

Limited Tender Enquiry Document

For

Traffic Monitoring and Web-casting System

For BRT Corridor From Ambedkar Nagar to Moolchand



Delhi Integrated Multi-Modal Transit System Limited (DIMTS)

(A Joint Venture of Govt. of Delhi and IDFC Ltd.)

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1. Introduction

Delhi Integrated Multi Modal Transit System Ltd. (DIMTS) is a Joint Venture Company set up by the Government of National Capital Territory of Delhi (GNCTD) and Infrastructure Development Finance Company (IDFC). One of the projects being managed by the DIMTS is the operation on Bus Rapid Transport (BRT) corridor. Presently, a stretch of BRT corridor from Ambedkar Nagar to Moolchand is operational. The total length of the first stretch is 5.8 kms.

For effective live monitoring of traffic conditions at BRT Corridor and analysis of traffic data, DIMTS desires a web based application system. The primary aims of the proposed system are as under:

- To monitor the traffic situation at various junctions of the BRT Corridor, from a central location and through internet/intranet access in real-time.
- To webcast images of live traffic condition at various junctions on BRT Corridor.
- To classify and count the number of vehicles passing through various junctions on BRT Corridor at different parts of the day, for analysis purpose.
- To assess average speed of vehicles passing through BRT Corridor at any point of time, so that the information regarding average speed or time to pass through BRT Corridor can be informed to public through website, SMS or through Variable Message Signs, in real-time.

2. Detailed Requirements of the Proposed System

- CCTV Cameras to be placed at various junctions, at right altitude and angle with appropriate lenses to have desired coverage, with the primary aim to monitor traffic conditions and to capture video feed for traffic analysis. The minimum specification of camera should be 1/3" CCD with Color 380 TV lines, 0.5 lux, 3.6 mm Manual/Electronic Auto focus and Electronic iris. The system should be designed in such a way that it is capable to operate in day as well as night and in all the weather conditions.
- The total strategic points/junctions in the present BRT stretch, to be covered in the system are six. However, the proposed system should be scalable i.e. it should be designed in such a way that it can accommodate more locations/cameras, as and when required. The system should also be upgradable to cover future BRT corridors and other parts of city.
- There will be a minimum of two and maximum of eight cameras at each junction. All the video data captured from CCTV cameras is to be stored on a central Server. The feed from all the cameras will have to be made available live to DIMTS office. As a result, live video feed from all the cameras may be observed at DIMTS office at any time.

- The vendor will have to web-cast images of live traffic condition at various junctions on BRT Corridor in real time. The refresh rate for images shall be configurable and can be as low as 30 seconds. The images should automatically be refreshed on the website. The vendor will also be responsible for arranging the services of the web-server for web-casting of images of live traffic condition. A link from the website of DIMTS will be provided for the same.
- Video recording of at least one month for all the locations is to be made available on-line, with the provision of Offline backup for selective location and period as may be required.
- The equipment installed at the field should be minimum in order to avoid operational and environmental issues. The Vendor, if so desires, may use DIMTS' site office at Ambedkar Nagar DTC Depot, for storing and processing the Video data. All the equipment in the field must be encased in suitable casings for protection against vandalism, weather conditions, etc.
- The video captured by the proposed system should also be stored and indexed properly for future retrieval and analysis for both online and offline data. Vendor will have to deploy Application software for the same; application software shall have the feature to access the video/image of particular moment (date and time) and location/camera.
- The application software should have authentication mechanisms for access of archived/off-line data. The live/old data should be available to senior officers of DIMTS through intranet, after proper authentication.
- Application software should be capable of processing the Video Data captured for assessing the average speed of vehicles passing through BRT Corridor and the number of vehicles passing at various junctions of BRT corridor in different categories like two-wheelers, cars, buses and other heavy vehicles, so that same can be used for traffic analysis and also displayed on website, if so desired.
- Vendor may propose any alternative system/technology to calculate the average speed and vehicle count in different categories. However, CCTV cameras will have to be provided for web-casting of live condition of the traffic.
- The proposed solution should be based on proven technology. Vendor must have implemented at least one similar project by using proposed technology.
- The Application software must be able to generate queue length of vehicles in different lanes viz. MV lane, Bus lane, etc. The software may generate the alert, if the number of vehicles in particular lane increases by the predefined number of vehicles (configurable parameter for application software).
- The vendor shall generate a live Traffic Situation Map & display it on website wherein the live Traffic situation at various junctions of BRT corridor shall be depicted through

different color codes.

- Vendor shall provide at least on serve capable of meeting all the requirements of the system including processing, storage etc. along-with all networking equipments, power backup, third party software etc.
- The connectivity back-bone of appropriate band-width as may be required in the proposed system, for example between site office and DIMTS office, site office and web-server etc. will have to be provided by the vendor.
- The system offered shall be a turnkey solution including all components required, for successfully functioning of the system.
- Provision of sending the traffic related data through website, SMS, any other means of public dissemination.
- In case the proposed solution requires Optical Fiber Connectivity from Ambedkar Nagar to Moolchand, the vendor shall quote separately for the same. The OFC may be made available by DIMTS, in which case, this cost will not be payable.

3. Facilities to be made available by DIMTS

- Electricity, free of cost, at nearby Bus Queue Shelters.
- Site office at Ambedkar Nagar DTC bus depot.
- Optical Fiber Connectivity on the stretch from Ambedkar Nagar to Moolchand may be provided by the DIMTS.

4. General terms and Conditions

- The contract period of the project will be two years from the date of commissioning of the entire system with all the features/requirements.
- The warranty period for the entire proposed system will be one year from the date of commissioning of the entire system with all the features/requirements.
- Vendor will also be responsible to impart necessary training on proposed system to 4-5 officials of DIMTS.
- DIMTS may ask bidders for making a presentation on their proposed solution and/or conducting a POC (Proof of Concept) at any one of the locations of BRT.
- The bidders are required to submit the complete Bill of Material (BOM) along with the Financial Proposal.
- Payments terms:

1. (a.) 90% of the capital cost will be made within 30 days of commissioning of the entire

system with all the features/requirements.

1. (b.) Remaining 10% payment will be made after completion of warranty period of one year. Alternatively, the complete payment of 100% may be made within 30 days of commissioning of the entire system with all the features/requirements, against a bank guarantee of 10% of capital cost of the project, valid for one year.

2. Recurring Payment will be made on quarterly basis, at the end of each quarter.

- The L1 bidder will be identified on the basis of the sum of the expenditure involved for implementation of the proposed system (one time cost) and two years operational charges (recurring cost).

- Implementation Schedule:

- The Vendor shall have to implement the web-casting at all junctions within 4 weeks of placing the order.
- The complete solution, covering all the feature required shall have to be implemented within 8 weeks of placing the order.

- Bid Security

Bidders shall furnish as part of its bid, a bid security of Rs. 1 lakh (Rs. One Lakh) in the form of bank Draft in favor of "Managing Director, DIMTS Ltd."

- Unsuccessful Bidders' bid security will be returned within 10 days after the award of work to the successful bidder.

5. Contents of Bids

- The vendors are required to submit the proposal in two parts i.e. 1. Technical Bid 2. Financial Bid.

- The Technical bid should include the following:

1. Brief About the Company
2. Brief about Proposed Solution
3. Technical Details of the Proposed Solution, Equipment to be installed, etc
4. Implementation Reference of similar project, giving complete details including client reference along-with documentary evidences.
5. Constraints / Limitations of the proposed system, if any.
6. Requirements/expectations from DIMTS to implement the system, if any.
7. Any other point, relevant to the proposed solution/system

- Vendors are requested to submit Financial Bid in the following format:

1. Cost of each Camera including installation, cabling, mounting, accessories, etc.
2. One time cost of the Application Software implementation (including license) with the features of web casting, vehicle classification & counting and calculation of average speed.

3. Cost of offline backup of video recording per hour per camera, including media.
4. Cost of Hardware & third-party software including server, UPS, networking equipment and any other equipment to be installed for the proposed system.
5. Connectivity Charges, web server charges along-with other recurring charges per month.
6. Cost of Optical Fiber Connectivity from Ambedkar Nagar to Moolchand, if required to be laid down by the vendor.
7. Any other Charges
8. AMC of the proposed system after the expiry of one year warranty period.

Note: The rates quoted by bidders, shall be inclusive of all the applicable taxes.

- DIMTS reserves the rights to accept or reject any bid without assigning any reason or providing any notice and without accepting any liability for the same.
- Technical bid of the Tender should be covered in a separate sealed cover superscribed with "Technical Bid" on envelope cover. The bid security should be placed in the Technical Bid.
- Financial Bid of the Tender should be covered in a separate sealed cover super scribed with "Financial Bid" on envelope cover.
- The last date and time for submission of the proposal to the DIMTS' office is 6-08-2008 at 3:00 PM. The Technical bids shall be opened on the same day at 3:30 PM, in the presence of bidder's representatives, if they choose to attend the same.
- All the bidders are requested to send their bids, duly sealed in an outer cover containing both sealed bids (Technical and Commercial) super-scribed with "Bid for Traffic Monitoring and Web-Casting System, Not to be opened before 6-08-2008 at 3:30 PM".
- For any further detail, vendor may contact Sh. Ajay Gupta (Ph.: 011-43090162, email : ajay.gupta@dimts.in) or Sh. Yogesh Khanduja (Ph.: 011-43090168, email: yogesh.khanduja@dimts.in).
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