispute Adjudication is ongoing.
### STATUS OF THE WORKS CONTRACTS

<table>
<thead>
<tr>
<th>Contract Description</th>
<th>Name of Contractor</th>
<th>Original Contract Amount (million INR)</th>
<th>Likely Completion Cost (million INR)</th>
<th>Works Start Date</th>
<th>Original Works Completion Date</th>
<th>Extended Works Completion Date</th>
<th>Approximate Value of Works Done (million INR)</th>
<th>Physical Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus Shelters, Pick-up Points, Workshop Depot and Control Centre</td>
<td>Essel Infrastructure Private Limited, Raipur</td>
<td>298.9</td>
<td>239.6</td>
<td>31 Dec 2013</td>
<td>30 Mar 2015</td>
<td>31 Mar 16 (Request for Extn upto 30.6.16)</td>
<td>203.6</td>
<td>82.3% of likely Completion Cost</td>
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<tr>
<td>Non-Motorized Transport Infrastructure (Cycle Tracks, Walkway, etc)</td>
<td>BSBK Private Limited, Bhilai, Chhattisgarh</td>
<td>416.5</td>
<td>448.0</td>
<td>28 Mar 2014</td>
<td>27 Jun 2015</td>
<td>30 Apr 16 (Request for Extn upto 31.7.16)</td>
<td>364.9</td>
<td>81.5% of likely Completion Cost</td>
</tr>
</tbody>
</table>

### Technical Discussions

14. **Terminal of BRT-Lite at Raipur Railway Station:** During a field visit the mission observed that work progress had been slower than expected. While some elements of the station may be delayed until system opening is clearly defined (to avoid vandalism), there is no such reason to delay the raising the bus roadway by 300 mm nor building the raised footpath to the railway station. With regard to the latter, the NRDA transport planner has established its exact location and defined possible layouts of vehicle parking in front of the railway station; the Bank team agrees with this technical plan. During the previous mission, it had been agreed that this plan was to be submitted to the railway authorities, so the construction of the footpath could begin. However, the mission understands that there have been no recent contacts in this regard. This is now becoming urgent, if a high-quality BRT terminal (with its accesses) is to be ready when operations are meant to start. *The mission urges NRDA* to give attention to this matter and send the PMU and World Bank, *by August 31, 2016*, a timed action plan to implement the raised footpath, including: (a) date of submitting detailed proposal to the Railways and any other agencies that may be involved, (b) deadline for obtaining necessary approvals, (c) date of preparing construction plans, (d) date of starting construction, (e) date of completing construction.

15. It had previously been noted that the southern access ramp to the BRT terminal ends in an ill-defined area used by buses, other motor vehicles and pedestrians. In order to improve access conditions for BRT passengers and minimize accident hazards, *the mission repeats its previous recommendation* that NRDA prepare a traffic engineering design of that area, including an at-grade pedestrian crossing of Station Road, *no later than August 31, 2016*. Following approval of the plan by the Raipur Municipal Corporation and other agencies that may be involved, works could begin to improve the traffic and pedestrian conditions in that area. *The mission also recommends* that a timed action plan similar to the points (a) to (e) above be sent to the PMU and World Bank, *by August 31, 2016*.

16. **Terminal of BRT-Lite at Old Mantralya:** Currently, the layout of the terminal area does not provide for feeder buses delivering passengers that would transfer to the BRT-Lite. To attract passengers to use the
Old Mantralya terminal, it has become of prime importance to establish a convenient interchange with the nearby City Bus services, in particular those plying along GE Road.

17. During the previous mission, it was agreed that NRDA would examine such a connection, involving a new City Bus stop at the junction of GE Road with the accessway to the Old Secretariat, and to build the planned footpath on the eastern side of that accessway. The current mission was advised that existing bus stops on GE Road would be sufficient for this purpose. After visiting those stops, which are a 5-minute walk away from the BRT terminal, the mission is of the opinion that the existing stops are too far away for an effective transfer link. Moreover, the sidewalk along GE Road would have to be rebuilt, as its current condition makes it impossible for pedestrians to walk on it (Figure 1). Even worse, the prevalent parking and double-parking along GE Road (Figure 2) would deter potential transfer passengers from using it.

![Figure 1: Existing footpath along GE Road; Figure 2: Double parking along GE Road](image)

18. The mission concludes that improving that particular sidewalk, so it becomes part of an acceptable transfer connection, would be costly and very difficult to implement. It thus repeats its previous recommendation to locate new City Bus stops at the junction of GE Road with the accessway to the Mantralya area. This would require cutting though the median separation of GE Road in order to provide a walkway connection between inbound City Buses with the BRT terminal. The mission recommends again that NRDA prepare a geometric layout of an at-grade pedestrian crossing at that location, no later than August 15, and immediately establish contact with the Raipur Municipal Corporation, the City Bus operator and any other entity involved, in order to get the necessary approvals. It further recommends that a time-bound action plan to implement this transfer connection be sent to the PMU and the World Bank by August 31, 2016.

19. No progress has been made in improving the accessway (including a footpath along one of its sides) from GE Road to the Old Mantralya terminal, even though it had always been part of the original plan. The mission recommends that the necessary detailed designs be prepared by August 31, 2016, including a schedule for the construction work required.

20. Previous missions had recommended that the access and egress roads and the circulation plan for the entire area surrounding the terminal should be reviewed and that any (probably minor) works that may be required to ensure the fluid movement of buses and minibuses be defined. No such review has evidently been made, and the mission thus repeats its previous recommendation to carry out that review and advise the PMU and the Bank of the conclusions, by September 30, 2016.
21. **Pick-up and Drop-off Points at Telibandha**: The bus service plan had confirmed the establishment of a pick-up and drop-off point at Telibandha, connecting the BRT-Lite with some feeder routes. In June 2016, NRDA submitted functional designs to which the Bank already gave its agreement. The next step will be to obtain any approvals that may be required to implement the scheme (including the cutting of an existing median to place a pedestrian crosswalk) and to prepare the construction drawings for the works. The mission recommends that NRDA send the PMU and the World Bank by **August 31, 2016** a timed action plan to implement all elements of the plan.

22. **Intelligent Transport Systems.** The Bank team understands that while the soft launch with 15 buses and 6 shelters and the control center is planned for Sep 15, the final launch with all 30 buses and all shelters will be slated for Nov 1 2016. The Mission held discussions with the vendor and the ITS PMC on key areas:

- The Bank team urged the PMC and ITS vendor to generate a micro-level deployment plan based on milestones for soft launch and the final launch and negotiate partial delivery of ITS BoM from subcontractors.

- The mission team received clarification that the PMC has verified manufacturer authorizations from ITS vendor for products that have been requested in the revised Bill of Material (BoM). The revised BoM has been approved by NRDA.

- The mission discussed ITS requirements for the two new proposed bus shelters at Telibandha. Specifically, the need to equip the shelter with 4 CCTV cameras, 2 PIS displays, and an off-board ETM ticket issuer. Furthermore, it was decided that these new bus shelters require only 1 turnstile corresponding to one access ramp. These additional ITS components need to be included in the revised BoM for ITS.

- In terms of readiness, the Bank mission emphasized the need for the ITS Control Center and Storage area to be ready and handed over to ITS Vendor by Aug 15 for installation and testing. Furthermore, the Fiber Optic cabling terminating at the Control Center needs to be fully tested and ready by Aug 30th. The Bank team also suggested the installation and testing of on-board ITS as and when buses are delivered to the ITS vendor leading up to the soft and final launches.

- In order to ensure successful deployment, the Bank team urged the ITS PMC to develop an extensive and detailed Acceptance Test Plan together with ITS vendor in consultation with NRDA. Furthermore, the actual acceptance testing for purposes of milestone should start after the installation of all BoM (by Nov 1, the official launch date).

- It was clarified that the Fare Policy established by NRDA could be downloaded to the ETMs over the air and that any changes (new routes, new fares etc.) will also be effected over the air without the need for the ETMs to be programmed at the control station.

- Although the ITS vendor and PMC have developed an SLA tool, computations used to generate the relevant KPIs in the tool need to be verified before they could be utilized.

- Finally, the Bank mission noted that the ITS responsibility at NRDA currently resides in just one staff member and urged the client to augment its staff with additional ITS expertise with a view to ensure a successful implementation. The Bank team also suggested exposure visits to the Mysore ITS network in order to strengthen capacity in the shorter term.

- The Bank team suggested a mix of interventions including social media presence, Smartphone Apps with fare structure, ETA, route graphs etc. and a Hackathon to increase public awareness and participation leading up to the BRT launch.
23. **Bus Delivery.** The Mission understands that state government shall be part funding the buses and the balance funds would come from a HUDCO loan. NRDA has reconfirmed the order for 30 buses with Tata Marcopolo, and delivery is expected to commence by first week of August and complete by September 2016. NRDA will need to ensure this timeline as this directly affects the installation schedule of the ITS vendor.

24. **BRT Operator:** NRDA has received 3 bids for the bus operator contract. The contract is modelled on a gross cost contract template. NRDA plans to complete the evaluation and issue the Letter of Acceptance by August 15, 2016. The mission advised NRDA to maintain a tight schedule as the operator would require some time to mobilise including hiring of drivers and other crew. This especially important given that NRDA now plans a soft launch by September 15 and a full launch by November 1, 2016.

25. **Fare Policy.** NRDA informed the mission that based on the guidance given in the previous missions they had revisited the fare policy and rationalized the fares for the BRT Lite service. The fare on the BRT service between Raipur and Naya Raipur is now pegged at Rs. 30, Rs. 5 more than the regular bus service. This has also been approved by the NRDA Board. The mission agreed that this was a major improvement on the earlier approved fare policy.

26. **Fare Collection Agency.** NRDA did not receive a response to its tender for fare collection agency. It is proposed to float the tender again after due consultation, and no later than August 15, 2016.

**Technical Assistance and Capacity Building**

27. **Regional Mobility Plan.** The consultants (LEA Associates) had prepared a presentation on the Draft Final Regional Mobility Plan for Greater Raipur Region (GRR). The draft plan for 2034 (with 2019 and 2024 as intermediate target years) envisages a total population of about 6 millions in the GRR, spread over an area of 5,156 square km. In addition to major road investments including three ring roads, the plan includes 142 km of suburban railways (an increase of 28 km over the previous draft) and 277 km of BRTS corridors (a decrease of 39 km). A review cum discussion was held in Delhi on July 7, 2016, and the Bank team advised the consultants to revisit the presentation and format of the Regional Mobility Plan. It was recommended that the Final report should be written for decision makers and citizens, not to document in detail survey and process, especially modeling details, which tends to dilute the information critical for decision makers and the general public to know. The “plan” is far too specific in its recommendations. Other than projects comprising an immediate action plan based on real, not modeled data, it is more appropriate to identify places which are likely to require a special highway capacity or public transport enhancements and leave it up to subsequent detailed “alternatives analysis” to say what the actual detailed investment should be. The emphasis should be on the mobility strategy for the region based on alternative strategies and scenarios considered.

28. **Bus Service Plan and Business Plan:** The consultants presented the final service plan to the mission and this now includes a stop at Telibandha at the time of launch. The stop at Ghadi Chowk would be considered at a later date. The consultants also presented the business plan which still requires a lot of work including a clear articulation of the scope and level of operation of the SPV, the required fleet, infrastructure, staffing and finally financial resources to sustain efficient operations. The consultants will rework and share the Business Plan report with the PMU and the Bank by Aug 31, 2016.

29. **Marketing and Communications Strategy:** NRDA has access to communications firm and they have already commenced promotion of the Project by soliciting suggestions for naming of the BRT Lite. It was recommended that NRDA have a standard presentation developed on the BRT Project which should be delivered to a variety of stakeholders including political representatives, officials, school and college
students and authorities, industry associations etc. to start creating awareness about this new project. It is planned to begin the promotional activities in earnest following the soft launch in September. NRDA is also actively planning to promote a cycling culture within the state capital to make use of the infrastructure that is being developed. They are in talks with various bicycle manufacturers to offer rental services in the city. Cyclethon is planned at the proposed launch on November 1.

30. **BRT Lite Implementation.** NRDA is likely to launch the BRT Lite this November 2016 on their State Day. The Mission feels that is possible provided NRDA develops a realistic BRT Implementation Schedule and strictly adheres to it (including BRT pickup points and key stations, bus delivery and hiring of bus operators, ITS installation, service plan, communications, fare collection agents, traffic wardens, security & housekeeping etc.). Currently it plans to have the soft launch by Sept 15 (covering pick up points, depot and control room and 3 stations) and the full launch by November 1. It was agreed that NRDA would share the plan with PMU and the Bank by August 31, 2016, covering the following aspects.

- Completion of Control Centre – Aug 10
- Completion of additional pick up drop off points at Telibandha – Oct 15
- Completion of access improvements around terminal locations – Sep 30
- Delivery of buses – August 5 onwards
- Appointment of bus operator – Aug 15
- Bus operator/ driver training – Sept 15
- Installation and Testing of ITS – Sept 15
- Completion of procurement for fare collection agency – Sep 30
- BRT Service Plan – Jul 31
- BRT Business Plan – Aug 31
- Soft launch (including 2 pickup points, 3 stations & depot) – Sep 15
- Communications & Outreach plan and implementation – Sep-Dec 2016
- Full launch – Nov 1

31. **Project Management.** The Mission again advised NRDA to ensure a proper team at the newly created SPV and for it to be fully engaged with the current implementation phase so they could hit the ground running during operations. Presently, the SPV is staffed with only an MD and Transport Planner and most of their time is spent managing the interim bus operations between Raipur and Naya Raipur. It will be important for this team to be enhanced and for them to be fully involved in the service planning, bus procurement, procurement of fare collection agency, ITS implementation and BRT Lite Implementation Schedule planning etc. now and with operations management and oversight subsequently.

**Safeguard Management**

32. **Environment.** For the NMT works, it was confirmed that disposal of waste concrete and wash water from the mixers and mixing of asphalt and soil where new cycle track is being laid was being properly handled and disposed.

33. At the pick-up point in the old Mantralaya site, NRDA confirmed that the arrangements have been made for safe disposal of asbestos sheets that are used as wall material by the contractor for storage at the edge of the bus station site.

34. The Regional Mobility Plan study report has been updated with latest data on air pollution. The changes to the results need to be discussed in the report with recommendations to factor in this potential impact of GHG emission reductions early in the decision making process. It was also agreed that the new set of assumptions made for the modeling undertaken would be explicitly stated in the documentation with the report to allow readers to make informed judgments.
35. **Social.** The entry and exit points at old Mantralaya pick-up points will have some resettlement /livelihood impacts. In case of Entry point, 3 small shops will be affected and NRDA confirmed that these shop keepers will be provided alternative pre-fabricated shops at the same site itself to ensure that their livelihood is maintained. In case of exit point, NRDA indicated that it require 7.1 Meters for traffic movement and some additional space will also be required from safety point of view. The preliminary assessment indicated that about 6-8 residential huts on right side and some encroached portion of a hospital and temple will be affected on the left side. NRDA also indicted the possibility of them resettling under ongoing Government housing scheme. NRDA should prepare a brief RAP by including the baseline socio-economic characteristics of PAPs, tenural status and proposed mitigation measures in line with ESMF/World Bank’s involuntary policy provisions. In case these people are resettled under Government program, the differential allowance/ assistance between ESMF and World Bank policy provisions should be proposed. Appropriate consultations and grievance mechanism should also be described. The RAP will be reviewed by the Bank and require approval and disclosure from NRDA. The timing of shifting of these families and payment of compensation/assistance should be completed prior to shifting of these people and commencement of bus services.

36. **Key Agreed Actions**

- NRDA to prepare a timed action plan to implement the footpath between the railway station and the BRT Terminal – August 31, 2016
- NRDA to prepare a preliminary design for the area south of the BRT railway station terminal, to serve traffic and pedestrians, and a timed action plan to implement it – August 31
- NRDA to design pedestrian crossing on GE Road, near the Old secretariat – August 15
- NRDA to prepare timed action plan to implement that pedestrian crossing – August 31
- NRDA to prepare designs and construction schedule for improving the accessway between GE Road and the Old Mantralya BRT terminal
- NRDA to send review of access roads and circulation plan around the Old Secretariat terminal – September 30
- NRDA to prepare a timed action plan to implement BRT stop at Telibandha – August 30
- Lea Associates to submit Final Regional Mobility Plan– Sep 15, 2016
- Submit draft Business Plan for SPV – Aug 31
- Submit monthly progress report contract wise – Continuous
- Completion of BRT civil works (Soft launch/ full launch) – Sep 15; Oct 15
- Completion of NMT civil works– Sep 30, 2016
- Complete procurement of bus operator/ fare collection agency – Aug 15/ Sep 30
- Submit revised BRT Lite Implementation Schedule – Aug 31, 2016
- Develop a Communications & Outreach Plan for BRT Lite – Aug 15
- Complete social impact assessment and mitigation for Old Secretariat site – Aug 31, 2016
INDIA: GEF-World Bank-UNDP: Sustainable Urban Transport Program (SUTP)

Indore

1. The World Bank mission, along with PMU and PMC, held discussions with Mr. Sandeep Soni, CEO, AICTSL, and his team on the project progress in regard to the Indore component in Delhi on July 26, 2016.

BRT Corridor

2. **BRTS corridor:** The 12 km corridor runs from Niranjanpur towards the north of the city to Rajiv Gandhi chowk in the south. There are 7 interchanges with the city buses in between these two points. The average travel time for a BRT bus from end to end reduced to 35 minutes from 45-50 minutes earlier. Accident rates have reduced with mixed traffic no longer being allowed within the BRT corridor.

3. Corridor extension is proposed for another 8 kms as per in principle approval by the AICTSL Board and Sarak Suraksha Committee in Indore. Stations will be developed on PPP. Road widening works (6 lanes) are already ongoing. AICTSL needs to develop depots for maintenance of the new bus fleet.

4. **BRT Operations.** AICTSL has 44 buses in operations and the daily passenger traffic is 53,000 on the BRT corridor. The service frequency of BRT ranges from 3-4 minutes. There has also been a replenishment to the city bus fleet from 73 buses last year to approximately 130 buses with the induction of roughly 41 new midi buses and 9 regular buses. The ridership has improved from 30,000 to about 50,000 at present. Another 24 midi buses are expected shortly.

5. **ITS Component.** Two bids were received and opened on Feb 2, 2015. The bids were found technically non responsive and the decision to proceed with rebidding was taken. Based on the feedback received it was determined that the inclusion of fare collection within the scope of the ITS vendor during the operation phase was increasing the risk perception and responsible for the poor response and also the non-responsiveness of the bidders. Accordingly, AICTSL took the decision to drop the fare collection requirement from the bid scope and continue with only AFCS and AVL/ PIS systems along with an operation phase covering system maintenance and operation. The bid documents were issued on 4 January 2016 and 4 bids were received on July 14, 2016. The evaluation is ongoing and likely to take until August 31, 2016.

6. **Technical Assistance Activities.** The Mission reviewed the status of the proposed TA activities.
   (i) Preparation of BRT Accessibility Plan, including pedestrian access: Pre proposal clarifications and amendments are being issued with proposals expected to be received by August 20. The TER shall be submitted by September 7, 2016.
   (ii) Monitoring & Evaluation Study. Consultants are on board and surveys are ongoing.
   (iii) Preparation of a business plan for AICTSL. The contract is expected to be signed by July 31 and the Inception Report shall be submitted by August 31.

7. **Key Agreed Actions:**
   - Submit ITS BER – Aug 31
   - Finalise Technical Evaluation for BRT Accessibility Study – Sep 7
   - Submit Inception Report for Route Planning and Business Planning Study – Aug 31
1. A World Bank mission held discussions with Mr. Vishwanath, GM (Traffic), and Mr. Ramamurthy, DC, MCTD, KSRTC, the ITS team including MCTD officials, their consultants and vendors in Bangalore on July 21, 2016 to discuss the project’s progress. Also present in the meeting were representatives from PMU and PMC.

GEF-SUTP Funded Project

2. **Intelligent Transport Systems.** Intelligent Transport System (ITS) was implemented and launched in November 2012, and has following sub components:
   - Passenger Information System (PIS)
   - GPS based Automatic Vehicle location (AVL) System
   - Monitoring center to track and monitor bus movement through GPRS based devices

3. KSRTC has issued the ‘certificate of operational acceptance’ to the ITS vendor effective Oct 1. The system is now in full operational phase, meaning that all contractual SLAs are fully applicable. The vendor has a three-year AMC for the ITS system, effective from 1st October 2015. The vendor has a full-time team in Mysore. This consists of cover at the Control Centre to maintain the server and communications platform and to assist the KSRTC on various dispatching tasks; and 24-hour technical cover at each of the four MCTD depots.

4. Issues of VMU resets were discussed. The problems with VMU resets continue to exist and the Systems Integrator is seeing improvement in performance through the replacement of power cards. The SI has requested KSRTC to permit the diagnosis and resolution of VMU problems at convenient area away from the designated bus stops so as to improve the overall availability.

5. The performance of PIS in the network is likely to improve. The Bank mission fully supports KSRTC's plan to procure dedicated power meters and electricity service at locations that previously experienced severe power supply problems. The Bank team encouraged KSRTC to explore re-use factors in terms of existing batteries, UPS etc. when issuing a change request order to the ITS SI for upgrade of PIS.

6. KPI definitions and computations cannot be altered now at this point during the operational phase due to contractual obligations. However, the Bank team encouraged KSRTC and the ITS Systems Integrator to monitor the performance of each and every VMU in the network through the measurement of VMU heartbeats generated every 10 seconds.

7. The Bank mission advised the SI to provide definitions for each of the KPIs used in the weekly reports so that the operational data becomes easier to interpret. Furthermore, the need for the weekly report to capture cumulative performance measures, and trends was also discussed.

8. KSRTC had organised an ‘appathon’ in Mysore in February 2016, which was well attended and received favourable press coverage. Consequently, a team of students at one of the city’s engineering colleges has developed an app to provide a wide range of passenger information, including ETA. This was formally launched by KSRTC during the Knowledge Exchange Workshop on ITS in City Bus Transport in Mysore on 30 May 2016. The ITS Mitra Smartphone App has seen more than 1500 downloads with an average rating of 4.8 from 207 reviewers. The Bank mission discussed the need to ensure there is a longer term plan for the maintenance and upkeep of the App. One option discussed was to ask the College of
Engineering to take ownership for continuous upkeep in exchange for certain payment. Alternatively, KSRTC could transfer the source code of app to ITS SI and have the systems integrator combine the Mitra App with their own smartphone through a change request to the existing contract.

9. Finally, the Bank mission discussed the Open Data Report. The Bank team provided clarity in terms of the primary objective of opening up the data and basic costs associated with maintaining an open data platform.

10. **Other Procurements.** KSRTC advised that the bid evaluation for **driving simulator** was in final stages and would be completed by August 8, 2016.

11. KSRTC advised that the process is ongoing for procurement of the further M&E work and the communications and outreach activity. The mission expressed concern over the long delays in finalising the communications procurement.

12. **Comprehensive Service Operations Analysis Study.** A discussion was organised on the study findings and way forward on June 1, 2016. It was agreed that much had been learned through the exercise but it was now time for the KSRTC/ MCTD team to take over and start internalising and implementing the recommendations. As a formal handover exercise it was agreed that the consultants would conduct a workshop in Mysore along with the depot managers and take them through the staged process of conducting the route profitability analysis etc.

**Key Agreed Actions:**

- Submit ITS Performance updates - Continuous
- Complete driving simulator procurement – Aug 8
- Complete technical evaluation of Communications Consultants – Sep 30
- Complete extension of scope of M&E Consultants – Aug 15
INDIA: GEF-World Bank-UNDP: Sustainable Urban Transport Program (SUTP)

Mysore – Public Bike Sharing Project (PBS)

1. The Mission met with Ms. V. Manjula, Commissioner DULT, officials of DULT and Mysore City Corporation, the PMC and their team and the vendor in Bangalore on July 23, 2016, to review the Mysore Bike Sharing Project.

2. MCC shall be the implementing agency for this activity with a committee for managing the overall administration of the project. The project monitoring committee has been set up as on May 15, 2015 and is chaired by the Deputy Commissioner of Mysore District. It consists of the Mysore City Corporation Commissioner, the Commissioner of Police, Mysore, Commissioner Urban Development Authority and a representative of Commissioner DULT. The total project capital cost and operating cost is Rs. 205.23 million for the six year period. A Rs. 3 crore corpus has been created for supporting the operations and maintenance phase and transferred to a jointly held account by DULT and MCC. The PMC for the project, PWC cum VBSoft, hired by DULT came on board in Feb 2016 to support the project. Mssrs. Green Wheel have been hired on a design, supply, install and operate model, and signed the contract in January 2016.

3. The mission was informed that there will now be a total of 48 station locations with 52 docking stations. 47 of the 48 locations have been certified by PMC. Similarly, the design and specifications for both geared and non-geared bicycles have been certified and vendor has commenced manufacturing. So far 10 bicycles have been manufactured and at a rate of 10 bikes per day it should be possible for the vendor to produce 100 bicycles by August 5, prior to launch of pilot. The design and specs for docking stations have also been approved and are under production. The registration process has been tested including the payment gateway which shall be enabled as the time of full launch. The PBS service has been named ‘Trin-Trin’, and a website has already been created. The following key aspects were highlighted during the discussions:
   - The PBS logo and website were launched on July 16. The pilot launch date is proposed as August 10 will full launch by Aug 31.
   - The pilot is expected to be launched with six station locations, approximately 100 bicycles and 50 smart cards.
   - There has been a delay in providing the maintenance centre location to the vendor by MCC. The control room size and location is also not found to be convenient. As such it is now proposed to include both these items within the vendor scope to avoid any further delays on the Project. This is proposed to be done through a variation order.
   - In the context of overall system availability and geographical redundancy, the Bank team discussed the revised System Architecture that would provide de-centralized authentication of smart cards and greater overall system availability. A stored value smart card has been finalized. It is proposed to be closed loop to begin with. As and when the solution being adopted by KSRTC is clearer and / or the technology stabilized PBS will also consider an open loop common mobility card.
   - A mobile app is also being developed and shall be launched at the time of full launch.
   - The pilot is proposed to be a closed trial with a pre-identified group of volunteers, government officials and cycling club members. It was agreed to have a proper questionnaire in place to ensure that feedback on all important aspects was sought during the trial phase, including bicycle design.
   - It was noted that the control centre and the maintenance centre were not equipped as yet. It was advised to have the call centre / control room operational and simulate similar conditions during the trial phase to fully test the system rather than wait until full launch.
• The Bank mission stressed the need to develop an extensive Acceptance Test Plan that would evaluate and verify all aspects of the system including Wide Area Networking infrastructure (Microwave capacity and KSWAN links to the State Data Center), docking stations, operations of Smart Card including payment gateway functions, Application Software in the cloud, at the Control Center, and at the State Data Center etc. The test plan should simulate extensive failure conditions and evaluate the fail-safe and recovery procedures and with a new location, all features of the Control Center will also need to be tested. To this extent, the Bank team urged the PMC to develop a detailed micro-level plan of testing activities leading up to the trail period, during the soft launch, and beyond until the final launch of the system.

• The Bank team reviewed the demo applications and provided suggestions on improving the look and functionality of the PBS Website and Smartphone App as well as the effectiveness of customer support system.

• The mission was informed that the station design has been modified to avoid having to dig the foundation into the soil. Some locations have been changed from the original plan to suit site conditions. During the next mission, once all the stations are installed, and the scheme is functional, the mission would undertake a site visit.

4. **Key agreed actions included:**
   • Submit acceptance test plan – Aug 5
   • Launch PBS – Aug 31
Financial Management

1. **Disbursement profile:** As of July 22\textsuperscript{nd} 2016, the disbursement profile (including advances) stood at 45.28\% against IBRD and 55.78\% against GEF financing. Overall position is stated below and the PIU wise disbursement position is summarized below.

<table>
<thead>
<tr>
<th>Financing source</th>
<th>Allocation</th>
<th>Disbursement</th>
<th>GEF status of Disbursement</th>
<th>USD Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBRD</td>
<td>105.23</td>
<td>38.57</td>
<td>GEF</td>
<td>18.45</td>
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<tr>
<td>DA Advance</td>
<td>-</td>
<td>9.08</td>
<td>DA Advance</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>105.23</strong></td>
<td><strong>47.65</strong></td>
<td><strong>Total</strong></td>
<td><strong>10.29</strong></td>
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<tr>
<td>% Disbursed inc DA</td>
<td></td>
<td>45.28%</td>
<td>% Disbursed inc DA</td>
<td>55.78%</td>
</tr>
<tr>
<td>% Disbursed exc DA</td>
<td></td>
<td>36.65%</td>
<td>% Disbursed exc DA</td>
<td>45.39%</td>
</tr>
</tbody>
</table>

2. **IUFRs:** We have received all IUFRs covering the period through March 2016. IUFRs for quarter-end June should be received by August 15, 2016.

3. **External Audit:** For PCMC, the statutory audit report covers only the Bank-funded portion of the project. The non-Bank portion of the project, majorly funded by JNNURM, will be certified by the private CA firm.

In the case of Mysore City Corporation, the entrustment of the audit was done to the State AG and they will follow up for the scheduling of the audit. No delays are expected in the audit report.

4. **Internal Auditors:** The draft internal audit reports for some cities for the entire one year FY 14-15 were shared with the mission. The final internal audit reports should be submitted soon.

5. **Key Actions**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Actions</th>
<th>By Whom</th>
<th>By When</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Follow up after entrustment of audit to state AG for Mysore to schedule audit for FY 15-16</td>
<td>MCC</td>
<td>August 31, 2016</td>
</tr>
<tr>
<td>2</td>
<td>Internal audit reports for FY 14-15</td>
<td>PMU</td>
<td>August 31, 2016</td>
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</table>
### PIA’s wise disbursement profile USD/Mn

#### IBRD- PIU wise disbursement (USD/mn)

<table>
<thead>
<tr>
<th>PIU’s</th>
<th>PCMC *</th>
<th>Naya Raipur</th>
<th>HDBRTS</th>
<th>Total*</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBRD allocation *</td>
<td>35.58</td>
<td>13.94</td>
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<td>Designated advance</td>
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<td>8.16</td>
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<td>Total Disbursements</td>
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<td>8.16</td>
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<td>% Disbursed inc DA</td>
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<td>58.52%</td>
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<tr>
<td>% Disbursed exc DA</td>
<td>66.69%</td>
<td>51.34%</td>
<td>13.86%</td>
<td>36.65%</td>
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</table>

* Excluding the front end fees of USD 0.263 mn

#### GEF- PIU wise disbursement (USD /mn)

<table>
<thead>
<tr>
<th>PIU’s</th>
<th>PCMC</th>
<th>Naya Raipur</th>
<th>Indore</th>
<th>KSRTC</th>
<th>MoUD</th>
<th>HDBRTS</th>
<th>Mysore</th>
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<tr>
<td>Revised GEF allocation</td>
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<td>1.9</td>
<td>1.91</td>
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<td>6.15</td>
<td>2.5</td>
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<td>Designated advance</td>
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<td>0.23</td>
<td>0.22</td>
<td>0.23</td>
<td>0.84</td>
<td>-</td>
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<tr>
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<td>2.54</td>
<td>1.24</td>
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<tr>
<td>Total Disbursements</td>
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<td>3.37</td>
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<td>67.08%</td>
<td>42.40%</td>
<td>89.99%</td>
<td>54.87%</td>
<td>49.49%</td>
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<tr>
<td>% Disbursed exc DA</td>
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<td>41.24%</td>
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