



**NOIDA METRO RAIL  
CORPORATION (NMRC) LIMITED**

**REQUEST FOR PROPOSAL (RFP)**

**Replacement of Existing Passenger Information Display  
System at Aqua Line of NMRC with Integrated PIDS  
Software and Hardware System**

**E- Tender No. NMRC/Telecom/2024/334**

**July- 2024**

**Issued by:**

**Noida Metro Rail Corporation (NMRC) Limited.  
Block-III, 3<sup>rd</sup> Floor,  
Ganga Shopping Complex, Sector-29,  
Noida -201301, District Gautam Budh Nagar,  
Uttar Pradesh, India**

## Disclaimer

This Request for Proposal (RFP) Document (or “E-Tender” or “E-Bid”) for “**Replacement of Existing Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System**” contains brief information about the scope of work and selection process for the Bidder (‘the Contractor’ or “the Tenderer” or “the Applicant”). The purpose of the Document is to provide the Bidders with information to assist in the formulation of their Bidding Documents.

While all efforts have been made to ensure the accuracy of information contained in this RFP Document, this Document does not purport to contain all the information required by the Bidders. The Bidders should conduct their own independent assessment, investigations and analysis and should check the reliability, accuracy and completeness of the information at their end and obtain independent advice from relevant sources as required before submission of their Bid/s. Noida Metro Rail Corporation Ltd. (“NMRC” or “the Corporation/Employer”) or any of its employees or advisors shall incur no liability under any law, statute, rules or regulations as to the accuracy or completeness of the RFP Document.

NMRC reserves the right to change any or all conditions/information set in this RFP Document by way of revision, deletion, updating or annulment through issuance of appropriate addendum/corrigendum as NMRC may deem fit without assigning any reason thereof.

NMRC reserves the right to accept or reject any or all Bids without giving any reasons thereof. NMRC will not entertain or be liable for any claim for costs and expenses in relation to the preparation of the Bid/s to be submitted in terms of this RFP Document.

## Glossary

- a) **“Addendum / Amendment”** means any written amendment / addendum /corrigendum to this RFP, from time to time issued by NMRC to the prospective bidders;
- b) **“Agreement”** means the Contract Agreement to be executed between NMRC and the selected bidder.
- c) **“Applicable Laws”** means all laws, brought into force and effect by Govt. of India, State Governments, local bodies and statutory agencies and rules / regulations / notifications issued by them from time to time. It also include judgments, decrees, injunctions, writs and orders of any court or judicial authority as may be in force and effected from time to time.
- d) **“Bidder”** or **“Tenderer”** means Sole proprietorship, registered partnership firm, public limited company, private limited company or Consortium of any of the above and its Successor in title and assigns which is submitting its bid pursuant to RFP Documents
- e) **“Bid Due Date”** means Bid Submission end date and time given in the E-tender
- f) **“Commencement Date”** means the date of commencement of Contract Agreement as mentioned in NOA
- g) **“Earnest Money Deposit (EMD)”** means the refundable amount to be submitted by the Bidder along with RFP documents to NMRC
- h) **“NMRC”** means Noida Metro Rail Corporation Limited ( or “Corporation or Employer”)
- i) **“Party”** means Contractor or Corporation (together they are called **“Parties”**)
- j) **“Performance Bank Guarantee/ Security Deposit”** means interest free amount to be deposited by the Contractor with NMRC as per terms and conditions of Contract Agreement as a security against the performance of the Contract agreement
- k) **“Permits”** shall mean and include all applicable statutory, environmental or regulatory Contracts, authorization, permits, consents, approvals, registrations and franchises from concerned authorities
- l) **“Re. or Rs. or INR”** means Indian Rupee
- m) **“Revenue Operations Date (ROD)”** means the date of operation of metro rail.
- n) **“Selected Bidder”** means the bidder who has been selected by NMRC, pursuant to the bidding process for award of Contract.
- o) **“CAMC”** means Comprehensive Annual Maintenance contract ( Contract for Maintenance of Equipment’s including spares and up gradation of technical parameters as per OEM recommendation)
- p) **“Engineer/Engineer-in-charge”** means any person nominated or appointed from time to time by the Employer to act as the Engineer for the purposes of the contract and notified as such in writing to the contractor. Technical representative of NMRC nominated by employer.

The words and expressions beginning with capital letters and defined in this document shall, unless repugnant to the context, have the meaning ascribed thereto hereinabove.

## Data Sheet

1	Name of the Work	Replacement of Existing Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System
2	Approximate Cost of Work	₹ 11.27 Cr (Including GST)
3	Time-period of contract	10 Months ( Supply, Installation ,Testing and Commissioning of PIDS 24 Months ( Defect Liability Period) 36 Months ( CAMC)
4	Method of selection	Cost Based Selection (Lowest –L1)
5	Bid Processing Fee( Non Refundable)	INR 23,600/- (including GST) (Rupees Twenty Three Thousand Six Hundred only) through RTGS/NEFT only payable in favor of Noida Metro Rail Corporation Limited
6	Earnest Money Deposit (EMD)	₹11.27 Lakh
7	System of Tendering	Single stage Two Packet/Bid System (Technical bid and Financial bid to be submitted together on e-Tender portal.)
8	Name of the Employer's official for addressing queries and clarifications	Dy.General Manager/AFC-Tele Noida Metro Rail Corporation Limited, Block-III, 3rd Floor, Ganga Shopping Complex, Sector-29, Noida 201301 Email: <a href="mailto:nmrc.afc@gmail.com">nmrc.afc@gmail.com</a> Website: <a href="http://www.nmrcnoida.com">www.nmrcnoida.com</a> , <a href="http://etender.up.nic.in">http://etender.up.nic.in</a>
9	Bid Validity Period	180 days
10	Bid Language	English
11	Bid Currency	INR
12	<b>Schedule of Bidding Process</b>	
	<b>Task</b>	<b>Key Dates</b>
	<b>Uploading of Bid</b>	25.07.2024
	<b>Last date of receipt of Pre-bid queries</b>	12.08.2024 ( up to 14:00 Hrs)
	<b>Pre-bid Meeting</b>	12.08.2024 (11:30 Hrs) at NMRC Head Office
	<b>Last date of issuing amendment, if any</b>	16.08.2024
	<b>Last Date of Bid Submission</b>	26.08.2024 ( 15:00 Hrs )
	<b>Date of Technical Bid Opening</b>	26.08.2024 ( at 15:30 Hrs)
13	Consortium /JV to be allowed	No
14	Account details	<b>For Bid Processing Fee &amp; EMD</b> State Bank of India (04077) – Sector 18, Noida Gautam Budh Nagar, Uttar Pradesh -201301 IFSC Code: SBIN0004077 <b>A/c No. 37707840592</b> <b>Noida Metro Rail Corporation Ltd.</b>

**Note: (i)** Tender Cost and Tender Security (EMD) is exempted for Micro & Small Enterprises (MSEs) registered with District Industries Centre or Khadi & Village Industries Commission or Khadi & Village Industries Board or Coir Board or National Small Industries Corporation or Dte. Of Handicraft & Handloom or any other bodies specified by Ministry of Micro, Small & Medium Enterprises for appropriate category and have valid registration certificate as on date of tender submission.

Only those MSEs will be eligible for Tender cost and Tender Security exemption which are registered under following categories (With valid registration).

**(i) “Manufacturer of Display Components (plasma, polymer, LCD, LED)”**

OR

**(ii) Manufacture of electronic capacitors, resistors, chokes, coils, transformers (electronic) and similar components**

The tenderers seeking exemption from ‘tender security’, being MSEs, shall ensure their eligibility w.r.t above and submit registration certificate issued by the body under which they are registered which clearly mentions category of along with Terminal Validity of registration.

In absence of any of the above requirements no exemption for ‘Tender cost and Tender security will be allowed and their bid will be rejected and not evaluated further without the Tender cost and EMD.

No further clarification shall be sought on the above.

In case the bidder who has been exempted Tender Cost/Tender Security being Micro & Small Enterprise, and;

- (i) withdraws his Tender during the period of Tender validity; or
- (ii) becomes the successful bidder, but fails to commence the work (for whatsoever reasons) as per terms & conditions of Tender; or
- (iii) refuses or neglects to execute the contract; or
- (iv) fails to furnish the required Performance Security within the specified time,

The bidder shall be debarred from participating in future tenders for a period of 1 year from the date of discharge of tender/date of cancellation of NOA/annulment of award of contract as the case may be. Thereafter, on expiry of period of debarment, the bidder may be permitted to participate in the procurement process only on submission of required Tender Cost/ Tender Security.

Further the Employer may advise the authority responsible for issuing the exemption certificate to take suitable actions against the bidder such as cancellation of enlistment certificate etc.

## Table of Content

Disclaimer .....	1
Glossary .....	2
Data sheet .....	3
1. Section 1: General Information .....	6
Background .....	6
About Locations .....	6
Communication .....	6
2. Section 2: Terms of Reference .....	7
Objective .....	7
Tenure .....	7
Annexure-A .....	9
Scope of work .....	10
Annexure-B .....	12
Annexure-C .....	14
Technical System Performance .....	30
Obligation To contractor .....	57
3. Section 3: Instructions to Bidders .....	58
General instructions .....	58
Preparation and submission of Bids .....	61
Earnest Money Deposit .....	66
Opening and Evaluation of Bids .....	67
Award of Contract .....	68
4. Section 4: Eligibility, Evaluation and Selection Process .....	70
Eligibility Criteria .....	70
Information of the Technical and Financial Proposal .....	72
Notice of Award and Execution of Contract Agreement .....	72
Performance Bank Guarantee/Security Deposit .....	73
Contract during Proposal Evaluation .....	74
Project Financial Terms .....	75
Special Condition of Contract .....	76
5. Section 5: GCC .....	80
6. Section 6: Draft Contract Agreement .....	85
7. Section 7: Forms .....	88
Form 1: Letter of Proposal Submission .....	88
Form 2: Firm Details .....	89
Form 3: Capability Statement .....	90
Form 4: Work Experience .....	92
Form 5: Financial Capability Details .....	93
Form 6: Memorandum .....	95
Form 7: Bid Capacity .....	96
Form 8: Undertaking .....	98
Form 9: Power of Attorney .....	99
Form 10: Saleable Form for Tender Document .....	101
Form 11: Declaration of Refund of Earnest Money .....	102
Form 12: Performa for Clarifications/Amendments on the RFP .....	103
Form 13: Bid Offer/BOQ (Format) .....	104
Form 14: Performa of performance security/Bank Guarantee by Bank .....	107
Form 15: Bid Details .....	109

## 1. Section 1: General Information

### Background

- a. Noida and Greater Noida are being developed as the satellite towns to New Delhi and more and more people from Delhi and other areas are shifting to these towns in search of fresh air, greenery and better infrastructure. There is a need of providing an efficient, reliable and comfortable transportation system for the population intending to settle in these towns and also the public coming to these areas for education, service and business.
- b. Noida Metro Rail Corporation is a Special Purpose Vehicle (SPV) formed for planning and executing urban transport projects in Noida, Greater Noida regions. The Company desires to provide a world-class Public Transportation System with state-of-the-art technology. As such, the overarching criterion for setting up of the Company is to help create an efficient, safe, reliable, economical and affordable public transport system.
- c. An elevated metro line between Noida and Greater Noida is already in operation.
- d. NMRC invites E-Bids for selection of Contractor for the work of“ **Replacement of Existing Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System”**
- e. In this regard, the NMRC invites the interested Bidder/s to submit their proposals as per provisions of this Request for Proposal Document.
- f. NMRC will shortlist the Bidders on the basis of evaluation criteria mentioned in this RFP Document. On the basis of the minimum evaluation criteria, qualified Bidders will be shortlisted. Financial proposal of only qualified Bidders will be opened.
- g. The Successful Bidder shall provide the services as described in Section 2: Terms of Reference and other relevant sections of this RFP“ **Replacement of Existing Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System”**

### About Locations

NMRC Metro Rail corridor (Aqua Line) is 29.7 km long and is known as Noida Greater Noida Metro Rail Corridor. It comprises 21 metro stations starting from Noida Sector 51 in Noida and ends up at Depot Station in Greater Noida. In addition, Metro depot /OCC is located ahead of Depot Station in Greater Noida, Gautam Budh Nagar,UP

### Communication

All communications should be addressed to:

Dy. General Manager/ AFC-Tele  
Noida Metro Rail Corporation (NMRC) Limited  
Block-III, 3rd Floor, Ganga Shopping Complex,  
Sector-29, Noida -201301  
District Gautam Budh Nagar, Uttar Pradesh  
Email: nmrc.afc@gmail.com

## Section 2: Terms of Reference

### 2.1 Objective:

The work consists of “**Replacement of Existing Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System**” at Platform level installed over NMRC stations. The work shall be done in accordance with terms of reference and employer’s requirement and other requirement of the contract. The work shall be executed to the highest standards available. Bidder has to carry out their self-assessment in respect of their capacity in terms of employer’s requirement, machinery, spares, tools, manpower and finance to carry out work to the satisfaction of employer.

### 2.2 Tenure:

**2.2.1** The term of contract shall be up to (10 Month for Supply, Installation, Testing and Commissioning of PIDS, from the date of acceptance of Notice of Award (NOA), Defect Liability Period of 2 Years from the date of successful commissioning/issue of acceptance certificate by NMRC thereafter 3 years of CAMC (Comprehensive Annual maintenance Contract) from the date of completion of DLP, unless otherwise terminated by the Parties in accordance with the terms.

**2.2.2** Awarding of CAMC work will be decided after checking the performance of successful bidder during DLP (Defect Liability Period). NMRC may or may not operate CAMC works contract as per prevailing circumstances/conditions. Decision of NMRC in this regard shall be final and binding on successful bidder.

**2.2.3** Extension of time line, if any duly justified has to be taken from NMRC well before expiry of original contract period.

### 2.3 Introduction

The existing PIDS system in NMRC consist of central system comprising of cluster server interfaced with ATS system, Master clock, FOTS (LAN) connected to the client PIDS server installed in each and every station and forms a PA/PIDS network with the help of which centralized information related to audio and display can be distributed over the network and displayed and announced accordingly at station level. In addition to this it is possible to display the written text messages and announce the audio messages generated centrally from Operation Control Centre (OCC) as well as locally from individual station from SCR.

At station level the system consists of client server connecting to PIDS/PAS common rack and interfaces for display board installed at platform and concourse. The overview of existing PIDS is detailed below:

**2.3.1** The Passenger Information Display System (PIDS) shall be IP based system and shall be the primary means of visual communication with passengers at station Concourse, Platforms and any other designated area(s) for notification of scheduled train arrivals and departure and display of operational normal and emergency including evacuation messages to passengers.

**2.3.2** The PIDS System and control equipment shall be installed at Aqua Line stations of NMRC and Operational Control Centre ( OCC/BCC)

**2.3.3** Detail where PIDS system is required to be provided is mentioned in **Annexure-A**.

**2.3.4** The PIDS at stations have access from the following locations as a minimum:

(A) From the Station Control Room (SCR) to the PIDS at the station

(B) From the Back up Control Centre (BCC)/Operation Control Centre (OCC) to the PIDS at one station



- (C) From the Back up Control Centre (BCC)/Operation Control Centre (OCC) to a group of stations
- (D) From the Back up Control Centre (BCC)/Operation Control Centre (OCC) to all stations of a line.

**2.3.5** The PIDS and Public Address system (PAS) are in co-ordination automatically to provide real time passenger audio broadcast and visual information on designated platform at each station and in concourse at each station. The PIDS and PAS respond to special train running interrupt messages from the Train Control and Signaling System. PIDS operator is able to display special or emergency messages for passengers and staff on individual or all display boards.

**2.3.6** Three major types of messages shall be provided by the PIDS as a minimum:

- (A) Fixed;
- (B) Pre-formatted with data to be added; and
- (C) Instantly constructed.

**2.3.7** All PIDS display boards shall present a full message in Hindi and English characters and graphics. Numerals in Hindi language shall however be displayed as English characters. All messages shall be displayed simultaneously in Hindi and English characters and/or scrolling/blinking from one language to another language as selected by the PIDS operator.

**2.3.8** Quantities of various PIDS Boards shall be provided as under Annexure- A

**Annexure-A**

**PIDS at PF (Platform) Level to be replaced**

Sr. No.	Location	UP Platform	Down Platform	Third PF	Total
1	Sector 51	2	2	0	4
2	Sector-50	2	2	0	4
3	Sector-76	2	2	0	4
4	Sector-81	2	2	0	4
5	Sector-101	2	2	0	4
6	NSEZ	2	2	0	4
7	Sector-83	2	2	0	4
8	Sector-137	2	2	0	4
9	Sector-142	2	2	2	6
10	Sector-143	2	2	0	4
11	Sector-144	2	2	0	4
12	Sector-145	2	2	0	4
13	Sector-146	2	2	0	4
14	Sector-147	2	2	0	4
15	Sector-148	2	2	0	4
16	KP-II	2	2	0	4
17	Pari Chowk	2	2	0	4
18	Alpha-I	2	2	0	4
19	Delta-I	2	2	0	4
20	GNIDA	2	2	0	4
21	Depot Station	2	2	2	6
<b>TOTAL</b>					<b>88</b>

**Details of Concourse PIDS:**

2 Passenger Display System per station i.e. total of 21 (stations) x 2 = 42 PIDS system at concourse level at 21 station.

## **2.4 Scope of Work**

### **2.4.1 General**

NMRC had installed PIDS system at 21 stations both at Platform and concourse level. There are in total 88 PIDS display installed at NMRC platform (PF) level and 42 PIDS display at concourse level of NMRC stations.

### **2.4.2 SCOPE OF SUPPLY FOR PASSENGER INFORMATION DISPLAY SYSTEM**

**2.4.2.1** Contractor has to give demonstration of integration of its PIDS with NMRC existing PIDS/Signaling/PAS system at one station or NMRC Lab as a part of technical bid evaluation. If demonstration is not successful then no further evaluation of bid will be done and bid will be summarily rejected.

For demonstration of technical capabilities, NMRC will allocate date and time period to each bidder, wherein each bidder has to bring at least one PIDS system at its own risk and cost to NMRC premises for demonstration of its technical capabilities.

**2.4.2.2** Scope of supply for PIDS system shall include, but not be limited to, the following:

- 1. True Color LED display boards for Platforms – Elevated stations**
- 2.** All software required for operation of the PIDS including backup on flash drive or latest storage media containing software's , both application & operating system.
- 3.** Integration of existing concourse level PIDS with proposed PIDS solution
- 4.** Data Communication equipment;
- 5.** Any other item/software required for completing scope of contract

### **SCOPE OF SERVICES**

**2.4.2.3** Dismantling of existing PIDS panels, Cables, Junction Boxes, Modem, Switches, rack etc. from the stations detailed as Annexure- A and transportation to NMRC Telecom store at NMRC Depot Greater Noida.

**2.4.2.4** The installation of the PIDS displays also includes the supply and installation of all related Network Switches, Servers, data cable, Optical fiber cable etc along with all relevant connectors supported interfaces thimbles etc. New cabling shall be within the scope of the contractor including Switches, Racks, and other necessary equipment as required.

**2.4.2.5** The work also includes, supply of other items necessary for installation of PIDS panels like different type of connectors, cable, jumpers, cable ties, nut-bolts, thimbles, data converter, earthing etc. and their installation are to be provided by the contractor.

**2.4.2.6** For laying of cables of fixing of equipment any civil work required like drilling on the wall, making small cut-out and restoration of the same after completion of the activity will be in the scope of the contractor. Such Civil work shall require prior approval of the Employer. Contractor shall inspect all the site/locations where the work to be carried out from time to time and shall plan site activity in detail accordingly.

**2.4.2.7** It will be responsibility of the contractor to supply and install the fixture. However contractor will submit both primary and secondary fixture specified and design for employer review and approval.

- 2.4.2.8** The work also includes the interface of PIDS display with the existing PIDS system to achieve the same display performance as the existing PIDS system. The interface may consist of software interfacing and/or hardware interfacing which shall depend on site condition. The contractor may study the existing system on as is where basis and prepare the interface as per requirement.
- 2.4.2.9** To work on Platform/Concourse, contractor shall require to fill up PTW (permit to work) form and submit it to CSS/NMRC. Only after approval of PTW, contractor shall carry out the work. Work on Platform shall be carried out during night (Non-Revenue Hours).
- 2.4.2.10** Storage Space for material under this contract will be provided to the contractor by NMRC. Space will be provided prior to installation only i.e. one to two months before the installation work starts at the particular station/site with prior permission of Employer. Transportation of material to and fro from site will be in the scope of contractor.
- 2.4.2.11** The schedule of requirement of NMRC as per tentative BOQ is mentioned in Annexure-C. However every bidder is required to give detailed break up of schedule of requirement each component, software, hardware, Licenses, Network in its bid document. The Bidder is suggested to undertake the Site Visit and assess the requirement basis of the proposed solution for Replacement of Existing Passenger Information Display System of NMRC.
- 2.4.2.12** Contractor shall submit technical offer of the PIDS Panel being offered along with their specification and method statement of step by step procedure for installation, dismantling and commissioning to NMRC for approval.
- 2.4.2.13** After successful supply, installation, testing, integration and commissioning of the system the Employer will issue a completion certificate and only after that the system will be under DLP for the period of 2 years. Post completion certificate being issued.
- 2.4.2.14** During DLP period (24 months) contractor will be required to maintain sufficient contractual spares of hardware and software including licenses and will be required to attend any fault of PIDS both software and hardware without any cost to NMRC.
- 2.4.2.15** After Completion of DLP period, Awarding of CAMC work will be decided after checking the performance of successful bidder during DLP (Defect Liability Period). NMRC may or may not operate CAMC works contract as per prevailing circumstances/conditions. Decision of NMRC in this regard shall be final and binding on successful bidder.
- 2.4.2.16** The contractor shall prepare necessary design documentation, training document, application engineering, configuration detail, site drawing etc and submit to employer for evaluation and approval.
- 2.4.2.17** Contractor shall prepare all as built drawing and document and same will be submitted to NMRC along with method statement for installation to be carried out.
- 2.4.2.18** Contractor shall inspect all the site/locations where the Equipments are proposed to be installed shall plan, site activity, prepared drawing and prepare details. All drawing documents shall be submitted in both soft as well as in hard copy to NMRC.
- 2.4.2.19** Contractor also shall provide training of PIDS system both onshore and offshore if applicable.
- 2.4.2.20** The contractor shall make necessary arrangement to conduct testing like FAT(Factory Acceptance Test),SAT(Site Acceptance Test), PAT (Partial Acceptance Test) at his own cost to meet the specifications mentioned in technical specifications at its factory premises/office However travel cost/ Boarding/lodging of NMRC officials will be borne by NMRC itself.
- 2.4.2.21** The contractor must have an office in Delhi NCR region or if office is not present in Delhi-NCR then in case of award of work then successful bidder will be required to setup new office at Noida,(Gautam Budh Nagar) UP.

**2.4.2.22** The successful bidder will have to ensure seamless integration of existing concourse PIDS with the proposed PIDS solution.

**2.4.2.23 Annexure-B**

**(KEY DATES LINKED TO PAYMENT MILESTONE)**

The Contract shall be complete in a phased manner by fixing priorities to different stretches of work as per requirement of work from time to time as per the key dates (mile stone) indicated below:

Key Dates	Time to achieve in months from date of acceptance of Notice of Award	Description	Remarks
KD-1	2	Successful Demonstration of PIDS System at One station of NMRC	Payment i.e.10% of cost of Supply, Installation, Testing and Commissioning of PIDS System will be released to the satisfaction of NMRC
	2 to 3	FAT/FAI	
KD-2	4 to 6	Supply of Double Face ,2 Line PIDS panel for platforms	Payment i.e. 30 % of cost of Supply, Installation, Testing and Commissioning of PIDS System will be released to the satisfaction of NMRC  Cluster 1 : ( 7 Stations) – 10% Cluster 2 : ( 7 Stations) – 10% Cluster 3 : ( 7 Stations) – 10%
KD-3	7 to 8	Dismantling of Existing platforms PIDS panel and accessories and shifting to Telecom stores at NMRC Depot Greater Noida	Payment i.e. 30 % of cost of Supply, Installation, Testing and Commissioning of PIDS System will be released to the satisfaction of NMRC  Cluster 1 : ( 7 Stations) – 10% Cluster 2 : ( 7 Stations) – 10% Cluster 3 : ( 7 Stations) – 10%
		Installation of Double Face,2 Line PIDS Panel at Platforms of each station for	

Replacement of Existing Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System

		all 21 stations of NMRC and Software Integration of existing Concourse PIDS and PAS.	
KD-4	9 to 10	Final Commissioning of PIDS system at all 21 Stations of NMRC	Payment i.e. i.e. 20 % of cost of Supply, Installation, Testing and Commissioning of PIDS System will be released with entire satisfaction of NMRC
KD-5	22 (1 <sup>st</sup> Yr DLP)  &  34 (2 <sup>nd</sup> Yr DLP) respectively	Defect Liability Period ( DLP) support for 2 years	Balance payment i.e. 10% of cost of Supply, Installation, Testing and Commissioning of PIDS System will be released with entire satisfaction of NMRC in following manner: <ul style="list-style-type: none"> <li>a. 5% : At the end of 1st Year DLP</li> <li>b. 5% : At the End of 2<sup>nd</sup> Year DLP</li> </ul>

**2.4.2.24 Annexure C : Schedule of Requirement (Tentative)**

S. No	Item Description	Unit	Qty
<b>Supply of PIDS</b>			
1	PIDS at Platform	No.	88
2	Integration and Updation of existing Concourse PIDS	No.	42
<b>PIDS Management System.</b>			
1	Central server Application ( 01 at OCC and 01 at BCC	No.	2
2	Central MMI Application	No.	21
3	NMS Server Application ( at OCC and BCC)	No.	1
4	MMI Application for NMS	No.	2
5	SCR Server Application	No.	21
<b>Supply of Server ,Work Station &amp; Media Converter</b>			
1	Server for the OCC and BCC	No.	2
2	Work Station for OCC and BCC	No.	2
3	Station Server in TER	No.	21
4	Station MMI IN SCR	No.	21
5	NMS Server Work Station at OCC and BCC /CSS	No.	2
6	Network Switch 24 Port RDSO/Railway /Industrial Grade, 2 Switch per station	No.	44
8	Media Converter	No.	176
<b>Supply of Cables</b>			
1	Power Cable 3 core ,1.5 Sq mm FRLS	Mtr	19000
2	of Data Cable Cat 6 Armoured Type	Mtr	7000
3	Optical Fiber Cable 4 F FRLS	Mtr	15000
<b>Laying of Cables and Installation</b>			
1	Laying and dressing of Power Cable 3 core ,1.5 Sq mm FRLS	Mtr	19000
2	Laying and dressing of Data Cable Cat 6 Armoured Type	Mtr	7000
3	Laying and dressing of Optical Fiber Cable 4 F FRLS	Mtr	15000
4	Dismantling of existing PIDS, other network elements and their transportation from station to NMRC store at NMRC Depot Greater Noida	No.	88
5	Installation of new PIDS with transportation including software and hardware peripherals	No	88
<b>Integration, Testing and Commissioning</b>			
1	Integration, Testing and Commissioning at all location as per NMRC requirement	LumpSum	1
<b>Documentation and Training</b>			
1	Engg Documents and Manual	LumpSum	1
2	Training	LumpSum	1

Replacement of Existing Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System

3	FAT/FAI	LumpSum	1
4	PAT at all location	LumpSum	1
5	SAT at all location	LumpSum	1
<b>Warranty/Defect Liability Period</b>			
1	2 Years DLP Starting from Date of issuance of Work Completion/Acceptance Certificate by NMRC	Year	2
<b>CAMC ( Comprehensive Annual Maintenance Contract</b>			
1	System will be under CAMC for 3 years from the end of 2 <sup>ND</sup> Year DLP	Year	3

**Note:**

- a) The requirement quoted above is tentative. However every bidder is required to give detailed break up of schedule of requirement each component, software, hardware, Licenses, Network in its bid document.
- b) The Bidder is suggested to undertake the Site Visit and assess the requirement basis of the proposed solution for Replacement of Existing Passenger Information Display System of NMRC.
- c) The Bidder should make himself completely acquainted with all conditions, obligations, specifications, drawings, etc.
- d) The Bidder is required to submit Bill of Quantity describing each of the above mentioned tentative line items and additional items, if any, with their corresponding make and model
- e) The Bidder is required to submit "Network Architecture" with justification for Bill of Quantity
- f) Which shall include –
  - (1) Application Engineering, Design and Layout (with Documentation)
  - (2) Interface Application Engineering and design with designated DDC, Construction Contractor of station, Depot, etc.
  - (3) As built Drawings as per General and Technical Specification
  - (4) Any other Item to comply to the operational and functional requirement
- g) During the course of Project Execution the above quantity may be vary as per the detailed design proposed by the respective bidder. The above list is mere indicative and not exhaustive and may be subject to changes as per site conditions and solution proposed by bidder.



## 2.5 Performance Requirements

### 2.5.1 GENERAL

General Requirements of this Particular Specification, specific performance requirements for the PIDS shall be as specified herein:

### 2.5.2 RELIABILITY REQUIREMENTS

Reliability of the PID system shall include, but not be limited to, the following:

2.5.2.1 The Contractor shall ensure that PIDS equipment supplied under the Contract comply with the following reliability figures:

PIDS Equipment	MTBF
PIDS Display boards (True Color LED)	> 50,000
PIDS management system	> 50,000
PIDS MMI on common Workstation	> 50,000
Serial Converters	>100,000

### 2.5.3 AVAILABILITY REQUIREMENTS

PIDS visual messages initiated by any mode of operation shall be considered unavailable under the following failure conditions as minimum:

- a. Unable to display messages as initiated by the train control and signaling (T&CS) system at any location.
- b. Failure of any PIDS display board at locations under this contract.
- c. Non-readable from specified viewing distance/angle.

The PIDS panel shall have an overall availability of better than 99.96%.

### 2.5.4 MAINTAINABILITY REQUIREMENTS

2.5.4.1 The Mean Time to Restore (MTTR) of the Platform PIDS panel to full normal operation following a failure shall be rectified on availability of first Power block.

### 2.5.5 SYSTEM SAFETY REQUIREMENTS

2.5.5.1 All equipment must comply with and be installed in accordance with IEC 65, IEC 364.

2.5.5.2 All metal enclosures shall be provided with an earthing terminal and earthing of all equipment shall be carried out in accordance with overall earthing policy.

## **2.6 FUNCTIONAL REQUIREMENTS**

### **2.6.1 GENERAL**

- 1) The PIDS shall display passenger information in any combination of Hindi text, English text, numerals, animated graphics, punctuation and symbols or combination of alpha – numeric or any of the above. Each page of display shall be complete in meaning which shall be easily interpreted by passengers.
- 2) The PIDS MMI shall have necessary facilities to direct different manually triggered messages to individual side of the display board, both sides of the display board, or group of display boards simultaneously within a station.
- 3) The PIDS shall be an IP based system with health status of the equipment being monitored locally at station and remotely at OCC.
- 4) The PIDS shall send different messages, other than initiated by the Signaling system, in either one of the following user programmable orders:
  - a) Display of the first message in different languages followed by the second message in the same order of languages and so on; and
  - b) Display of a set of messages in one language followed by the same set of messages in another language and so on.
  - c) The display time of each message and toggle time between two messages shall both be user configurable.
- 5) Layout of the True Color LED display board(s) being provided shall be configured to include Train Information Display integrated with Analog Clock, Coach Loading Information Advertisement Screens.

The contractor shall submit proposed layout(s) of display boards at Platforms to Employer's f Representative for review and approval.

- 6) Where certain messages are to be broadcast both by audio and visual means the audio messages broadcast by the PAS System and the visual messages displayed on PIDS displays shall as far as is possible be simultaneous/synchronous with an indiscernible time difference.

### **2.6.2 OPERATION**

The PIDS shall support the following modes of operation as a minimum:

- 1) Time mode as initiated by the PIDS internal system clock via a Time table& message scheduler provided as part of the MMI facilities;
- 2) Automatic mode based on information from the Signalling System for train related information displays;
- 3) Manual mode as initiated by a PIDS operator on the MMI at OCC/BCC & SCR.

### **2.6.3 MESSAGE INITIATION( PIDS)**

#### **1) MESSAGE INITIATED FROM SCR**

- a. The SCR MMI shall have necessary facilities to initiate any fixed or instantly constructed messages, and add in any additional information required to complete the pre-formatted messages.
- b. The SCR MMI shall have selection facilities to direct the message to one side of a display board, both sides of a display board, group of display boards or all display boards within a station. Also, it shall be possible to make this selection, row wise, in

each of the LED type PIDS Boards. The operator shall be required to confirm this selection before the message is Transmitted /implemented.

- c. The SCR MMI shall have the instant message construction facilities to store “adhoc” messages for repetitive displays.

## **2) MESSAGES INITIATED FROM OCC/BCC**

- a. The OCC shall be provided with necessary facilities to access PIDS Board at every station.
- b. Data communication links shall be provided to each station allowing the OCC to convey messages to the following as a minimum:
  - i) One station;
  - ii) A group of stations;
  - i) All stations;
  - ii) One or more display boards at one station; and
  - iii) Any combination of display boards in any combination of stations

## **3) MESSAGES INITIATED FROM THE SIGNALLING SYSTEM**

- a. Data will be sent in a coordinated (synchronized) manner to the PAS and PIDS by the Signalling System to broadcast &/or display the pre-defined information including Train arrivals, Departures & Coach Occupancy on designated PA Zones and Passenger Display Boards Platform/Concourse at stations.
- b. Based on the train information received from the Signalling System., designated PAS messages shall be initiated and coordinated (synchronized) with the PIDS, The PIDS shall maintain the data integrity of the train information received from the Signalling System.
- c. The PIDS shall initiate associated display to alert passengers of all stopping and non-stopping trains based on the information received from the Signalling System.
- d. The PIDS shall carry out the internal time countdown based on the estimated time data sent by the Signalling System and the current PIDS internal system clock. The PIDS shall accordingly announce and display the estimated train arrival & /or departure particulars.
- e. In the event of any train stopping to proceed to the next station, the Signalling System shall update information pertaining to the countdown time (arrival) to the PIDS System.
- f. The estimated time to arrive &/or depart of the train(s) shall be updated automatically every minute from the current PIDS internal system clock and shall be corrected if necessary, following a data update from the Signalling System.
- g. The pre-defined message displays shall be triggered by the time countdown functions of the PIDS or data to be sent by the Signalling System including display of non-stopping trains passing through the station.
- h. All messages initiated by the Signalling System shall be designed for automatic broadcast & display without human intervention. However, the PIDS operator shall have necessary facilities to override the display by manual inputs including blanking the current display.
- i. Simultaneously, upon receiving the train information from the Signalling System at the OCC, the PIDS shall display, within 3 to 5 seconds, the train information on the designated display boards. The Signalling equipment at each station shall invoke the station PIDS control equipment to clear the designated train arrival/departure information on the corresponding PIDS display boards subsequent to a train departure.
- j. The details of the initiation & methodology of various Displays shall be submitted by the contractor as part of detailed design for review and approval of the Employer.

## **2.6.4 MESSAGE CONSTRUCTION**

### **2.6.4.1 FIXED AND PRE-FORMATTED MESSAGES**

- 1) Fixed and pre-formatted messages shall be produced by the Contractor with message scripts issued by the Employer's representative prior to commencement date of Installation Tests. Samples of the produced messages along with suggested animated graphics shall be submitted, to the Employer's representative for review/approval, before final production of the messages.
- 2) Special and emergency messages shall be fixed, pre-formatted or instantly constructed messages depending on the message nature. Typical examples of these messages shall, as a min., include the following:
  - a) Fixed message - "Smoking is prohibited in the entire station";
  - b) Pre-formatted message - "This station is .....";
  - c) Special messages - "Due to ..... failure, the arrival of trains shall be delayed"; and
  - d) Emergency messages - "Owing to an accident ....., please leave the station as soon as possible".
  - e) Any other message advised during design stage.
- 3) Messages shall be constructed and stored in Hindi and English characters, along with the associated animated graphics, symbols and punctuation. Every message shall be displayed in one language or any combination of these languages.
- 4) The pre-formatted messages at each station shall be identical, providing fields for name, time or other variables to be added.
- 5) Messages shall be selected from a screen look-up table. Message additions required for pre-formatted messages shall be typed in directly from the key-board or "click and dragged" from another look-up table of commonly used characters, words and phrases.
- 6) Fixed or pre-formatted messages initiated from the OCC shall be issued in message codes to respective station PIDS control equipment.
- 7) Pre-formatted messages may have more than one variable to be added with one containing fixed characters and the other containing variable information. These messages shall be used repeatedly by inserting different variables.

### **2.6.4.2 INSTANTLY CONSTRUCTED MESSAGES**

- 1) The PIDS shall enable the OCC and SCR MMI operators to instantly construct messages and store them to the local message database of the PIDS control equipment. These messages can then be retrieved for display or be deleted if they are no longer required by the operators.
- 2) The instantly constructed messages shall be displayed either one-off or repeatedly similar to the pre-stored messages.

### **2.6.4.3 MESSAGES RELATED TO FIRE DETECTION AND ALARM SYSTEM**

- 1) On detection of Fire alarm, Operator/Controller in SCR shall operate the Emergency Push button on the Integrated Emergency Panel provided by BMS. The Operation of the Emergency Push Button shall result in automatic initiation of pre-recorded evacuation announcement in all zones and display of Emergency Exit Message on all the PIDS display boards of the station.

- 2) In addition to the above, on detection of Fire alarm, Operator/Controller in SCR can also make: Manual announcements and Display fixed, pre-formatted or instantly constructed and manually triggered Emergency Exit message.

#### **2.6.4.4 MESSAGE EDITION**

- 1) Utilized to make Normal as well as Emergency announcements
- 2) User-friendly message editing facilities shall be provided to define messages which consist of characters, symbols, punctuation and graphics.
- 3) Editing facilities shall be provided for both Hindi and English characters.
- 4) General editing functions including cut, paste and copy as employed in commonly used word processor software shall be provided.
- 5) Global selection capabilities shall be provided for pre-defined, commonly used words, phrases and messages for all stations.
- 6) Global selection capabilities of pre-defined presentation styles shall be provided for standard displays. This shall enable the operator, as a minimum, provide blinking or highlighted characters, and change scrolling and animation effects.
- 7) Preview functions of the editing messages shall be provided for different display boards via the "What You See Is What You Get (WYSIWYG)" facilities of the MMI.
- 8) Graphical editing facilities shall enable the operator to create/modify animated graphics which will consist of graphical symbols, drawings/pictures and Hindi/English characters.
- 9) Drawing capabilities shall be provided to produce different shapes for each object within the same graphical frame.
- 10) Necessary facilities shall be provided to create new characters, symbols and graphics that can be stored in the associated library in required format. The new characters shall then be assigned with a code and stored for future retrieval. PIDS System must have storage facility of at least 1 TB at each station..
- 11) The PIDS shall be provided with adequate facilities for the edition and creation of Hindi messages which shall be reviewed by the Employer's Representative:

#### **2.6.4.5 MESSAGE CHARACTERISTICS**

- 1) All messages under preview via the "WYSIWYG" facilities of the MMI shall have the same font type, display speed and display effect as will be shown on the display board.
- 2) Messages shall have a number of characteristics assigned to them depending on the message type. The message characteristics shall include display speed, display effect, associated animated graphics and the message display intervals as defined by the message scheduler of the MMI facilities.

#### **2.6.4.6 SCROLLING MESSAGES**

- 1) Messages shall be scrolling horizontally from right to left or vertically from lower to upper for any type of display boards. This choice shall be made by the Operator from the MMI. Also, it shall be possible to have a combination of fixed static message on one row and scrolling/flashing message on another row of the same PIDS Board. These functions shall be operator selectable form the Station MMI.
- 2) For platform display boards, at the conclusion of the previous message, the display line shall momentarily blank before the scrolling message emerges.

- 3) The message to be scrolled for a number of cycles shall be programmable by the operator

#### 2.6.4.7 FLASHING MESSAGES

- 1) Important messages shall be selected to have a flashing effect to draw attention to the importance of the message being displayed. This choice shall be made by the Operator from the MMI.
- 2) The default flashing period shall be 1 second “on”, 0.5 second “off”. This duration shall be user re-programmable within practical limits by the PIDS management system.

### 2.7 MESSAGE PRIORITIES

- 2.7.1** Message displays shall be prioritized. Before any message is displayed, the PIDS shall check internally that no other message of higher priority is about to be or is being sent for being displayed. If a conflict is detected, the highest priority message or a sequence of messages shall be displayed first.

PIDS message priorities shall be programmable from the PIDS management Workstation. PIDS shall offer the following levels of priority as a minimum, in a descending order.

**Table: Message Priorities**

Priority	Details of messages
1	Instantly constructed / pre-stored messages relating to emergencies like fire, evacuation, abnormal working etc. from the SCR.
2	Instantly constructed / pre-stored messages relating to emergencies like fire, evacuation, abnormal working etc. from the OCC
3	Train arrival/departure related messages Actuated automatically by Train Control & Signalling system
4-9	Pre-stored / instantly constructed messages regarding routine system information.
10	Maintenance and test messages
11- 13	Spare additional Messages

- 2.7.2** Any higher priority level message, when initiated, shall interrupt any lower priority message currently displayed. All such interrupted messages shall be removed from the message queues so that they will not restart or continue after they have been interrupted.
- 2.7.3** Lower priority message shall not interrupt any higher priority message in progress. The lower priority message shall only be initiated by the automatic / manual modes of operation defined for the PIDS in accordance with its respective priority level only at the end of a message display cycle as indicated by the removal of the busy indication.
- 2.7.4** Equal priority level messages shall be dealt with on a “first-come-first-served” basis.

## 2.8 PIDS DISPLAY BOARDS

PIDS display boards shall be provided at following locations at stations as a minimum:

- 1) Platforms (True Colour LED Type)
- 2) Integration and repair of existing Concourse LED back lit LCD panel display board (42 No.)
- 3) Any other location (if required)

### 2.8.1 GENERAL

- 1) All PIDS display boards shall be capable of ceiling or pillar or wall mounting, as per site conditions.
- 2) All PIDS display boards shall be double-sided. The final position of all display boards shall be subject to review by the Employers representative.
- 3) The Contractor shall co-ordinate with civil works project Contractors to finalize the location and installation details of the display boards for optimal viewing distance/ angle.
- 4) The final position of the display boards shall be submitted for review & approval by the Employer's Representative.

### 2.8.2 DISPLAY CAPABILITIES

- 1) **All DISPLAY Boards:**
  - a) The PIDS shall enable every display board to display up to six message screens per minute. The number of message screens to be displayed per minute shall however be user programmable.
  - b) Display boards shall display a combination of text messages in Hindi and English characters, symbols, punctuation, graphics with or without animation. Each animated graphics file shall contain information for displaying a full graphics animation sequence or image designed for the display board.
  - c) Display boards shall be capable of producing special display effects including scrolling up/down/left/right, fade-in/fade-out, wipe up/down/left/right, pop, character by character and blinking.
  - d) Display Board(s) shall normally be synchronized with the Master Clock System and shall synchronized with the Internal Clock System provided in the Display Board, in event of failure of the Master Clock System / Isolation of the Display Board(s) from the PIDS System.
  - e) In event of isolation of the Display boards from the PIDS System, the default message (Text, Image & Video) along with the Analog Clock shall continue to be displayed on the Display Board. The default message(s) can also be called upon to be displayed via the local station PIDS control equipment.  
  
The default messages shall include Analog Clock, pre-defined messages, Images and Full HD Video(s), details of which shall be finalized during detailed design stage.
  - f) The PIDS shall display the train information to the designated display boards within 2 seconds of receiving the train information from the Signaling system.
  - g) The PIDS shall automatically display specific &/or emergency messages triggered by the SCR to the designated display boards within 2 seconds.

- h) The time clock of the PIDS shall be synchronized to the Master Clock of the Master Clock Subsystem to an accuracy of less than 1 second.
- i) On screen performance management report generation on the PIDS Network Management System shall not exceed 15 seconds.

**2) True Colour LED type Double-sided display boards installed on Platforms:**

In addition to functionalities defined, the platform display board(s) shall have the following functionalities

- a) Shall have double sided display board having multifunctional display including display of Train arrival/Departure, Passenger Loading (if applicable) of next train in Hindi & English format.
- b) The multifunctional display board shall be configured to display the time in Analog/Digital format along with advertisement or any other application decided during detailed design
- c) The display format and display sequence of messages to be displayed on the display boards shall be individually defined and selected and programmed by the MMI operator.
- d) Each side shall display same or different messages or scripts, as required, and operated independently from the other side.
- e) Each side of the display board shall have a default message assigned.
- f) The default message shall be displayed, if enabled by the MMI operator, when no other information is assigned to the display board. All default messages shall be configurable from the MMI by an operator of appropriate authority.

**3) DISPLAY BOARD POSITIONING**

- a) All display boards shall be located to minimize interference to passenger flows and other station signages while providing optimum viewing distance.
- b) Display boards suspended above open floor space shall be mounted so that the lowest part of a display board is at least 2.5 meters above floor level. In case it is not possible to meet these criteria because of site constraints, specific approval of the Employer’s Representative shall be obtained.
- c) In case it is not possible to meet these criteria because of site constraints, specific approval of the Employer’s Representative shall be obtained.

**4) PLATFORM DISPLAY BOARDS**

- a) Two numbers of Double-sided display boards (True Colour LED type) shall be provided at each platform of elevated station to display train related & other information as per configuration / design and dimensions tabulated below:

**Dimensions of Platform Display Board**

Location (Platform)	Length (m)	Width (m)
Elevated Station	2.0 (min.)	0.5 (min.)

The size of the PIDS panel shall be decided/finalized as per site conditions

- b) These display boards shall be positioned for optimal viewing coverage



## **2.9 INTERFACE (MMI) (PIDS)**

The supplied PIDS system will have to be provided with a MMI based in Station Control Room (SCR) at all 21 stations and it will also interface with PAS (Passenger Announcement System)/Public Address System. Further PIDS system will have mainly interface with NMRC signaling System, Master Clock System, PAS system.

## **2.10 INTEGRATED MANAGEMENT SYSTEM ( PIDS SUBSYSTEM)**

- 1. System Management**
- 2. Message/Event Logging Functionalities**
- 3. System Response Time etc.**

## **2.11 NETWORK MANAGEMENT SYSTEM (FAULT AND ALARM MANAGEMENT)**

- 1) Fault Diagnostics etc.
- 2) Fault Printing

### **2.11.1 FAULT AND ALARM MONITORING (PIDS)**

- 1) The PIDS Server in Station should monitor the fault status of the equipment in the Station including.
  - i) PIDS Displays
  - ii) Master Clock Connection
- 2) The Station MMI should present a dashboard showing the status of all the equipment being monitored in the Station. The dashboard should show the status of each equipment using color coding (green for OK, red for fault and yellow for passive equipment).
- 3) The PIDS Server in Station should forward all the major alarms to the OCC/BCC Server which will consolidate all the major alarms from all Stations into a single listing.
- 4) The faults data should be available in the Station Workstation and in OCC/BCC Servers for at least 30 days which should be configurable.
- 5) Operator should be able to acknowledge a fault.
- 6) The faults reported from the remote stations should be synchronized across all the central PIDS Servers in OCC/BCC so that when server fails over all historic and current faults are still visible.
- 7) The PIDS NMS should be a separate system located in the OCC/BCC which can connect to all the Central PIDS servers and view faults from all these servers.
- 8) The OCC MMI should present a dashboard showing the status of all the equipment being monitored in the OCC/BCC and from all the remote Stations. This consolidated dashboard should also present the status of the equipment in color coded format.
- 9) Large amount of fault data spanning over a longer date range should be exportable as an archive file that can be opened using MS Excel.
- 10) The PIDS sub-system NMSs shall monitor system alarm status on real time basis using dedicated server(s) for the purpose.
- 11) The alarm data shall be available in the active alarm list and also be stored in the database (alarm history) for future reference and retrieval of alarm history data

- 12) It is envisaged that NMS and corresponding management workstation shall be provided in OCC/BCC. The NMS should be available for access only in CSS/CER. A graphical user interface shall be provided allowing user-friendly operation of the PIDS.

The GUI used for the NMS of all sub-system(s) should follow a Top down approach.

The first screen should indicate status of the sub-system (Faulty/OK) of all Stations on a single line diagram of the Metro corridor. Selection of any station on the single Line of the Metro corridor should be able to select detailed status of all elements of the sub-system of that particular station.

- 13) All control equipment for PIDS including PIDS display boards shall be provided with fault monitoring and reporting to the PIDS management system.
- 14) In addition to the alarms and status to be shown on the management Workstation of PIDS status of major equipment of the PIDS shall be monitored and displayed with suitable indications on the local PIDS equipment shelves/racks.

### 2.11.2 ALARM HANDLING

Following alarms should be reported by the station server and OCC/BCC PIDS Servers as a minimum

- 1) Station PIDS Server
  - a. Communication link failure. Loss of connection to FOTS
  - b. Loss of connection to master clock
  - c. Loss of connection to OCC/BCC Central Servers
- 2) OCC PIDS Server
  - a. Communication link failure. Loss of connection to FOTS
  - b. Loss of connection to master clock
  - c. Loss of connection to ATS Servers / No data from ATS Servers
  - d. Loss of connection to any of the remote station servers
- 3) PIDS Displays
  - a. Communication link failure. Loss of connection to FOTS
  - b. Power supply failure
  - c. Temperature of the PIDS above threshold
  - d. Display panel failure.
- 4) Alarm handling shall be implemented through individual (PIDS) Network Management system(s), with visual indications for specific alarm conditions, provided in SCR (PIDS workstation) and CER/CSS at Station(s) and OCC& BCC respectively.
- 5) Following alarm conditions shall be extended to the PIDS management system as a minimum:
  - a) Loss of communication link;
  - b) Loss of entire sub-system facilities at a location;
  - c) Loss of clock synchronization;
  - d) Loss of interface link with Signaling System
  - e) Power supply unit failure;
  - f) Failure of KVM Extender.

- g) All alarms shall be stamped with time and date;
- h) All alarms shall be classified into major or minor alarms and same shall be user configurable.
- i) All alarms resulting from an equipment fault shall be latched alarms.
- j) Contractor shall state the display capabilities of the proposed system.
- k) Alarms shall be accompanied with audio and visual display.
- l) All alarms reported to the PIDS management system shall be associated with an audible tone which can be controlled (enabled or disabled) by the system administration operator on the PIDS management Workstation.
- m) When an alarm is received, it shall appear flashing on the alarm banner of the appropriate workstation as a text message, with an audible warning and flashing of the button of the display group relating to the alarm and copy the text message into a separate alarm text page (i.e. Active alarm list) which shall list the alarms in reverse chronological order.
- n) An unacknowledged alarm and an alarm acknowledged but with the fault condition not reset/still existing, shall be distinguished by colour and by various groups of characters flashing. Reset alarms shall be steady.
- o) It shall be possible to acknowledge alarms individually or in-groups from the alarm display page. Alarm acknowledgment shall also be time tagged.
- p) All alarms removed from the active alarm display list shall automatically be transferred and stored to the alarm history database upon rectification of the alarm on the PIDS management system as detailed in the Central Archiving Facilities.
- q) Usage of storage capacity, of the alarm database memory, beyond 85% shall generate an alarm to the operator for initiating necessary housekeeping action. If the storage still goes beyond 85%, same shall result in overwriting of alarm history on FIFO (First In First Out) basis. Under no circumstance, this scenario shall result in degradation in performance (hanging etc.) of the NMS. Storage capacity at minimum should be 1 TB.
- r) Major and minor summary alarms of the PIDS and MCLK equipment at stations and the OCC & BCC shall be provided to the NMS of PIDS & MCLK sub-system(s) for monitoring health of the equipment.

### 2.11.3 ALARM DISPLAYS

Contractor shall provide following general capabilities and characteristics for the alarm displays as a minimum:

- 1) Quickly filter the alarm display to view alarms generated from a particular system component, by geographic location, by time and date;
- 2) A colour coding scheme indicating the alarm severity according to the alarm classifications;
- 3) Display of the alarms in chronological order along with their associated time stamps;
- 4) Scrolling capabilities to enable the management Workstation user to view more alarms that can be displayed on one single screen; and
- 5) Facilities to acknowledge alarms.

#### **2.11.4 FAULT AND ALARM MANAGEMENT**

- 1) The PIDS NMSs shall have necessary facilities to produce user configurable reports based on user-programmable time schedules on the overall performance of the PIDS system including traffic reports, fault reports, alarm history, display board usage statistic reports and message usage statistic reports (as applicable).
- 2) The NMS shall enable user configurable generation of MIS reports indicating performance of the PIDS system

#### **2.11.5 FAULT PRINTING**

- 1) The PIDS NMSs shall be equipped with a maintenance printer port for connection with the common maintenance printer to produce hard copies of the management Workstation screen display including graphical screen information, system parameter data, maintenance fault history, listing of pre-defined system information and various performance management reports.
- 2) The PIDS NMSs shall be equipped with a log printer at each OCC connected to the maintenance printer port for printing real-time logs incl. maintenance activities & fault events as detailed above.

#### **2.11.6 FAULT DIAGNOSTICS**

##### **1) GENERAL**

- a) Fault diagnostics shall be provided for PIDS system control equipment and for each Passenger Information Display Board & Clock (Digital & Analog).
- b) The fault diagnostics system shall detect the alarm conditions.
- c) The fault diagnostics system shall have following additional diagnostics features as a minimum:
  - i) Provide testing to individual module and card level;
  - ii) Provide on-line help to maintenance personnel; and
  - iii) provide self-test facilities and built-in diagnostic routines to enable malfunctions to be automatically displayed.

##### **2) FAILURE MODES**

- a) When power is restored following a power failure to the PIDS sub-system, the effected equipment / system shall perform all necessary self-testing processes and then resume functioning fully in the same configuration as before the shutdown. This shall be completed automatically within 5 minutes of power restoration.
- b) Failure of one side of the PIDS display board (True Color LED display modules) & Bi-directional Analog Clocks shall not cause failure or loss of communication to the other side of the PIDS display board and Analog Clock or other Display boards and Analog Clocks
- c) Failure of both sides of the Display board and Analog Clocks shall not cause failure or loss of communication to other Display boards & Analog Clocks
- d) Failure of an MMI shall not prevent any other MMIs from operating and controlling the PIDS sub-system(s).

## 2.12 DESIGN/APPLICATION ENGINEERING REQUIREMENTS

Design Engineering Requirements for the PID system shall include, but not be limited to, the following:

### 2.12.1 GENERAL

**2.12.2** The system design of the PIDS shall be based on a proven, reliable, scalable, secure standard – based solution using open architecture.

**2.12.3** In addition to above requirement it shall also meet the following system performance and equipment specification as specified herein:

- a) The PIDS shall be designed with fault tolerant/redundant system architecture to prevent common mode failures.
- b) The PIDS system application software shall be based on a proven operating system subject to the review by the Employer's representative.
- c) The software package used for PIDS system shall incorporate commercially available software for graphics and character generation, particularly for the generation of Hindi characters.
- d) The software shall be designed to accommodate the ultimate, fully expandable capacity, without requiring any change to the hardware, software or firmware of the installed system and without affecting the overall operation or performance of the PIDS system.
- e) The details of the synchronization plan of the PAS & PIDS sub-system(s) with the Master Clock System shall be submitted for review by the Employer's Representative.
- f) PIDS system should be a networked distributed computing system with central servers in OCC/BCC and local servers in each Station. Central Server should distribute workload to Station servers in normal mode of operations.
- g) The PIDS system should support the below content types.
  - Text and numbers in English and Hindi
  - Animated Graphics
  - Images. Videos, Vector Graphics (Analog Clock)
- h) PIDS should be capable of rendering the above content types at the same time on different parts of the display using Templates. Requirements for templates are defined in Design stage.
- i) All text displayed on PIDs should be based on Unicode fonts, thus supporting commercially available industry standard font families for English and other Indian languages.
- j) PIDS system should be able to direct Broadcast messages and multimedia content to individual displays and to various combinations of displays. User should be able to select one of more displays to broadcast a message.
- k) System should provide two modes of selection for PIDs display Zones while broadcasting a message as shown below.

- a) Structure showing the PIDs Zones which can be expandable depending on the location of the PIDs. In the OCC this tree structure should start with Line which will expand to list of Stations which will further expand to Platform, Con course etc. In Station the tree should start with Platform, Concourse etc.
- b) Map based selection. This should be a graphical representation of the Station. In OCC this should start with the network map showing the lines and stations. Operator can select a Station and then go deeper to select specific areas or specific PIDs Zones.
- l) PIDS System should facilitate message library management, where each message is a single selectable item, containing a combination of text message in English and Hindi.
- m) PIDS Displays should be true color LED with capability to render text, multimedia content and analogue clock with configurable clock faces.

## **2.12.2 TECHNICAL SYSTEM PERFORMANCE**

### **2.12.2.1 DISPLAY PERFORMANCE OF TRUE COLOUR LED BOARDS ON PLATFORMS**

#### **1) Display Contrast Ratio**

The PIDS shall produce images with a minimum contrast ratio of 3000:1 when operating in ambient artificial lighting conditions and outdoor lighting environment up to full sunlight conditions found throughout the station. Anti-reflective screen shall be used to optimize contrast value, duly ensuring compliance to other requirements specified in this PS.

#### **2) Viewing Angle**

The viewing angle in the horizontal plane and normal to the face of all display boards shall not be less than  $\pm 110$  degrees.

### **2.12.3 EQUIPMENT SPECIFICATION ( PARTICULAR SPECIFICATIONS )**

PIDS equipment shall comply to following requirement:

#### **2.12.3.1 PIDS CONTROL EQUIPMENT**

- 1) The PIDS control equipment shall select and route various inputs to any combination of outputs to one side or both sides of the designated display board, combination of display boards or all display boards according to the control command from the integrated PIDS MMI.
- 2) Data validation and data integrity checks shall be done for all input and output ports to ensure correct information is transmitted and received.
- 3) The central PIDS control equipment shall hold the fixed and pre-formatted message format for each station, with specific variables for the insertion of, for example, destination names, arrival/departure time and platform number.
- 4) A Flash Drive or other alternative device subject to review by the Employer's representative shall be provided to add to or extend the graphics software which shall be capable of being downloaded both locally and centrally.
- 5) The message database equipment shall be of proven database technology with sufficient storage capacity to store fixed, pre-formatted and instantly constructed messages.
- 6) Storage capacity shall be provided to store the local and central message logs for all the instantaneous messages manually triggered by the PIDS operators as detailed in the Central Archiving Facilities
- 7) The message database equipment shall be provided with the SSD or any other fast access memory capacities for following uncompressed messages for each PIDS control equipment as a minimum:
  - a) 250 fixed messages for Hindi and 250 fixed messages for English;
  - b) 250 pre-formatted messages for Hindi and 250 pre-formatted messages for English;
  - c) 50 instantly constructed messages for Hindi and 50 instantly constructed messages for English;
  - d) 100 graphics and symbols;
  - e) All Hindi characters;
  - f) All standard ASCII characters and punctuation.

- g) There should not be any limitation in message storing and playback. Above mentioned message list is the minimum requirement.
- 8) The PIDS control equipment and each individual display board at station shall be equipped with built-in test routines that are capable of testing each hardware module. These routines shall selectively operate in an off-line mode to enable a complete functional test of the module in question.
- 9) Built-in test routines shall be initiated by following means as a minimum:
  - a) Local maintenance commands via a notebook computer connected to the local maintenance port;
  - b) Remote maintenance commands via the central PIDS management Workstation;
  - c) Automatically as a result of the on-line error detection; and
  - d) Automatically as part of the power-up initialization processes.

#### 2.12.4 DISPLAY EQUIPMENT

##### 2.12.4.1 GENERAL

- 1) The Contractor shall review different display board requirements and determine the final standard size for each type of display board to ensure that the overall performance requirements of the PIDS can be met.
- 2) Individual display boards shall have graphics display capabilities. The software programs for these graphic animations shall be contained in the PIDS control equipment.
- 3) The display board shall be blanked whenever no valid signal is received from the local PIDS control equipment and if the default display message is not activated.

If the default display message is activated, then the default message in the PIDS Boards memory or in the PIDS station server shall be displayed.

##### 2.12.4.2 PLATFORM DISPLAY BOARDS (True Color LED Type)

- 1) The PIDS displays consisting of Industrial Grade True color LED type panels shall meet the following minimum specifications:
  - a) LED model : 3 in 1 SMD LED
  - b) Color : True Color
  - c) Pixel Pitch (mm) : 2.5 or better
  - d) No of sides : 2
  - e) Display Dimension in mm x mm(Active Area) : 1920 X 480 (min.)
  - f) Brightness (cd/m<sup>2</sup>) : 3000 or better
  - g) Contrast ratio : 3000:1 or better
  - h) Optimal Viewing angle : 110° or better
  - i) LED display life-span (hours) : 100,000 or better
  - j) Operating Temperature (Ambient) : up to 70° C
  - k) Humidity : 0-95% or better



Replacement of Existing Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System

- l) IP Rating (Front & Rear) : IP 65
  - m) Cooling System : Required Fan cooled
  - n) Frame Rate : 30 FPS (min.)
  - o) Refresh Rate : 2000Hz or better
  - p) Interface :HDMI & 2 Ethernet
  - q) Service conditions : 24x7.
  - r) RAM : 4 GB Min
  - s) Storage : 1 TB SSD or better
  - t) Operating System : Preferably Windows OS or Equivalent OS
  - u) SPD : Suitable PSP and DSP
  - v) Redundant power supply : dual power supplies configured in hot Standby mode, with each power supply configured for taking load for both sides of the display boards, in normal as well as degraded (failure) modes.
  - w) Type test certificates : PIDS Display Hardware must be tested in an NABL approved lab, and NABL report must be submitted for following tests
    - a) EMC : IEC 50121-1/4
    - b) Vibration : IEC 60068-2-6
    - c) Ingress Protection : IEC 60529 (IP 65)
    - d) Environmental : IEC 60068-2-1, IEC 60068-2-30
    - e) Safety CE : IEC 60950-1, IEC 62368-1
  - x) Remote Monitoring : Should be able to monitor Internal Temperature, Power Supply Failure, FAN Failure etc from Central Server
  - y) Casing : All PIDS System must be provided with protected casing, cover to withstand winds/rain etc.
- 2) The display board shall display real time data simultaneously in all the rows without any delay.
  - 3) The display board shall be equipped with:
    - a) Dual controller(s) in hot standby configuration, with each pair controlling one side of the display board(s).

- b) Dual power supplies configured in hot standby mode, with each power supply configured for taking load for both sides of the display boards, in normal as well as degraded (failure) modes.
- 4) The construction of the whole unit of different type of display boards should be modular, such that any module (i.e. PCB, connector, cable, power supply unit etc.) can be easily removed when defective and a fresh module is fixed to make the system functional again. Wiring between different modules should be done with the help of male/female type of connectors. There should not be any requirement of rewiring, re-soldering/ de-soldering or opening and reconnections of wiring etc. during the maintenance, unless there is damage to the wiring. Proper cable guides are to be provided inside the display board for drawing cables and wires neatly.
- 5) LEDs used in platform display boards shall be of high-performance quality and from reputed manufacturers viz. Nichia/ OSRAM/ Cree /Philips/GE lighting/Samsung/Equivalent. The maximum junction temperature of a LED shall not be less than 100<sup>o</sup>C and epoxy used in the LED shall have UV inhibitors.

The contractor shall include details of the LEDs used including the make design document and submit the same for approval of the Engineer. Decision of the Engineer shall be final.

- 6) The brightness level of the LED panel shall be adjustable both automatically and manually so as to maintain the required viewing distance and viewing angle under all indoor and outdoor environment.

The manual adjustment of the brightness level shall be possible from the PIDS MMI.

- 7) The visibility of each Display shall be at least 35 m for both Hindi and English characters when displaying in the biggest font size characters during brightest part of the day.
- 8) The display board shall display moving text/graphics smoothly at the programmable scrolling rate. No “break-up”, “line pulling” and “line jittering” shall occur to the displays on the display board.
- 9) The optical characteristics of the transparent display cover for the LED display area shall be selected such that the light transmission and display contrast are suitable for outdoor, indoor and semi-outdoor environment where it is applicable throughout the station areas.
- 10) Each display board shall be equipped with light sensors to adjust the brightness to a level comfortable for passengers according to the ambient light intensity in different environments.
- 11) Each side of the display board shall display True Colors and shall use Ultra Bright LEDs
- 12) Every LED dices/clusters shall have the same level of brightness to achieve an even brightness across the whole display area of the display board. LEDs shall be used with equal fringe and uniform intensity to ensure that the information to be displayed is with excellent contrast so that no black patches are visible on the display screen.
- 13) The brightness of the LED to be installed at the station areas with direct sunlight or reflection of sunlight shall be high enough to achieve the specified viewing distance and viewing angle at all times.
- 14) The Contractor may propose an architecturally bending sunshade or sunshield to reduce the incident sunlight but this shall not reduce the viewing angle and viewing distance.
- 15) The LED and other processor modules for the display board shall be plug-in type to facilitate easy module replacement.
- 16) All LEDs ‘ON’ testing facility shall be provided on each display board.

- 17) The software of display panel should be designed in such a way that the panel shall work without any trouble such as software hang, flickering, unstable picture etc. in 24x7 working environment.
- 18) Software shall allow defining objects with their attributes (back ground color, the type, size and color of fonts etc.).
- 19) The PIDS display Boards shall have IP input from the main server system, for ease of configuration and uniformity as most of the communication sub-system(s) shall be IP based with IP inputs.
- 20) Suitable earthing arrangement shall be provided for earthing the body of the display Unit.
- 21) Templates for Platform PIDS shall be as detailed below:
  - a) The Platform Display Panel shall be a multifunctional display panel with comprehensive information contents in Templates.
  - b) The panel shall support multi partitioning without degradation of display quality and with independent addressing of individual partitions.
  - c) The displays shall support various media formats pertaining to graphics (BMP, GIF, JPEG, PNG, WMF etc.), Animation (SWF, FLC, FLI, Animated GIF etc.), Sound (WAV, MP3, MIDI, CD Audio etc.), Video (SD/HD, MP4, MPEG, 1/2/4, AVI, QT3, WMV etc) Fonts (Open Type, TrueType, Devanagari etc), Language (Hindi, English).
  - d) The PIDS System should support the below content types
    - a. Text Content
      - i. Displays should be capable of rendering text in English and Hindi using Unicode fonts
      - ii. Rendering text using Unicode fonts from the internet should be supported.
      - iii. Rendering text in user selectable colors, backgrounds, borders and shadows should be supported.
    - b. Images
      - i. Displays should be capable of rendering images.
      - ii. Images in multiple formats including jpeg and png with transparency should be supported.
      - iii. Templates should provide various options to render images on the display along with train information and broadcast messages.
    - c. Videos
      - i. Displays should be capable of rendering videos.
      - ii. Videos in mp4 format should be supported.
      - iii. Templates should provide various options to render videos on the display along with train information and broadcast messages
    - d. Animations
      - i. Displays should be capable of rendering animated images.
      - ii. Animated Images in gif format with transparency should be supported.
      - iii. It should be possible to render broadcast messages which are combinations of text and animated gifs.
    - e. Vector Graphics (Analog Clock)
      - i. Displays should be capable of rendering vector graphics

- ii. should be possible to render a live analogue clock on one part of the display.
- iii. The analogue clock should be in synch with the network master clock and show the correct time at all times
- iv. Template should be used to manage the look and feel of the analogue clock including the clock face graphics.

**f. Advertisement and Playlist Management**

The PIDS System should be capable of rendering advertisements using the below features

- i. It should be able to upload videos and images centrally via the OCC/BCC MMI and distribute the images and videos to remote stations for local use
- ii. Users should be able to create playlists containing a collection of images and videos and manage the same in OCC/BCC and distribute the same to remote Stations for local use
- iii. It should be able to include a playlist in a template and designate a part of the display to render the playlist in a loop
- iv. It should be possible to render the playlist along with train information. For example display train information for 2 minutes followed by first content from playlist. This should be followed by 2 minutes of train information and then second item from playlist. Various such combinations should be possible.

**g. Template requirements.**

The PIDS System should be based on true color displays with templalized layout options.

i. Template Management

- 1. Templates should be uploaded from the OCC/BCC MMI and distributed to all the Stations for local use.
- 2. It should be possible to assign templates to one or more displays at the same time.
- 3. PIDS Displays should download the templates and its associated media items and render the content locally without using network resources for rendering videos and images.
- 4. When the display loses connectivity the template and its related media content should still be available and should render.

ii. Template Editable features

- 1. Templates editing should be user friendly with custom UI for each template depending on the nature of the Template
  - 2. Templates should also be able to render emergency fire messages and other high priority messages in full screen and in flashing mode.
  - 3. Templates with analog clock should allow editing the clock face and give options to select various clock types including an option for digital clock.
  - 4. Templates should be capable of handling scroll messages that have no limit to the size of the text message.
- h. The overall design of the Platform PIDS shall match the station architecture / design. As such the aesthetics of the display and the arrangement shall be coordinated with architectural and signage aspects.
  - i. The PIDS software delivery shall include a field proven commercially available comprehensive software package for the Design, Creation and Editing, Storage and Scheduling of Digital Content.
  - j. Platform display boards shall show the estimated time of arrival of the next train by a countdown counter. Train information shall be displayed with the Hindi characters and

English characters simultaneously (The display shall be coordinated with PA announcement for the expected train arrival announcement also). This display sequence format for the train information shall be continuously displayed unless a message with higher priority is assigned, including an emergency message.

- k. Information of all non-stopping trains will be shown on platform display boards. The PIDS shall, however, co-ordinate with the PAS to ensure that appropriate audio announcements are made to alert passengers of these non-stopping trains.
- l. Stopping train not in passenger service shall be displayed as "TRAIN NOT IN SERVICE" in place of destination for all the train information display messages at all stations.
- m. Train terminating at any intermediate station shall be described as "TRAIN TERMINATES HERE" in place of destination for all the train information display messages at the intermediate terminal station.
- n. The template shall contain display of Clock (Analog / Digital), Train departures, Train info (disruptions, non- stopping etc), Advertisements, videos etc.
- o. PIDS contractor shall submit multiple templates (min.20 nos.), for approval of Employer's representative.

## **22) FONTSIZES AND NUMBER OF CHARACTERS**

- i) The number of characters to be displayed per row for LED type display boards within the display area without scrolling for the platform display boards shall be the following as a minimum (for the Destination field):
    - 15 Hindi characters for the biggest font sizes;
    - 15 English characters for the biggest font sizes.
  - ii) Destination station name having more than 15 characters, will be displayed in horizontal scrolling manner from right to left with stable display of estimated time of arrival.
  - iii) The Contractor shall submit details of dimensions of characters, housing etc. to the Employer's Representative for approval.
- 23)** Platform display boards shall predominantly display information on train arrivals for the corresponding platform. Relevant service and passenger information shall also be displayed, if required, on the destination station field.

### 2.12.4.3 DISPLAY BOARD HOUSING

- 1) The internal components of the display board shall be arranged in a compact manner to minimize the thickness of the housing. The housing material has to either MS/Powder coated with proper sealing mechanism to avoid water ingress due to rain etc.
- 2) The Contractor shall submit detailed design information of the display board housing and mounting brackets for review and approval by the Employer's representative.
- 3) The visual impact of display boards and the proposed housing and mounting designs shall take into account ergonomic considerations and overall harmonization with station architectural design. The Contractor shall co-ordinate with Architect & Civil Works Project Contractors to finalize the locations, visual impact, housing and mounting design and colour selection for the display boards.
- 4) All display board housings shall be lockable but easily accessible for maintenance.
- 5) All the display board equipment faces shall be provided with shatterproof and scratch resistant coating.
- 6) Display boards shall be suitable for operating in an environment with or without air-conditioning. Indoor housing shall be designed to IP 65 compliant.
- 7) In open areas (e.g. Platforms of Elevated Station) where display boards will be exposed to rain or sunlight, the display boards shall be dust-proof and water-proof to IP65 standard.
- 8) There shall be no gap between the edge of the housing and the LED matrix so that no internal hardware or wiring is exposed to the public.
- 9) The housing design shall ensure no sharp corners.
- 10) The design of the ceiling or pillar or wall mounting brackets shall facilitate easy replacement of the whole display board.

### 2.12.5 CABLES & ACCESSORIES

All cabling and wiring shall use fire resistant/retardant cables (as required) to achieve optimum fire performance as per safety requirements specified in NFPA-130.

All control and audio cables shall be twisted pair overall screened cables.

PIDS display boards shall be connected by either serial or LAN connections or through Optical Fiber Cable to the station PIDS control equipment.

#### 2.12.5.1 Data Cable

The Data Cable shall be UTP Category 6e or better and having following specifications as minimum:

1.	<b>Type</b>	24 AWG Solid Copper Conductor, twisted pair, Rip cord with PVC Jacket
2.	<b>Conductor diameter</b>	0.50 mm
3.	<b>Insulation diameter</b>	1.04 mm
4.	<b>Cable diameter</b>	5.90 mm
5.	<b>Characteristic impedance</b>	100+/-15 Ohm
6.	<b>Attenuation@100 Mhz</b>	22Db/100 m

**2.12.5.2 Cables** shall comply with the latest version of the relevant requirements of British Standards, IEC standard, ASTM standards, ITU recommendations or equivalent international standards.

**2.12.5.3** All cables shall have continuous operating life of at least 25 years.

**2.12.5.4** All cables used in external or open areas shall be the armoured type and shall be able to with stand rain and ultra violet rays. As a minimum, All Data and Power cables laid in outdoor ducts/ trenches/trays from the Station (e.g. to Ancillary Buildings) and within the Outdoor Depot area (e.g. one building to another), shall be armoured type.

**2.12.5.5 OPTICAL FIBRE CABLE**

- a. For the Elevated/At-Grade Section and for any Optical Fibre Cable being laid on the cable tray, the Specifications shall be in accordance with the armoured OFC TEC /RDSO specifications no. IRS TC/55:2000 with latest amendments.
- b. The cable shall comply with the ITU-T Recommendations G.652 (03/93) for single mode fibre. Optical Fibre for all areas shall be armoured type.
- c. **Optical Requirements – Single Mode Fibre**

Type	Single Mode
Mode Field Diameter (nominal) <ul style="list-style-type: none"> <li>• depressed clad fibre</li> <li>• matched clad fibre</li> <li>• Mode field concentricity error</li> </ul>	<p>9<math>\mu</math> m +/- 10%</p> <p>9.5<math>\mu</math> m +/- 10%</p> <p>&lt; 1.0<math>\mu</math> m</p>
Cladding Diameter Cladding non-circularity	<p>125 <math>\mu</math>m +/- 2 <math>\mu</math>m</p> <p>&lt; 1 %</p>
Optical Attenuation <ul style="list-style-type: none"> <li>• at 1310 nm</li> <li>• between 1285 to 1330 nm</li> <li>• at 1550 nm</li> </ul>	<p>&lt; 0.38 dB/Km (cabled fibre)</p> <p>&lt; 0.38 +/- 0.02 dB/Km (un cabled fibre)</p> <p>&lt; 0.25 dB/Km (cabled fibre)</p>
Chromatic Dispersion ( 1285-1330 nm)	< 3.5 ps/nm. Km
Cut off wave length for 2 m fibre section	1320 maximum

## **2.13 POWER SUPPLY DISTRIBUTION SYSTEM**

### **2.13.1 Introduction**

- 1) PIDS system shall work on 180 – 240 AC and shall be supplied with single phase UPS power supply at each station.
- 2) PIDS equipment located in proximity / close to the 25 KV traction systems at stations/Depot/RSS, suitable data & power cables shall be provided/used with proven and of adequate rating surge suppressers, both at the field (equipment) and TER end.

### **2.13.2 Power Supply Distribution**

- 1) Dual, 3 phase 415V AC power supply from UPS viz. UPS-1 & UPS-2, available and terminated on a bus bar in an AC distribution board equipped with MCBs in the TER (Telecom Equipment Room at each station.
- 2) The AC distribution system provided by DS-15 Contractor shall meet with the requirements of IT & all Telecom contractors. Distribution circuits shall be suitably protected with MCBs, Earth Leakage Detectors and SPDs etc.
- 3) Contractor shall ensure that the MCBs used in the system shall follow the general rule of hierarchal decrease in ratings from source of power supply to the end equipment (load) in the AC power flow chart.
- 4) Contractor shall provide Sub-METs (Earthing strip with min. 10 holes) at each Platform and Concourse and connect them to the Main Earth MET in TER using dual (redundant) connectivity.
- 5) Contractor shall submit the design of the PS distribution system to the Employer's Representative for review and approval

## **2.14 SURGE PROTECTION AND EARTHING ARRANGEMENT**

### **2.14.1 Surge Protection**

- 1) All the PIDS equipment(s) shall be protected from induced current, voltage as per CCITT Regulations against 25 KV AC Catenary carrying 1000 Ampere Current. Protection should be provided against all surge/transient voltages.
- 2) External surge protection devices should be used at the input of all vulnerable equipment for effective transient protection.
- 3) SPDs shall be used for data & power cables present in the vicinity of high voltage lines for surge protection.

### **2.14.2 EARTHING ARRANGEMENT**

- 1) All indoor/outdoor PIDS equipment(s) shall be earthed properly as per guidelines.
- 2) Earthing arrangement in the TER/CER shall be provided by E&M department on an MET - bus bar with value less than one (1) ohm (approx.)
- 3) The MET in the TER shall be extended to a sub-MET in Concourse & Platforms using redundant earthing cables (1+1) of 10 Sq.mm through physically diverse routes (to the extent possible) by PIDS contractor.
- 4) Earthing of all PIDS racks & equipment installed in the TER, Platforms & Concourses etc. shall be done through the MET &/or sub-MET and shall be the responsibility of PIDS contractor.



- 5) The earthing shall be done using earth cable of 16 sq. mm (min.) & 4 sq. mm copper of ISI make for Racks in the TER & End equipment (Racks, Router, Switches etc. installed on platforms, concourses etc.) respectively.
- 6) All metallic enclosures, racks and Poles shall be provided with an earth terminal

## 2.15 SYSTEM EXPANSION

For expansion capabilities following provisions shall be ensured for the PIDS sub-system(s):

- 1) All software shall be designed to accommodate the ultimate, fully expandable capacity, without requiring any change to the hardware or firmware of the installed system and without affecting the overall operation or performance of the PIDS sub-system(s).
- 2) Software databases working in off-line or on-line mode of operation shall be designed to allow ease of expansion. Where new database structures are implemented with fixed sizes then at least 25% spare capacity of each entry type and attribute shall be provided.
- 3) The exact databases for which this expansion requirement will apply shall be subject to review & approval by the Employer's representative. In general, use of commercially available, proven and mature database shall be preferred.
- 4) The PIDS equipment shall be modularly expandable without the need to replace the installed hardware and software for the service life of the PIDS sub-system(s). No major equipment (Central equipment) of these sub-system(s) shall be required to be added for the expansion.
- 5) Capacity of Central equipment for OCC, BCC shall be modularly expandable without causing the installed hardware and software equipment to be replaced within the service life of the PIDS sub-system(s)
- 6) While the PIDS & MCLK sub-system(s) system shall be equipped & wired for the required & spare capacity, it shall be designed & provisioned for the expandable capacity requiring only additional modules (in racks already provided) & wiring without requirement of any additional license / software or wiring.

The contractor while considering the above provisions shall submit the Equipped, wired & Expandable capacity of the PIDS sub-system(s) to the Engineer for review and approval.

- 7) Minimum wired capacity of 25% shall be possible to be provided by only, Passenger Information Display Boards and without requirement of any additional hardware and /or Software. The expandable capacity shall be considered to be utilized only after the spare (wired) capacity specified above is exhausted.

The Central System(s) for the PIDS shall have an expandable capacity of minimum 25% (beyond the wired capacity) for PIDS Boards and Slave Clocks & associated interfaces with other sub-system(s).

For clarification, requirements beyond the spare capacity of 25% (wired capacity), only shall require additional hardware etc. to cater for expanding the system up-to the Expandable capacity of PIDS system /sub-system(s)

- 8) The spare capacity requirements shall apply to the following resources as a minimum:
  - a. Primary memory, consisting of all memory used for real-time processing and storage of data;

- b. SSD or equivalent storage, typically consisting of SSD equipment, but also covering the use of interchangeable magnetic media including disk cartridges and tapes (or equivalent as applicable);
  - c. Communication links, standard network, serial and parallel ports, port-to-port connection and peripheral equipment including printers and modems; and
  - d. I/O capacity including spare ports, bit rate capacity and channel capacity.
- 9) The Contractor shall submit a detailed plan for Equipped, Wired & Expandable capacity of the proposed PIDS for NMRC approval.

## **2.16 NETWORK SECURITY**

### **2.16.1 All IP based PIDS network shall strictly comply the IT security policy**

- 1) The PIDS network shall not be accessible from any other Telecom System with which no interface has been provided.
- 2) To ensure security of PIDS from vulnerabilities & breaches and discourage false undertaking from OEMs, security auditing and testing of equipment including source code of equipment and software shall be carried out from STQC (Ministry of Electronics & Information Technology) or any other Government Agency from the list of CERT-In empanelled Information Security Auditing Organization.

So as to ensure security of network and other IT equipment of the PIDS. System(s), before bulk supply & installation, purchaser should ensure Security auditing and testing at the time of Factory Acceptance Test (FAT) of 1st Lot of material or as specified by the Purchaser. In case any security breach is found in the system at any stage, immediate strict penal action shall be initiated by the purchaser.

- 3) All OEMs involved in this system contract must submit a declaration certificate regarding their genuinity, have their own manufacturing setups and IPR for the hardware(s)/software(s), and shall not have 3rd party manufacturing from any company blacklisted in India or abroad (due to proven backdoor access and data vulnerability) or any company sharing land border with India. The Intellectual Property Rights (IPR) of all manufactured final products and source code of all software including firmware, software etc. should not reside in countries sharing land borders with India, until unless specifically allowed by Government of India and is registered with the Competent Authority of Government of India. Proof / Declaration of IPR & country of source Code (residing) along with requisite permission & registration with Competent Authority of Govt. of India, as applicable towards compliance to the above, shall be provided by the OEMs. In case any breach or false declaration is found at any stage, immediate strict penal action shall be initiated by the purchaser.

## **2.17 INTERFACE REQUIREMENTS**

### **2.17.1 GENERAL**

The PIDS Contractor shall interface with signaling system (ATS) for real time traffic, Clock Master Clock system

- 1)** All circuit interfaces between PIDS sub-system(s) and FOTS network  
Shall be provided at the main distribution frame, digital distribution frame, as appropriate, depending on the type of circuit connections.
- 2)** PIDS Contractor s shall provide all relevant system data through API for integration & successful commissioning.
- 3)** The , PIDS Contractor shall determine the appropriate type of connectivity required for interface and ensure the interfacing circuits are of sufficient quantity and bandwidth to meet the requirements.

## **2.18 TESTING STAGE:**

The Contractor shall carry out testing and commissioning activities in the following phases:

Factory Acceptance Tests.  
On Site Testing and Commissioning.

### **2.18.1 FACTORY ACCEPTANCE TESTS**

**2.18.1.1** The Contractor shall carry out factory acceptance tests at the place of manufacturing. The test shall include, but not be limited to, visual, environmental, electrical, Optical and functional tests on each individual equipment and associated Subsystem as well as simulation before delivery of the equipment to the Site.

**2.18.1.2** Factory acceptance test shall be carried out for all PIDS equipment, which include FAI and FAT.

**2.18.1.3** The Contractor shall prepare and submit a Factory Test Plan at least one month before the tests. In addition, the Factory Test Plan shall also include the following:

- a) The program of all the activities related to factory acceptance tests.
- b) The locations where factory acceptance tests to be carried out.
- c) The estimated duration of tests activities at each location.
- d) Submission schedule of all the factory acceptance test procedures for equipment.

**2.18.1.4** The Contractor shall prepare the factory acceptance test procedures for PIDS Panel and submit to the Employer for review.

**2.18.1.5** The factory acceptance test procedures shall describe all tests to demonstrate the functional, electrical, optical and physical performance of PIDS Panel.

**2.18.1.6** Contractor shall not proceed with production until the Employer issues formal written Production Approval. A satisfactory conclusion and acceptance by the Employer of the demonstration tests with the exception of the Field Test and reports on the pre-production equipment, and acceptance of any deviations shall be mandatory in order for the Contractor to obtain a formal Production Approval. The NMRC will identify required modifications to be made and demonstrated before accepting the results of the tests. Should a major design change be made after the test, the performance of the modified equipment shall be demonstrated and the test results submitted for acceptance. The Contractor shall maintain the pre-production equipment to the latest configuration for hardware and software throughout the Contract duration i.e. 2 years of DLP support period without any cost to NMRC.

**2.18.1.7** In case FAI (First article of inspection)/FAT( Factory Acceptance Test fails during 1<sup>st</sup> visit of NMRC team, then contractor will have to bear all travel/boarding lodging of NMRC official for subsequent FAI visit at designated factory/office within India or Abroad.

**2.18.1.8** During FAI Contactor will present one prototype sample to NMRC displaying major functionality. NMRC official will give approval for FAI/FAT at designated factory before starting of mass production.

## **2.18.2 ON-SITE TESTING AND COMMISSIONING**

The on-site testing and commissioning shall be undertaken in the following phases:

- (I) Installation Tests;
- (II) Partial Acceptance Tests;
- (III) System Acceptance Tests

The Contractor shall prepare and submit to the Employer for review an On-Site Testing and Commissioning Plan. Above test will be jointly signed by both contractor team and NMRC team.

### **2.18.2.1 INSTALLATION TESTS**

**2.18.2.1.1** Installation Tests shall be carried out on individual Subsystem location by location after the completion of equipment physical installation.

**2.18.2.1.2** The objective of the installation tests shall ensure:

- a. The equipment is installed in accordance with the contract's requirement.
- b. The equipment is installed in accordance with the requirements detailed in this Specification;
- c. All cables are properly and accurately connected and terminated; and
- d. All installation works are of acceptable workmanship.
- e. The Contractor shall develop procedures for Installation Tests and submit to the Employer for review.
- f. The Installation Test shall not be started unless the Employer has reviewed the test procedures without objection.
- g. All installed equipment shall be physically inspected against all relevant review design documentation.
- h. All the installation test results, physical locations of the equipment and serial numbers shall be captured in the test record forms. The Contractor shall include completed test record forms in the Test Report and submit to the Employer for review.

### **2.18.2.2 PARTIAL ACCEPTANCE TESTS**

**2.18.2.2.1** Partial Acceptance Tests shall be carried out on individual Subsystem station by station to verify the functions, performance and services coverage at the stage:

- i) after successful completion of the Installation Tests;
- ii) after the Subsystems have been configured with correct settings and parameters;
- iii) Properly connected to the power supply and can be switched on for Partial Acceptance Tests; and
- iv) Before the equipment of different locations are connected up and ready for System Acceptance Tests.

**2.18.2.2.2** The Contractor shall develop Partial Acceptance Tests Plan at least one month before the test.

**2.18.2.2.3** The Contractor shall develop Partial Acceptance Tests procedures for each Subsystem and submit to the Employer for review at least one months before the tests.

**2.18.2.2.4** The Partial Acceptance Tests procedures shall include:

- i) Objectives of the Partial Acceptance Tests for all Subsystems;
- ii) List of specifications and standards, reviewed design documentation for reference;
- iii) Step-by-step test instructions;
- iv) List of test instrument and special tools.
- v) Test record forms.
- vi) Pass or fail criteria.

**2.18.2.2.5** All equipment settings and parameters shall be verified and recorded in the reviewed test record forms.

**2.18.2.2.6** The Contractor shall perform functional check.

**2.18.2.2.7** The Partial Acceptance Tests are considered completed only if the Employer without objection reviews the Partial Acceptance Tests results.

**2.18.2.2.8** Upon completion of the Partial Acceptance Test, the individual Subsystem shall be operational and ready to be connected to other Subsystems and interfacing systems for testing.

### **2.18.2.3 SYSTEM ACCEPTANCE TESTS**

- a. System Acceptance Tests shall be carried out to ensure the System operates in accordance with functional and performance requirements given in the Particular Specification.
- b. System Acceptance Tests shall be carried out at the stage:
  - i) After completion of Partial Acceptance Tests for each Subsystems; and
  - ii) After all individual PIDS Panel has been connected together and the System as a whole is capable to operate in all respect in accordance with the requirements given in the Technical Specification.
- c. The Contractor shall submit a System Acceptance Tests Plan including software quality assurance plan to the Employer for review.
- d. The system response time of relevant Subsystems and the System shall be tested and measured.
- e. The System Acceptance Tests are considered completed only if the Employer without objection reviews the System Acceptance Tests results.
- f. Upon completion of the System Acceptance Tests, the System shall operate in accordance with the functional and electrical performance requirements given in the Technical Specifications.

## **2.19 SCOPE OF WORK DURING DEFECT LIABILITY PERIOD/CAMC.**

The DLP/CAMC service will include:

- 2.19.1** DLP will be for a period of 2 years from the date of issuance of work completion Certificate by NMRC After successful completion of DLP System will be under CAMC for next 3 years
- 2.19.2** All routine inspection and preventive maintenance, configuration management Corrective/breakdown maintenance for the PIDS Panel.
- 2.19.3** Man power support for the correction of all defects of whatsoever nature and howsoever arising.
- 2.19.4** Contractor will issue the work order/job order. After completion of work, Contractor will also submit the analysis report of failures as and when required.
- 2.19.5** As & when the failure occurs, Contractor will replace faulty items.
- 2.19.6** Contractor shall maintain adequate percentage of spares to meet the Performance requirement as detailed in PS.
- 2.19.7** The Contractor should strictly adhere to the Environmental, Safety and Security guidelines during the execution of the DLP period as well as CAMC period.
- 2.19.8** All related material for rectification of failure like Multimeter, other maintenance tools etc will be in the scope of work of contractor.
- 2.19.9** The Mean Time to Restore(MTTR) of the PIDS panel to full normal operation following a failure shall be less than 8(Eight) hours(excluding time of travel)
- 2.19.10** The Mean Time to Restore (MTTR) of the Platform PIDS panel to full normal operation following a failure shall be rectified on availability of first Power block.
- 2.19.11** To work on Platform/Concourse, contractor shall require filling up PTW (permit to work) form and submit it to CSS at NMRC Depot Greater Noida. Only after approval of PTW, contractor shall carry out the work. Work on Platform shall be carried out only in night Hours (Non-Revenue Hours)
- 2.19.12** 2 Manpower support (One for General Shift day time) and another for night shift will be made available to NMRC through DLP period of 24 Months.
- 2.19.13** Contractor will also have to maintain/repair /replace concourse PIDS during DLP & CAMC period.
- 2.19.14** Contractor needs to provide its own vehicle /travel arrangement during night shift work/Maintenance /DLP & CAMC support etc.
- 2.19.15** The Contractor shall inform the CSS of his arrival at the site and the commencement of corrective maintenance. Before the Contractor's Manpower leaves the site, they shall confirm with the CSS that full operation has been restored.
- 2.19.16** Contractor will maintain and operate round the clock mobile no for fault reporting and communication.
- 2.19.17** The Contractor shall also provide facsimile line or valid email address for fault reporting.
- 2.19.18** The Contractor shall ensure that all maintenance tools and tackles are kept calibrated and in good condition.
- 2.19.19** The employer shall monitor actual performance against the Service Performance. A joint meeting will be done with contractor on monthly basis for analysis of data and suggestions from contractor for any corrective action.
- 2.19.20** The contractor shall maintain all failures records data and will pass on to employer on monthly basis. (Soft /hard copy).

**2.20 Preventive Maintenance and Cleaning of all Hardware.**

The contractor/firm shall also be responsible for deployment of necessary staff for regular Preventive Maintenance which is Quarterly for external hardware cleaning and Half Yearly for Deep Hardware cleaning for all the equipment of PIDS System using suitable cleaning material and supportive equipment. Preventive maintenance includes proper network cabling and tightening of any loose connections.

A separate log book shall be maintained for preventive maintenance record and it should be verified and signed by the Duty Supervisor of NMRC. For details of Quarterly and Half Yearly Tasks, following tables may be referred-

<b>PIDS : QUARTERLY PM RECORD</b>																			
<b>TASK</b> 2	1) Cleaning of external surface of PIDS 2)TER PIDS rack and equipment's cleaning														<b>PERIODICITY:</b> QUARTERLY				
<b>Checklist: O&amp;M/TELE/L-AQUA/PIDS/Q</b>									<b>STATION:-</b>						<b>Revision : 00</b>				
<b>PERIOD</b>																			
<b>DATE</b>																			
<b>PIDS AREA</b>		<b>PF1</b>		<b>PF2</b>		<b>PF3</b>		<b>CONCOURSE</b>		<b>PF1</b>		<b>PF2</b>		<b>PF3</b>		<b>CONCOURSE</b>			
<b>EQUIPMENT</b>		<b>NO</b> <b>RT</b> <b>H</b>	<b>SO</b> <b>UT</b> <b>H</b>	<b>NO</b> <b>RT</b> <b>H</b>	<b>SO</b> <b>UT</b> <b>H</b>	<b>NO</b> <b>RT</b> <b>H</b>	<b>SO</b> <b>UT</b> <b>H</b>	<b>NO</b> <b>RT</b> <b>H</b>	<b>SO</b> <b>UT</b> <b>H</b>	<b>NOR</b> <b>TH</b>	<b>SO</b> <b>UT</b> <b>H</b>	<b>NO</b> <b>RT</b> <b>H</b>	<b>SO</b> <b>UT</b> <b>H</b>	<b>NOR</b> <b>TH</b>	<b>SOU</b> <b>TH</b>	<b>NOR</b> <b>TH</b>	<b>SOU</b> <b>TH</b>		
<b>External cleaning of PIDS</b>																			
<b>Status</b>	<b>Before</b>																		
	<b>After</b>																		
<b>STAFF</b>		<b>NAME</b>						<b>EM</b> <b>P</b> <b>ID</b>	<b>DE</b> <b>S</b>	<b>SI</b> <b>GN</b>	<b>NAME</b>						<b>EMP</b> <b>ID</b>	<b>DES</b>	<b>SIG</b> <b>N</b>
<b>LOCATION-TER</b>		<b>DATE:-</b>								<b>DATE:-</b>									
<b>EQUIPMENT</b>		<b>PID</b> <b>S</b> <b>rac</b> <b>k</b>	<b>/PIDS</b> <b>Server</b>	<b>PIDS</b> <b>Workstat</b> <b>ion</b>	<b>L2</b> <b>Swi</b> <b>tch</b> <b>es</b>	<b>Me</b> <b>dia</b> <b>con</b> <b>vert</b> <b>er</b>	<b>OD</b> <b>F</b> <b>Un</b> <b>it</b>	<b>PIDS</b> <b>rack</b>	<b>PIDS</b> <b>Server</b>	<b>PIDS</b> <b>Workstatio</b> <b>n</b>	<b>L2</b> <b>Swit</b> <b>che</b> <b>s</b>	<b>Med</b> <b>ia</b> <b>con</b> <b>vert</b> <b>er</b>	<b>ODF</b> <b>Unit</b>						
<b>External cleaning</b>																			
<b>Status</b>	<b>Before</b>																		
	<b>After</b>																		
<b>Remarks</b>																			
<b>STAFF</b>		<b>NAME</b>						<b>EMP ID</b>			<b>NAME</b>						<b>EMP ID</b>		



Replacement of Existing Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System

TASK 3 : Internal Cleaning of PIDS and PSUs								PERIODICITY : HALF YEARLY					
Revision : 00													
PERIOD		JUL-DEC											
DATE													
PIDS AREA		PF1		PF2		PF3		PF1		PF2		PF3	
EQUIPMENT		NOR TH	SOU TH	NOR TH	SOU TH	NOR TH	SOU TH	SOU TH	NOR TH	SOU TH	NOR TH	SOU TH	NOR TH
Cleaning and Checking of	PIDS Cleaning												
	Fan & PSUs												
	Fixture Nut-Bolt												
Status of LDR & FAN													
Cleaning and testing of MMI in SCR													
Internal cleaning of LCD													
Status of centrally and locally created message													
<b>Remarks</b>													
<b>STAFF</b>	NAME					EMP ID	SIG N	NAME					

<b>SUMMARY OF PREVENTIVE MAINTENANCE OF PIDS EQUIPMENTS AT OCC/AQUA-LINE</b>												
<b>MONTH</b>	<b>JAN</b>	<b>FEB</b>	<b>MAR</b>	<b>APR</b>	<b>MAY</b>	<b>JUN</b>	<b>JUL</b>	<b>AUG</b>	<b>SEP</b>	<b>OCT</b>	<b>NOV</b>	<b>DEC</b>
<b>FREQUENCY</b>	<b>MONTHLY</b>											
<b>TASK-1</b>												
<b>FREQUENCY</b>	<b>QUATERLY</b>											
<b>TASK-2</b>												
<b>FREQUENCY</b>	<b>YEARLY</b>											
<b>TASK-4</b>												
<b>Details of Task:-</b>												
<b>TASK1</b>	<b>MONTHLY</b>	General Cleaning & Visual Inspection of the rack & all PIDS equipments										
<b>TASK2</b>	<b>QUARTERLY</b>	PIDS system are in synch with Master Clock. Backup of all OK announcement file, configuration files, folders and of registry settings and Ghost image of PIDS server and MMI of OCC.										
<b>TASK4</b>	<b>YEARLY</b>	Internal Cleaning of PIDS Rack and all equipment.										

PIDS MONTHLY PM					
<b>TASK: 1 (General Cleaning of PIDS equipments)</b>		<b>STATION: OCC/AQUA-LINE</b>		<b>PERIODICITY: Monthly</b>	
<b>Description of Task :</b> 1. Cleaning of pids equipments. 2. Check the cabinet ventilation system. 3. Check all the alarms of different equipments. 4. Check if all the connectors are in perfect operating condition. 5. Check if all the wires are well tagged for an easy identifications.					DATE:
<b>Details:</b> All the equipments to be cleaned by using vacuum cleaner, cleaning cloth, brush, cleaning solution etc accordingly. After cleaning status of equipment should be checked and recorded in Performa given below.					
Sl. No	Items to check	Status Before Maint	Status After Maint	Action taken, if any	Remarks
1	PIDS SERVER1-OCC				
2	PIDS SERVER2-BCC				
3	PIDS SERVER3-Depot				
7	PIDS RACK EQUIPMENTS				
8	PIDS MMI/CSS				
9	PIDS MMI/CC				
10	PIDS/MMI/ACC				
11	PIDS MMI/DCC				
12	PIDS MMI/BCC				
<b>REMARKS:</b>					
<b>Task done by:</b>					
<b>Name</b>					
<b>Emp Id</b>					
<b>Signature</b>					

<b>PIDS QUARTERLY MAINTENANCE</b>					
<b>TASK: 2</b>		<b>STATION: OCC/AQUA-LINE</b>			<b>PERIODICITY: Quarterly</b>
<b>Description of Task :</b> <b>1. Check if all PIDS system are in synch with Master Clock.</b> <b>2. Backup of all OK announcement file, configuration files, and folders and of registry settings.</b> <b>3. To take Ghost image of PIDS server and MMI of OCC.</b>					<b>DATE:</b>
Sl. No	Items to check	Status Before Maint	Status After Maint	Action taken, if any	Remarks
1	PIDS SERVER1- OCC				
2	PIDS SERVER2- BCC				
3	PIDS SERVER3- Depot				
4	PIDS MMI/CSS				
5	PIDS MMI/CC				
11	PIDS MMI/ACC				
12	PIDS MMI/BCC				
6	PIDS MMI/DCC				
<b>REMARKS:</b>					
<b>Task done by:</b>					
<b>Name</b>					
<b>Emp Id</b>					
<b>Signature</b>					

<b>PIDS YEARLY MAINTENANCE</b>										
<b>TASK: 4 ( Internal Cleaning of equipments)</b>			<b>STATION: OCC/AQUA-LINE</b>				<b>PERIODICITY: YEARLY</b>			
<b>Description of Task :</b> 1. Internal Cleaning of pids Rack . 2. All the equipments to be cleaned by using vacuum cleaner, cleaning cloth, brush, cleaning solution etc accordingly. After cleaning status of equipment should be checked and recorded in Performa given below.								<b>DATE:</b>		
<b>Details: All the equipments to be cleaned by using vacuum cleaner, cleaning cloth, brush, cleaning solution etc accordingly. After cleaning status of equipment should be checked and recorded in Performa given below.</b>										
Sl. No	Items to check	OCC/CER			BCC/TER					
		Status Before Maint	Status After Maint	Remark	Status Before Maint	Status After Maint	Remark			
1	SERVER									
<b>Task done by:</b>										
<b>Name</b>										
<b>Emp Id</b>										
<b>Signature</b>										

In addition to above contract will be liable to carry out addition/maintenance pertains to PIDS system based on need of NMRC for system.

### 2.21 Availability of man power and Escalation matrix

- The contractor/firm shall ensure the availability of atleast One Person per Shift (Total three Shifts of 08 hrs. Each), in order to attend failure related to PIDS.
- The system engineer must have the minimum qualification of diploma/B.Tech in electronics/electrical engineer with field experience of atleast five years.
- All system engineer to be well trained in metro rail environment.
- Contractor will routinely brief them on safety aspects metro railways.
- Contractor will take undertaking from them of Knowledge of proper safety standards in metro system.

Also, contractor/firm shall provide escalation matrix (with proper designations, contact numbers and E-mail IDs) at least up to three levels. NMRC JE / maintainer will also assist in carrying out repair / replacement by means of providing PTW (Permit to work)/access to locations and other support etc from NMRC.

### 2.22 Post Contract handover

It shall be the responsibility of the firm to make whole system and equipment work satisfactorily throughout the contract period and to hand over the systems in working conditions to this department after expiry of the contract.

## 2.23 Confidentiality

The contractor/firm must ensure confidentiality regarding handling of all information obtained within the control room, whether videotapes, snapshots, written, verbal and other sensitive materials held within the NMRC premises. The Contractor/firm should ensure all storage and apparatus should be virus free. The service engineer/technicians will be allowed to work 24x7. Renting, lending and copying of any software and hardware products are completely prohibited.

## 2.24 Do's and Don'ts for Staff

### DO'S

1. In case of fire/ anything unusual on electric traction equipment or wires, inform the respective Engineer-in-charge.
2. Extinguish fire by special extinguishers (carbon tetrachloride or carbon dioxide type, if available).
3. Ensure no water jet to be directed at the fire under any circumstances.
4. Before taking up the work on a line running parallel to 25 KV AC lines, the line shall be earthed on both sides. Ensure that the distance between the two earths used for protection does not exceed 1km.
5. Keep clear of the track and avoid contact with the rails when electric train within 250m.
6. Special care should be taken to carry long pipes, poles or ladders so that it should not come in contact with or within 2 meters of live OHE.
7. Cleaning work other than that of surface (i.e. of beam, pillars etc.) should be done during block period only.
8. Whenever washing or cleaning using water jets is done, take appropriate power block.
9. Cases of electric shock arising out of contact with 25 KV A.C traction equipment shall be reported immediately to TPC.

### DON'Ts

1. Do not approach within 2 meters of any traction wires or live equipment.
2. Do not work on or near traction wires or any live equipment unless they are made dead, earthed and shut down notices/ permit to work obtained.
3. Do not enter any switching station or remote control centre unless specially permitted.
4. Do not touch a person in contact with live traction wires. Remove body only after power supply is switched off & earthed.
5. Do not touch any traction wire hanging from the mast or fallen on the ground and do not allow anyone else to touch it.
6. Cleaning work with conducting materials like Aluminium/ Steel rods should be avoided at all times when power block is not availed.
7. Do not lift or raise your tools towards traction wires.
8. Do not damage the plinth continuity, connection to BEC, OPC and handrail continuity.
9. Do not use steel tape or metallic tape or tape with woven metal reinforcement in electrified area.
10. Do not forget to give artificial respiration to the victim as per the prescribed procedure laid down at shock treatment charts.
11. Metallic telescopic rods are prohibited for use in the NMRC station.
12. Do not throw garbage in haste. Dispose it properly at designated place.
13. Contractor has to submit undertaking in specified Performa w.r.t Does & Don'ts related to danger of work in the vicinity of 25KV traction

## **2.25 Safety**

- (i) Contractor shall adopt the necessary safety procedures to avoid any type of accidents to Employer's personnel, any other personnel & to avoid damages to NMRC assets.
- (ii) The contractor shall display necessary sign ages while carrying out the work.

## **2.26 Accidents:**

- (i) It shall be the sole responsibility of the contractor to adopt all the safety measures & deploy personnel who are adequately trained in safety.
- (ii) If any accident occurs within the station and associated area due to installation work or due to negligence on the part of the contractor's personnel it shall be the full responsibility of the Contractor.
- (iii) If any damage occurs to the structures/ material & equipment due to installation work, the cost of damage will be recovered from the contractor's bill.
- (iv) Contractor shall submit the indemnity bond such that the contractor's staff shall not claim of any type, payment, and employment etc with employer. After completion of contract the contractor shall withdraw all of his staff from the site without any claim.

## **2.27 Quality of Supplied Services & Items**

The quality of the services delivered shall correspond to the technical conditions or specifications enumerated as per RFP.

- i. The material supplied & services rendered will be inspected/assessed by the NMRC or his nominee any time and in case of any deficiency or deviation to the specifications laid down and accepted in tender, is noticed, the defective goods/services will be replaced or material destroyed at his sole discretion. The entire cost, risk and responsibility shall be borne by the Contractor.
- ii. The NMRC reserves the right to discontinue the services/supplies prior to the completion of the period specified in this agreement or to extend the contractual period beyond the specified period.
- iii. Notwithstanding anything contained herein, the Employer has the right at anytime to terminate this Agreement, either wholly or in part, by giving 01 month notice in writing to the Contractor, by registered mail. The Employer shall have no further liability to make any payment in terms of this Agreement and all the obligations under this Agreement shall cease after expiry of the said period of notice, provided that no notice is required to be given except a letter of termination in case the contractor fails to comply with the terms and conditions of this agreement.
- iv. The Contractor shall observe all rules regarding security precautions/instructions as applicable to NMRC. Any breach of security shall render the contract liable to termination in addition to forfeiture of Performance security deposit or any other remedy as decided by the Employer and as laid down above.

## **2.28 Confidentiality**

The contractor/firm must ensure confidentiality regarding handling of all information obtained within the control room, whether videotapes, snapshots, written, verbal and other sensitive materials held within the NMRC premises. The Contractor/firm should ensure all storage and apparatus should be virus free. The service engineer/ technicians will be allowed to work only during non-revenue hours. Renting, lending and copying of any software and hardware products are completely prohibited.

Maximum cumulative penalty must not exceed 10 (Ten Percent) of Contract value in any case. Failing which contract would deem to be terminated.

## 2.29 Service Level Agreement and Penalty:

Service Level Agreement (SLA) defines the terms of the successful bidder's responsibility in ensuring the Performance of the network based on the agreed performance indicators as detailed in the agreement. Successful bidder has to co-ordinate with respective supervisor and gets the complaint closed and also has to keep proper records.

## 2.30 Penalty Clause during Project Execution Phase

Sr. No.	Instances	Penalty Amount
1	Penalty for non-completion of tasks in the defined timeline	0.2% per week of the value of the contract
1	Mean time to restore (MTRR) shall be 24 hours excluding the travelling time. Penalty for non-compliance of MTRR	Rs 10,000 per day will be charged
2	Unsafe work practices	Rs20,000 per instance
3	Misbehaviour with NMRC staff	Rs20,000 per instance
4	Delay in submission of documents as per design plan	Rs50,000 per instance
5	Delay in supply of equipment's/hardware/software against the approved plan	Rs50,000 per instance

## 2.31 Penalty Clause applicable during DLP & CAMC Period

Sr. No.	Instances	Penalty Amount
1	Misbehave of Contractor Staff with NMRC Representative	Rs. 5000 per instance
2	Non-availability of Spares	Rs 10,000 per instance
3	Refusal for carrying out work	Rs. 10,000 per instance
4	Late reporting in Shift	Rs. 10,000 per instance

Note: Further NMRC also reserve the right to impose any amount of penalty which may arise due the negligence/manhandling of contractor/failure to attend the fault with in stipulated time.



Replacement of Existing Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System

Appropriate Penalties will be recovered from the quarterly payment if successful bidder is not able to achieve required Service levels

Maximum cumulative penalty must not exceed 10 (Ten Percent) of Contract value in any case. Failing which contract would deem to be terminated.

### **2.32 Obligation to the Contractor**

- a. If any damages / loss/theft etc. occurs in the NMRC premise on negligence of contractor staff, shall be the sole responsibility of the contractor and necessary compensation shall be paid by the contractor to NMRC as per the actual cost assessed by NMRC.
- b. The contractor shall indemnify and hold NMRC harmless from and against all claims, damages, losses and expenses arising out of, or resulting from the works/services under the contract provided by the contractor.
- c. Contractor shall ensure that its personnel shall not at any time, without the consent of NMRC, in writing, divulge or make known any trust, accounts, matter or transaction undertaken or handled by NMRC and shall not disclose to any person information to the affairs of NMRC.
- d. All necessary reports, records, registers and other information, under the Contract and all other Statutory Laws compliances, shall be submitted by the contractor on demand by NMRC.
- e. Any damage or loss caused by contractor's persons to the property & equipments of NMRC Ltd. in whatever form may be recovered from the contractor.
- f. Any liabilities arising out of any litigation (including those in consumer courts) due to any act of contractor's personnel shall be directly borne by contractor including all expenses/fines. The concerned contractor's personnel shall attend the court as & when required.
- g. All conveyance and transportation to be borne by contractor itself.
- h. Contractor must ensure minimum wages as per labor laws of its staff deployed at NMRC system and submit undertaking to NMRC pertaining to this and will indemnify NMRC against any such labor law related matters pertaining to its manpower deployed during project phase as well as Defect Liability Period.

## Section 3: Instructions to Bidders

### 3.1 General instructions

- a. A tenderer shall submit only one bid in the same tendering process, individually as a tenderer. A tenderer who submits or participates in, more than one bid will cause all of the proposals in which the tenderer has participated to be disqualified. No tenderer can be a sub-contractor while submitting a bid individually. A tenderer, if acting in the capacity of subcontractor in any bid, may participate in more than one bid, but only in that capacity.
- b. The Bidder shall initiate, and actively pursue and involve itself in all investigations and enquiries, employer feedbacks, information, convening of and attendance at meetings, and in any other activities as are or may be necessary for producing high quality work as per the requirements.
- c. The Bidder shall carry out the services in compliance with the provisions of this Agreement. Any and all changes necessary to ensure that the Bidder's documents conform to the intent and purpose set out in the Agreement, shall be made at the Bidder's own expense. The Bidder represents that it is a professional and experienced company, and hereby agrees to bear full responsibility for the correctness and technical merit of the services performed.
- d. Bidders shall be evaluated on the basis of the Evaluation Criteria specified in this document. Bidders shall be deemed to have understood and agreed that no explanation or justification for any aspect of the Selection Process will be given and that NMRC's decisions are without any right of appeal whatsoever.
- e. Any entity which has been barred by the Central/State Government in India or by any entity controlled by them, from participating in any project, and the bar subsists as on the date of Bid, would not be eligible to submit an e -Bid.
- f. Bidders are encouraged to inform themselves fully about the assignment and the local conditions before submitting the e-Bid by paying a visit to the employer and/or by sending written queries to NMRC before the last date for receiving queries/clarifications.
- g. NMRC shall not be liable for any omission, mistake or error on the part of the Bidder in respect of any of the above or on account of any matter or thing arising out of or concerning or relating to e-Bid or the Selection Process, including any error or mistake therein or in any information or data given by NMRC.
- h. The currency for the purpose of the Proposal shall be the Indian Rupee (INR).
- i. Tenderers shall not have a conflict of interest. All Tenderers found to have a conflict of interest shall be disqualified. Tenderers shall be considered to have a conflict of interest with one or more parties in this bidding process, if:
  - i. A tenderer has been engaged by the Employer to provide consulting services for the preparation related to procurement or implementation of the project;
  - ii. A tenderer is any associates/affiliates (inclusive of parent firms) mentioned in sub paragraph above; or

- iii. A tenderer lends, or temporarily seconds its personnel to firms or organizations which are engaged in consulting services for the preparation related to procurement for an implementation of the project, if the personnel would be involved in any capacity on the same project.

### 3.1.1 Cost of Bid Document / e-Tender processing Fee

- a. The tenderer shall bear all costs associated with the preparation and submission of its e-Bid and Noida Metro Rail Corporation Ltd. ("NMRC" or "the Corporation"), will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the e-Bid process.
- b. This tender document is available on the web site <http://etender.up.nic.in> or on NMRC website ([www.nmrcnoida.com](http://www.nmrcnoida.com)) to enable the tenderers to view, download the e-Bid document and submit e-Bids online up to the last date and time mentioned in e-Tender notice/e-tender document against this e-Tender. The tenderers shall have to pay cost of bid document/ e- Tender processing fee of as mentioned in **Data Sheet** through RTGS/NEFT only payable in favor of Noida Metro Rail Corporation Limited in the A/c No. mentioned in **Data Sheet**. The scanned copy of RTGS/NEFT receipt with transaction Id certified by the same bank must be enclosed along with the e-Bid. This cost of bid document/ e-Tender processing fee as mentioned in **Data Sheet** will be non-refundable. Tender without cost of bid document/ e-Tender processing fee in the prescribed form, will not be accepted..

### 3.1.2 Acknowledgement by Bidder

It shall be deemed that by submitting the e-Bid, the Bidder has:

- a. made a complete and careful examination of thee-Bid;
- b. received all relevant information requested from NMRC;
- c. acknowledged and accepted the risk of inadequacy, error or mistake in the information provided in the e-Bid or furnished by or on behalf of NMRC;
- d. satisfied itself about all matters, things and information, necessary and required for submitting an informed Application and performance of all of its obligations thereunder;
- e. acknowledged that it does not have a Conflict of Interest; and
- f. Agreed to be bound by the undertaking provided by it under and in terms hereof.

### 3.1.3 Availability of Bid Document

This Bid document is available on the web site <http://etender.up.nic.in> or on Noida Metro website [www.nmrcnoida.com](http://www.nmrcnoida.com) to enable the Bidders to view, download the e-Bid document and submit e-Bids online up to the last date and time mentioned in e-Bidder notice/ e-Bid document. The Bidder`s shall have to pay e-Bid document fee and EMD as mentioned in Data sheet through RTGS/ NEFT on addresses given in data sheet. The scanned copy of RTGS/ NEFT with transaction ID certified by the same bank must be enclosed along with the e-Bid. This e-Bid document fee will be non-refundable. Bid without Bid fee in the prescribe form will not be accepted.

### 3.1.4 Clarifications of e-Bid

- During evaluation of e-Bid, NMRC may, at its discretion, ask the Bidder for a clarification of his/her e-Bid. The request for clarification shall be in writing.
- Any queries or request for additional information concerning this RFP shall be submitted in writing or by fax and e-mail to the Dy. General Manager/AFC-Tele, NMRC **only before or during Pre-Bid Meeting** held at NMRC. The envelopes/ communication shall clearly bear the following identification/ title: "**Queries/ Request for Additional Information: Replacement of Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System**". The responses will be posted to all such queries on the official Website [www.nmrcnoida.com](http://www.nmrcnoida.com). NMRC reserves the right not to respond to any questions or provide any clarifications, in its sole discretion, and nothing in this Clause shall be taken or read as compelling or requiring NMRC to respond to any question or to provide any clarification.
- A pre- submission meeting shall be called on the date mentioned in **Data Sheet** at NMRC Office. Any change corresponding to date, if any, shall be communicated to the Bidder vide NMRC/ e- Tendering website.
  - In case the Bidder seeks for any queries, he shall send letter or e-mail to the correspondence address given in Data Sheet.
  - However, NMRC shall not entertain any correspondence from the Bidders during the period of e- Bid opening to selection of the successful Bidder. Any wrong practice shall be dealt in accordance with the Section 5.9 of this e-Bid document under Fraud and Corrupt Practices.
  - The Tenderer is advised to visit and examine the Site of Works and its surroundings and obtain for himself on his own responsibility all information that may be necessary for preparing the Tender and entering into a contract for the proposed work. The costs of visiting the Site shall be borne by the Tenderer. It shall be deemed that the Contractor has undertaken a visit to the Site of Works and is aware of the site conditions prior to the submission of the tender documents.
  - The Tenderer and any of his personnel will be granted permission by the Employer to enter upon his premises and lands for the purpose of such inspection, but only upon the express condition that the Tenderer, and his personnel, will release and indemnify the Employer and his personnel from and against all liability in respect thereof and will be responsible for death or personal injury, loss of or damage to property and any other loss, damage, costs and expenses incurred as a result of the inspection.

### 3.1.5 Amendment of e-Bid Document

- g. At any time prior to the deadline for submission of e-Bid, NMRC may, for any reason, whether at its own in iterative or in response to a clarification requested by a prospective Bidder, modify the e-Bid document by amendments. Such amendments shall be uploaded on the e- procurement website <http://etender.up.nic.in> and NMRC's website [www.nmrcnoida.com](http://www.nmrcnoida.com). The relevant clauses of the e-Bid document shall be treated as amended accordingly.

- h. It shall be the sole responsibility of the prospective Bidder to check the web site <http://etender.up.nic.in> and NMRC's website [www.nmrcnoida.com](http://www.nmrcnoida.com) from time to time for any amendment in the e-Bid documents. In case of failure to get the amendments, if any, NMRC shall not be responsible for it.
- i. In order to allow prospective e-Bids a reasonable time to take the amendment into account in preparing their e-Bids, NMRC, at the discretion, may extend the deadline for the submission of e-Bids. Such extensions shall be uploaded on the e-procurement website <http://etender.up.nic.in> or NMRC's website [www.nmrcnoida.com](http://www.nmrcnoida.com).

### 3.2 Preparation and submission of Bids

#### 3.2.1 Language of e-Bid

The e-Bid prepared by the Bidder, as well as all correspondence and documents relating to the e-Bid exchanged by the Bidder and NMRC shall be written in English language. Only English numerals shall be used in the e-Bid. The correspondence and documents in any other language must be accompanied by transcripts verified by the Embassy of Home Country or equivalent.

#### 3.2.2 Documents constituting thee-Bid

**The e-Bid prepared by the Bidder shall comprise the following components:**

**a. Technical e-Bid- Technical e-Bid will comprise of-**

- i. **Fee details** - Details of Bid processing fee and prescribed EMD
- ii. **Eligibility details** - Includes copies of required documents in PDF format justifying that the Bidders qualified to perform the contract if his/her bid is accepted and the Bidder has financial & technical capability necessary to perform the contract and meets the criteria outlined in the Qualification requirement and technical specification and fulfill all the conditions of the contract.
- iii. **Technical evaluation** - Details of all documents needed for Technical evaluation as mentioned in this RFP

**b. Financial e-Bid -**

- i. **Price bid** – Bill of Quantities in XLS format to be filled in after downloading from the e- Procurement website for this e-tender (<http://etender.up.nic.in>). There shall be a single financial quote for the package for which the bid is submitted.

#### 3.2.3 Documents establishing Bidder's Qualification

- a. The Bidder shall furnish, as part of its technical e-Bid, documents establishing the Bidder's qualification to perform the contract if its e-Bid is accepted. The documentary evidence should be submitted by the Bidder electronically in the PDF format.
- b. The documentary evidence of Bidder's qualification to perform the contract if its e-Bid is accepted shall be as per qualification requirements specified in e-Bid document.

#### **3.2.4 E-Bid form**

The Bidder shall complete the e-Bid form and the appropriate price schedule/BOQ furnished in the e-Bid document.

#### **3.2.5 E-Bid Currency**

Prices shall be quoted in Indian Rupees only.

#### **3.2.6 Formats and Signing of e-Bid**

- a. The Bidder shall prepare one electronic copy of the technical e-Bid and financial e-Bid separately.
- b. The e-Bid document shall be digitally signed, at the time of uploading, by the Bidder or a person or persons duly authorized to bind the Bidder to the contract. The later authorization shall be indicated by a scanned copy of written power-of attorney accompanying the e-Bid. All the pages/documents of the e-Bid that are to be uploaded shall be digitally signed by the person authorized to sign the e-Bid.
- c. Bidders should provide all the information as per the RFP and in the specified formats. NMRC reserves the rights to reject any proposal that is not in the specified formats.
- d. In case the Bidders intend to provide additional information for which specified space in the given format is not sufficient, it can be furnished in duly stamped and signed PDFs.

#### **3.2.7 Deadline for submission of e-Bid**

E-Bid (Technical and financial) must be submitted by the Bidder at e-procurement website <http://etender.up.nic.in> not later than the time specified on the prescribed date (as the server time displayed in the e-procurement website). NMRC may, at its discretion, extend this deadline for submission of e-Bid by amending the e-Bid document, in which case all rights and obligations of NMRC and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

#### **3.2.8 Submission of e-Bid**

- a. The bid submission module of e-procurement website <http://etender.up.nic.in> enables the Bidders to submit the e-Bid online in response to this e-Bid published by NMRC.
- b. Bid submission can be done only from the bid submission start date and time till the bid submission end date and time given in the e-Bid. Bidders should start the bid submission process well in advance so that they can submit their e-Bid in time.
- c. The Bidder should submit their e-Bid considering the server time displayed in the e-procurement website. This server time is the time by which the e-Bid submission activity will be allowed till the permissible time on the last/end date of submission indicated in the e-Bid schedule.
- d. Once the e-Bid submission date and time is over, the Bidders cannot submit their e-Bid. For delay in submission of e-Bid due to any reasons, the Bidders shall only be held responsible.

**3.2.9 The Bidders have to follow the following instructions for submission of their e-Bid:**

- a. For participating in e-Bid through the e-Bidding system it is necessary for the Bidders to be the registered users of the e-procurement website <http://etender.up.nic.in>.
- b. In addition to the normal registration, the Bidder has to register with his/her digital signature certificate (DSC) in the e-Bidding system and subsequently he/she will be allowed to carry out his/her e-Bid submission activities. Registering the digital signature certificate (DSC) is a one- time activity. Before proceeding to register his/her DSC, the Bidder should first log on to the e- Biding system using the user login option on the home page with the login Id and password with which he/she has registered.

For successful registration of DSC on e-procurement website <http://etender.up.nic.in> the Bidder must ensure that he/she should possess class-2/class-3 DSC issued by any certifying authorities approved by controller of certifying authorities, Government of India, as the e-procurement website <http://etender.up.nic.in> is presently accepting DSC issued by these authorities only. The Bidder can obtain user login Id and perform DSC registration exercise given above even before the e-Bid submission date starts. NMRC shall not be held responsible if the Bidder tries to submit his/her e-Bid at the moment before end date of submission but could not submit due to DSC registration problem.

- c. The Bidder can search for active Bids through "search active tenders" link, select a Bid in which he/she is interested in and then move it to 'My Tenders' folder using the options available in the e-Bid submission menu. After selecting and the Bid, for which the Bidder intends to e-Bid, from "My tenders" folder, the Bidder can place his/her e-Bid by clicking "pay offline" option available at the end of the view Bid details form. Before this, the Bidder should download the e-Bid document and price schedule/bill of quantity (BOQ) and study them carefully. The Bidder should keep all the documents ready as per the requirements of e-Bid document in the PDF format except the price schedule /bill of quantity (BOQ) which should be in the XLS format (excel sheet).
- d. After clicking the 'pay offline' option, the Bidder will be redirected to terms and conditions page. The Bidder should read the terms & conditions before proceeding to fill in the Bid fee and EMD offline payment details. After entering and saving the Bid fee and EMD details form so that "bid document preparation and submission" window appears to upload the documents as per technical (fee details, qualification details, e-Bid form and technical specification details) and financial (e-Bid form and price schedule/BOQ) schedules/packets given in the Bid details. The details of the RTGS/NEFT should tally with the details available in the scanned copy and the date entered during e-Bid submission time otherwise the e-Bid submitted will not be accepted.
- e. Next the Bidder should upload the technical e-Bid documents for fee details (e-Bid fee and EMD), Qualification details. Before uploading, the Bidder has to select the relevant digital signature certificate. He may be prompted to enter the digital signature certificate password, if necessary. For uploading, the Bidder should click "browse" button against each document label in technical and financial schedules/packets and then upload the relevant PDF/XLS files already prepared and stored in the Bidder's computer. The required documents for each document label of technical ( fee details, qualification details, e-Bid form and technical specification details) and financial (e-Bid form and price schedule/BOQ)



schedules/packets can be clubbed together to make single different files for each label.

- f. The Bidder should click "Encrypt" next for successfully encrypting and uploading of required documents. during the above process, the e-Bid document are digitally signed using the DSC of the Bidder and then the documents are encrypted/locked electronically with the DSC's of the bid openers to ensure that the e-Bid documents are protected, stored and opened by concerned bid openers only.
- g. After successful submission of e-Bid document, a page giving the summary of e-Bid submission will be displayed confirming end of e-Bid submission process. The Bidder can take a printout of the bid summary using the "print" option available in the window as an acknowledgement for future reference.
- h. NMRC reserves the right to cancel any or all e-Bids without assigning any reason.

### **3.2.10 Late e-Bid**

- a. Bids received by NMRC after the specified time on the Bid Due Date shall not be eligible for consideration and shall be summarily rejected.
- b. The server time indicated in the bid management window on the e- procurement website <http://etender.up.nic.in> will be the time by which the e-Bid submission activity will be allowed till the permissible date and time scheduled in thee-Bid.
- c. Once the e-Bid submission date and time is over, the Bidder cannot submit his/her e-Bid. Bidder has to start the bid submission well in advance so that the submission process passes off smoothly. The Bidder will only be held responsible if his/her e-Bid is not submitted in time due to any of his/her problems/faults, for whatsoever reason, during e-Bid submission process.

### **3.2.11 Withdrawal and re-submission of e-Bid**

- a. At any point of time, a Bidder can withdraw his/her e-Bid submitted online before the bid submission end date and time. For withdrawing the Bidder should first log in using his/her login id and password and subsequently by his/her digital signature certificate on the e-procurement website <http://etender.up.nic.in>. The Bidder should then select "My bids" option in the bid submission menu. The page listing all the bids submitted by the Bidder will be displayed. Click "View" to see the details of the bid to be withdrawn. After selecting the "bid withdrawal" option the Bidder has to click "Yes" to the message "Do you want to withdraw this bid?" displayed in the bid information window for the selected bid. The Bidder also has to enter the bid withdrawing reasons and upload the letter giving the reasons for withdrawing before clicking the "Submit" button. The Bidder has to confirm again by pressing "OK" button before finally withdrawing his/her selected e-Bid.
- b. No e-Bid may be withdrawn in the interval between the deadline for submission of e-Bids and the expiration of period of e- bid validity. Withdrawal of an e-Bid during this interval may result in the forfeiting of Bidder's e-Bid security.
- c. The Bidder can re-submit his/her e-Bid as when required till the e-Bid submission end date and time. The e-Bid submitted earlier will be replaced by the new one. The payment made by the Bidder earlier will be used for revised e-Bid and the new e-Bid submission summary generated after the successful submission of the revised e-Bid will be considered for evaluation purposes. For re-submission, the Bidder should first log in using his/her login Id and password and subsequently by his/her digital signature certificate on the e-procurement website <http://etender.up.nic.in>. The

Bidder should then select "My bids" option in the bid submission menu. The page listing all the bids submitted by the Bidder will be displayed. Click" View "to see the detail of –Bid to be resubmitted. After selecting the "bid re-submission" option, click "Encrypt & upload" to upload the revised e-Bids documents.

- d. The Bidder can submit their revised e-Bids as many times as possible by uploading their e-Bid documents within the scheduled date & time for submission of e-Bids.
- e. No e-Bid can be resubmitted subsequently after the deadline for submission of e-Bids.

#### **3.2.12 NMRC's right to accept any e-Bid and to reject any or all e-Bids.**

- a. Notwithstanding anything contained in this e-Bid, NMRC reserves the right to accept or reject any Bid and to annul the Selection Process and reject all Bids, at any time without any liability or any obligation for such acceptance, rejection or annulment, and without assigning any reasons thereof.
- b. NMRC reserves the right to reject any Bid if:
  - At any time, a material misrepresentation is made or uncovered, or
  - The Bidder does not provide, within the time specified by NMRC, the supplemental information sought by NMRC for evaluation of thee-Bid.
- c. Such misrepresentation/ improper response may lead to the disqualification of the Bidder. If such disqualification /rejection occurs after the e-Bid have been opened and the highest ranking Bidder gets disqualified / rejected, then the NMRC reserves the right to consider the next best Bidder, or take any other measure as may be deemed fit in the sole discretion of NMRC, including annulment of the Selection Process.

#### **3.2.13 Period of validity of e-Bid**

- a. E-Bid shall remain valid for 180 days after the date of e-Bid opening prescribed by NMRC. An e- Bid valid for a shorter period shall be rejected by NMRC as non-responsive.
- b. In exceptional circumstances, NMRC may solicit the Bidder's consent to an extension of the period of e-Bid validity. The request and the response thereto shall be made in writing.

#### **3.2.14 Correspondence with the Bidder**

- a. Save and except as provided in this e-Bid, NMRC shall not entertain any correspondence with any Bidder or its Technical Partners in relation to acceptance or rejection of any e-Bid.
- b. No Bidders or its Technical Partners shall contact NMRC on any matter relating to his e-Bid from the time of Bid opening to the time contract is awarded.
- c. Any effort by the Bidder or by its Technical Partners to influence NMRC in the Bid evaluation, Bid comparison or contract award decisions, may result in the rejection of his Bid.

### 3.3 Earnest Money Deposit

#### 3.3.1 Earnest money deposit (EMD)

- a. The tenderer shall furnish, as part of its e-Bid, an e-Bid security/ EMD as stated in Data Sheet in form of RTGS/NEFT only in favor Noida Metro Rail Corporation Limited in the A/c No. mentioned in **Data Sheet**. The scanned copy of RTGS/NEFT receipt of Security/ EMD with transaction Id certified by the same bank must be enclosed along with the e-Bid. Tender without Earnest Money in the prescribed form, will not be accepted.
- b. Bidders submitting bids for more than one package shall be required to submit EMD for each package as mentioned in **Data Sheet** for which bid is submitted.
- c. Any e-Bid not secured in accordance with above shall be treated as non-responsive and rejected by NMRC.
- d. Unsuccessful Bidder's EMD will be returned within 45 days after conclusion or discharge of the tender.
- e. No interest will be paid on the Earnest Money Deposit.
- f. The successful Bidder's e-Bid EMD will be adjusted with Performance Bank Guarantee, if applicable, to be submitted by the Bidder upon signing the contract.
- g. The EMD may be forfeited:
  - i. If Bidder (a) withdraws its e-Bid during the period of e-Bid validity specified by the Bidder on the e- bid form: or (b) does not accept the correction of errors or (c) modifies its e-Bid price during the period of e-Bid validity specified by the Bidder on the form.
  - ii. In case of a successful Bidder, if the Bidder fails to sign the contract with the Employer.
- h. Tender Cost and Tender Security is exempted for Micro & Small Enterprises (MSEs) registered with District Industries Centre or Khadi & Village Industries Commission or Khadi & Village Industries Board or Coir Board or National Small Industries Corporation or Dte. Of Handicraft & Handloom or any other bodies specified by Ministry of Micro, Small & Medium Enterprises for appropriate category and have valid registration certificate as on date of tender submission.

The MSEs would not be eligible for exemption of tender security if:

- a. Either they are not registered for appropriate category.
- b. Or they do not have valid registration as on the date of tender submission.

The bidders seeking exemption from 'tender security', being MSEs, shall ensure their eligibility w.r.t above and submit registration certificate issued by the body under which they are registered which clearly mentions category of registration i.e. :

(i) **“Manufacturer of Display Components (plasma, polymer, LCD, LED)”**

OR

(ii) **Manufacture of electronic capacitors, resistors, chokes, coils, transformers (electronic) and similar components**

### **3.4 Opening and Evaluation of Bids**

#### **3.4.1 Opening of technical e-Bid by NMRC**

- a. NMRC will open all technical e-Bids, in the presence of Bidder's representatives who choose to attend on the prescribed date of opening at NMRC Office. The Bidder's representatives who are present shall submit the letter to NMRC on the letter head of the company stating that the representative (name) is authorized to attend the meeting (Please note – The representative is required to carry a copy during pre-bid and other related meetings as well). He / She shall sign a register evidencing their attendance at NMRC. In the event of the specified date e-Bid opening being declared a holiday for the employer, the e –bids shall be opened at the appointed time and place on the next working day
- b. The Bidder who is participating in e-Bid should ensure that the RTGS/NEFT of Bid Processing Fee and EMD must be submitted in the prescribed account of NMRC within the duration (strictly within opening & closing date and time of individual e-Bid) of the work as mentioned in Bid notice, otherwise, in any case, e-Bid shall be rejected.
- c. The Bidders names and the presence or absence of requisite e-Bid security and such other details as NMRC at its discretion may consider appropriate, will be announced at the opening.

#### **3.4.2 Opening of financial e-Bid**

- a. After evaluation of technical e-Bid, through the evaluation committee NMRC shall notify those Bidders whose technical e-Bids were considered non-responsive to the conditions of the contract and not meeting the technical specifications and qualification requirements indicating that their financial e-Bids will not be opened.
- b. NMRC will simultaneously notify the Bidders, whose technical e-Bids were considered acceptable to the employer. The notification may sent by e-mail provided by-bidder.
- c. The financial e-Bids of technically qualified Bidders shall be opened in the presence of technically qualified bidders who choose to attend. The date and time for opening of financial bids will be communicated to the technically qualified Bidders subsequently after completion of technical bids evaluation through e-mail provided by the Bidder.

#### **3.4.3 Correction of Errors**

- a. Financial Bids determined to be responsive will be checked by NMRC for any arithmetic errors. Where there is a discrepancy between the rate quoted in the Financial Bid, in figures and in words, the amount in words will prevail over the amounts in figures, to the extent of such discrepancy.
- b. The amount stated in the Financial Bid will be adjusted by NMRC in accordance with the above procedure for the correction of errors and shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected quoted rate of e-Bid, his e-Bid will be rejected, and his Bid Security shall be liable for forfeiture.

#### **3.4.4 Examination of e-Bid document**

- a. The NMRC will examine the e-Bid to determine if:
  - i. They are complete;
  - ii. They meet all the conditions of the contract;
  - iii. The required e-Bid Processing fee, EMD and other required documents have been furnished;
  - iv. The documents have been properly digitally signed; and
  - v. The e-Bids are in order.
- b. Any e-Bid or e-Bids not fulfilling these requirements shall be rejected.

#### **3.4.5 Contacting NMRC**

- a. No Bidder shall contact NMRC on any matter relating to his/her e-Bid, from the time of the e-Bid opening to the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of NMRC, he/she can do so in writing.
- b. Any effort by a Bidder to influence NMRC in its decisions on e-Bid evaluation, e-bid comparison or contract award may result in rejection of the Bidder's-Bid.
- c. In the event of any information furnished by the Bidder is found false or fabricated, the minimum punishment shall be debarring /blacklisting from Noida Metro works and legal proceeding can also be initiated. EMD of such bidders will be forfeited.

#### **3.4.6 Confidentiality**

- a. Information relating to the examination, clarification, evaluation, and recommendation for the Bidders shall not be disclosed to any person who is not officially concerned with the process or is not a retained professional advisor advising NMRC in relation to or matters arising out of, or concerning the Bidding Process. Any effort by a Bidder to exert undue or unfair influence in the process of examination, clarification, evaluation and comparison of Proposal shall result in outright rejection of the offer, made by the said Bidder.
- b. NMRC shall treat all information, submitted as part of Bid, in confidence and shall require all those who have access to such material to treat the same in confidence. NMRC may not divulge any such information unless it is directed to do so by any statutory entity that has the power under law to require its disclosure or is to enforce or assert any right or privilege of the statutory entity and/ or NMRC or as may be required by law or in connection with any legal process.

### **3.5 Award of Contract**

#### **3.5.1 Award Criteria**

- a. NMRC will award the contract as per evaluation criteria stated in the RFP Document.
- b. NMRC will award the contract to the successful Bidder whose bid has been determined to be responsive to all the conditions of the contract and meeting the eligibility requirement of the bidding document.

### **3.5.2 Notice of Award(NOA)**

- a. Prior to the expiration of the period of e-Bid validity, NMRC will notify the successful Bidder in writing, by letter/e-mail/fax, that its e-Bid has been accepted.
- b. The acceptance of NOA will constitute the formation of the contract until a formal contract agreement is executed.

### **3.5.3 Signing of contract**

At the same time as NMRC notifies the successful Bidder that it's e-Bid has been accepted, the successful Bidder shall have to sign the Agreement with relevant document as mentioned in the RFP. The agreement draft along with other related terms and conditions will be same as furnished in this e-Bid. Any refusal will not be allowed. The Bidder need not download and submit in hard copies of these documents. The signing of contract agreement within a period of 30 days of submission of performance security or 60 days from the date of acceptance of Notice of Award whichever is later, the successful tenderer will be required to execute the contract agreement.

### **3.5.4 NMRC's right to accept any e-Bid and to reject any or all e-Bids**

NMRC reserves the right to accept or reject any e-Bid, and to annul the e-Bid process and reject all e- Bids at any time prior to contract award, without thereby incurring any liability to the affected tenderer or tenderers.

### **3.5.5 Make in India**

**NMRC will adhere to Make in India norms as per various Govt Orders such as DPIIT Order No P-45021/2/2017-PP(BE-II) Dated 04/06/2020 and Order No P-45021/2/2017-PP(BE-II) 16/09/2020 and MoUHA Order No. K-14011/08/2017/MRTS-Coord dated 14.10.2020 and latest instructions in this regard.**

**Accordingly relevant documents must be attached alongwith Bid document in technical offer.**

## 4. Section 4: Eligibility, Evaluation and Selection Process

### 4.1 Eligibility Criteria

The Bidder's competence and capability is proposed to be established by the following parameters. The Bidder should meet all the criteria given in this section.

- a. Sole proprietorship, registered partnership firm (including LLP), public limited company, and private limited company can submit the Bid. The firms and companies should be registered in India.
- b. The Bidder should have a minimum experience of having satisfactorily and successfully completed similar works during last 7 (Seven) years period ending last day of month previous to the one in which the bids are invited should be either of the following:
  - i. One similar completed work costing not less than the amount equal to Rs.9.01 Crore (Rs Nine Crore One Lakh Only)

**OR**
  - ii. Two similar completed works each costing not less than the amount equal to Rs.5.64 Crore (Rs Five Crore Sixty Four Lakh only)

**OR**
  - iii. Three similar completed works each costing not less than the amount equal to Rs. 4.51 Crore (Rs Four Crore Fifty One Lakh Only)

#### Definition of Similar Works-

**“Supply, Installation, testing and commissioning of PIDS/PAS in any Metro Railway/Indian Railway/High Speed Rail Networks/LRT (Light Rail Transit).**

Contractor has to give demonstration of integration of its PIDS system with NMRC existing PIDS/Signaling/PAS system at one station or NMRC Lab as a part of technical bid evaluation. If demonstration is not successful then no further evaluation of bid will be done and bid will be summarily rejected.

For demonstration of technical capabilities, NMRC will allocate date and time period to each bidder, wherein each bidder has to bring at least one PIDS system at its own risk and cost to NMRC premises for demonstration of its technical capabilities.

- c. **Bidders are required to enclose copies of the work orders and work completion certificate in support of the same with the Technical-Bid. Work Completion certificate clearly indicating the nature/scope of work, actual completion cost and actual date of completion for such work without proper and valid certificates from the Employers, bid will be rejected.**
- d. The Bidder should have minimum Average Annual Turnover of Rs. 10.82 Cr. /-(Rs Ten crore Eighty Two Lakh Only) in the last 5 (Five) Financial Years (2019-20,2020-21,2021-22, 2022-23,2023-24) preceding the Bid Due Date.
- e. Working capital/Net cash flow (Current asset minus current liabilities should be greater than Rs. 1.93 Cr (Rupees One Crore Ninety Three Lakh Only) in the last audited F.Y.
- f. Net worth should be greater than Rs. 2.70 Cr (Rupees Two crore Seventy Lakh only) in the last audited F.Y.

- g. Profit before tax should be positive in at least 2 (Two) years out of the last 5 (Five) audited financial years (2019-20, 2020-21, 2021-22, 2022-23,2023-24).
- h. The Bidder should be registered with the Goods and Services Tax Authorities.
- i. NMRC/any other Metro Organization (100% owned by Govt.) / Ministry of Housing & Urban Affairs / Order of Ministry of Commerce, applicable for all Ministries must not have banned business with the tenderer (including any member in case of JV/consortium) as on the date of Bid submission for **“Replacement of Existing Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System.** The tenderer should submit undertaking to this effect in Form-8 of Tender.

**The Bidder shall also furnish the following documentary proof:**

- a. For above criteria4.1(a)
  - i. Registration certificate of the firm/ Partnership deed/ certificate of incorporation ,etc.
  - ii. PAN copy as per legal entity.
- b. For above criteria4.1 (b) &(c)
  - i. Form 4: Work Experience with documentary evidence
- c. For above criteria4.1(d) to( g)
  - i. Form 5: Financial Capability Detail
  - ii. A copy of the Audited balance sheets and Profit and Loss Statements for the last 5 (Five) financial years  
In case the Financial Statements for the latest financial year are not audited and therefore the Bidder cannot make it available, the Bidder shall give an undertaking to this effect and the statutory auditor/charted accountant shall certify the same. In such a case, the Bidder shall provide the Audited Financial Statements for 4 (Four) years preceding the year for which the Audited Financial Statement is not being provided. Also, pertaining to latest financial year, the bidder shall submit an affidavit certifying that “The Annual Accounts have not been audited so far. We are submitting the CA certified provisional accounts, which shall be substantiated by the Audited Accounts, when prepared.” Bidders must submit the work order copies along with Satisfactory Work Completion Certificates. In case of ongoing work, the partial completion value pertaining to current year will be considered.
  - iii. Self-attested copy of ITR for latest three financial years.
- d. For above criteria 4.1(h)
  - i. Copy of self-attested GST registration certificate
- e. For above criteria 4.1( i)
  - i. Form 8:Undertaking

## **4.2 Bid Capacity Criteria**

The Bidders will be qualified only if their available bid capacity is more than the approximate cost of work as per RFP (Refer Form 7: Bid Capacity Information). Available bid capacity will be calculated based on the following formula:

$$\text{Available Bid Capacity} = 2 * A * N - B$$

Where,

A = Maximum of the value of works executed in any one year during the last five financial years (updated to the last day of the previous month of tender submission price level



assuming 5% inflation for Indian Rupees every year and 2% for foreign currency portions per year).

N = No. of years prescribed for completion of the work for which bid is invited

B = Value of existing commitments (as on the last day of the previous month of tender submission) for on-going works during period of 48 months w.e.f. from the first day of the month of tender submission.

In the case of a group, the above formula will be applied to each member to the extent of his proposed participation in the execution of the work. If the proposed % is not provided, equal participation will be assumed.

The tender submission of tenderers, who do not qualify the minimum eligibility criteria & bid capacity criteria stipulated above, shall not be considered for further evaluation and therefore rejected.

#### **4.3 Information of the Technical and Financial Proposal.**

- a. The bidder satisfying the technical and financial eligibility criterion specified above shall be considered as technically qualified.
- b. The financial proposal of only technically qualified Bidders shall be opened for evaluation.
- c. The Bidder with the lowest quoted price for the entire work in the financial proposal (L1 bidder) shall be selected for the award of contract.

#### **4.4 Selection of Bidder**

NMRC shall award the Contract for “**Replacement of Existing Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System**” to the Lowest Tenderer (L1 bidder), whose tender has been determined to be substantially responsive and compliant to the requirements contained in the Tender Documents i.e Technically qualified.

- a. In case, two or more technically qualified bidders quote the same rate in the Commercial Bid, and become Lowest (i.e. L-1), then the tender would be awarded to the bidder who has the highest / higher Average Annual Turnover during the last 3 years ending on the last day of the month preceding the month in which the tender has been floated.
- b. Prior to the expiry of the period of bid validity, NMRC will notify the successful bidder in writing, either through Notice of Award (NOA), that his bid has been accepted.
- c. The NOA would be sent in duplicate to the successful bidder, who will return one copy to NMRC duly acknowledged, signed and stamped by the authorized signatory of the bidder, as an unconditional acceptance of the NOA, within 10 (ten) days from the date of issue of NOA.
- d. No correspondence will be entertained by NMRC from the unsuccessful bidders.

#### **4.5 Notice of Award and Execution of Contract Agreement**

- a. NMRC will notify the Successful Bidder by a NOA that its bid has been accepted.
- b. The Selected Bidder shall, within 10 (ten) days of the receipt of the NOA, sign and return the duplicate copy of the NOA in acknowledgement thereof along with letter of acceptance of NOA. In the event, the duplicate copy of the NOA duly signed by the Selected Bidder and letter of acceptance of NOA is not received by the stipulated date, NMRC may, unless it consents to extension of time for submission thereof, appropriate the Bid Security of such

Bidder as mutually agreed genuine pre-estimated loss and damage suffered by NMRC on account of failure of the Selected Bidder to acknowledge the NOA

- c. The Successful Bidder shall execute the Contract Agreement within a period of 30 days of submission of performance security or 60 days from the date of acceptance of Notice of Award whichever is later, the successful tenderer will be required to execute the Contract Agreement. One copy of the agreement duly signed by the employer and the contractor through their authorized signatories will be supplied by the employer to the contractor.
- d. Failure of the Successful Bidder to comply with the requirement of acknowledgement of NOA shall constitute sufficient grounds for the annulment of the NOA, and forfeiture of the bid security.
- e. **The Employer reserves the right to increase or decrease the quantity up to 25% of the quantity offered by the successful tenderer. The bidder is bound to accept the increase or decrease in the tendered quantity up to 25% under this clause without any change in unit price.**
- f. In case the variation in individual items or the group of items as stipulated above, is more than 25% on plus side, the rate for the varied quantity beyond 25% shall be negotiated between the NMRC and the Contractor and mutually agreed rates arrived at before actual execution of the extra quantity. In case the contractor executes the extra quantity without written approval of the NMRC with specific instructions to execute pending the finalization of rates, the payment shall be made at contract rate only. In the event of disagreement, the Engineer shall fix such rates of price as are, in his opinion appropriate and shall notify the Contractor accordingly, with a copy to the Employer. Until such time as rates or prices are agreed or fixed, the Engineer shall determine provisional rates or prices to enable on account payments to the Contractor. Alternatively, in the event of disagreement, the Contractor shall have no claim to execute extra quantities/new items and the Engineer shall be free to get such additional quantities beyond 25% or new items executed through any other agency. However, if the Engineer or the Employer so directs the Contractor shall be bound to carry out any such additional quantities beyond the limits stated above original quantities and or new items and the disagreement or the difference regarding rates to be paid for the same shall be settled in the manner laid down under the conditions for the settlement of dispute.

#### **4.6 Performance Bank Guarantee / Security Deposit**

- a. To fulfill the requirement of performance bank guarantee during the implementation period, the Successful Bidder (herein referred to as the "Contractor") shall deposit 5% of the value of the price for Supply, Installation, testing and Commissioning of PIDS( Passenger Information Display) in form of FDR/ DD or unconditional and irrevocable Bank Guarantee bond as per Form -14 of this RFP, issued by a scheduled bank of Delhi-NCR in favor of NMRC valid for 40 months within 30 days from Notice of Award. The performance Guarantee shall be valid for a period upto 6 months beyond DLP end date. EMD amount of successful bidder shall be adjusted in the performance bank guarantee, if applicable. For unsuccessful bidder, EMD shall be refunded without any interest. In case of extension of tenure by 6 months, the performance bank guarantee shall be extended by 6 months or such increased period as well the performance Guarantee shall be extended or renewed in advance before expiry of existing guarantee.

Also the Successful Bidder shall deposit 5% of the value of the CAMC in form of FDR/ DD or unconditional and irrevocable Bank Guarantee bond issued by a scheduled bank of Delhi-NCR in favour of NMRC valid for 3 years and 6 months 30 days prior to the

commencement of first year of CAMC. The Bank guarantee shall be extended and renewed in advance before expiry of existing bank guarantee. The expenses to be incurred for the making Performance Bank Guarantee (PBG) shall be borne by the Contractor.

- b. It is to note that if contract value increases by more than 25% of the original contract value, the performance bank guarantee shall be increased accordingly. However same PBG will hold good for any variation up to 25% of original contract.
- c. A Contract agreement will have to be signed by the Contractor at his cost on proper stamp paper. Without performance guarantee by Contractor, Contract agreement shall not be signed.
- d. The Bank Guarantee must be issued by a bank branch located in Delhi/NCR, Noida and Greater Noida region only. The Bank guarantee shall be extended and renewed in advance before expiry of existing bank guarantee.
- e. NMRC reserves the right for deduction of NMRC dues from Contractor's Performance Bank Guarantee/ Security Deposit (interest free) for –
  - i. Any penalty imposed by NMRC for violation of any terms and conditions of agreement committed by the Contractor.
  - ii. Any amount which NMRC becomes liable to the Government/Third party due to any default of the Contractor or any of his director/ employees/ representatives/ servant/ agent, etc.
  - iii. Any payment/ fine made under the order/judgment of any court/consumer forum or law enforcing Contractor or any person duly empowered in his behalf.
  - iv. Any outstanding payment/ claims of NMRC remained due after completion of relevant actions as per agreement.

Once the amount under above Clause is debited, the Contractor shall replenish the Security Deposit/ Performance Bank Guarantee to the extent the amount is debited within 15 days period, failing which, it shall be treated as Contractor Event of Default and will entitle NMRC to deal with the matter as per the provisions of RFP and Contract Agreement.

#### **4.7 Contract during Proposal Evaluation**

- f. Proposals shall be deemed to be under consideration immediately after they are opened and until such time NMRC makes official intimation of award/ rejection to the Bidders. While the Proposals are under consideration, Bidders and/ or their representatives or other interested parties are advised to refrain from contacting by any means, NMRC and/ or their employees/ representatives on matters related to the Proposals under consideration till the time Contract is awarded
- g. Any effort by a Bidder to influence NMRC in its decisions on e-Bid evaluation, e-Bid comparison or contract award may result in rejection of the Bidder's-Bid.
- h. In the event of any information furnished by the agency is found false or fabricated the minimum punishment shall be debarred/ blacklisting and the legal proceeding may also be initiated.
- i. If the Bidder wishes to bring additional information to the notice of NMRC, he/she can do so in writing. All correspondence/ enquiry should be submitted to the following in writing by fax/ post/courier:

Dy. General Manager/ AFC-Tele  
Noida Metro Rail Corporation (NMRC) Limited  
Block-III, 3rd Floor, Ganga Shopping Complex,  
Sector-29, Noida -201301  
District Gautam Budh Nagar, Uttar  
Pradesh  
Email:nmrc.afc@gmail.com

- j. No interpretation, revision, or other communication from NMRC regarding this solicitation is valid unless in writing and signed by the competent authority from NMRC.

#### 4.8 Project Financial Terms

##### **Payment Terms:**

The standard payment terms subject to recoveries, if any by way of Liquidated damages (LD) will be as under:

- a. Payment will be effected based on unit rate as approved in the Bill of Quantity (BOQ) and Key Dates defined as per Annexure- B.
- b. For the purpose of On-account payment, the contractor shall submit detailed activities carried out as per Annexure- B. Abstract sheets along with recorded bill for the item actually executed for checking and payment. Payment will be effected based on unit rates as approved in the Bill of Quantities.
- c. Payment of CAMC will be done on Quarterly basis.
- d. Contractor shall submit necessary documents & Bill (3 copies of invoices) for payment. Income Tax is deductible at source while effecting payment of bills at the prescribed percentage as per the orders of the government.
- e. GST, if claimed, will be reimbursed only if the GST Registration no. is mentioned in the Invoice. In the absence of GST Registration No., GST will not be reimbursed. Further, GST will be reimbursed only when GST is reflected on the GST Portal (GSTR2A of NMRC).
- f. Quote PAN and GST on all correspondence, bills, voucher and other documents otherwise TDS at higher of the prescribed rate will be deducted.
- g. All payments to the contractor will be made by e-payment/ Account payee cheques. Quarterly payments shall be made on receipt of the bill complete and correct in all respect along with the supporting documents subject to deduction of statutory charges/ taxes/ duties/ levies etc.
- h. Bills, correct in all respect, shall be submitted in Engineer in-charge, in duplicate along with supporting documents, who will arrange the payment through department of NMRC.
- i. No advance of any type shall be paid.
- j. TDS on invoice will be deducted while processing bills as per Government guidelines.
- k. Supporting documents to be submitted by contractor along with bill.
- l. No overtime is considered to achieve high level safety standards. The tenderer should consider execution of work in shifts as specified in the tender or desired by engineer in-charge.
- m. The Agency must ensure the timely payment of salary, PF, ESI, etc. and prompt medical facility to the sick/injured and to all staff.

## 4.9 SCC (Special Condition of Contract)

S. No.	Description
1	<p><b>Contract Agreement</b> The Form of Contract Agreement shall be in the format given.</p>
2	<p><b>Functions of Engineer</b></p> <p>(i) Shall watch and inspect the Works, monitor and examine any material to be used and workmanship employed by the Contractor in connection with the Works;</p> <p>(ii) Shall carry out such duties and exercise such powers vested in the Engineer in accordance with the provisions of the Contract;</p> <p>(iii) Shall issue instructions which in his opinion are necessary for the execution of the Works; and</p> <p>(iv) May issue any other instruction which in his opinion is desirable in connection with the Works.</p> <p>In case The Engineer is employee of any agency hired by the Employer, the Engineer shall take the approval of the Employer for all technical and financial matters otherwise he shall be deemed to have taken the approval of the Employer.</p>
3	<p><b>PERFORMANCE SECURITY</b></p> <p>Contractor is required to submit PBG i.e. 5% of Contract Value If the contract value increases by more than 25% of the original contract value, the Performance Security will be increased accordingly. However same PBG will hold good for any variation up to 25% of original contract.</p> <p>Performance Security is required to be submit by successful bidder within 30 days from the date of acceptance of Notice of Award. The extension of Time for submission of Performance Security beyond 30 days up to 60 days from the date of acceptance of Notice of Award may be given by the authority who is competent to sign the contract agreement. However, a penal interest of 15% per annum shall be charged for the entire period i.e. from the date of acceptance of NOA (Notice of Award) to the date of submission of Performance security.</p> <p>In case the Contractor fails to submit the requisite Performance Security within 60 Days from the date of acceptance of NOA, The contract shall be annulled duly forfeiting Tender security and other dues, if any payable against the contract. The failed contractor shall be debarred not only from participating in re-tender for that work but also in any tender of NMRC for a period of 1 year from the date of acceptance of NOA ( Notice of Award)</p>
4	<p><b>Coordination with other Contractors</b> The contractor for this package shall plan and execute work in coordination and in co-operation with other contractors working for adjacent/other packages</p>
5	<p><b>Sufficiency of Tender</b> The Tenderer shall be entirely responsible for sufficiency of rates quoted by him in his tender. The Contractor (Successful Tenderer) shall be paid for only at quoted/accepted rates for the items of works executed as per BOQ.</p>
6	<p><b>Access Route</b> All operations for the execution of the Works shall be carried out so as not to interfere unnecessarily with the convenience of the public or the access to public properties owned by the Employer or by any other person.</p>
7	<p><b>Safety Precautions</b> The Contractor is required to make himself aware of all the requirements of the Employer's Safety, Health and Environmental Manual. The Site Safety Plan shall include detailed policies, procedures and regulations which, when implemented, will ensure compliance.</p>

8	<p><b>Electricity and Water</b> Employer may provide Electricity at the site as per requirement of the work. The contractor shall make his own arrangements to tap the Electricity from the nominated and existing sockets/ points. The contractor shall tap the Electricity as per IE Rules &amp; IE Act (Latest) duly complying all safety precautions.</p>
9	<p><b>Employer Supplied Machinery and Materials</b> The Employer will not provide any machinery or materials under the Contract.</p>
10	<p><b>Security of the Site</b> The Contractor shall take all measures necessary to ensure such security, including exercising control over all persons and vehicles which are employed or engaged on the Site or in connection with the Works or the other works comprising the Project and with the security arrangements applicable to any other site within the Project.</p> <p>The Contractor shall arrange the issue of passes for the admission of all persons and vehicles to the Site or to any part thereof and may refuse admission to or remove from the Site any person or vehicle failing to show an appropriate pass on demand to any duly authorised person.</p> <p>If required by the Engineer, the Contractor shall submit a list identifying all persons to whom passes have been issued together with two photographs of each person and all entities to which a pass has been issued in respect of any vehicle and shall satisfy the Engineer of the bonafides of any such person or entity.</p> <p>The Contractor shall not, without the written permission of the Engineer or otherwise in accordance with the Contract, allow access to the Site to any person unless the presence on Site of such person is necessary in connection with the execution of the Works or with the discharge of the duties of any relevant authority.</p> <p>For the purposes of this Clause only, "Site" shall include off-Site places of manufacture or storage and the Contractor's Work Areas and shall include, areas provided to the Contractor by others.</p>
11	<p><b>Submission of Documents</b> The Contractor shall submit drawings and documents, as required by the Contract, to the Engineer in accordance with any submittal schedule agreed with the Engineer. This submittal shall be made sufficiently before the Works are to be carried out to give the Engineer and the Employer reasonable time to examine the drawings or other documents, to prepare comments and for any changes to be accommodated by the Contractor.</p> <p>Where the consent of the Engineer is required, the Engineer shall notify the Contractor in writing of his decision either within such period as may expressly be stipulated in the Contract or otherwise within a reasonable time.</p> <p>The Operation and Maintenance Manuals and drawings submitted by the Contractor shall, if required, be updated by him during the Defects Liability Period and re-submitted for review by the Employer's Representative.</p>
12	<p><b>Labour Laws and NMRC Labour Welfare Fund</b></p> <p>The Contractor shall, if required by the Employer, deliver to the Engineer or to his office; a return in detail, in such form and at such intervals as the Employer may prescribe, showing the number of labour employed in different categories by the Contractor for the entire work.</p> <p>The contractor must ensure compliance of all the labour laws including obtaining labour license.</p>
13	<p><b>Health and Safety</b> Contractors are required to have tie-up with well-equipped reputed hospitals having facilities of MRI, CT Scan, Ultrasound, Blood Bank, specialist Doctors like neurosurgeon, orthopedic as</p>

	<p>mandatory requirement and fire station located in the neighborhood for attending to the casualties promptly and emergency vehicle kept on standby duty during the working hours for the purpose.</p>
14	<p><b>Quality Control</b>                  Within 28 days of the issue of the Notice to Proceed, the Contractor shall submit to the Engineer, for his consent, his proposed Site Quality Plan based on the Outline Quality Plan and the Employer's Requirements. The quality manual should address the quality system as required by ISO 9001-1991. Any supplement to the Site Quality Plan shall be submitted at least 14 days before commencement of the relevant work.</p> <p>Upon the Engineer notifying his consent to the Site Quality Plan, or any supplement thereto, the Contractor shall, adhere to the principles and procedures contained in such document, except where the Engineer gives his consent to any amended or varied version thereof. The Contractor shall cause any sub-contractors to adhere to this Plan.</p> <p>The Contractor shall appoint a suitably qualified and experienced person, not otherwise engaged in the performance of the Contract, to act as manager of the quality assurance system and shall provide such other personnel and resources as required to ensure effective operation of the quality assurance system. The said manager shall carry out audits of the application of the quality assurance system, and ensure effective quality control and delivery of quality assurance.</p> <p>The Contractor shall provide all necessary access, assistance and facilities to enable the Engineer to carry out surveillance visits both on and off the Site to verify that the quality assurance system is being properly and fully implemented. No extra payment shall be made in this regard and the cost of the Work under this element shall be deemed to be included in the Contract Price.</p>
15	<p><b>Defect liability period/CAMC</b>                  The Defect liability period (DLP) shall be 24 months from the date of issue of the acceptance/ Taking over Certificate for the whole of the works.</p> <p>After successful completion of DLP (Defect Liability Period) System will be under CAMC (Comprehensive Annual Maintenance Contract) for 3 Years from the date of successful completion of DLP.</p>
16	<p><b>Contract Price(Inclusion/Exclusion)</b></p> <p><b>16.1 Duties, Taxes Octroi, Royalty etc.</b>                  The contract price, subject to any adjustment thereto in accordance with contract conditions shall be inclusive of all taxes Act(s),duties, levies, royalty ,service Tax etc.or any tax in replacement of such taxes like GST.</p> <p><b>Change in Taxes Duty</b>                  "Change in Taxes /Duties/Levies" means the occurrence or coming into force of the following ,at any time after the date of submission of tender</p> <ol style="list-style-type: none"> <li>a. Any new tax which is imposed after the due date of submission of tender.</li> <li>b. Change in the rate of any existing tax.</li> </ol> <p><b>16.2</b> The contract Price shall not be adjusted due to any of the above two conditions and its impact shall be considered covered in the price indices of various components and thus compensated in price variation clause. Also, the contract price shall not be adjusted on account of fluctuations in the rates of exchange between the foreign currencies of the contract and Indian rupees from the last date of submission of tender.</p> <p>In case where price variation is not allowed under clause 17 of SCC, the contract price shall not be adjusted due to any of the above two conditions and its cost shall be deemed included in the quoted contract price.</p>
17	<p><b>Price Variation</b>                  This is a fixed price contract and no Price Variation is admissible in this contract.</p>

18	<p><b>Payment</b> For the purpose of On-account payment, the contractor shall submit detailed activities carried out as per BOQ. Abstract sheets along with recorded bill for the item actually executed for checking and payment. Payment will be effected as per key dates defined in Annexure-B of tender document</p>
19	<p><b>Insurance</b></p> <p><b>19.1</b> All of the contractor's employees drawing monthly wages up to Rs.15,000/- or as applicable as per the enhanced limit, shall have to be covered under ESI. The Contractor shall take insurance policy as specified in the Employee's Compensation Act only for those employees who are not covered by ESI.</p> <p><b>19.2</b> The contractor shall insure against liability to third parties in the joint name of the Employer and the contractor for any loss, damage, death or injury which may occur to any physical property (except things insured otherwise) or any person (except person insured by employer, staff of other contractor working in the premises, which may arise out of the performance of the contract. The insurance shall be at least for the amount of ₹ 15, 00000/- for each incident.</p> <p><b>19.3</b> Insurance cover for Contractor's All Risk shall be full value of Contract price.</p>
20	<p><b>Notices and Instructions</b></p> <p>The Contractor shall furnish to the Employer/Engineer the postal address of his office at Noida /Greater Noida. Any notice or instructions to be given to the Contractor under the terms of the contract shall be deemed to have been served on him if it has been delivered to his authorized agent or representative at site or if it has been sent by registered post to the office, or to the address of the firm last furnished by the Contractor.</p> <p>The Contractor shall establish an office in the Noida /Greater Noida in consultation with the in charge for planning, co-ordination and monitoring the progress of the Work and intimate the same in writing to in charge. In addition, the Contractor may set up field offices at convenient and approved locations for co-ordination and for monitoring the progress of fieldwork at his own cost.</p>



## **Section 5: General Conditions of Contract (GCC)**

These conditions shall be part of the contract agreement.

### **5.1 General Provisions**

#### **5.1.1 Governing law and jurisdiction**

These general conditions shall be governed by and construed in accordance with the laws in the territory of India. Irrespective of the place of delivery and the place of payment under the contract, the contract shall be deemed to have been made at the place in India from where the acceptance of tender has been issued. Any dispute arising between the parties or arising out of this project or these terms shall be subject to the exclusive jurisdiction of, and venue in, the District court located in Gautam Budh Nagar, Uttar Pradesh, India.

#### **5.1.2 Notices**

Any notice, request or consent required or permitted to be given or made pursuant to these general conditions shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the party to whom the communication is addressed, or when sent to such party at the mentioned address.

#### **5.1.3 Authorized Representatives**

Any action required or permitted to be taken, and any document required or permitted to be executed under these general conditions by the Corporation or the Successful Bidder may be taken or executed by the officials as formally designated by each party.

#### **5.1.4 Taxes and Duties**

- a. The Agency shall bear and pay all taxes, duties, levies and charges assessed on the Agency, its Sub Agencies or their employees by all municipal, state or national government authorities in connection with the Facilities in and outside India, the amount of which is deemed to have been included in the Contract Price.
- b. The Agency shall ensure full compliance with tax laws of India with regard to this contract and shall be solely responsible for the same. He shall keep the Employer fully indemnified against liability of tax, interest, penalty etc., of the Agency's in respect thereof, which may arise.

### **5.2 Commencement, Completion, Modification and Termination of Contract**

#### **5.2.1 Effectiveness of Contract**

This Contract shall come into effect on the date the Contract is signed by both the parties and such other later date as discussed and agreed with the Bidder.

#### **5.2.2 Commencement of Services**

The Contractor shall begin carrying out the Services from the date of acceptance of NOA or any such date as specified by the employer.

#### **5.2.3 Expiration of Contract**

Unless terminated earlier pursuant to Clause 5.2.6 hereof, these general conditions shall expire at the end of such time period as given in the time schedule in RFP Document.

#### **5.2.4 Modifications or Variations**

Any modification or variation of the terms and conditions of these general terms, including any modification or variation of the scope of the Services, may only be made by written agreement between the Parties. However, each Party shall give due consideration to any proposals for modification or variation made by the other Party.

#### **5.2.5 Force Majeure**

- (i) Definition: For the purpose of these general terms, "Force Majeure" means an event which is beyond the reasonable control of a Party and which makes a Party's performance of its obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances.
- (ii) No Breach of Contract: The failure of a Party to fulfill any of its obligations under the contract shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event (a) has taken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract, and (b) has informed the other Party as soon as possible about the occurrence of such an event.
- (iii) Extension of Time: Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.
- (iv) Payments: During the period of their inability to perform the Services as a result of an event of Force Majeure, the Agency shall be entitled for time extension for such period.
- (v) Conditions like Pandemic/Lockdown (e.g. in COVID-19) will be treated as Force Majeure. During the period of Non-performance in these conditions, contractor will not be billed and Extension of Time will be given for such period.

#### 5.2.6 Termination of Contract

If the Contractor fails to carry out any of his obligations, or if the Contractor is not executing the Works in Accordance with the Contract, the Engineer may give notice to the Contractor requiring him to make good Such failure and remedy the same within such time as the Employer / Engineer may deem to be reasonable.

The Employer shall be entitled to terminate the Contract if the Contractor or any one of its constituents,

- a. Fails to comply with a notice under this clause.
- b. abandons or repudiates the Contract
- c. without reasonable excuse acceptable to the Engineer, fails to commence the Works in accordance with The Contract
- d. Sub-contracts the whole of the Works or assigns the Contract without approval of the Employer
- e. becomes bankrupt or insolvent or goes into liquidation except voluntary liquidation for the purpose of Amalgamation or reconstruction
- f. persistently disregards instructions of the Engineer or contravenes any provisions of the Contract, or
- g. fails to adhere to the agreed programme of work by margin of 10% of the stipulated period or 21 days, whichever is earlier, or fails to complete the Works or parts of the Works within the stipulated or extended period of completion, or is unlikely to complete the whole Work or part thereof within time because of poor record of progress; or
- h. fails to remove materials from the Site, or pull down and replace Work, after receiving notice from the Engineer to the effect that the said materials or Works have been condemned or rejected, or
- i. fails to take steps to employ competent and/or additional staff and labour, or
- j. fails to afford the Engineer or his Representative proper facilities for inspecting the Works or any part thereof, or
- k. indulges in corrupt or fraudulent practices as explained in Clause 5.9
- l. Violation/breach of the any terms and conditions of the agreement.

In any one of these events or circumstances, the Employer may upon giving 14 days' notice to the Contractor, Terminate the Contract and expel the Contractor from the Site. However, in case of sub-paragraph (e) or (k), the Employer may by notice of 7 days to the Contractor, terminate the Contract immediately.

If the Agency fails to provide the services within the period fixed for such services in the contract or as extended or at any time repudiates the contract before the expiry of such period, the employer may terminate the contract without prejudice to his other rights. The total amount of liquidated damages, however, not exceed the **limit of liquidated damages i.e.10 % of total Contract value**, after which contract will be deemed as cancelled & PBG will be encashed by the Employer.

The Employer's decision to terminate the contract shall not prejudice any other rights of the employer under the contract.

On Termination of contract due to Contractor's default, the performance Security shall be forfeited by encashing the Bank Guarantee and the balance work shall be got done independently without risk and cost of the failed contractor. The failed contractor shall be debarred from participating in the tender for executing the balance work.

### **5.2.7 Upon Termination of this Agreement for any reason whatsoever**

Upon termination of this Agreement shall not release contractor to pay any sums then owing to the other party nor from the obligation to perform or discharge any liability that had been incurred prior thereto.

### **5.3 Insolvency and Breach of Contract**

The Employer may at any time, issue notice in writing summarily terminate the contract without compensation to the Agency in any of the following events, that is to say –

- a. If the Agency being an individual or a firm - Any partner thereof, shall at any time, be adjudged insolvent or shall have a receiving order or order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any conveyance or assignment of his effects or enter into any assignment or composition with his creditors or suspend payment or if the firm be dissolved under the Partnership Act, or
- b. If the Agency being a company is wound up voluntarily or by the order of a Court or a Receiver, Liquidator, or Manager on behalf of the debenture holders is appointed, or circumstances shall have arisen which entitle the Court or Debenture holders to appoint a Receiver, Liquidator or Manager, or
- c. If the Agency commits any breach of the contract not herein specifically provided for
- d. Provided always that such determination shall not prejudice any right of action or remedy which shall have accrued or shall accrue thereafter to the Employer and provided also the Agency shall be liable to pay to the Employer any extra expenditure he is thereby put to and the Agency shall, under no circumstances, be entitled to any gain on re purchase.

### **5.4 Warranty/Defect Liability Period**

- a. The Bidder shall give warranty that the goods shall be new and free from defects and manufacture shall be of the highest grade and consistent with the established and generally accepted standards for materials of the type ordered.
- b. Warranty of replaced equipment should be of at least 90 days.
- c. If it becomes necessary for the Agency to replace or renew any defective portion/portions of the item under this clause, the provisions of the clause shall apply to the portion/portions of item's replaced or renewed. If any defect is not remedied within a reasonable time, the Employer may proceed to get the work done at the Agency's risk and expenses, but without prejudice to any other rights which the Employer may have against the Agency in respect of such defects.
- d. Replacement under warranty clause shall be made by the Agency free of all charges at site including freight, insurance and other incidental charges, as the case may be.

### **5.5 Inspection**

The Employer or its representatives or ultimate client shall have the right to inspect and test the goods for their conformity to the specifications as required.

## 5.6 Obligations of the Agency

- a. The Agency/Bidder shall undertake **“Replacement of Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System”** with due care and diligence in accordance with the Contract.
- b. Engagement of Staff and Labour- Except as otherwise stated in the Specification, the Agency shall ensure/ make arrangements for the engagement of all staff and labour, local or otherwise, and for their payment, transport, etc.

## 5.7 Packaging

The Agency shall be responsible for packing, transporting, receiving, storing and protecting all items and other things required for the Works.

## 5.8 Obligations of employer

NMRC agrees to provide support to the Agency and undertake to observe, comply with and perform, subject to and in accordance with the provisions of the Agreement and the Applicable Laws.

## 5.9 Fraud and Corrupt Practices

- a. The Bidders and their respective officers, employees, agents and advisers shall observe highest standard of ethics during Bidding Process and subsequent to issue of NOA and during subsistence of Contract Agreement. Notwithstanding anything to the contrary contained herein, or in the NOA or the Contract Agreement, NMRC may reject a Bid, withdraw the NOA, or terminate the Contract Agreement, as the case may be, without being liable in any manner whatsoever to the Bidder or Agency, as the case may be, if it determines that the Bidder or Agency, as the case may be, has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in the Bidding Process. In such an event, NMRC shall be entitled to forfeit & appropriate Bid Security or Security Deposit (interest free)/ Performance Bank Guarantee, as the case may be, as Damages, without prejudice to any other right or remedy available to NMRC under Bidding Documents and/ or Contract Agreement, or otherwise.
- b. Without prejudice to the rights of NMRC under Clause 5.9a hereinabove and the rights and remedies which NMRC may have under the NOA or the Contract Agreement, or otherwise if a Bidder or Agency, as the case may be, is found by NMRC to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Bidding Process, or after the issue of the NOA or the execution of the Contract Agreement, such Bidder or Agency shall not be eligible to participate in any tender or RFP issued by NMRC during a period of 3 (three) years from the date such Bidder is found by NMRC to have engaged, directly or indirectly, in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice.
- c. For the purposes of this Clause, the following terms shall have the meaning herein after respectively assigned to them:
  - i. “corrupt practice” means the offering, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the selection process or in contract execution;
  - ii. “fraudulent practice” means a misrepresentation or omission of facts in order to influence a selection process or the execution of a contract;
  - iii. “collusive practices” means a scheme or arrangement between the Agency, with or without the knowledge of the authority, designed to establish prices at artificial, non-competitive levels;

iv. "coercive practices" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a contract

d. Measures to be taken:

The employer shall have right to cancel the engagement of the Agency, if found to be indulged in corrupt, fraudulent, collusive or coercive practices either during the selection process or during the execution of the contract.

## **5.10 Settlement of Disputes**

### **5.10.1. Amicable Settlement**

The Parties agree that the avoidance or early resolution of disputes is crucial for a smooth execution of the Contract and the success of the Project. The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation.

### **5.10.2. Conciliation**

In the event of any dispute, difference of opinion or dispute or claim arising out of or relating to this License Agreement or breach, termination, shall firstly be attempted to be settled by conciliator appointed/nominated by NMRC on receipt of such requests from either party. The conciliator shall make the settlement agreement. The settlement agreement shall be final and binding on the parties. The settlement agreement shall have the same status and effect of an Arbitration Award.

### **5.10.3. Arbitration:**

All disputes related to this agreement contract or claims arising out of or relating to this agreement or breach, termination or the invalidity thereof or any issue whether arising during the progress of services or after the completion or abandonment thereof or any matter directly or indirectly connected with this agreement shall be attempted to be settled by mutual discussion and consultation with parties here of in event of any such disputes or any disputes or claims are not settled in aforesaid manner, then the disputes claim shall be referred for arbitration.

The matter referred to arbitrators appointed by Managing director, NMRC on receipt of such request from either party. Matters to be arbitrated upon shall be referred to a sole arbitrator, if the total value of the claim is up to Rs.50 Lakhs and to a panel of 3 arbitrators for the claims of more than Rs.50 Lakhs. NMRC shall provide a panel of 3 arbitrators for the claim up to 50 Lakhs and a panel of 5 arbitrators for the claim of more than 50 Lakh which may also include NMRC officers. License shall have to choose the sole arbitrator from the panel of 3 and / or one arbitrator from the panel of 5 in case 3 arbitrators are to be appointed. NMRC shall also choose one arbitrator from this panel of 5 and 2 so chosen will choose the 3<sup>rd</sup> arbitrator from the panel only. As a presiding arbitrator the arbitrators shall be appointed within a period of 30 days from the date of receipt of written notice/demand of appointment of the arbitrator from either party.

The decision of sole arbitrator / panel of arbitrators shall be binding on all the parties. The cost of arbitration shall be borne by respective parties equally. The venue of such arbitration shall be Noida, UP. The parties agree to comply with the awards resulting from arbitration and waive their rights to any form of appeal insofar as such waiver can validly be made.

### **5.10.4. Rules Governing Arbitration Proceedings:**

The arbitration proceedings shall be governed by Indian arbitration and conciliation act 1996, as amended from time to time including provisions in force at the time the references made.

### **5.10.5. Jurisdiction of Courts:**

The Court at Gautam Budh Nagar, U.P. shall have the exclusive jurisdiction to try all dispute between the party arising out of this agreement.

## 6. Section 6: Draft Contract Agreement

THIS AGREEMENT made on the.....day of.....2024 at Noida, District Gautam Budh Nagar, Uttar Pradesh Between **Noida Metro Rail Corporation Limited** (Hereafter referred to as "NMRC"), a company incorporated under Companies Act 2013, vide corporate identification Number: U60231UP2014SGC066849 and having its registered office at **Block-III, 3rd Floor, Ganga Shopping Complex, Sector-29, Noida -201301**, District Gautam Budh Nagar, Uttar Pradesh, India represented by.....of the company, by virtue of his designation and authorization by Noida Metro Rail Corporation (hereinafter called as the "Employer"), which expression shall unless excluded by or repugnant to the context or meaning thereof be deemed to include its successors and permitted assigns) of the one part,

**AND**

.....having its registered office at.....,represented by.....(herein after called the "**Contractor**", which expression shall unless excluded by or repugnant to the context or meaning thereof be deemed to include its successors and permitted assigns) of the other part. WHEREAS the employer desires that the Works/ Services known as the "....."should be executed by the Contractor, and has accepted a contract by the Contractor for the execution and completion of these Works.

The employer and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement-

### Reference:

- (i) Tender No. .... Dated.....
- (ii) Bid Documents duly accepted and submitted by ..... dated.....
- (iii) The Bidding Documents which include all the Sections specified below:
  - a. Section 1: General Information
  - b. Section 2: Terms of Reference, Scope of work, Particular Specifications
  - c. Section 3: Instructions to Bidders
  - d. Section 4: Eligibility, Evaluation and Selection Process, Special Condition of Contract
  - e. Section 5: General Conditions of Contract (GCC) of NMRC
  - f. Section 6: Draft contract agreement
  - g. Section 7: Forms
- (iv) Amendments/Corrigendum/Addendum issued by NMRC, if any.
- (v) Notice of Award( ..... ) issued by NMRC
- (vi) Letter of acceptance of NOA(.....) given by(.....) to NMRC.
- (vii) Any other admitted correspondence documents between NMRC and the Bidder.

**3. Duration of Contract**

The Employer intends to appoint a Contractor to NMRC for a period of 70 Months (10 Months (Supply, Installation, Testing and Commissioning of PIDS system, 24 Months Defect Liability Period and 36 Months CAMC.

Awarding of CAMC work will be decided after checking the performance of successful bidder during DLP (Defect Liability Period). NMRC may or may not operate CAMC works contract as per prevailing circumstances/conditions. Decision of NMRC in this regard shall be final and binding on successful bidder.

**4. Price Schedule**

NMRC shall consider the following Total Contract Price, as quoted by the Contractor as part of financial bid.

5. The courts at District Gautam Budh Nagar, Uttar Pradesh shall have the exclusive jurisdiction to try all disputes arising out of this agreement between the parties.

6. In consideration of the payments to be made by the Employer to the Contractor as specified in this Agreement, the Contractor hereby covenants with the Employer to execute the Works/ Services and to remedy defects therein in conformity in all respects with the provisions of the Contract and Notice of Award issued. "Any conditions, deviation, assumption, exclusion, suggestion of alternative clauses, request of amendments in conditions & specifications of work submitted by bidders along with his Technical Bid or Financial bid, which is different from the Tender Document, Corrigendum, Addendum uploaded by NMRC on the E-Tender Portal (<http://etender.up.nic.in>) and any other correspondence in this regard, shall not be treated as a part of the contract Agreement & shall not be binding upon NMRC in anyway whatsoever at any stage of work during execution or thereafter."

7. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works/Services, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract and NOA.

IN WITNESS where of the parties hereto have caused this Agreement to be executed in accordance with the laws of India on the day, month and year specified above.

For and on behalf of the Contractor  
Signature of the authorized official

For and on behalf of the Employer  
Signature of the authorized official

**Name of the official**

**Name of the official**

Stamp/Seal of the Contractor    Stamp/Seal of the Employer

In the presence of:

In the presence of:

Sign of Witness 1 \_\_\_\_\_

Sign of Witness 1 \_\_\_\_\_

Name \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

Address \_\_\_\_\_

Replacement of Existing Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System

\_\_\_\_\_

\_\_\_\_\_

Sign of Witness 2 \_\_\_\_\_

Sign ofWitness2 \_\_\_\_\_

Name \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



## Section 7: Forms of Tender

### 7.1 Form 1: Letter of Proposal Submission

[Location, Date]

To

Dy. General Manager/AFC-Tele  
Noida Metro Rail Corporation (NMRC) Limited  
Block-III, 3rd Floor, Ganga Shopping Complex,  
Sector-29, Noida -201301  
District Gautam Budh Nagar, Uttar Pradesh

**Subject: “Replacement of Existing Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System”.**

Dear Sir,

We, the undersigned, offer to “**Replacement of Existing Passenger Information Display System at Aqua Line of NMRC With Integrated PIDS Software and Hardware System**” in accordance with your RFP Document dated [Insert Date] and our Proposal. We are hereby submitting our Technical and Financial Proposal. We confirm that we have read the RFP Document in totality and abide by the terms and conditions stated in the document.

We acknowledge that we have

- Studied and analyzed and satisfied ourselves about all the requirement of the tender including but not limited to market and market conditions
- Carefully assessed the commerciality of Project and that we will be fully responsible for all its assessment in this regard.

We confirm and declare that no agent, middleman or any intermediary has been, or will be, engaged to provide any services, or any other item or work related to the award and performance of this Contract and declare that no agency commission or any payment which may be construed as an agency commission has been, or will be, paid and that the tender price will not include any such amount.

We accept all the terms and conditions of this RFP document unconditionally.

**Authorized**

**signatory**

**Name and Title:**

**Date:**

**Name of the Bidder with seal**

**7.2 Form 2: Firm Details**

1.	<b>Title and name of the Work:</b> <b>“Replacement of Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System”</b>
2.	State the structure of the Bidder's organization (Bidders to complete/delete as appropriate) Sole Bidder
3.	For Bidders who are individual companies or firms, state the following: Name of Company or firm: ..... Legal status: (e.g. incorporated private company, proprietorship, etc.) ..... Registered address: ..... Year of incorporation..... Principal place of business: ..... Contact person: ..... Contact person's title: ..... Address, telephone, facsimile number and e-mail ID of Contact person ..... ..... .....
4	GST Registration Number (Attach Documentary Proof)
5	PAN (Attach Documentary Proof)
6	Employees Provident Fund No. ( attachdocumentary proof)
7	Employees state insurance Act in India No. (attach documentary proof)

### 7.3 Form 3: Capability Statement

It is Compulsory for the bidder to fill this statement and the bidder must upload those document that support this statement

Tender Reference No: \_\_\_\_\_

Name of Work: \_\_\_\_\_

Name of Bidder: \_\_\_\_\_

<b>S.No.</b>	<b><u>ELIGIBILITY CRITERIA</u></b>		<b>(To be filled by the Bidder)</b>
1	Sole proprietorship, registered partnership firm (including LLP), public limited company or private limited company can submit the Bid. The firms and the companies should be registered in India. (Yes/No)		
2	<p>The Bidder should have a minimum experience of having satisfactorily and successfully completed similar works during last 7 years period ending last day of month previous to the one in which the bids are invited should be either of the following:</p> <p>i. One similar completed work costing not less than the amount equal to Rs.9.01 Cr ( Rs Nine Crore One Lakh Only)</p> <p>OR</p> <p>ii. Two similar completed works each costing not less than the amount equal to Rs.5.64 Cr (Rs Five Crore Sixty Four Lakh only)</p> <p>OR</p> <p>iii. Three similar completed works each costing not less than the amount equal to Rs. 4.51 Cr (Rs Four Crore Fifty One Lakh only)</p>	7 years	

<b>S.No.</b>	<b>ELIGIBILITY CRITERIA</b>	<b>(To be filled by the Bidder)</b>	
3	The Bidder should have minimum Average Annual Turnover of .Rs. 10.82 Cr. Rs Ten Crore Eighty Two Lakh only)in the last 5 (five) Financial Years (2019-20,2020-21,2021-22, 2022-23,2023-24) preceding the Bid Due Date.	FY 2023-24	
		FY 2022-23	
		FY 2021-22	
		FY 2020-21	
		FY 2019-20	
		Total	
4	The Bidder should have minimum Net Worth of. Rs. 2.70 Cr (Rupees Two crore Seventy Lakh only)in last audited Financial Year.	FY 2023-24	
5	The Bidder should have Positive Profit before Tax in at least 2 (two) years, out of the last 5 (Five) Financial Years(2019-20,2020-21,2021-22, 2022-23,2023-24)	FY 2023-24	
		FY 2022-23	
		FY 2021-22	
		FY 2020-21	
		FY 2019-20	
		Total	
6	The Bidder should be registered with the Goods and Services Tax Authorities.		
7	The Bidder should not have been blacklisted/ banned/ declared ineligible for corrupt and fraudulent practices by the Government of India/ any State Government/ Government Agency and court of law and contracts have been terminated/ foreclosed by any company/department due to non-fulfillment of Contractual obligation in last 5 (five) financial years preceding the bid due date.		
8	The bidder should have minimum working capital/ net cash flow current assets- current liabilities Rs. 1.93 Crore (Rupees One Crore Ninety Three Lakh Only)		

## 7.4 Form 4: Work Experience

The following format shall be used for statement of experience of Bidder:

S/N	Similar Contract description	Contract Identification Number	Award date & Completion date	Employer's Name, address, telephone number, e- mail etc	Role in contract	Completion cost	Value of similar work in completed work
					Individual		
1							
2							
3							
4							
Add required number of rows							

### Authorized

### signatory

**Name:**

**Date:**

**Name of the Bidder with seal**

### NOTE:

1. Only the value of contract as executed by the applicant/member in his own name should be indicated. Where a work is undertaken by a group, only that portion of the contract which is undertaken by the concerned applicant/member should be indicated and the remaining done by the other members of the group be excluded. This is to be substantiated with documentary evidence (Experience Certificate/Work Completion Certificate on Client's Letter Head will only be considered) which clearly mentioned the amount for the Similar work as defined in section 4.1 of this RFP under definition of similar work.
2. The tenderer shall upload details of work executed by them in the prescribed format for the works to be considered for qualification of work experience criteria. Documentary proof such as completion certificates from the client clearly indicating the nature/scope of work, actual completion cost and actual date of completion for such work should be uploaded. In case work is executed for private client documentary proof such as **copy of work order, Bill of quantities, Bill wise details of payment received certified by CA, TDS certificates for all the payments received, copy of final/ last bill paid by the client should be uploaded. The offers submitted without this documentary proof will not be evaluated.**
3. Value of successfully completed portion of any ongoing work up to the last day of the previous month of tender submission will also be considered for qualification of work experience criteria.
4. For completed works, value of work done shall be updated to the last day of the previous month of tender submission price level assuming 5% inflation for Indian Rupees every year and 2% for foreign currency portions per year. The exchange rate of foreign currency shall be applicable 28 days before the submission date of tender.
5. If the above work(s) comprise(s) other works also, then client's certificate clearly indicating the amount of work done in respect of the "similar work" shall be furnished by the tenderer in support of work experience along-with their tender submissions.

### 7.5 Form 5: Financial Capability Details

This is to certify that the Average Annual Turnover, Profitability, Net Worth and working Capital of M/s ..... having registered office at ....., as applicable, is as below:

#### A. Average Annual Turnover

S.No.	Financial year	Name of the Bidder	Turnover
1.	2023-24		
2.	2022-23		
3.	2021-22		
4.	2020-21		
5.	2019-20		
	Average Annual Turnover		

#### B. Profit Before Tax

S.No.	Financial Year	Name of Bidder	Profitability
1.	2023-24		
2.	2022-23		
3.	2021-22		
4	2020-21		
5	2019-20		

#### C. Working Capital

S.No.	Financial year	Name of the Bidder	Working Capital
1.	2023-24		
2.	2022-23		
3.	2021-22		
4.	2020-21		
5.	2019-20		

**D. Net worth**

S.No.	Financial year	Name of the Bidder	Net Worth
1	2023-24		
2.	2022-23		
3.	2021-22		
4.	2020-21		
5.	2019-20		

**Certificate of the Chartered Accountants/Statutory Auditors**

Based on Audited Accounts and other relevant documents of \_\_\_\_\_(Name of Bidder), we M/s

\_\_\_\_\_, Chartered Accountants/ Statutory Auditors, certify that the above information pertaining to FY 2019-20, 2020-21, 2021-22, 2022-23 and 2023-24 is correct.

**Signature and Seal of**

**Chartered Accountants/Statutory Auditors** (with membership No.& UDIN)

**Authorized Signatory**

**(Name & Designation of Authorized Signatory)**

**Undertaking**

I/We \_\_\_\_\_(M/s \_\_\_\_\_) declare that the Annual Accounts for FY 2022-23 have not been audited so far. We are submitting the CA certified provisional accounts, which shall be substantiated by the Audited Accounts, when prepared.

**Authorized Signatory**

**(Name & Designation of Authorized Signatory)**

In case the Financial Statements for the latest financial year are not audited and therefore the Bidder cannot make it available, the Bidder shall give an undertaking to this effect and the statutory auditor/chartered accountant shall certify the same. In such a case, the Bidder shall provide the Audited Financial Statements for 4 (Four) years preceding the year for which the Audited Financial Statement is not being provided. Also, pertaining to latest financial year, the bidder shall submit an affidavit certifying that "The Annual Accounts have not been audited so far. We are submitting the CA certified provisional accounts, which shall be substantiated by the Audited Accounts, when prepared."

**NOTE:**

1. All such documents reflect the financial data of the bidder and not that of sister or parent company.
2. The financial data in above prescribed format shall be certified by CA/ Company Auditor under his signature and stamp in original along with membership no.
3. The Bidder shall provide the audited annual financial statements as required.

## 7.6 Form 6: Memorandum

**Name of Work: Replacement of Existing Passenger Information Display System at Aqua Line of NMRC with integrated PIDS Software and Hardware System”**

I/We agree to keep the quoted rate open for acceptance for 180 days from the due date of submission thereof and not make any modification in its terms and conditions.

I/Whereby declare that I/We shall treat the quotation documents, drawings and other records connected with the works as secret/ confidential documents and shall not communicate information derived there from to any person other than the information in any manner prejudicial to the safety of NMRC.

Signature of the bidder  
with seal Dated:

Address:

Occupation



**7.7 Form 7: Bid Capacity Information**

Name and Brief particulars of contract (Clearly indicate the part of the Work assigned to The applicant(s))	Name of client with telephone number and fax number	Contract Value In Rupees Equivalent (Give only the value of work assigned to the applicant (s))	Value of balance work yet to be done in Rupee equivalent as on last day of the previous month of tender submission	Date of completion as per Contract Agreement	Expected Completion Date	Delay if any, with reason	Value of work to be done during next 48 months with effect from the first day of the month of tender submission
<b>Total</b>							

S.No.	Financial year	Total Value of Works done as per audited financial statement
1.	FY 2019-20	
2.	FY 2020-21	
3.	FY 2021-22	
4.	FY 2022-23	
5.	FY 2023-24	

Bid Capacity (Bidder shall calculate, mention his bid capacity and enclose the supporting calculation)

A = Rs. ....

N=..... years

B = Rs. ....

Assessed available bid capacity =  $2*A*N - B$

### **Certificate of the Chartered Accountants / Company Auditor**

We, M/s \_\_\_\_\_, Chartered Accountants/ Company Auditors, certify that the above information is correct.

Name of Chartered Accountants / Company Auditor

Signature and Seal of Chartered Accountants/ Company Auditor Membership

Number of Chartered Accountants/ Company Auditor & UDIN No

### **Authorised Signatory**

**(Name & Designation of Authorised Signatory)**

#### **NOTE:**

1. The financial data in above prescribed format shall be certified by Chartered Accountant/ Company Auditor in original under his signature & stamp along with audited financial statements.
2. Value of existing commitments for on-going works during period of 48 months w.e.f. from the first day of the month of tender submission has to be uploaded by the tenderer in Form. These data shall be certified by the Chartered Accountant with his stamp and signature in original with membership number.

## 7.8 Form 8: Undertaking

### **Name of Work: “Replacement of Existing Passenger Information Display System at Aqua Line of NMRC with integrated PIDS Software and Hardware System”**

I confirm that we (Tenderer), \_

- a. Have not been banned in NMRC and any other Metro Organization (100% owned by Govt.)/ Ministry of Housing & Urban Affairs / Order of Ministry of Commerce, applicable for all Ministries must not have banned business with the tenderer (including any member in case of JV/consortium) as on the date of tender submission.
- b. Do not have any pending litigation & non-performing contracts during last 5 (five) years. Further, has not been barred by any other Metro Organization (100% owned by Govt.)/ Ministry of Housing & Urban Affairs / Order of Ministry of Commerce, applicable for all Ministries as on the date of tender submission.
- c. Have not abandoned any work in last 5 (five) years.
- d. Have not delayed in similar work completion during orders executed in last 5 (five) years.
- e. Do not ever been terminated due to poor performance.
- f. Have not suffered Bankruptcy/ insolvency in last 5 (five) years.
- g. Have not been blacklisted/debarred by any organization.
- h. Neither penalised with liquidated damages of 10% (or more) of the contract value due to delay nor imposed with penalty of 10% (or more) of the contract value due to any other reason in any of value more than 10% of NIT cost of work, during 5 (five) years.
- i. Have not been put on defaulter's list of EPF/ESI/GST/ Labour Deptt. etc as on date of tender submission.
- j. Have not been be involved in any illegal activity and/or has not been charge sheeted for any criminal act during the last 5 (five) years.
- k. Have not submitted any misleading information in the Bid. I. Are financially sound to perform the work
- l. Are financially sound to perform the work.

**Authorized**

**signatory**

**Name:**

**Date:**

**Name of the Bidder with seal**

**7.9 Form 9: Power Of Attorney**

**(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)**

**Power of Attorney to be provided by the Bidding Company in favour of its representative as evidence of authorized signatory's authority.**

Know all men by these presents, We .....(name and address of the registered office of the Bidding Company) do hereby constitute, appoint and authorize Mr./Ms.....(name and residential address) who is presently employed with us and holding the position of \_\_\_\_\_, as our Attorney to do in our name and our behalf all or any of the acts, deeds or things necessary or incidental to submission of our Bid for **“Replacement of Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System”** in response to the RFP Document dated\_ issued by Noida Metro Rail Corporation (“NMRC” or “the Corporation”), including signing and submission of the Bid and all other documents related to the Bid, including but not limited to undertakings, letters, certificates, acceptances, clarifications, guarantees or any other document which the employer may require us to submit. The aforesaid Attorney is further authorized for making representations to the NMRC or any other authority, and providing information / responses to the NMRC, representing us in all matters before the NMRC, and generally dealing with the employer in all matters in connection with our Bid till the completion of the bidding process as per the terms of the RFP Document and further till the Contract is entered into with the NMRC and thereafter till the expiry of the Contract.

We hereby agree to ratify all acts, deeds and things done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall be binding on us and shall always be deemed to have been done by us.  
All the terms used herein but not defined shall have the meaning ascribed to such terms under the RFP Document.

Signed by the within named  
..... [Insert the name of the executants  
company] through the hand of  
Mr. ....  
duly authorized by the Board to issue such Power of  
Attorney Dated this ..... day of  
.....

Accepted  
.....  
..... Signature  
of Attorney  
(Name, designation and address of the Attorney)

Attested  
.....  
..... (Signature  
of the executants)  
(Name, designation and address of the executants)

.....  
Signature and stamp of Notary of the place of execution

Common seal of ..... has been affixed in my/our presence pursuant to Board of Director's Resolution dated.....

WITNESS

1.

.....  
..... (Signature)  
Name .....

Designation.....

2.

.....  
..... (Signature)  
Name .....

Designation.....

Notes:

- (1) The mode of execution of the power of attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executants (s) and the same should be under common seal of the executants affixed in accordance with the applicable procedure. Further, the person whose signatures are to be provided on the power of attorney shall be duly authorized by the executants (s) in this regard.
- (2) In the event, power of attorney has been executed outside India, the same needs to be duly notarized by a notary public of the jurisdiction where it is executed.
- (3) Also, wherever required, the executants (s) should submit for verification the extract of the charter documents and documents such as a board resolution / power of attorney, in favour of the person executing this power of attorney for delegation of power hereunder on behalf of the executants (s)

**7.10 Form 10: Saleable Form for Tender Document**

Job No. ....

The required fee of tender form has been deposited in \_\_\_\_\_ Bank A/c No. \_\_\_\_\_ RTGS/NEFT and the scanned copy of UTR receipt with Transaction Id is being enclosed with E-tender documents. If the copy of UTR receipt is not uploaded with the E-tender the tender shall be rejected.

DETAILS OF EARNEST MONEY ATTACHED

The required amount of Earnest money has been deposited in \_\_\_\_\_ Bank A/c No. \_\_\_\_\_ RTGS/NEFT and the scanned copy of UTR receipt with transaction Id is being enclosed with E-tender documents. If the copy of UTR receipt is not uploaded with the E-tender the tender shall be rejected.

BIDDER

### 7.11 Form 11: Declaration of Refund of Earnest Money

**Noida Metro Rail Corporation (NMRC) Limited**  
**Block-III, 3<sup>rd</sup> Floor,**  
**Ganga Shopping Complex, Sector-29, Noida -201301,**  
**District Gautam Budh Nagar, Uttar Pradesh, India**

<b>1 Bidder Name</b>	
<b>2 Bidder Address</b>	
<b>3 Bank Name</b>	
<b>4 Bank Branch</b>	
<b>5 A/c No</b>	
<b>6 IFSC Code</b>	
<b>7 PAN No.</b>	
<b>8 Tin/TAN No.</b>	
<b>9 GST No.</b>	
<b>10 Phone No.</b>	
<b>11 Mobile No.</b>	
<b>12 Email-Id</b>	
<b>13 Type of Account</b>	

FOR OFFICE USE ONLY

<b>14 Party Unique Id</b>	
---------------------------	--

The above provided information is true to the best of my knowledge.

**Date:**

**Signature with Stamp/Seal**

**7.12 Form 12: Performa for Clarifications / Amendments on the RFP**

<b>Sl. No.</b>	<b>Document</b>	<b>Clause No. and Existing Provision</b>	<b>Clarification required</b>	<b>Suggested Text for the Amendment</b>	<b>Rationale for the Clarification or Amendment</b>

**Authorized**

**signatory**

**Name:**

**Date:**

**Name of the Bidder with seal**



**7.13 Form 13: Bid Offer/ BOQ (Format)**

To

Dy. General Manager/AFC-Tele  
 Noida Metro Rail Corporation (NMRC) Limited  
 Block-III, 3rd Floor, Ganga Shopping Complex,  
 Sector-29, Noida -201301  
 District Gautam Budh Nagar, Uttar Pradesh

**THIS FORM IS NOT TO BE FILLED. THE BIDDERS ARE REQUIRED TO FILL THE FINANCIAL PROPOSAL IN XLS FORMAT AFTER DOWNLOADING THE FORM FROM THE E-PROCUREMENT WEBSITE FOR THIS TENDER DOCUMENT**

**Sub: “Replacement of Existing Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System”**

Dear Sir,

I/we have read and examined the RFP document, general terms and conditions for the work.

I/we hereby quote the following Total price for work/services in INR (Indian Currency) for **“Replacement of Existing Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware System”**

**Price Schedule for “Replacement of Existing Passenger Information Display System at Aqua Line of NMRC with Integrated PIDS Software and Hardware”**

**Schedule A : Supply, Installation, Testing and Commissioning of PIDS**

Sl. No.	Item Description	Qty	Unit	Unit Rate ( In INR)	GST %	Total Amount Excluding GST (In INR)	Total Amount Including GST ( in INR )
1	Supply of Double face, 2-Line PIDS panel for platforms.	88	No				
2	Dismantling of existing PIDS, Installation, testing ,Commissioning and Integration of Concourse PIDS	1	Lump sump				
3	Hardware Servers, Network Equipments ,Caballing, Accessories etc	1	Lump sump				
4	Software Licences, Software, Integration with Signalling Systems and Others system	1	Lump sump				

**Schedule B: CAMC (Comprehensive Maintenance Contract)**

Sl. No.	Item Description	Qty	Unit	Unit Rate ( In INR )	GST %	Total Amount Excluding GST (In INR)	Total Amount Including GST ( in INR )
1	CAMC 1st year	12	Month				
2	CAMC 2 <sup>nd</sup> Year	12	Month				
3	CAMC 3 <sup>rd</sup> Year	12	Month				

**Total Quoted Rates in Figures for Schedule (A + B) Including GST:**

**Total Quoted Rates in Words for Schedule (A + B) Including GST**

**\*The bidder is required to fill only empty cells.**

\*The quoted rates shall be for NMRC destination at Noida Metro.

\* Contract will be awarded for 10 Months and followed by Defect Liability Period of 2 Years.

System will be under CAMC for next 3 years after success full completion of Defect Liability Period.

Note:

- Awarding of CAMC work will be decided after checking the performance of successful bidder during DLP (Defect Liability Period). NMRC may or may not operate CAMC works contract as per prevailing circumstances/conditions. Decision of NMRC in this regard shall be final and binding on successful bidder
- The Bidders shall mention Quoted Rate In Figures for NMRC destination at Noida Metro**
- The Amount Arrived at from Quoted Rate, per item along with all Miscellaneous Charges in the Commercial Bid, would be treated as complete in all respect. It will be deemed to include all incidental charges, supervision, transport, contractor's profit and establishment/overheads, all risks & insurance liabilities, compliance of labour laws and other obligations set out or implied in the contract.
- The total payment due to contractor shall be inclusive of all taxes, Tender Requirements, Statutory Contributions etc.**
- The GST will be reimbursed based on the invoice of GST paid to the concerned authority by the contractor.
- The rates and prices tendered in the priced bill of quantities are for complete work and complete in all respects. It will be deemed to include all plant, labour, supervision, materials, including all leads, lifts, ascents, descants, crossing of Rly. tracks and any other obstructions etc. unloading, loading, handling, re-handling, taxes, royalty and compensation etc. all temporary works, erection, maintenance, contractor's profit and establishment/ over heads, together with all general risks, insurance liabilities and obligations set out or implied in the contract.

7. We have completely read and understood the Bid Document. The Financial Tender submitted is unconditional and fulfills all the requirements of the Tender Document.
8. Our Financial Proposal shall be binding upon us subject to the modifications resulting from contract negotiations, up to expiration of the validity period of the Proposal. We understand you are not bound to accept any Proposal you receive.
9. We agree that-
  - a. NMRC shall have right to cancel the tender at any point of time without any reason.
  - b. NMRC reserves the right to terminate/cancel the agreement (contract) at a notice of 30 days.
  - c. During Tenure/Notice Period we will continue to perform all of our obligations/duties within the scope of this contract.

In case of failure to adhere to above, NMRC shall reserve the right to encash the PBG.

**Signature and Name of the Authorized Person**

**NAME OF THE BIDDER AND SEAL**

## 7.14 Form 14: Performa of performance security/Bank Guarantee by Bank

### **FORM OF PERFORMANCE SECURITY (GUARANTEE) BY BANK**

1. This deed of Guarantee made this..... day of..... (month & year) between Bank of..... (Hereinafter called the “Bank”) of the one part, and Noida Metro Rail Corporation Limited (hereinafter called “the Employer”) of the other part.
2. Whereas Noida Metro Rail Corporation limited has awarded the contract for .....(name of work)(hereinafter called “the contract”) to M/s.....(Name of the Contractor)....hereinafter called “the Contractor”.
3. AND WHEREAS the Contractor is bound by the said Contract to submit to the Employer a Performance Security for a total amount of ₹..... (Amount in figures and words).
4. Now we the Undersigned..... (Name of the Bank) being fully authorized to sign and to incur obligations for and on behalf of and in the name of..... (Full name of Bank), hereby declare that the said Bank will guarantee the Employer the full amount of ₹.....(Amount in figures and Words) as stated above.
5. After the Contractor has signed the aforementioned Contract with the Employer, the Bank is engaged to pay the Employer, any amount up to and inclusive of the aforementioned full amount upon written order from the Employer to indemnify the Employer for any liability of damage resulting from any defects or shortcomings of the Contractor or the debts he may have incurred to any parties involved in the Works under the Contract mentioned above, whether these defects or shortcomings or debts are actual or estimated or expected. The Bank will deliver the money required by the Employer immediately/same day on demand without delay without reference to the Contractor and without the necessity of a previous notice or of judicial or administrative procedures and without it being necessary to prove to the Bank the liability or damages resulting from any defects or shortcomings or debts of the Contractor. The Bank shall pay to the Employer any money so demanded notwithstanding any dispute/disputes raised by the Contractor in any suit or proceedings pending before any Court, Tribunal or Arbitrator/s/ Arbitral Tribunal relating thereto and the liability under this guarantee shall be absolute and unequivocal.
6. This Guarantee is valid till ..... (The initial period for which this Guarantee will be valid must be for at least 6-months (six months) longer than the anticipated expiry date of contract period as stated in Clause 4.2 of the “General Conditions of Contract”).
7. At any time during the period in which this Guarantee is still valid, if the Employer agrees to grant a time extension to the Contractor or if the Contractor fails to complete the Works within the time of completion as stated in the Contract, or fails to discharge himself of the liability or damages or debts as stated under Para 5, above, it is understood that the Bank will extend this Guarantee under the same conditions for the required time on demand by the Employer and at the cost of the Contractor.
8. The Bank agrees that no changes, addition, modifications to the terms of the contract Agreement or to any documents, which have been or may be made between the Employer and the Contractor, will in no way release us from the liability under this Guarantee; and the Bank, hereby, waives any requirement for notice of any such change, addition or modification to the Bank.
9. The Guarantee hereinbefore contained shall not be affected by any change in the Constitution of the Bank or of the Contractor.
10. The neglect or forbearance of the Employer in enforcement of payment of any moneys, the payment whereof is intended to be hereby secured or the giving of time by the Employer for the payment hereof shall in no way relieve the bank of their liability under this deed.

11. The expressions “the Employer”, “the Bank” and “the Contractor” hereinbefore used shall include their respective successors and assigns.
12. Notwithstanding anything contained herein:
  - (a) Our liability under this Bank Guarantee shall not exceed Rs.....(Rs. ....)
  - (b) This Bank Guarantee shall be valid up to .....
  - (c) We are liable to pay the Guarantee amount or part thereof under this Bank Guarantee only & only if you serve upon us a written claim or demand on or before.....

In witness whereof I/We of the bank have signed and sealed this guarantee on the.....day of ..... (Month & Year) being herewith duly authorized.

**For and on behalf of the \_\_\_\_\_ Bank.**

**Signature of authorized Bank official**

Name: .....  
Designation: .....  
I.D. No. : .....  
Stamp/Seal of the Bank: .....

Signed, sealed and delivered for and on behalf of the Bank by the above named \_\_\_\_\_

In the presence of:

Witness 1.

Witness 2.

Signature .....  
Name .....  
Address .....

Signature .....  
Name .....  
Address .....

**Notes:**

- The stamp papers of appropriate value shall be purchased in the name of the Bank, who issues the ‘Bank Guarantee’.
- The ‘Bank Guarantee’ shall be from the Scheduled Commercial Bank based in India, acceptable to Employer.

## 7.15 Form 15: Bid Details

The following list is intended to help the bidders in submitting offer which are complete. An incomplete offer is liable to be rejected. Bidders are advised to go through the list carefully and take necessary action.

S.No.	Particulars	Attached Yes / No / Not Applicable	Page no. (Mandatory)
1	Bid Processing Fees		
2	Earnest Money Deposit		
3	Form 1: Letter of Proposal Submission		
4	Form 2: Firm Details		
5	Form3: Capability Statement		
6	Form 4: Work Experience		
7	Form 5: Financial Capability Details A copy of the Audited balance sheets and Profit and Loss Statements for the last 5 (five) financial years		
8	Form 6: Memorandum		
9	Form7: BID Capacity Information		
10	Form8: Undertaking		
11	Form9: Power of Attorney		
12	Form 10: Saleable form for Tender Document		
13	Form 11: Declaration of Refund of Earnest Money		
14	Form 12: Performa for Clarifications /Amendments on the RFP		
15	Form 13: Bid offer/BOQ Format		
16	Form 14: Performance Bank Guarantee		
17	Registration certificate of the firm/ Partnership deed/ certificate of incorporation, etc.		
18	Self-attested copy of PAN,ITR, GST		
19	Any other document asked by the employer if submitted, specify the documents Or Any other document which the Tenderer considers relevant		