



REQUEST FOR PROPOSAL

Through e-procurement Portal of Government of NCT of Delhi
(<https://govtprocurement.delhi.gov.in>)

FOR

**SUPPLY OF FULLY BUILT 1000 AC CNG PROPELLED
LOW FLOOR BUSES**

GLOBAL RFP NUMBER: CGM/SBU/924/2019/AC

Part I	Request for Proposal (“RFP”)
Part II	Financial Proposal Format

Issued By



DELHI TRANSPORT CORPORATION

(Government of NCT of Delhi)

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New Delhi – 110 002, India
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Prepared by

Delhi Integrated Multi-Modal Transit System Limited
(A Joint Venture of Government of Delhi & IDFC Foundation)
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CONTENTS OF RFP DOCUMENT

The RFP document comprises of the following Sections as listed below and would additionally include any Addendum issued before the due date of submission of the RFP. Any reference to the RFP document includes all the contents unless specifically mentioned otherwise.

Section I.	Disclaimer
Section II.	Background
Section III.	Bid Invitation Notice (BIN) and Schedule of Bidding Process with Key Details
Section IV.	Definitions and Abbreviations
Section V.	Instructions to Bidders (ITB)
Section VI.	General Conditions of Contract (GCC)
Section VII.	Schedule of Requirements (SOR)
Section VIII.	Technical Specifications (TS)
Section IX.	Techno-Commercial Evaluation Proformas (TCEP)
Section X.	Price Schedule (PS)
Section XI.	Bid Forms, Annexures and other Formats

Note: THE RFP DOCUMENT, IF PURCHASED BY THE BIDDER, IS NOT TRANSFERABLE.

SECTION I: DISCLAIMER

This RFP is being issued by Delhi Transport Corporation (DTC) for inviting tenders for Supply of 1000 FULLY BUILT AC CNG PROPELLED LOW FLOOR BUSES conforming to Bharat Stage-IV (Euro-IV) norms or improved standard as applicable on the date of registration of the bus (Design, Manufacture, Supply, Testing & Commissioning) (hereinafter called "Buses") on such terms and conditions and Technical Specifications as set out in this RFP document.

It is hereby clarified that this RFP is not an agreement and is not an offer or invitation by DTC to any party hereunder. The purpose of this RFP is to provide the Bidder(s) with information to assist in the formulation of their proposal submission. This RFP document does not purport to contain all the information Bidders may require. This RFP document may not be appropriate for all persons, and it is not possible for DTC to consider particular needs of each Bidder. Each Bidder should conduct its own investigation and analysis, and should check the accuracy, reliability and completeness of the information in this RFP document and obtain independent advice from appropriate sources. DTC and their advisors make no representation or warranty and shall incur no liability financial or otherwise under any law, statute, rules or regulations or otherwise as to the accuracy, reliability or completeness of the RFP document.

DTC may in their absolute discretion, but without being under any obligation to do so, update, amend or supplement the information in this RFP document.

SECTION II: BACKGROUND

- (a) The Government of India ('GOI'), Ministry of Transport took over the local bus services in Delhi in May 1948. The Delhi Road Transport Authority was constituted under the Road Transport Corporation Act, 1950 which became an undertaking of the Municipal Corporation of Delhi ('MCD') by an Act of Parliament in April, 1958.
- (b) The GOI took over the management of the undertaking by enacting the Delhi Road Transport Laws (Amendment) Act, in 1971 and took over the assets and liabilities from the erstwhile Delhi Transport Undertaking ('DTU') operated by the MCD till 2nd Nov, 1971. Thus, DTC was set up in 1971. DTC which was earlier functioning under the administrative control of the GOI was taken over by the Government of National Capital Territory ('NCT'), Delhi on 5th August 1996.
- (c) DTC at present has manpower of about 23,000 (twenty-three thousand) employees comprising drivers, conductors, traffic supervisory personnel, repair, maintenance and administration staff including short term staff. The Corporation have 40 (forty) depots with sufficient parking capacity. Each depot is headed by a Depot Manager with officers in mechanical, traffic and account wings, to assist him in depot functioning. Out of the above, the present fleet of low floor buses in DTC is 3781 buses, which is maintained in 34 bus depots. The maintenance of low floor buses is outsourced to vehicle manufacturers for the life time of the bus.

AIMS & OBJECTIVES:

- (d) With a view to strengthen and modernize public transport in Delhi, it is planned to augment DTC's bus fleet to 5500 as per the Government of the National Capital Territory Delhi ('GNCTD') policy. The increase in DTC's bus fleet will help to enhance commuter satisfaction, reliability and punctuality of bus services thereby reducing the dependence on private modes of transport. To this end, DTC took the decision to procure 1000 (One Thousand) FULLY BUILT AC CNG PROPELLED LOW FLOOR BUSES.

SECTION III: BID INVITATION NOTICE & SCHEDULE OF BIDDING PROCESS WITH KEY DETAILS

III-A: BID INVITATION NOTICE (BIN)

DELHI TRANSPORT CORPORATION
(GOVERNMENT OF NCT OF DELHI)
Strategic Business Unit, Hauz Khas Bus Terminal, New Delhi, INDIA
Phone: 91-11-26511638, e-mail: dcgmsbu@dtc.nic.in

NOTICE INVITING E-TENDER: GLOBAL REQUEST FOR PROPOSAL (RFP) FOR SUPPLY OF FULLY BUILT AC CNG PROPELLED LOW FLOOR BUSES
GLOBAL RFP Number: CGM/SBU/924/2019/AC

Delhi Transport Corporation (DTC) invites Bids from manufacturers of CNG propelled bus Chassis and / or fully built CNG Buses through e-procurement portal of Government of NCT of Delhi (<https://govtprocurement.delhi.gov.in>) for supply (including Design, Manufacture, Supply, Testing & Commissioning) of FULLY BUILT AC CNG PROPELLED LOW FLOOR BUSES as per Schedule of Requirements given below:

BRIEF SCHEDULE OF REQUIREMENTS:

Item No.	Description of Work	Warranty Period	Tendered Quantity (Nos.)	Delivery Period	Bid Security	Due Date and Time of Opening of Bids
1	Design, Manufacture, Supply, Testing, & Commissioning of FULLY BUILT AC CNG PROPELLED LOW FLOOR BUSES conforming to BS-IV (Euro-IV) Norms or latest as per Specification given in RFP Document.	Warranty Period of 3 (three) years or 2,10,000 Km. whichever is earlier	1000	08 + 20 Weeks	Indian Rupees (INR) 180 Million	06th Sept., 2019 at 15.30 hrs. (IST)

The Bid Document can be downloaded from the e-procurement portal of GNCTD (<https://govtprocurement.delhi.gov.in>) and website of DTC (<http://www.dtc.nic.in>)

PRE-BID CONFERENCE: A Pre-Bid Conference will be held on 01st August, 2019 at 14.30 Hours (IST) at Head quarter, Delhi Transport Corporation, I P Estate, New Delhi-110002, INDIA with the prospective Bidders for the purpose of holding discussions and for providing clarifications on the RFP Document by the Purchaser.

SUBMISSION OF BIDS: Complete Bid (separately each for Techno-Commercial Bid & for Price Bid) in the prescribed forms should be uploaded/ submitted through e-procurement Portal of Government of NCT of Delhi on or before 06th September, 2019 by 15:00 hrs. (IST). The Bid Security of amount and mode as per details given in RFP and Cost of RFP Document (INR 75,000/- plus GST @ 18% or as applicable) in the form of Demand Draft in original favoring Chairman-cum-Managing Director, Delhi Transport Corporation payable at New Delhi must be delivered in the office of Dy. Manager, (Tender Cell), Room No. 207, Delhi Transport Corporation, I.P. Estate, New Delhi-110 002, India, so as to reach, on or before 1500 hours (IST) on **or before 06th September, 2019 ("Bid Due Date for submission of e-tender")**.

FOR MORE DETAILS OF TENDER NOTICE LOG ON TO E-PROCUREMENT PORTAL OF GOVERNMENT OF NCT OF DELHI OR DTC WEBSITE.

Sd/-
CHIEF GENERAL MANAGER (SBU)
dcgmsbu@dtc.nic.in

III-B: SCHEDULE OF BIDDING PROCESS WITH KEY DETAILS

Delhi Transport Corporation (DTC) would endeavour to adhere to the following schedule:

Sr. No	Activity Description	Date
1	Date of Issue of RFP on e-procurement portal of Government of NCT of Delhi (https://govtprocurement.delhi.gov.in)	26.07.2019
2	Submission Pre-Proposal Meeting Queries	01.08.2019
3	Date and Time of Pre-Bid Conference*	01.08.2019 at 14:30 Hrs.
4	Deadline for submission queries/ clarifications made during the Pre-Bid Conference in writing	02.08.2019 by 17:00 hrs.
5	Date for freezing of RFP Document	08.08.2019
6	Last Date and time of uploading/ submission of Bids	06.09.2019 by 15:00 hours
7	Opening of Techno-Commercial Bid (Bid 1)	06.09.2019 at 1530 hours
8	Opening of Price Bid (Bid 2)	To be informed Separately

***Venue of Pre-Bid Conference:**

Conference Room,
Delhi Transport Corporation
I P Estate, New Delhi -110002, INDIA

SECTION IV: DEFINITIONS & ABBREVIATIONS

In this RFP, the following word(s), unless repugnant to the context or meaning thereof, shall have the meaning(s) assigned to them herein below:

1. **"Aims and Objectives"** has the meaning ascribed to it in Clause (d) of Section II of the RFP.
2. **"Arbitration Act"** means the Arbitration and Conciliation Act, 1996 and shall include modifications to or any re-enactment thereof as in force from time to time.
3. **"Bid"** means the proposals submitted by the Bidder(s) in response to this RFP in accordance with the provisions hereof including the Techno-Commercial proposal and Financial proposal along with all other documents forming part and in support thereof.
4. **"Bidder"** means a company incorporated in India or outside India, engaged in manufacture and supply of CNG propelled bus chassis and/ or complete CNG Buses and who has submitted the bid for the supply of FULLY BUILT AC CNG PROPELLED LOW FLOOR BUSES (Design, Manufacture, Supply, Testing & Commissioning) as per the terms and conditions and Technical Specifications of the RFP document.
5. **"Bus Procurement Committee"** shall mean Committee constituted by the Managing Director of DTC comprising of departmental members from technical, finance, operations and stores department.
6. **"Earnest Money Deposit/ Bid Security"** shall have the meaning ascribed to it in Section V 'Instructions to Bidders'.
7. **"Encashment Notice"** shall have the meaning, the notice issued to the Contractor by the Purchaser for encashment of bank guarantee pursuant to the terms of the Contract.
8. **"Bidding Process"** means the process of selection of the Successful Bidder through competitive bidding and includes submission of Bids, scrutiny and evaluation of such Bids as set forth in the RFP.
9. **"CMD"** means the Chairman-cum-Managing Director of DTC.
10. **"MD"** means the Managing Director of DTC.
11. **"Consignee"** means the person to whom the buses are required to be delivered as per the "Letter of Acceptance" to be dispatched by rail, road, air or steamer.
12. **"Contract"** means and includes 'Letter of Acceptance', complete RFP Document including 'Bid Invitation Notice', 'Instructions to Bidders', 'General Conditions of Contract', 'Schedule of Requirements', 'Technical Specifications', 'Techno-Commercial Evaluation Proformas', 'Price Schedule', 'Annexures' and includes a repeat order accepted or acted upon by the Contractor and a formal agreement, if executed;
13. **"Contractor"** means the company with whom the Contract for the supply is placed and shall be deemed to include the Contractor's successors (approved by the Purchaser), representatives, heirs, executors and administrators, as the case may be, unless excluded by the terms of the Contract;
14. **"Deadline for Submission of Bids"** shall mean the last date and time for uploading/ submission of Bids as set-forth in Section III-B of this RFP under the heading **"Schedule of Bidding Process with Key Details"** or such other date / time as may be decided by DTC in its sole discretion and notified to the Bidders by dissemination of requisite information in this

- behalf on the E-Procurement Portal of Government Of NCT Of Delhi (<https://govtprocurement.delhi.gov.in>) and/ or DTC Website and / or in writing either by email or by facsimile or by registered post.
15. **"Delivery of Buses"** shall be deemed to take place only if the Buses are delivered in accordance with the terms of the Contract, after approval by the Inspecting Officer if so provided in the Contract to –
- The consignee at its premises/ site, or
 - Where so provided, the interim consignee at its premises;
16. **"DTC"** means the Delhi Transport Corporation and its authorized successors and assignees at all times.
17. **"DTC Website"** means the website of DTC which, at present has the following URL – <http://www.dtc.nic.in>
18. **"Effective Date"** of the Contract shall mean the date on which the 'Letter of Acceptance' (LOA) shall be dispatched by the Purchaser;
19. **"Government"** means the Government of National Capital Territory of Delhi (GNCTD) or Government of India as is relevant in the context;
20. **"Inspecting Officer"** means the person(s), firm(s) or organization nominated by the Purchaser for the purpose of inspection of buses or work under the Contract and includes its/ their authorized representative;
21. **Inspections:**
- "Pre-Dispatch Inspection"** (PDI) of Buses means the inspection of Fully Built Buses to be carried out at the Contractor's manufacturing premises before dispatch to the Purchaser;
 - "Final Inspection"** of Buses means inspection of the Buses to be carried out at Central Workshop-I, Delhi Transport Corporation, Banda Bahadur Marg, Delhi – 110 009 or any other places in Delhi as desired by the Purchaser;
22. **"Letter of Acceptance"** means the letter or memorandum communicating to the successful Bidder the acceptance of its Bid and includes an advance acceptance of its Bid;
23. **"Manufacturing Premises"** means the manufacturing works of the Contractor at which the Buses shall be manufactured;
24. **"Material"** means anything used in the manufacture or fabrication and maintenance of the Buses;
25. **"Particulars"** include –
- Technical Specifications;
 - Drawings;
 - "Proprietary Mark" or "Brand" meaning the mark or brand of a product which is owned by an Industrial firm;
 - Any other details governing the construction, manufacture, supply & Commissioning of buses as may be prescribed by the Contract;
26. **"PIS"** means Passenger Information System whereby and where under passengers shall be informed, inter alia, of approaching bus stops inside the Buses.
27. **"Purchase Officer"** means the officer signing the "Letter of Acceptance" and includes any officer who has the authority to execute the relevant Contract on behalf of the Purchaser;
28. **"Purchaser"** means Chairman-cum-Managing Director/ Managing Director, Delhi Transport Corporation, Indraprastha Estate, New Delhi - 110 002 or its authorized representatives;

29. **"RFP"** and / or **"RFP Document"** means this 'Request for Proposal' document comprising of the sections namely Disclaimer, Background, Bid Invitation Notice (BIN) and Key Details, Definitions and Abbreviations, Instructions to Bidders (ITB), General Conditions of Contract (GCC), Schedule of Requirements (SOR), Technical Specifications (TS), Techno-Commercial Evaluation Proformas (TCEP), Price Schedule (PS) and Bid Forms, Annexures and other Formats and any applicable Schedules thereto;
30. **"Services"** means services ancillary to the supply of the Buses such as transportation and insurance etc;
31. **"Signed"** means signed and stamped;
32. **"Site"** means the place specified in the Contract at which any work is required to be executed by the Contractor under the Contract or any other place approved by the Purchaser for the purpose;
33. **"Sub-Contractor"** means any person, firm or company approved by the Purchaser, from whom the Contractor may obtain any material or equipment/ components/ fittings to be used in the supply or manufacture of the Buses;
34. The terms **"Successful Bidder"**, **"L1 Bidder"**, and / or "Vendor" shall mean the Bidder who qualifies the Techno-Commercial proposal stage and the Financial proposal stage of this RFP and to whom a Letter of Acceptance is consequently issued by DTC.
35. **"Test"** means such test(s) as is/ are prescribed by the Purchaser or considered necessary by the Inspecting Officer whether performed or carried out by the Inspecting Officer or any agency acting under the direction of the Purchaser/ Inspecting Officer;
36. **"Warranty Period"** shall mean a period of three years or operation of Buses up to 2,10,000 Kms., individually for each bus whichever is earlier from the date of placement in service after registration from Transport Department, Delhi.
37. **"Works"** means all the works specified or set forth and required in and by the said 'Technical Specifications', 'General Conditions of Contract', 'TCEP', 'Drawings' and 'Schedule of Requirements', 'Bid Forms', 'Annexures' and other Formats' hereto annexed or to be implied therefrom or incidental thereto, or to be hereafter specified or required in such explanatory instructions and drawings (being in conformity with the said original Specification(s), Drawing(s) and 'Schedule of Requirements' and also in such additional instructions and drawings not being in conformity as aforesaid, as shall from time to time, during the progress of the work hereby Contracted for, be supplied by the Purchaser;
38. **"Writing"** or **"Written"** includes matter, either in whole or in part, in manuscript, type written, lithographed, photocopied, photographed or printed form under or over signature or seal, as the case may be;
39. Any other term(s), not defined herein above but defined elsewhere in this RFP shall have the meaning(s) ascribed to such term(s) therein and shall be deemed to have been included in this Section.
40. **"FOB"** and **"DDP"** means as defined in INCOTERMS-2010.
41. **"Incoterm-2010"** means International Commercial Terms, published by International Chamber of Commerce (ICC).

SECTION – V
INSTRUCTIONS TO BIDDERS (ITB)

SECTION V: INSTRUCTIONS TO BIDDERS (ITB)

A. INTRODUCTION

1. GENERAL

- 1.1 Delhi Transport Corporation (Government of National Capital Territory of Delhi), **(hereinafter referred to as the Purchaser)**, invites bids through e-procurement Portal of Government of NCT of Delhi (<https://govtprocurement.delhi.gov.in>) in Two Bid System (separately uploaded each for Techno-Commercial Bid & for Price Bid) for Supply of Fully Built Air Conditioned (AC) Compressed Natural Gas (CNG) Propelled Buses of Low Floor Height (Design, Manufacture, Supply, Testing & Commissioning) fitted with Automatic Transmission, Air Suspension, Power Steering, Electro-Pneumatically operated doors, LED Destination Board System (LDBS), Security Camera Network, ITS enabled bus with inbuilt GPS System and a non-polluting fuel efficient CNG propelled engine (hereinafter called Buses) conforming to Bharat Stage-IV (Euro-IV) norms or improved standard as applicable on the date of registration of the bus as per "Schedule of Requirements" and 'Technical Specifications' from established and reliable manufacturers having at least 3 years' experience in manufacturing of CNG Propelled Bus Chassis and/ or fully built CNG Buses of at least preceding three years ending on 31st, March'2019.
- 1.2 The Bidders shall agree in respect of each bus a Warranty period of 3 years or 210,000 kilometers, whichever is earlier to ensure trouble free services, supply of components and proper maintenance of Buses. The Buses are expected to be utilized for 12 years or 10, 00,000 km whichever is earlier, during life cycle of operation.
- 1.3 Complete Bid (separately each for Techno-Commercial Bid & for Price Bid) in the prescribed forms should be uploaded/ submitted through e-procurement Portal of Government of NCT of Delhi on or before the time and date fixed for submission of bid. Bid received after the stipulated time and date will not be entertained. Such bids will be, termed as late/ delayed bid and returned unopened.
- 1.4 The Bidders are required to offer only single model of Fully Built AC CNG Propelled Bus of Low Floor Height. Further, the Bidders are required to quote only one rate for the tendered quantity of Fully Built AC CNG Propelled Bus of Low Floor Height. Bids of those Bidders who quote more than one rate and/ or offer more than one model shall be rejected. Conditional offers/ rates on any account will not be accepted.
- 1.5 Traders, Agents, Brokers and middlemen are not eligible for participation in the bid

2. ELIGIBILITY

- 2.1 The Bidder eligible for participating in the Bid process shall be an Indian company incorporated under the provisions of Indian Companies Act, 2013 or a foreign company, incorporated under relevant Act. The bidder should be legally competent to enter into contract as per prevailing laws.
- 2.2 The Bidder shall be engaged in the manufacture and supply of CNG Fuel Mode Bus chassis and/ or Fully-built CNG Propelled Buses with at least preceding three years'

- experience ending on 31st March 2019.
- 2.3 Further the Bidder shall have average annual gross turnover of more than INR 3000 Million (or in equivalent foreign currency) during the last three financial years and net worth of more than INR 1000 million (or in equivalent foreign currency), as on the last day of preceding financial year.
- 2.4 The technical experience and financial capabilities of any other Group Company or holding company or subsidiary company of any Bidder shall not be considered for evaluation.

3. COST OF DOCUMENT

- 3.1. The RFP document package is priced at Indian Rupees (INR) 75,000 (Rupees Seventy-Five Thousand only) plus GST @ 18% or as applicable payable in the form of a Demand Draft drawn in favour of Chairman-cum-Managing Director, Delhi Transport Corporation, Delhi payable at Delhi. The said cost of RFP Document shall be submitted to in the office of Dy. Manager, (Tender Cell), Room No. 207, Delhi Transport Corporation, I.P. Estate, New Delhi-110 002, India, so as to reach, on or before 1500 hours (IST) on or before Bid Due Date for submission of e-tender.
- 3.2. In the event of failure to deposit the requisite cost by such Bidder, his Bid shall not be processed further.

4. COST OF BIDDING

The Bidder shall bear all costs associated with the preparation and submission of Bid and the Purchaser will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the Bidding process.

5. CLARIFICATION TO RFP DOCUMENT

- 5.1. In the event that any Bidder requires any clarification of the RFP document, such Bidders are expected to send their queries to DTC in writing by Post, Courier, e-mail or by facsimile within such date as specified in the Schedule of Bidding Process set forth in Section: III - B at the address given below in order to enable DTC to have adequate notice of the said queries so that the same may be addressed by the date and time of freezing of RFP document.:

Chief General Manager,
Strategic Business Unit,
DTC Hauz Khas Bus Terminal,
Delhi Transport Corporation, New Delhi 110 016, India
Email addresses: dcgmsbu@dtc.nic.in

Bidders shall have to post queries by email to dcgmsbu@dtc.nic.in

- 5.2. Nothing in this section shall be taken to mean or read as compelling or requiring DTC to respond to any questions or to provide any clarification to a query. DTC reserves the right to not to respond to the questions it perceives as non-relevant which may be raised by a Bidder or not to provide clarifications if DTC in its sole discretion considers that no reply is necessary. No extension of deadline for Submission of Bids will be granted on the basis or grounds that DTC has not responded to any question or not provided any clarification to a query.

6. PRE-BID CONFERENCE

- 6.1. A Pre-Bid Conference will be held as per the details provided in Section: III - B with the prospective Bidders, for the purpose of holding technical & commercial discussions and providing clarifications by the Purchaser. In the Pre-Bid Conference, clarifications pertaining to technical, commercial and other issues regarding these Buses including design parameters/ standards and specifications that may be required by the prospective Bidders will be provided. The prospective Bidders should on their own cost, attend the said conference on the date and venue.
- 6.2. Details of proposed/ suggested variations/ deviations/ additions from the Bid specifications/ conditions, if any, should be clearly indicated while sending queries before Pre-Bid Conference. No further suggestions for deviations/ variations/ additions will be entertained after the Pre-Bid Conference. Any verbal suggestion/ proposal of variations/ deviations/ additions in the RFP document made during the Pre-Bid Conference should also be given in writing to the Purchaser latest by 1700 hours on next working day of the Pre-Bid Conference.
- 6.3. The Purchaser may clarify on variations/ deviations, alternative proposals, which ensure equal or higher quality/ performance to the Technical Specifications during Pre-Bid Conference. However, the decision of the Purchaser in this regard will be final.
- 6.4. After incorporating the amendments acceptable to the Purchaser, the RFP Document shall be frozen as per the details provided in Section: III - B, through issuance of an Addendum(s) which can be downloaded from the e-procurement portal of GNCTD (<https://govtprocurement.delhi.gov.in>) and website of DTC ([http:// www.dtc.nic.in](http://www.dtc.nic.in)).
- 6.5. Non-attendance at the Pre-Bid Conference will not be a cause for disqualification of a Bidder. However, the terms and conditions of the Addendum(s) will be legally binding on all the Bidders irrespective of their attendance at the Pre-Bid Conference.

7. LOCAL CONDITIONS

It is imperative that each Bidder fully acquaints himself with all the local conditions and factors, which would have any effect on the performance/ completion of the contract in all respects inter-alia including the cost of the design, manufacture, supply, testing, commissioning and maintenance thereafter of these Buses. Bidders would themselves be responsible for compliance with Rules, Regulations, Laws and Acts in force from time to time in India and/ or country of manufacture & supply. On such matters, the Purchaser shall not entertain any request from the Bidders.

B. RFP DOCUMENT

8. RFP DOCUMENT

8.1. The RFP document consist of the following:

- Section I. Disclaimer
- Section II. Background
- Section III. Bid Invitation Notice (BIN) and Schedule of Bidding Process with Key Details
- Section IV. Definitions and Abbreviations
- Section V. Instructions to Bidders (ITB)
- Section VI. General Conditions of Contract (GCC)
- Section VII. Schedule of Requirements (SOR)
- Section VIII. Technical Specifications (TS)
- Section IX. Techno-Commercial Evaluation Proformas (TCEP)
- Section X. Price Schedules (PS)
- Section XI. Bid Forms, Annexures and other Formats

8.2. The Bidder is required to examine carefully all the contents/ pros & cons of the RFP Document including instructions, conditions, forms, terms, specifications and take them fully into account before submitting the bid. Failure to comply with the requirement(s) of RFP document will be at the Bidder's own risk & responsibility.

9. AMENDMENT OF BID DOCUMENTS

- 9.1. As and when required prior to the freezing of the RFP document, the Purchaser, for any reason, whether at his own initiative or in response to a clarification or query raised by a prospective Bidder, may modify the RFP document by issuing amendment(s) to the RFP document.
- 9.2. Any Addendum thus issued will only be posted on e-procurement portal of GNCTD. Bidders are advised to visit the website <https://govtprocurement.delhi.gov.in> regularly to keep themselves updated.
- 9.3. The Purchaser reserves the right at his sole discretion to extend the deadline for submission of Bids.
- 9.4. If any amendment is affected in the RFP document, only the amended RFP document shall be final and determinative.

C. PREPARATION OF BIDS

10. LANGUAGE OF BID

- 10.1. The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid, exchanged by the Bidder and the Purchaser shall be written in English. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by a self-authenticated accurate translation of the relevant passages in English, in which case, for purposes of interpretation of the Bid, the English translation shall govern.

11. COMPLIANCE WITH TECHNICAL SPECIFICATIONS

- 11.1. The Buses required against this Bid shall conform to the Technical Specifications of the RFP Document i.e. Section VIII for FULLY BUILT AC CNG PROPELLED LOW FLOOR BUSES and amendments therein, if any.
- 11.2. The Bidder shall obtain itself, at its own expense, all the latest specifications required for the design, manufacture, supply, testing & commissioning of the Buses in accordance with the Contract terms.
- 11.3. The Bidder shall be required to comply with all the latest provisions of the Central Motor Vehicle Rules 1989 (CMVR), the Motor Vehicle Act 1988 (MVA), the Delhi Motor Vehicle Rules 1993 (DMVR) along with any and all amendments therein and other statutory and legal requirements as applicable on the date of delivery/ registration of Buses with Transport Department, Government of NCT, Delhi.

In case any critical issue arises, Bus Procurement Committee will decide the issue on case to case basis.

12. VARIATIONS / DEVIATIONS

- 12.1. Bidders may note that the Purchaser will not entertain any deviations to the RFP Document at the time of submission of the Bid or thereafter. The Proposal to be submitted by the Bidders will be unconditional and unqualified and the Bidders would be deemed to have accepted the terms and conditions of the RFP Document with all its contents.
- 12.2. The Bidder shall submit no deviation statement, from the 'Instruction to Bidders', 'General Conditions of Contract' and 'Schedule of requirements' of the Bid Document in the prescribed Proforma (**Annexure 1**).
- 12.3. The Bidder shall submit no deviation statement in the 'Technical Specifications' of the Bid Documents in the prescribed Proforma (**Annexure 2**).
- 12.4. Bids found inconsistent with the terms and conditions and/ or specifications of the RFP document are liable for rejection at the threshold. The decision of the Purchaser in this regard, shall be final and binding.

13. DOCUMENTS ESTABLISHING BIDDER'S ELIGIBILITY AND QUALIFICATIONS:

- 13.1. The Bidders shall along with the Bid, provide satisfactory evidence acceptable to the Purchaser as given below:
 - a. Copy of Certificate of Incorporation duly certified as true copy by a Chartered Accountant.
 - b. The Bidder should be a manufacturer of CNG propelled Bus chassis and/ or complete CNG Buses with at least three years' experience in line during at least preceding three years ending on 31st March, 2019. The Bidders shall furnish all information on past supplies for last three years and their satisfactory performance in the Proformas prescribed in the RFP document. Bidders should furnish the copies of contracts & client's certificates for satisfactory performance of the CNG bus chassis/

buses manufactured & supplied by them. For other type of buses, bidders to furnish the details of major supplies made by them in the preceding three years ending on 31st March, 2019.

- c. The Bidder should have average annual gross turnover of more than INR 3000 Million (or in equivalent foreign currency) during the last three financial years. Bidders should furnish certificate from the Chartered Accountant as documentary evidence in support of the same. The Bill Currency (Selling) exchange rate, as established by the State Bank of India on the date of issue of Bid Invitation Notice (BIN), shall be used for calculating the average turnover in case of foreign Bidders whose turnover is indicated in the currency other than Indian Rupees (INR).
 - d. The Bidder shall have present net-worth (on the last day of the preceding financial year) of INR 1000 Million (or in equivalent foreign currency). The net worth as indicated in audited annual accounts or certified by Chartered Accountant only shall be considered.
 - e. Bidder shall furnish details of its plant, equipment and the manufacturing capacity certifying that they have the capacity to manufacture and supply the buses within the delivery schedule offered by them. Production Capacity of the Bidder is to be supported with a certificate issued by the Cost Auditor of the Company after taking into account the installed capacity, actual production during last three years and expansion/ debottlenecking plan of Company, if any, ending on 31st March, 2019.
 - f. Bidder shall furnish details of the its quality control system and organization certifying that they have the capacity to ensure adequate quality control at all stages of the manufacturing process. The details should be furnished in the Proforma prescribed in the RFP document.
 - g. Bidder shall furnish details of the its technically qualified and experienced personnel certifying that he has adequate technically qualified and experienced personnel for the design, manufacturer, supply, testing, trials and commissioning.
 - h. The Foreign Bidder, intending to indigenize / manufacture buses in joint venture/ collaboration with an Indian company should indicate details of his similar experience in other countries. In addition, copies of Transfer of Technology (TOT) Agreement, Collaboration Agreement, if any, shall be furnished.
 - i. Bidder should confirm adequate availability of spare parts and after sales services in India for the Buses offered in the bid.
- 13.2. In addition to the above, the Bidder, if required by the Purchaser, shall promptly furnish further information regarding his capacity/ capability, and he would extend all cooperation to the representatives of the Purchaser for assessing his capacity/ capability by actual visit to his works/ office.
- 13.3. In case of Foreign Bidder, the Bidder should indicate whether:
- (i) Buses will be manufactured in India in ready to use condition [assembled from sourcing major components/ Completely Knocked down Kit (CKD Kit) from his manufacturing premises] or supplied from their manufacturing premises located outside India.

- (ii) Start-up trials & commissioning will be done by the Bidder or their Indian collaborator/ partner, if so, tie-up arrangement be indicated.
 - (iii) There is any plan to establish manufacturing facilities in India on their own or with an Indian firm, with or without equity partnership, with TOT arrangement.
- 13.4. In case foreign Bidder intends to supply the buses manufactured in India in collaboration with an Indian firm, the Bidder should give his detailed methodology and plan of action for executing the contract. The methodology and plan shall include the details of the components to be manufactured at the Bidder's premises located outside India and to be imported at the works of the collaborator for assembly of buses, the details of the components to be manufactured at the works of the local collaborator including the details of infrastructure available at the local collaborator's manufacturing premises. The details shall also include the experience of collaborator in manufacturing such parts and the quality control measures proposed to be taken by the Bidder to ensure that the buses meet the laid down norms. The contract shall be placed on foreign Bidder only and he shall be solely responsible for execution of contract.
- 13.5. Bids not containing the requisite information are liable to be rejected.
- 13.6. Only eligible Bidders, who meet the eligibility criteria, need apply.
- 14. ONLINE SUBMISSION INSTRUCTIONS**
- 14.1 Complete bid document can be seen and downloaded from e-procurement Portal of Government of NCT of Delhi (<https://govtprocurement.delhi.gov.in>) free of cost.
- 14.2 Those bidders not registered on the website mentioned above, are required to get registered beforehand.
- 14.3 Bidders can upload documents in terms of requirements of the e-procurement Portal of Government of NCT of Delhi (<https://govtprocurement.delhi.gov.in>).
- 14.4 The intending Bidder must have valid class-III digital signature to submit the bid.
- 14.5 On opening date, the Bidders can login and see the bid opening process.
- 14.6 The Technical Proposal/Submissions shall be opened first on the date and time as specified in IIIB: Schedule of Bidding Process with Key Details of this RFP Document. The Bidder has access to view the Proposals online. Bidder, if so desire, can attend the Technical Submissions opening through e-procurement portal (<https://govtprocurement.delhi.gov.in>).
- 14.7 The time and date for opening of Price Proposal of Shortlisted Bidders shall be informed automatically, through aforementioned web site.
- 14.8 Pre-Bid Conference shall be held at the location date & time as mentioned in Section: III-B of this RFP Document to clear the doubt of intending Bidders, if any.
- 14.9 List of Documents to be scanned and uploaded within the period of Bid Submission of **Techno-Commercial Bid (Bid 1)** shall be in terms of Clause 13 and 15.1 of the

Instruction to Bidders.

- 14.10 **Price Bid (Bid 2)** shall consist of only Price Schedule in the prescribed formats (Annexure A1 and A2 of Section – X) and is required to be uploaded separately as prescribed in Clause 24.2 of ITB.

- 14.11 The Proposal submitted shall become invalid if the Bidder doesn't upload all the documents as stipulated above.

15. DOCUMENTS/ ITEMS COMPRISING THE BID

- 15.1. The proposal submitted by the Bidder shall consist of two separate Bids viz. Techno-Commercial Bid and Price Bid for FULLY BUILT AC CNG PROPELLED LOW FLOOR BUSES:

(i) **Techno-Commercial Bid (Bid 1)** shall contain the prescribed Proforma for Submission of Bid (Annexure–3), Proforma for Bid Security/ EMD (Annexure–4), Proforma for Performance Statement (Annexure–5A and 5B), Proforma for Part-1 'Production Capability & Quality Control' & Part-2 'Technical Specifications' (Proforma 'A' and 'B' of Section IX) and all other documents as well as technical and commercial information required in accordance with the RFP document. Bidder is required to submit details of documents vis-à-vis Check List prescribed in the RFP Document along with bid. Failure to provide the documents prescribed in the check list may result in rejection of the bid.

(ii) **Price Bid (Bid 2)** shall consist of only Price Schedule in the prescribed formats (Annexure A1 and A2 of Section – X)

- 15.2. The Bidder shall be required to provide a Power Point Presentation of their buses intended for supply to highlight the required/ specified salient features to the Purchaser, in the form of Pen Drive along with the Bid.

- 15.3. The Bidders shall provide drawings, Pen Drive, Documents etc. on 'Free of Cost' basis without charging any cost to the Purchaser, along with the Bid.

- 15.4. The Power Point Presentation, Pen Drives etc. submitted by the Bidder along with the bid shall be indicative in nature only. The aforesaid documents/ Items shall not form the basis of actual supplies. Instead, the successful Bidder, on award of contract, shall supply the buses strictly as per the technical specifications of the RFP Document/ Contract.

- 15.5. Bidders may bid for type of the bus mentioned in the 'Schedule of Requirements' and must bid for the entire quantity of the type of bus offered as mentioned in the "Schedule of Requirements".

- 15.6. Incomplete bids are liable to be rejected.

16. PRESCRIBED FORM FOR THE BIDDING

The Bidder shall submit the prescribed Form (Annexure–3) of Bid along with the Techno-Commercial Bid

17. BID SECURITY/ EARNEST MONEY DEPOSIT

- 17.1 The Bidder shall furnish Bid Security for the amount stipulated in the 'Schedule of Requirements' [hereinafter also referred to as "Earnest Money Deposit" (EMD)] as part of his Bid. Bid Security shall be sealed in a separate sealed envelope superscribed 'Bid Security/ Earnest Money Deposit for Bid No. CGM/SBU/924/2019/AC for FULLY BUILT AC CNG PROPELLED LOW FLOOR BUSES for the amount stipulated in the 'Schedule of Requirements'. This sealed envelope containing 'Bid Security/ Earnest Money' should be put inside the sealed cover in accordance with Clause 24.5 of ITB. The Earnest Money shall be in one of the following forms:
- i. Account payee Demand Draft/ Fixed Deposit Receipt (valid for 60 days beyond the validity of bid) in favour of Chairman-cum-Managing Director, Delhi Transport Corporation payable/ encashable at Delhi/ New Delhi (India) from any scheduled commercial bank, operating in India.
 - ii. An irrevocable Bank Guarantee from a scheduled commercial bank [licensed by RBI hereinafter referred to as "Scheduled Bank"] in favour of Chairman-cum-Managing Director, Delhi Transport Corporation valid for a period of 60 days beyond the validity of the Bid, in the format prescribed in the RFP document. The Bank Guarantee should be encashable at Delhi/ New Delhi. In case the Bank Guarantee is issued by a foreign bank outside India, confirmation of the same by any nationalized Bank or a scheduled Bank authorized to handle transactions of Government of India in India is required. For the avoidance of any doubt, 'Scheduled Bank' shall mean a Bank as defined under Section 2(e) of the Reserve Bank of India Act, 1934.
- 17.2 Any Bid not accompanied with valid Bid Security/ EMD in the acceptable form will be liable to be rejected by the Purchaser as being non-responsive.
- 17.3 The Bid shall remain valid and open for acceptance for a period of 120 days from the specified date of opening. The Bank Guarantee/ Account Payee Demand Draft/ Fixed Deposit Receipt towards Bid Security/ Earnest Money shall remain deposited with the Purchaser for a period of 180 days from the date of opening of bids. If the validity of bid is extended, the Bidder shall get the terms of the Earnest Money Fixed Deposit Receipt/ Bank Guarantee extended by such period as the bid has been extended and shall furnish the same to the Purchaser not later than 15 days from the date of the notice of the extension of the bid.
- 17.4 The Bid Security should be furnished in Indian Rupees (INR).
- 17.5 No interest will be payable by the Purchaser on the Bid Security.
- 17.6 The Bid Security is liable to be forfeited if the Bidder withdraws or amends or impairs or derogates from the Bid in any respect within the period of validity of its bid. The decision of Purchaser in this respect shall be final and binding.

18. DISCHARGE OF BID SECURITY OF UNSUCCESSFUL BIDDER(S)

Bid Security of unsuccessful Bidders will be discharged / returned as promptly as after the expiry of Bid validity and latest by the 30th (thirtieth) day of the signing Contract by the Purchaser

19. DISCHARGE OF BID SECURITY OF SUCCESSFUL BIDDER(S)

- 19.1 The Bid Security of the Successful Bidder(s) shall be discharged only after the Successful Bidder(s) furnishes the Contract Performance Security as required.
- 19.2 If the successful Bidder(s) fails to furnish the Contract Performance Security as specified in the 'General Conditions of Contract', then the Bid Security shall be liable to be forfeited by the Purchaser, in addition to any other actions as per terms and conditions stipulated in the RFP Document.

D. SUBMISSION OF BIDS

20. PRICE BASIS, DELIVERY SCHEDULE & PAYMENT TERMS:

- 20.1 Financial proposal should contain the 'Price Schedule' in the format prescribed in Annexure A1/ Annexure A2 for FULLY BUILT AC CNG PROPELLED LOW FLOOR BUSES as applicable. All prices should be in Indian Rupees for the buses manufactured in India (applicable for Indigenous Bidders and Foreign Bidders, who intend to supply buses manufactured by them in India) and in Indian Rupees or US Dollars or Euros for the buses manufactured at a location outside India (applicable for foreign Bidders supplying buses from their manufacturing premises located outside India). The financial proposal should be per bus basis mentioned in the Schedule of Requirements (Section VII).
- 20.2 (a) The Foreign Bidders supplying buses from their manufacturing premises located outside India are required to quote prices on Turnkey Basis [Delivered Duty Paid (DDP) Central Workshop-I, Delhi Transport Corporation, Banda Bahadur Marg, Delhi-110 009] indicating the following break-up of price:
- (i) F.O.B. Price,
 - (ii) Ocean Freight
 - (iii) Insurance Charges.
 - (iv) Custom Duty Charges (in Indian Rupees).
 - (v) Charges for Transportation of the Buses from the Indian port to the ultimate destination (in Indian Rupees).
 - (vi) Other charges i.e. Port Charges, Custom Clearance Charges etc. (in Indian Rupees),

Foreign Bidder supplying buses from their manufacturing premises located outside India shall furnish break up of prices as per Annexure– A2. Bids not containing the break-up of prices are liable to be rejected.

Note:

- (i) Prices for 20.2 (a)(i), (ii) & (iii) may be quoted in Indian Rupees/ US Dollars/ Euro whereas the Prices for 20.2 (a) (iv), (v) & (vi) are required to be quoted in Indian Rupees only.
- (ii) Bidder shall quote for marine insurance covering transit risk up to ultimate destination in India
- (iii) Purchaser shall reimburse the custom duty charges on submission of documentary evidence of having paid the same, in terms of the contract.
- (b) In the case of foreign Bidders supplying buses from their manufacturing premises, the

- Purchaser reserves the right to place the contract either on FOB basis or on turnkey basis (DDP - Central Workshop I, Delhi Transport Corporation, Delhi).
- 20.3 The Indian Bidders and foreign Bidders supplying buses manufactured by them in India are required to quote prices on "Delivered Duty Paid (DDP)" to destination at Central Workshop-I, Delhi Transport Corporation, Banda Bahadur Marg, Delhi-110 009" basis. They shall furnish break-up of the prices as per Annexure-A1/ Annexure A2 as applicable for types of the buses offered. Bids not containing the break-up of prices are liable to be rejected
- 20.4 The price for the buses manufactured in India shall include a complete break-up showing the basic price, excise duty, other levies, GST, packing charges, forwarding charges, freight and insurance charges and other charges if any, shall also be given. Bids not containing the break-up of prices are liable to be rejected. Government levies/ duties/ taxes on the complete bus as applicable on the date of opening of price bids will be considered for evaluation. In case there is variation in the statutory levies/ taxes during the currency of the contract, the same will be payable at actual as applicable on the date of invoicing of new buses provided the buses are delivered as per contracted delivery schedule.
- 20.5 The Bidders should quote their lowest possible prices. The Bidders shall be required to certify/ give an undertaking to the effect that the rates quoted are minimum/ reasonable & they have not quoted/ charged lower rates from any other Government Departments/ State Transport Undertaking for FULLY BUILT CNG PROPELLED AC LOW FLOOR BUSES conforming to same specifications. The undertaking be certified & duly stamped by their Chartered Accountants. This undertaking shall be required along with each and every bill. In case the Contractor offers to supply/ supplies the buses conforming to same specifications to any other State or Central Government Departments/ State Transport Undertakings/ Central or State Public Sector Undertakings at rates lower than the rates accepted against the present Contract, such lower rates shall also be made applicable to all the buses supplied/ to be supplied against the present Contract subsequent to the said date of offer of supply/ supplies at the lower rates by the Contractor.
- 20.6 The terms FOB & DDP shall mean as defined in INCOTERMS – 2010.
- 20.7 The price quoted for bus shall be firm and not subject to any upward variation except for the variation in statutory levies & duties separately quoted by the bidder in its bids.
- 20.8 **DELIVERY SCHEDULE:** After getting approval of prototype, within Eight Weeks from the date of Letter of Acceptance, complete in all respect by obtaining Type Approval Certificate & compliance with all statutory requirements, the Bidders is required to complete the entire supply of buses within the stipulated delivery period of 08 + 20 Weeks from the date of LOA. The bidder shall, subject to in accordance with the terms of RFP, achieve the delivery milestone set out in Annexure 10B.
- 20.9 In case of split order, the delivery schedule for ordered quantity for each Contractor to be reduced proportionately.
- 20.10 Failure to comply with month wise delivery schedule shall attract pre-estimated liquidated damages, risk purchase & other provisions of the contract.

- 20.11 **PAYMENT TERMS:** The Bidder must agree to the payment terms as specified in the General Conditions of Contract.

21. INSURANCE

- 21.1. For the buses manufactured outside India, in the case of DDP destination contract, marine insurance covering transit risk up to ultimate destination in India (ultimate consignee) will be arranged and paid for by the Contractor. However, in the case of FOB contract, insurance shall be arranged by the Purchaser.
- 21.2. For the buses manufactured in India, the Purchaser shall not arrange for any transit insurance etc. separately and the Contractor will be responsible till the ordered quantity of all the Buses arrives in safe and sound condition at destination complying with all statutory requirements. The insurance documents in original be submitted along with the other bus delivery documents. The insurance charges should be clearly indicated separately in the break-up of prices.
- 21.3. The consignee will advise the Contractor within 30 days of the arrival of buses at the destination, any loss/ damage etc. of the buses and it shall be the responsibility of the Contractor to lodge the necessary claim on the carrier and/ or insurer and pursue the same. The Contractor shall, however, at his own cost replace/ rectify the buses lost/ damaged to the entire satisfaction of the consignee, within 30 days from the date of dispatch of intimation from the consignee, without waiting for the settlement of the claim.
- 21.4. The successful Bidder/ Contractor shall be entirely responsible for suitable packing wherever required keeping in view the arduous conditions during transportation, handling and storage in tropical conditions (including monsoon) so as to eliminate damage/ deterioration of buses during transit/ trans-shipment/ handling or storage.
- 21.5. **INSURANCE AFTER DELIVERY:** On acceptance of buses by the Purchaser, third party insurance will be arranged by the Purchaser at its own cost. However, the Contractor will be required to arrange insurance of buses till the same are delivered to and accepted by the Purchaser.

22. BID VALIDITY

- 22.1 The Bid shall remain valid and open for acceptance for a period of 120 days from the specified date of bid opening.
- 22.2. In exceptional circumstances prior to expiry of the original bid validity period, the Purchaser may request the Bidder for extension in the period of validity. The request and response thereto shall be made in writing by email followed by confirmation copy by post. A Bidder may refuse the request without becoming liable for forfeiture of Earnest Money. However, a Bidder agreeing to the request of extension in the bid validity period will be required to extend the validity of his Bank Guarantee towards Bid Security/ EMD suitably. Moreover, the Bidder agreeing to the request will not be permitted to modify his Bid.

23. FORMAT AND SIGNING OF BID

- 23.1. Bidders shall provide all the information as per this RFP Document and in the specified formats. Purchaser reserves the right to reject any Proposal that is not in the specified formats.
- 23.2. The original bid /bids shall be typed or written neatly in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the Contract. The Letter of Authorization shall be indicated by written Power-of-Attorney accompanying the Bid/ Bids. The person or persons so authorized for signing the bid/ bids shall initial all pages of the Bid/ Bids including printed literature. Each page of the bid/ bids must be numbered at the right hand top corner.
- 23.3. The bid/ bids shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the Bidder, in which case, such corrections shall be initialed by the person or persons signing the Bid.
- 23.4. All prices and other information like discount etc. having a bearing on the Price shall be written both in figures and words in the prescribed Bid Form. In case of discrepancy, the price given in words shall be considered.

24. TWO BID SYSTEM

- 24.1. All details except for the prices shall be furnished in the Techno-Commercial Bid (Bid 1). Bidder shall quote for all the items mentioned in the 'Schedule of Requirements', 'Technical Specification'. **Techno-Commercial Bid** shall consist of the Proforma of Submission of Bid (Annexure-3), Earnest Money, Performance Statement, Technical details, Proforma of Production Capability & Quality Control and all other documents as well as all technical and commercial information required in accordance with the RFP document. The technical details shall be provided as per Technical Specification (Section VIII), Proformas 'A' & 'B' of Section IX, Annexure '12'. One copy of comprehensive specifications of type of Bus offered shall be submitted along with the Techno-Commercial Bid. The information on Technical Specification is to be furnished by the Bidders along with their offer on the prescribed formats of the RFP document.

NOTE: PRICES SHOULD NOT BE MENTIONED ANYWHERE IN TECHNO-COMMERCIAL BID I.E. IN BID - 1.

- 24.2. Bidder shall quote for all the items as specified in the 'General Conditions of Contract' in the **Price Bid (Bid 2)** format as given at Annexure A1/ A2 for FULLY BUILT AC CNG PROPELLED LOW FLOOR BUSES. Price Bid shall contain only the Price Schedule in the prescribed format of the RFP document (Annexure – A1, A2 as applicable).
- 24.3. The Bidder shall upload **separately** the scanned copy of Bid 1: Techno-Commercial Bid and Bid 2: Price Bid as defined in clause above on the e-procurement portal of Government of NCT of Delhi (<https://govtprocurement.delhi.gov.in>) (Please refer **"Instructions to Bidders for Online Bid submission"**).
- 24.4. **However, the following Documents have to be submitted in the hard copy:**
 - a) Original copy of the payment towards the cost of RFP Document.
 - b) Original Bid Security as per Annexure-4
 - c) Hard Bound Print out of uploaded: Techno-Commercial Bid (Bid 1).

24.5. All the envelopes shall clearly bear the following identification:

**SUPPLY OF FULLY BUILT AC CNG PROPELLED LOW FLOOR BUSES: GLOBAL
RFP NUMBER: CGM/SBU/924/2019/AC**

“To be opened by Tender Opening Committee only”

and

**“Submitted by
“Name, Address and Contact Phone No. of the Bidder”**

Note: The sealed envelopes shall indicate the name and address of the Bidder to enable the Purchaser to return the bid documents un-opened in the event the bid is declared “Late/ delayed bid”.

24.6. Bid shall be in accordance with the provisions contained in the RFP document. The no deviation of the RFP document shall be submitted separately in the Proforma as per Annexure-1 & 2 of the RFP document. Any material deviations/ variations in the terms & conditions in the bids submitted by the Bidders will make their bid liable for rejection.

25. DEADLINE FOR SUBMISSION OF BIDS

25.1. Bids complete in all respects must be uploaded / submitted through e-procurement Portal of Government of NCT of Delhi (<https://govtprocurement.delhi.gov.in>) and at the address given in the ‘Bid Invitation Notice’, not later than the time & date indicated therein. The Purchaser may, at his discretion, extend this deadline for the submission of bids by amending the Bid Documents by issuing an Addendum as per Clause 9 of ITB and in that case all rights and obligations of the Purchaser and the Bidders previously subject to the original deadline shall thereafter be subject to the deadline as extended.

26. LATE/ DELAYED BIDS:

Bids received by the Purchaser after the prescribed deadline will be returned to the Bidder and shall be deemed disqualified and thus rejected.

27. MODIFICATION AND WITHDRAWAL OF BID

The Bidder may modify or withdraw his bid after submission but before the date and time fixed for submission of the bids, in terms of process set out in e-procurement portal. No Proposal shall be withdrawn by the Bidder after the Proposal Due Date.

E. BID OPENING AND EVALUATION

28. BID OPENING

- 28.1. The Techno-Commercial Bids (**Bid 1**) of all the Bidders will be opened by the Purchaser through e-procurement portal of GNCTD at time, date and place indicated in the Bid Documents, in the presence of Bidders or their representatives who wish to attend the Bid opening. The Bidders' representatives, who are present, shall sign a register in evidence of their attendance. In the event of the specified date of bid opening being declared holiday for the Purchaser, the bids shall be opened at the appointed time and location on the next working day.
- 28.2. The Bidder's name, Bid Amendment/ Withdrawals, if any, the presence or absence of the requisite Earnest Money and such other details as the Purchaser or his authorized representative, at his discretion, may consider appropriate will be announced at the time of Bid opening.
- 28.3. Purchaser shall intimate Bidders in case of any change in the date or venue of opening of "Bid 1" of the Proposal.

29. PROCESS TO BE CONFIDENTIAL

- 29.1. After the public opening of Bids, information relating to the examination, clarifications, evaluation and comparison of Bids and recommendations concerning the Award of Contract shall be confidential and shall not be disclosed to other persons not officially concerned with such process. Disclosure to any such persons shall be made in confidence and shall extend only so far as it may be deemed necessary for the purposes of such performance.
- 29.2. Any effort by a Bidder to influence the Purchaser in the process of examination, clarification, evaluation and comparison of Bids and in decisions concerning award of contract, may attract the Clause 43 of ITB.

30. CLARIFICATION OF BIDS

- 30.1. To assist in the examination, evaluation and comparison of Bids, the Purchaser may, if necessary, ask Bidders individually for clarification of their Bids, including break-up of prices. The request for clarification and the response shall be in writing or by email only and no change in the price or substance of the Bid shall be sought, offered or permitted. The Bidder in such cases would need to provide the requested clarification / documents promptly and within 48 hours or such timeframe as given by Purchaser on the receipt of request to the satisfaction of the Purchaser, failing which the Bidder is liable to be disqualified at any stage of the bidding process. No change in the substance of the Bid would be permitted by way of such clarifications.
- 30.2. The Purchaser reserves the right to inspect/ visit the premises/ offices/ manufacturing facilities of the Bidder to ascertain the Bidder's eligibility & his fulfilling the qualification criteria etc. as and when required during evaluation of bids.

31. DETERMINATION OF RESPONSIVENESS

- 31.1. The Purchaser will determine whether each Bid is responsive to the requirements of the Bid Documents.

31.2. A responsive Bid is one which conforms to all the terms & conditions and specifications of the Bid Documents without any material deviation or reservation. A material deviation or reservation is one which affects in any way the scope, quality, performance or administration of the contract by the Bidder, or which limits in any way, inconsistent with the Bid Documents, the Purchaser rights or the Bidder's obligations under the contract, and the rectification of which would affect unfairly the competitive position of other Bidders presenting responsive Bids at reasonable prices.

31.3. If a Bid is not responsive to the requirements of the Bid Documents it will be liable to be rejected by the Purchaser.

32. EVALUATION AND COMPARISON OF BIDS

32.1. The Purchaser will evaluate and compare only those Bids determined to be responsive to the requirements of the Bid Document.

32.2. The Bidders are required to provide all technical details, as these are required for evaluation purpose & also for quality assurance during fabrication. Bids received without full & complete specifications and drawings are liable to be rejected. The Purchaser will examine the Techno-Commercial Bid to determine whether they are complete, whether the requisite Bid Guarantee has been furnished, whether the documents have been properly signed, and whether the Bids are generally in order.

32.3. The Purchaser shall go through and evaluate the Techno-Commercial Bids (Bid 1) and advise accordingly only those Bidders whose bids shall be found responsive to the requirements of the Bid Document. Price Bids of only such Bidders will be opened in the presence of their representatives (if they wish to be present) at the time & date to be notified later to individual Bidder.

32.4. Purchaser will convert all Bid Prices expressed in foreign currencies to the local currency of the Purchaser country at the Bill Currency (B.C.) selling market exchange rate established by the State Bank of India in the Purchaser country for similar transactions, as on the date of opening of Price Bids. The statutory levies i.e. GST or any other tax will also be taken as on the date of opening of Price Bid.

32.5. The Purchaser shall evaluate and compare the Price Bids of only those Bidders who have offered the prices complete in all respect as per the RFP document. The Purchaser will arrive at the all-inclusive total price of a bid, of both indigenous and Foreign Bidders, after adding following factors:

- i. Total all-inclusive price of all the Buses (inclusive of Letter of Credit opening charges, if any), till delivery at Central Workshop-I, Delhi Transport Corporation, Banda Bahadur Marg, Delhi-110 009. Or any other unit of the Corporation in Delhi.
- ii. Any other charges quoted by the Bidder and acceptable to the Purchaser as per RFP document.

32.6. Bid deviations and other factors, which are in excess of the requirements of the Bid Documents or otherwise result in the accrual of unsolicited benefits to the Purchaser, shall not be taken into account in Bid evaluation.

F. AWARD OF CONTRACT

33. AWARD CRITERIA

- 33.1 Subject to above, the Purchaser will consider the Bidder whose Bid has been determined to be responsive, complete and in accordance with the RFP Document and whose offer on evaluation has been determined to be the lowest acceptable offer for award of contract for 65% of the total quantity. The remaining 35% of the total quantity will be awarded to the L-2 responsive Bidder who will agree to match the price of L-1 Bidder.
- 33.2 In case the L-2 responsive Bidder does not agree to match the price of L-1 Bidder, L-3 responsive Bidder would be asked to match the price of L-1 Bidder and so on till such responsive Bidder agrees to match the price of L-1 Bidder for Award of the remaining 35% of the total quantity. In case none of the responsive Bidders other than L-1 agree to match the price of L-1 Bidder or there is only one responsive Bidder, in that case the balance 35% quantity will also be awarded to L-1 responsive Bidder. Purchaser's decision in this regard shall be final.

34. PURCHASER RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

The Purchaser reserves the right to accept or reject any Bid and to annul the Bid Process and reject all Bids without assigning any reason.

35. NOTIFICATION OF AWARD

- 35.1. Prior to the expiry of the period of Bid validity, the Purchaser will notify the successful Bidder through email to be confirmed in writing by Registered/ Speed Post that his Bid has been accepted. This letter (hereinafter and in the General Conditions of Contract called 'Letter of Acceptance') shall name the sum which the Purchaser will pay to the Contractor in consideration of execution, completion, testing & commissioning of the Buses by the Contractor.
- 35.2. The Letter of Acceptance (LOA) dispatched through 'Speed Post/ Registered Post/ e-mail/ by hand shall constitute the formation of the Contract.

36. SIGNING AND ACCEPTANCE OF LETTER OF ACCEPTANCE

- 36.1. Upon receipt of the 'Letter of Acceptance', the successful Bidder shall return two copies of the Letter of Acceptance duly signed and stamped by his authorized signatory within 2 weeks from the date of dispatch of Letter of Acceptance. However, the Contract shall be deemed to be concluded on the date of dispatch of the 'Letter of Acceptance' by the Purchaser.
- 36.2. Upon return of 'Letter of Acceptance' from the successful Bidder, Contract in accordance with the form of agreement prescribed with the RFP Document, would be signed by both the parties. The successful Bidder shall get the correct amount of Stamp Duty adjudicated, at Delhi in accordance with the applicable law, and submit the same in two copies duly stamped and executed within thirty days from the date of dispatch of 'Letter of Acceptance'. Purchaser will return one copy duly signed and sealed as a token of acceptance of contract agreement. Stamp Duty will be paid by the successful Bidder.

- 36.3. At the time of signing the Contract, the successful Bidder shall be required to give an undertaking in the form of AFFIDAVIT on Non-judicial Stamp Paper of appropriate value NOTORISED in conformity with the requirement of Clause-43 of ITB in the format (Annexure-'7' of Section XI), to the affect that they have not given any commission to any official of DTC/ Delhi Government or any other agencies engaged with the procurement process or indulged in any other corrupt or fraudulent practice in securing the Contract.

37. PERFORMANCE SECURITY

Within 30 days of dispatch of the 'Letter of Acceptance' from the Purchaser, the successful Bidder shall furnish to the Purchaser a Performance Security for an amount equivalent to 10 (Ten) % of the Contract value in accordance with Clause 4 of General Conditions of Contract.

38. IMPORT LICENCE, CLEARANCES, ETC.

The successful Bidder/ Contractor will have to apply to the concerned Government Authority for grant of requisite Import Licenses/ Foreign Exchange for such items as require to import. Any licenses or clearances etc. required under the law of the land will also be the responsibility of the Contractor. The Purchaser will only render assistance, wherever necessary and shall have no responsibility whatsoever in this regard nor shall any delay in obtaining the Licenses/ Clearances etc. and/ or delay in import be attributed to Purchaser

39. ADDRESSES FOR CORRESPONDENCE

Relevant addresses for various purposes regarding the Bid are given in the 'Bid Document'.

G. MISCELLANEOUS

40. GENERAL CLIMATIC CONDITIONS OF THE DELHI/ NEW DELHI (INDIA)

- 40.1. The work site area is mostly plain terrain and lies in latitudes between 28° x 23' and 28° x 53' North and longitudes 76° x 50' and 77° x 21' East. Bulk quantity of buses will be operated in Delhi. However, some buses will be operated in NCR also.
- 40.2. The temperature during the year in Delhi varies from approximately 0°C to 50.0°C.
- 40.3. Summer season is from April to June and winter season is from November to March, in summer months dust storms are also frequent.
- 40.4. Average annual rainfall in the area is of the order of 660 mm, major portion of which is concentrated in the months of July, August and September.
- 40.5. The road conditions in Delhi are generally plain but also having flyovers and speed breakers. During heavy rainfall, there is possibility of water logging in certain areas and potholes may also impact the road surface.

41. SEISMIC ZONE

Delhi falls under Seismic Zone IV; Earthquake of maximum magnitude of 7 on Richter's scale has been experienced in the past in the region.

42. SHIPPING ARRANGEMENT FOR FOREIGN CONTRACTS

- 42.1. The Foreign Bidders are required to indicate in their Bids the overall dimensions and the weight of the package containing each bus while dispatch through sea.
- 42.2. In the case of FOB Contracts, shipping arrangements shall be made by the Ministry of Shipping & Transport (Chartering Wing), New Delhi, India in accordance with details given in Annexure 22. The Contractor shall give adequate notice to the Forwarding Agents/ Nominees about the readiness of the cargo from time to time and at least six weeks' notice in advance of the required position for finalizing the shipping arrangements. In the case of DDP/ Turnkey Contracts, the Contractor shall arrange shipment in accordance with the requirements of the Ministry of Shipping & Transport, New Delhi, India, indicated in Annexure 21 or as applicable.

43. CORRUPT PRACTICES

- 43.1. Bidders are expected not to indulge in any corrupt and fraudulent practice. They are expected to observe the highest standard of ethics during the procurement and execution of the Contract. In pursuance of this policy, following definitions are relevant:
- (i) "Corrupt Practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in Contract execution; and
 - (ii) "Fraudulent Practices" means a misrepresentation of facts in order to influence a procurement process or the execution of a Contract to the detriment of the Purchaser and includes collusive practice among Bidders (prior to or after Bid submission) designed to establish Bid Prices at artificial non-competitive levels and to deprive the Purchaser of the benefits of free and open competition;
- 43.2. If it is found that Bidder(s) had engaged in corrupt/ fraudulent practice in securing and executing the Contract, the Purchaser reserves the right:
- (a) not to award Contract to such Bidder,
 - (b) to cancel the Contract, if already awarded. In case of cancellation, the Purchaser shall be entitled to recover from the Bidder/ Contractor the amount of any loss arising from such cancellation in accordance with the provisions of the RFP Document. The Purchaser shall also have the right to forfeit the Performance Bank Guarantee of such Bidder, and
 - (c) to ban the business dealing with the Bidder who engaged in such practices either indefinitely or for a specified period of time.

43.3. The Bidder is required to comply with terms of Integrity Pact as per format in Annexure-27.

44. CHECK LIST

An indicative Check List has been included at Annexure 19 of this RFP Document. This has been designed to help the Bidders in submitting the bids complete in all respect. An incomplete Bid is liable to be rejected. The Bidders must fill this Check List and submit along with their bid in their own interest. Any other documents required as per any other clause of the Tender Documents have to be submitted along with the Bid even if not indicated in the aforesaid Check List.

45. REQUIREMENTS OF PURCHASER FOR ANNUAL MAINTENANCE CONTRACT

Prior to award of contract for supply of buses in terms of RFP, the Purchaser has decided to invite separate tenders for Comprehensive Annual Maintenance Contract (AMC) for maintenance of buses proposed for procurement as per key terms and conditions given in Annexure 25. The Vehicle Manufacturer (Bidder) is required to submit undertaking as a part of Techno-Commercial Bid (Bid 1) as given in Annexure 23 to participate in the said tender of the Purchaser and offer a reasonable rate directly as Vehicle Manufacturers (VM) and also through their authorized network for which eligibility conditions are also defined in Annexure 25.

**SECTION VI:
GENERAL CONDITIONS OF CONTRACT (GCC)**

SECTION VI: GENERAL CONDITIONS OF CONTRACT (GCC)

1. INTERPRETATIONS

In the contract, unless the context otherwise requires:

- 1.1. Words in the singular include the plural and vice-versa.
- 1.2. Words importing the masculine gender shall be taken to include the feminine gender and words importing persons shall include any company or association or body of individuals, whether incorporated or not.
- 1.3. The heading of these conditions shall not affect the interpretation or construction thereof of the Clause.
- 1.4. Terms and expression not herein defined shall have the meanings assigned to them in the Indian Sale of Goods Act, 1930 (as amended) or the Indian Contract Act, 1872 (as amended) or the General Clauses Act, 1897 (as amended) as the case may be.
- 1.5. Wherever Date & Period are specified in the RFP Document for completing some formalities/ tasks/ documentations etc, the commencement of the period prescribed for the said completion shall be reckoned from the date of dispatch of the communication by the Purchaser, even if mentioned otherwise anywhere else.

2. PARTIES TO THE CONTRACT AND THEIR OBLIGATIONS

- 2.1. The parties to the contract are the Contractor and the Purchaser, as defined in Section IV of RFP Document.
- 2.2. A person signing the bid or any other document in respect of the contract on behalf of the Contractor without disclosing his authority to do so, shall be deemed to have the authority to bind the Contractor to fulfill his obligations as mentioned in such bid or document. If it is discovered at any time that the person so signing has no authority to do so, the Purchaser may, without prejudice to any other right or remedy of the Purchaser, cancel the contract and make or authorize the making of a purchase of the buses at the risk and cost of such person and hold such person liable to the Purchaser for all costs and damages arising from the cancellation of the contract including any loss which the Purchaser may sustain on account of such purchase.
- 2.3. Any approval that may be given by the Purchaser or Inspecting Officer on behalf of Purchaser shall only be deemed to be the approval in principle. Notwithstanding such approval, the Contractor shall be fully and totally responsible for the satisfactory performance and compliance with contract specifications, terms & conditions.
- 2.4. In case of any inter-se conflict between any provisions/ stipulations in the Bid Document or in the Contract Document, the decision of the Purchaser for interpretation/ application would be final and binding on the Contractor.

- 2.5. The Contractor shall be absolutely liable for the technical design and manufacture of the bus as per the design. It shall not be open to the Contractor to contend at a later stage that a particular change/ deviation in the technical parameters/ drawings is not compatible with the overall design of the bus or affects performance. Any losses, whatsoever, which are occasioned on account of the design / technical failure of the bus, shall be borne by the Contractor.

3. CONTRACT

- 3.1. The contract shall be for supply (Design, Manufacture, Supply, Testing & Commissioning) of the Buses of the description, specifications and drawings, and in the quantities set forth in the contract on the date or dates specified therein. The Buses shall be entirely brand new and of the best quality and workmanship to the satisfaction of the Inspecting officer and Purchaser.
- 3.2. The whole contract is to be executed in the approved, substantial and workmanlike manner, to the entire satisfaction of the Purchaser, who both personally and by its any person acting through or under Purchaser, shall have full power, at every stage of progress, to inspect the Buses at such times as he may deem fit and to reject any of the Bus/ item, which he may disapprove, and his decision thereon, and on any question of the true intent and meaning of the specifications shall be final and conclusive.
- 3.3. After the award of the Contract, the Purchaser reserves its right to not to respond to any query/ clarifications sought by the Contractor in respect of the Contract or not to provide clarifications, if the Purchaser in its sole discretion considers that no reply is necessary.

4. PERFORMANCE SECURITY

- 4.1. The Contractor shall furnish Performance Security encashable at Delhi in the form of Account Payee Demand Draft/ Fixed Deposit Receipt or in the shape of a Bank Guarantee in the Proforma prescribed in the RFP document (Annexure- 8) within 30 days from the date of dispatch of the 'Letter of Acceptance' of the bid by the Purchaser, for an amount equivalent to 10% of the value of the contract in Indian Rupees. In the event that the Contract Price is made up of currencies other than Indian Rupees, the value of the Performance Guarantee to be supplied shall be determined by reference of Contract Price calculated in Indian Rupees by applying exchange rates in accordance with the Sub-clause 32.4 of ITB. The Bank Guarantee/ Fixed Deposit Receipt should be from any Scheduled Commercial Bank (licensed by RBI) or confirmed by any Indian nationalized bank. The Bank Guarantee/ Fixed Deposit Receipt should be drawn in favour of "Chairman-cum-Managing Director, Delhi Transport Corporation", payable at Delhi.
- 4.2. In case furnishing of Performance Security is delayed by the Contractor beyond the period provided in sub-clause 4.1 and the Performance Security so submitted is accepted by the Purchaser, pre-estimated damages as per sub clause 4.4 hereinafter shall be levied for the period of delay, beyond 30 days allowed as per preceding sub clause 4.1, in submission of the Performance Security. Alternatively, the Purchaser may declare the Contract as cancelled and enforce Clause 9 of the General Conditions of Contract.
- 4.3. If the Bidder, having been called upon by the Purchaser to furnish Performance Security, fails to furnish the same, it shall be lawful for the Purchaser:

- (a) to recover from the Contractor the amount of Performance Security by deducting the amount from the pending bills of the Contractor under any contract with the Purchaser or the Government or
 - (b) to levy pre-estimated damages in terms of clause 4.4 of GCC or
 - (c) to forfeit the EMD and cancel the contract or any part thereof and to purchase or authorize the purchase of the buses at the risk and cost of the Contractor and in that event the provisions of sub-clause 9.2 shall apply as far as applicable.
- 4.4. In case of delay in submission of Performance Security in terms of clause 4.1, the Purchaser shall, without prejudice to other remedies under the contract, levy / deduct pre-estimated damages @ 0.5% of the total value of the Contract (inclusive of duties & taxes) for delay of each week or part thereof. The decision of Purchaser shall be final in this regard. The Contractor agrees that the pre-estimated damages are fair and genuine pre-estimate of the loss that would be occasioned by Purchaser and it shall not dispute the same in any manner. The pre-estimated damages shall be recovered from EMD and / or from any bill of the Contractor submitted against any contract.
In case any critical issue arises, Bus Procurement Committee will decide the issue on case to case basis.
- 4.5. The Purchaser shall be entitled and it shall be lawful on his part to forfeit the amount of the Performance Security in whole or in part in the event of any default, failure or neglect on the part of the Contractor in the fulfillment or performance in any manner whatsoever of the contract under reference or any other contract with the Purchaser or any part thereof to the satisfaction of the Purchaser. The Purchaser shall also be entitled to deduct from the amount of the Performance Security any loss or damage which the Purchaser may suffer or be put to by reason of or due to any act or other default, recoverable by the Purchaser from the Contractor in respect of the contract under reference or any other contract and in either of the events aforesaid to call upon the Contractor to maintain the amount of the performance security at its original limit by furnishing fresh Bank Guarantee of additional amount, provided further that the Purchaser shall be entitled to recover any such claim from any sum then due or which at any time thereafter may become due to the Contractor under this or any other Contracts with the Purchaser.
- 4.6. The Bank Guarantee shall remain in full force and effect during the period that would be taken for satisfactory performance and fulfillment in all respects of the contract i.e. till satisfactory commissioning of the buses at consignee's works. **The Bank Guarantee shall be valid up to for a period of six months after expiry of warranty period.** On the performance and completion of the contract in all respects including warranty, the Bank Guarantee will be returned to the Contractor without any interest and upon submission of no claim certificate.
- 4.7. As and when, an amendment is issued to the contract, having an impact on amount and validity of Performance Security, the Contractor shall, within fifteen days of the receipt of such an amendment furnish to the Purchaser an amendment to the Bank Guarantee rendering the same valid for the contract as amended.
- 4.8. The Bank Guarantee and/ or any amendment thereto shall be executed on a stamp paper of requisite money value in accordance with the laws applicable in India by the party competent to do so.

4.9. Fresh Performance Security

In the event of the encashment of the Performance Security by Purchaser pursuant to an Encashment Notice issued, the Contractor shall within 30 (thirty) days of the Encashment Notice furnish to Purchaser Fresh Performance Security. The provisions set forth in above shall apply mutatis mutandis to such fresh Performance Security.

5. DELIVERY SCHEDULE

- 5.1. Prototype of bus duly certified for all statutory requirements covered under Central Motor Vehicle Rules (CMVR), Motor Vehicles Act (MVA), any other statutory requirements etc. and Clause-2.4 & 2.5 of Technical Specifications (Section-VIII) with respect to the bus, its components & its aggregates etc. complete in all respects will be provided for inspection and approval taken within 08 (eight) weeks from the date of Letter of Acceptance. The delivery of the subject buses is to be completed within the milestone date/s based contracted delivery schedule from the date of Letter of Acceptance as provided in Clause - 20.8 of 'Instruction to Bidders' (Section-V).
- 5.2. If the Contractor fails to get the approval of the prototype within 08 (eight) weeks of date of dispatch of Letter of Acceptance and/ or fails to complete the milestone date/s based supplies within contracted delivery period as defined in Annexure 10B, the Purchaser shall take actions as per clause 7.3 of General Conditions of Contract.
- 5.3. The Contractor shall, as may be required by the Purchaser, deliver at the place/ places detailed in the contract, the quantities of the buses detailed therein. The buses shall be delivered not later than the dates specified in the contract in terms of said milestone delivery schedule.
- 5.4. The Contractor shall commission the buses within 15 days of receipt of buses at the consignee's end. If the Contractor fails to commission the buses during aforesaid period, the Purchaser shall take actions as per clause 7.3 of General Conditions of Contract.
- 5.5. Notwithstanding any inspection and approval by the Inspecting Officer, ownership of the buses shall not pass on to the Purchaser until the buses have been received, inspected and accepted by the consignee at his end i.e. Central Workshop-I, Delhi Transport Corporation, Banda Bahadur Marg, Delhi-110 009 or any other unit of the Corporation in Delhi.
- 5.6. The Purchaser shall not be liable to render assistance to the supplier in securing or in arranging or providing transport for the ordered Buses/ goods.
- 5.7. Successful Bidder shall make lot-wise supplies of the buses as per the delivery schedule indicated by him and incorporated in the contract. Failure to comply with milestone based delivery schedule (as defined in Annexure-10B) shall attract pre-estimated liquidated damages, risk purchase & other provisions of the contract.
- 5.8. The Contractor shall give call for pre-dispatch inspection of the buses for each monthly installment latest by the first working day of the month in which the said buses are planned for delivery failing which Purchaser shall not be liable for delay in inspection and supplies of buses.

6. NOTIFICATION OF DISPATCH

In case of FOB contract, notification of dispatch in regard to each and every installment shall be made to the Purchaser, consignee and port consignee (if applicable) immediately on dispatch. The Contractor shall further supply to the consignee, or the authorised representative, as the case may be, a packing account quoting number and date of the contract and date of dispatch of the buses. All packages shall be fully described in the packing account and full details of the contents of the packages and quantity of buses shall be given. The Contractor should ensure the road worthiness of packages in Indian conditions from port of entry to final destination. The copy of Consignment Note or Bill of Lading with other shipping documents, if any, shall be forwarded to the consignee and/ or the port consignee named in the contract as applicable by registered post immediately on the dispatch of buses. The Contractor shall bear and reimburse to the Purchaser demurrage charges, if any, paid by reason of delay on the part of the Contractor in forwarding the copy of the Consignment Note or Bill of Lading and other shipping documents.

7. DELAYS IN THE CONTRACTOR'S PERFORMANCE

- 7.1. **DELIVERY TO BE EFFECTED WITHOUT TIME OVER-RUN:** The time allowed for and the date specified in the contract or as extended, for the delivery & commissioning of the buses shall be the essence of the contract and delivery must be completed not later than the date(s) so specified or extended.
- 7.2. **PROGRESS OF DELIVERIES:** The Contractor shall allow reasonable facilities and free access to his works and records to the Inspecting Officer or such other Officer as may be nominated & deputed by the Purchaser for the purpose of ascertaining the progress of the deliveries under the contract.
- 7.3. In case of a failure or delay by the Contractor in the performance of his obligations for delivery and commissioning of buses, the Purchaser at his discretion may take the following actions:
- (a) Terminate the contract for unsupplied quantity; and/ or
 - (b) Forfeit the Performance Guarantee; and/ or
 - (c) Effect purchases at the Bidder's risk and cost for the unsupplied quantity as per clause 9.2 hereinafter; and/ or
 - (d) Extend the delivery period for the unsupplied/ non-commissioned quantity with imposition of pre-estimated liquidated damages and duties and taxes as per Clause 12.1 of GCC.
- 7.4. If at any time during performance of the Contract, the Contractor should encounter conditions beyond his control impeding timely delivery of the buses, the Contractor shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Contractor's notice, the Purchaser may evaluate the situation and may, at his discretion, extend the Contractor's time for

performance, in which case, the extension shall be ratified by the parties by amendment of the Contract.

- 7.5. The Contractor shall notify the Purchaser, in writing, of all sub-contracts, awarded under the contract, if not already mentioned in the bid. Such notification in the original bid or later shall not release the Contractor from any liabilities or obligations under the contract.

8. LIQUIDATED DAMAGES

- 8.1. Subject to Clause 11, for any delay in achieving the Delivery Milestones date/s as set out in Annexure 10B by the Contractor, the Purchaser shall, without prejudice to other remedies under the Contract, levy/ deduct pre-estimated liquidated damages @ 0.5% of the total value of the bus(es) (inclusive of duties & taxes) which the contractor has failed to deliver/ commission within the period fixed for delivery/ commissioning for delay of each week or part thereof.
- 8.2. The amount of pre-estimated liquidated damages to be charged under the contract will be bus-wise in terms of the preceding clause 8.1 and shall not exceed 10% of the total value of each bus (inclusive of duties & taxes) which the Contractor has failed to deliver/ commission within the period fixed for delivery/ commissioning.
- 8.3. The Contractor agrees that pre-estimated liquidated damages/ damages mentioned in clause 8.1 & 8.2 above are fair and genuine pre-estimates and not by way of penalty. The Contractor also agrees that he shall not dispute the same in any manner.

9. TERMINATION FOR DEFAULT

- 9.1. The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Contractor, terminate the contract in whole or in part:
- a. if the Contractor fails to deliver any or all of the buses or fails to commission the same within the delivery schedule(s)/ timeline as specified in the contract or any extension thereof granted by the Purchaser pursuant to clause 7 and/ or
 - b. if the Contractor fails to perform any other obligation(s) under the contract.
- 9.2. In the event the Purchaser terminates the contract in whole or in part, pursuant to sub-clause 9.1 above, the Purchaser may enter into fresh contract with any other Contractor for completing the unfulfilled portion of the contract and the Contractor (whose Contract is terminated) shall be liable to the Purchaser for any excess costs for such buses, their commissioning and maintenance for Warranty (and/ or remaining part of Warranty). However, the Contractor shall continue performance of the contract to the extent not terminated.

10. CONSEQUENCE OF REJECTION

- 10.1. If any consignment of buses is rejected by the Inspecting Officer or by the Purchaser during the testing, trials and commissioning and the Contractor fails to rectify rejected bus(s) within 21 days of rejection, the Purchaser shall be at liberty to: -

- a. request the Contractor to replace the rejected buses forthwith but in any event not later than a period of 30 days from the date of expiry of the rectification period and the Contractor shall bear all costs of such replacement including freight and insurance etc., if any, on such replacement and shall not be entitled to any extra payment on that or any other account; or
- b. purchase or authorize the purchase of quantity of the buses rejected of the same or similar description (when buses exactly complying with "particulars" are not in the opinion of the Purchaser readily available, which shall be final) without notice to the Contractor at his risk and cost and without affecting the Contractor's liability as regards the supply of any further installments due under the contract; or
- c. cancel the contract and purchase or authorize the purchase of the buses of same or similar description (when buses exactly complying with particulars are not in the opinion of the Purchaser readily available, which shall be final) at the risk and cost of the Contractor. In the event of action being taken under (b) above or under this sub-clause, the provisions of preceding sub-clause 9.2 above will apply as far as applicable.

11. FORCE MAJEURE

- 11.1. For purposes of this contract, Force Majeure means an event beyond the control of the parties to the contract and not involving either party's fault or negligence and not foreseeable.
- 11.2. If, at any time during the existence of the contract, either party is unable to perform in whole or in part any obligation under this contract because of an event rendering performance of obligations impossible which include acts of God, war, revolutions, hostility, civil commotions, strikes, floods, earthquake, epidemics, quarantine restrictions, freight embargoes or explosions, then the date of fulfillment of contract shall be postponed during the period when such circumstances are operative.
- 11.3. The party which is unable to perform its obligations under the present contract shall, within seven (07) days of occurrence of the Force Majeure event, inform the other party with suitable documentary evidence. Non-availability of any component etc or any price escalation or change in any duty, tax, levy, charge etc shall not be an excuse for the Contractor for not performing his obligations under this clause/ contract.
- 11.4. Any waiver/ extension of time in respect of the delivery of any installment or commissioning of buses shall not be deemed to be a waiver/ extension of time in respect of the remaining deliveries or commissioning of buses or completing balance portion of work for setting indigenous production facilities for the buses.
- 11.5. If such inability on account of force majeure to perform continues for a period of more than three (3) months, each party shall have the right to be released from further performance of the contract, in which case, neither party shall have the right to claim damages from the other. All prior performance shall be subject to contract terms.

- 11.6. Notwithstanding the provision of clauses 7, 8 and 9, the Contractor shall not be liable for forfeiture of his performance security, pre-estimated liquidated damages or termination if and to the extent that delay in performance or other failure to perform its obligations under the contract is the result of Force Majeure.

12. ACCEPTANCE OF BUSES RECEIVED AFTER THE EXPIRY OF DELIVERY PERIOD

- 12.1. The Contractor is required to complete the supplies within the stipulated delivery period. In case Contractor fails to complete the entire/ part quantity of supplies within the stipulated delivery period, the Purchaser, at its discretion, may grant extension in delivery period for unsupplied quantity. Such extension in delivery if granted shall be subject to following conditions:

- a. The Contractor shall pay and Purchaser will recover the pre-estimated liquidated damages from the Contractor as per clause 8 on the buses which the Contractor has failed to deliver within the period fixed for delivery.
- b. No increase in price on account of any statutory increase in or fresh imposition of GST & Freight Charges or on any account of any other tax or duty leviable in respect of the buses specified in the contract, which takes place after the date of delivery period stipulated in the said contract, shall be admissible on such of the said buses as are delivered after said date.
- c. Notwithstanding any stipulation in the contract for increase in price on any other ground, no such increase which takes place after the delivery date stipulated in the contract shall be admissible on such of the said buses as are delivered after the said date.
- d. The Purchaser shall be entitled to the benefit of any decrease in price on account of reduction in statutory levies, GST and duties or on account of any other ground which takes place during the currency of the contract and/ or after the expiry of the delivery date stipulated in the contract. The Contractor shall allow the said benefit in his bills and in the absence thereof shall certify that no decrease in price on account of any of these factors has taken place.
- e. **ADDITIONAL CONDITIONS IN CASE OF FOREIGN BIDDERS SUPPLYING BUSES MANUFACTURED OUTSIDE INDIA:**
 - (i) The Purchaser shall have the right to recover from the Contractor any extra expenditure which might have been incurred by the Purchaser on account of additional bank charges payable for extension/ amendment of the Letter of Credit, the increase in Custom Duty and Freight charges directly relating to the delay in shipping of the Buses.
 - (ii) Any additional expenditure incurred by the Purchaser on price, Custom Duty, Freight charges as also extra cost, which may arise on account of variation in exchange rate during the extended delivery schedule, shall be borne by the Contractor.

13. PROGRESS REPORTS

- 13.1. The Contractor shall, from time-to-time, render reports concerning the progress of the contract and/ or supply of the buses in the Proforma Annexure-9 prescribed in the RFP document.
- 13.2. The submission, receipt and acceptance of such reports shall not prejudice the rights of the Purchaser under the contract, nor shall operate as an estoppel against the Purchaser merely by reason of the fact that it has not taken notice of/ or subjected to test any information contained in such report.

14. INDEMNITY

- 14.1. The prices stated are to include all rights (if any) of patent, registered design or trade mark and the Contractor shall at all times indemnify the Purchaser against all claims which may be made in respect of the buses for infringement of any right protected by patent, registration of designs or trade mark; provided always that in the event of any claim in respect of alleged breach of a patent, registered design or trade mark being made against the Purchaser, the Purchaser shall notify the Contractor of the same and the Contractor, shall at his own expense and responsibility, either settle any such dispute or conduct any litigation that may arise therefrom.

15. SAFETY MEASURES

- 15.1. The Contractor should take all precautionary measures in order to ensure the protection of his own personnel moving about or working on the premises of the Purchaser i.e. Delhi Transport Corporation.
- 15.2. The Contractor should abide by and conform to all the rules and regulations of Purchaser in force from time to time and ensure that the same are followed by his representatives, agents, sub-Contractor or workmen working in the premises of Purchaser.
- 15.3. The Contractor should ensure that while working in the premises of Purchaser, unauthorized, careless or inadvertent operation of installed equipment/ buses which may result in accident to staff and/ or damage to equipment/ buses, does not occur.
- 15.4. The Contractor should indemnify and keep the Purchaser indemnified and harmless against all actions, suits, claims, demands, costs, charges or expenses arising in connection with any accident, death or injury, sustained by any person or persons within the premises of Purchaser and any loss or damage to property of Purchaser sustained due to the acts or omissions of the Contractor irrespective of whether such liability arises under the Workman's Compensation Act or the Fatal Accidents Act or any other statute in force from time to time.

16. OPTION CLAUSE

- 16.1. The Purchaser reserves the right to increase the number of Buses ordered by him by 25% (twenty five percent) of the initially contracted numbers of Buses, (i.e. the number of buses ordered in the LOA) at any time till the completion of delivery of the entire ordered number of Buses without any change in the Unit Price or other Terms & Conditions.

- 16.2. The increase of quantity shall be incorporated through an amendment. For the additional quantity, additional delivery period proportionate to the delivery period of the initially ordered quantity, excluding the time for submission of prototype, will be allowed. The Contractor will be allowed three months lead time for arranging raw material and other resources for the manufacturing of the additional quantity of buses. The Contractor will have to deposit performance security of additional amount separately within 30 days from the date of amendment of increased quantity in the same manner & method prescribed in clause 4 of GCC.

17. CORRUPT PRACTICES

- 17.1. The Bidder/ Contractor shall not offer or give or agree to give to any person in the employment of the Purchaser or working under the orders of the Purchaser any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or having done or forborne to do any act in relation to the obtaining or execution of the contract or any other contract with the Purchaser or for showing any favor or forbearing to show disfavor to any person in relation to the contract or any other contract with the Purchaser. Any breach of the aforesaid condition by the Bidder/ Contractor, or any one employed by him or acting on his behalf, under chapter IX of the Indian Penal Code, 1860 or the Prevention of Corruption Act, 1988 or any other act enacted for the prevention of corruption by public servants, shall entitle the Purchaser to cancel the contract and all or any other contracts with the Contractor and to recover from the Bidder/ Contractor the amount of any loss arising from such cancellation in accordance with the provisions of clause 9 as applicable.
- 17.2. Any dispute or difference in respect of either the interpretation, effect or application of the above sub-clause or of the amount recoverable there under by the Purchaser from the Bidder/ Contractor, shall be decided by the Purchaser, whose decision thereon shall be final and binding on the Bidder/ Contractor.
- 17.3. The Bidder is required to comply with terms of Integrity Pact as per format in Annexure-27

18. INSOLVENCY AND BREACH OF CONTRACT

- 18.1. The Purchaser may at any time, by notice in writing summarily determine the contract without compensation to the Bidder/ Contractor in any of the following events, that is to say:-
- a. if the Bidder/ Contractor being an individual or if 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 Bidder/ Contractor 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 Contractor commits any breach of the contract not herein specifically provided for. Provided always that such determination shall not prejudice any right of action or remedy which shall have accrued or shall accrue thereafter to the Purchaser and provided also the Contractor shall be liable to pay to the Purchaser any extra expenditure he is thereby put to and the Bidder/ Contractor shall, under no circumstances, be entitled to any gain on repurchase.

19. LAWS GOVERNING THE CONTRACT

- 19.1. This contract shall be governed and interpreted in accordance with the laws of India.
- 19.2. Irrespective of the place of delivery and the place of payment under the contract, the contract shall be deemed to have been made in Delhi (India) from where the 'Letter of Acceptance' of the bid has been issued and where the contract is to be performed by supply and commissioning of the buses.
- 19.3. JURISDICTION OF COURTS: The Courts of Delhi (India), the place from where the 'Letter of Acceptance' of the bid has been issued (Delhi) and where the contract is to be performed by supply and commissioning of the buses, alone shall have exclusive jurisdiction to decide any dispute arising out of or in respect of the contract.

20. SETTLEMENT OF DISPUTE AND ARBITRATION

20.1 Amicable Resolution

- (a) Save where expressly stated otherwise in this Contract, any dispute, difference or controversy of whatever nature howsoever arising under, out of or in relation to this Contract between the Parties and so notified in writing by either Party to the other (the "Dispute") in the first instance shall be attempted to be resolved amicably by the Parties and failing such resolution of the same, in accordance with the procedure set forth in sub-clause (b) below.
- (b) Either Party may require the Dispute to be referred to Managing Director, DTC for amicable settlement. Upon such reference, both the Parties and the Chairman-cum-Managing Director, DTC or his nominee (who can be an employee of DTC dealing with the Contract or otherwise) shall meet at the earliest mutual convenience and in any event within 15 (fifteen) days of such reference to discuss and attempt to amicably resolve the Dispute. If the Dispute is not amicably resolved within 15 (fifteen) days of such meeting, either Party may refer the Dispute to arbitration in accordance with the provisions given in clause-20.2 below.

20.2 ARBITRATION

(a) Arbitrators

Any Dispute which is not resolved amicably as provided in Clause 20.1(a) shall be finally settled by binding arbitration under the Arbitration and Conciliation Act, 1996. The arbitration shall be by a committee of 3 (three) arbitrators chosen from a panel of arbitrators on the list of arbitrators available with or furnished by DTC. 1 (One) arbitrator is to be chosen by each Party and the third, who shall be the Chairman to be appointed by

the 2 (two) arbitrators chosen by the Parties. If either Party fails to choose its arbitrator, the other Party shall take steps in accordance with Arbitration and Conciliation Act, 1996 and shall include modifications to or any re-enactment thereof as in force from time to time. The arbitrator shall issue a reasoned Award.

(b) Place of Arbitration

The place of arbitration shall be New Delhi, India.

(c) Language

The request for arbitration, the answer to the request, the terms of reference, any written submissions, any orders and rulings shall be in English and, if oral hearings take place, English shall be the language to be used in the hearings.

(d) Procedure

The procedure to be followed in the arbitration by the Arbitral Tribunal shall be in accordance with the Arbitration & Conciliation Act, 1996 and as may be decided by the Arbitral Tribunal.

(e) Enforcement of Award

Any decision or award resulting from arbitration shall be final and binding upon the Parties. The Parties hereto hereby waive, to the extent permitted by law, any rights to appeal or to review of such award by any Court or Tribunal. The Parties hereto agree that the arbitral award may be enforced against the Parties to the arbitration proceedings or their assets wherever they may be found and that a judgment upon the arbitral award may be entered in any Court having jurisdiction thereof.

(f) Fees and Expenses

The fees and expenses of the arbitrators and all other expenses of the arbitration shall be initially borne and paid by respective Parties equally subject to determination by the arbitrators. The arbitrators may provide in the arbitral award for the reimbursement to the prevailing party of its costs and expenses in bringing or defending the arbitration claim, including legal fees and expenses incurred by the said Party.

(g) Performance during Arbitration

Pending the submission of and/or decision on a dispute, difference or claim or until the arbitral award is published; the Parties shall continue to perform all of their obligations under this Contract without prejudice to a final adjustment in accordance with such award

21. SECRECY

- 21.1. Any information obtained in the course of the execution of the contract by the Contractor, his servants or agents or any person so employed, as to any matter whatsoever, which would or might be directly or indirectly, of use to any enemy of India, must be treated secret and shall not at any time be communicated to any person.

- 21.2. Any breach of the aforesaid conditions shall entitle the Purchaser to cancel the contract and to purchase or authorize the purchase of the buses at the risk and cost of the Contractor in accordance with Clause-9 thereof as applicable.

22. PROGRAMME OF DESIGN, MANUFACTURE, SUPPLY, TESTING AND COMMISSIONING OF BUSES

- 22.1. The Contractor shall whenever required by the Purchaser or Purchaser's representative, also provide in writing a general description of the arrangements and methods which the Contractor proposes to adopt for the completion of various activities. If at any time it should appear to the Purchaser that the actual progress of work does not conform to the programme of manufacture, the Contractor shall produce at the request of the Purchaser revised programme showing the modifications to the approved programme necessary to ensure completion of the work within the time for completion stipulated in the contract. The submission to and approval by the Purchaser or Purchaser's representative of such programme or the furnishing of such particulars, shall not relieve the Contractor of any of his duties or responsibilities or obligations under the contract. The Purchaser shall have full power and authority during progress of work to issue such instructions; as may be necessary for the proper and adequate execution of the contract and remedying of any defects therein. The Contractor shall carry out and be bound by the same.

23. CONTRACTOR'S RESPONSIBILITY

- 23.1. The Contractor shall be entirely responsible for the execution of the contract strictly in accordance with the Technical Specification, General Conditions of Contract, Instruction to the Bidders and other conditions of contract.
- 23.2. Any approval that may be given by the Purchaser or Inspecting Officer or any agency on behalf of the Purchaser (Delhi Transport Corporation) shall only be deemed to be the approval in principle. Notwithstanding such approval, the Contractor shall be fully and totally responsible for the satisfactory performance and compliance with the contract specifications and conditions.
- 23.3. The Contractor shall be responsible for taking all the necessary approvals and permissions from the Government of India and from the Government of National Capital Territory of Delhi as the case may be.
- 23.4. The Contractor shall ensure delivery of buses subject to 'No CNG Leakage' in the Bus System in addition to meeting other requirements as specified in the contract.

24. WARRANTY

- 24.1. The Contractor will be responsible for any defect or failure of Buses or equipment provided in these buses due to defective design, material or workmanship, for a period of three years or operation of buses up to 2,10,000 Kms., individually for each bus whichever is earlier from the date of placement in service after registration from Transport Department, Delhi ("**Warranty Period**"). The rectification/ replacement of failed components/ equipment will have to be undertaken by the Contractor free of charge at Purchaser's workshop/ depot. The Contractor shall collect the failed & defective components/ equipment from

Purchaser site and send them to the works of the suppliers at his cost and responsibility. This will be arranged directly by the Contractor or his representative. Further, should any design modification be required to be made in any assemblies/ sub-assemblies such as CNG engine, Automatic transmission, high pressure regulator, catalytic converter, self-starter & alternator, air suspension on rear wheels, front axle, rear axle, steering, electronic destination boards of the buses, pneumatically operated doors, ITS enabled bus with inbuilt GPS System etc. the period of 2,10,000 Kms. or three years of operation whichever is earlier, would commence from the date when the design modification in the aforesaid assemblies/ sub-assemblies/ equipment etc. is re-commissioned in service.

- 24.2. The Contractor will be required to station required number of competent engineers/ supervisors along with necessary spare parts during testing & commissioning of the Buses at his cost. However, at least one competent engineer will necessarily be stationed during the entire warranty period for the evaluation of the performance of the Buses & keeping liaison with the Purchaser. Necessary technical personnel will also be deputed by the Contractor at his cost for investigating defects and failures and carrying out modifications as and when required during the warranty period.

25. APPROVAL OF DESIGN

- 25.1. The design shall be developed based on the requirements given in the Technical Specification & sound engineering practices. However, the Contractor shall be required to obtain Type Approval for the buses and Conformity of Production (COP) as per prevailing CMVR and Bus Code from the authorized agencies.
- 25.2. The design shall be developed in S.I. Units (System International).
- 25.3. Approval of the design means the approval of the general design features. Notwithstanding the approval, the Contractor will be wholly and completely responsible for the satisfactory manufacture, supply & performance of these Buses.
- 25.4. The Purchaser shall have the right to accept the Prototype meeting the RFP Document requirements irrespective of the minor variations in the specifications quoted in the bid of the manufacturers subject to the quality, performance, etc meeting RFP requirements and no financial benefit accruing to the manufacturers.

26. QUALITY ASSURANCE PLAN / INSPECTION PLAN

- 26.1. The Contractor shall formulate a Quality Assurance Plan (QAP) to ensure quality product. QAP shall cover quality assurance procedures to be followed during all stages of design, planning, procurement, manufacture, testing and commissioning.
- 26.2. The Purchaser shall carry out inspection of the buses at various stages as per details given in clause 59 of the Technical Specifications. The Purchaser shall also carry out joint Pre-Dispatch Inspection (PDI) of fully built buses at the Contractor's manufacturing premises along with the representative of manufacturer before these are dispatched to the Purchaser and issue Pre-Dispatch Inspection Certificate within two days of satisfactory inspection. The Contractor shall dispatch the buses only after attending/ rectifying the defects/ deficiencies observed during Pre-Dispatch Inspection.

27. INSPECTION OF BUSES AT DESTINATION STATION

- 27.1. On receipt of the Buses at the place of delivery, these shall be jointly inspected by the Contractor and the consignee for completeness and satisfactory condition of all equipment/ components. Damages, defects and deficiencies, if any, shall be noted and the Contractor shall initiate immediate action for making good the same under advice to the Purchaser. Any delay in testing and commissioning of these buses due to any such reason will be to the Contractor's account and will be dealt with by the Purchaser as per Conditions of the Contract.
- 27.2. Buses shall be subjected to detailed tests and field trials as prescribed in the Technical Specification of the RFP document. Any modifications found necessary as a result of these tests or further service trials shall be incorporated by the Contractor at his own cost in these buses in a manner approved by the Purchaser. All key and manufacturing drawings incorporating the modifications shall be submitted to the Purchaser.

28. REMOVAL OF REJECTED BUSES

- 28.1. On rejection of any bus, subjected to inspection or assessment of performance during testing and commissioning at a place other than the premises of the Contractor, such buses shall be removed by the Contractor at his own cost subject as hereinafter stipulated, within 21 days of the date of intimation of such rejection. If the concerned communication is addressed and posted to the Contractor at the address mentioned in the contract, it will be deemed to have been served on him at the time when such communication would in the course of ordinary post reach the Contractor, provided that where the price or part thereof has been paid, the consignee is entitled without prejudice to his other rights to retain the rejected buses till the price paid for such buses is refunded by the Contractor save that such retention shall not in any circumstances be deemed to be acceptance of the buses or waiver of rejection thereof.
- 28.2. All rejected buses shall in any event and circumstances remain and always be at the risk of the Contractor immediately on such rejection. If such buses are not removed by the Contractor within the period aforementioned, the Inspecting Officer/ Purchaser may remove the rejected buses and either return the same to the Contractor at the risk and cost of the Contractor by such mode of transport as the Purchaser or Inspecting Officer may decide, or dispose of such buses at the Contractor's risk and on his account and retain such portion of the proceeds, if any, from such disposal as may be necessary to recover any expense incurred in connection with such disposals and any price refundable by the Contractor as a consequence of such rejection. The Purchaser shall, in addition, be entitled to recover from the Contractor handling and storage charges @ 0.5% of the price of buses per week or part thereof on the rejected buses after the expiry of the time-limit mentioned above.

29. PAYMENT TERMS

- 29.1. **PAYMENT OF THE BUSES MANUFACTURED IN INDIA:** It is applicable for Indigenous Contractor and foreign Contractor supplying buses manufactured in India either on their own or in collaboration with Indian firm. Payment shall be made subject to recoveries, if any, by way of liquidated damages or any other charges, deductions or adjustments as per terms & conditions of contract in the following manner:

- (a) Payment for 80% of the total price of each consignment of the Buses dispatched will be made to the Contractor on receipt of the buses by the consignee within 30 days of receipt of bill along with the documents as specified below:
- (i) Four Copies of Supplier's invoice showing contract number, goods description, quantity, unit price and total amount;
 - (ii) Provisional Receipt Certificate (PRC) in original issued by Consignee;
 - (iii) Two Copies of packing list identifying contents of each package;
 - (iv) Insurance certificate;
 - (v) Manufacturer's/ Contractor's Warranty certificate;
 - (vi) Inspection certificate issued by the nominated inspection agency.
 - (vii) Certificate of Origin.
 - (viii) Original copy of Consignee's receipt for Maintenance/ Service Manuals (5 sets per 100 buses or part thereof).
 - (ix) Sale certificate in Form 21
 - (x) Valid Temporary registration certificate,
 - (xi) Road-worthiness certificate in Form 22 from the manufacturers, [Form 22-A Part-2 of the Manufacturer]
 - (xii) CNG Cylinders no. & testing certificate
 - (xiii) Delivery Challan
- (b) Balance 20% payment would be made within 45 days against 'Final Acceptance Certificate' (FAC) of the buses to be issued by the consignee, subject to recoveries, if any either on account of liquidated damages, non-rectification of defects/ deficiencies, failed Lab Test Reports, Loose Items not supplied by the Contractor or any other charges or otherwise as per terms & conditions of contract.

29.2. PAYMENT OF THE BUSES MANUFACTURED OUTSIDE INDIA: It is applicable for foreign Contractor supplying buses manufactured at a location outside India. Payment shall be made in the currency specified in the Contract to the foreign Contractor subject to recoveries, if any, by way of liquidated damages or any other charges as per terms & conditions of contract in the following manner:

29.2.1 FOB CONTRACTS:

- (a) **ON SHIPMENT:** 80% of the FOB Contract Price of the Buses shipped shall be paid through irrevocable, non-transferable Letter of Credit (LC) opened in favour of the Contractor in a bank in his country and upon submission of documents specified in hereunder:
- (i) Supplier's Certificate that the amounts shown in the invoice are correct in terms of the contract and that all terms and conditions of the contract have been complied with;
 - (ii) Four copies of Supplier's invoice showing Contract number, goods description, quantity, unit price and total amount;
 - (iii) Original and four copies of the negotiable clean, on-board Bill of Lading and four copies of non-negotiable Bill of Lading;
 - (iv) Four Copies of packing list identifying contents of each package;
 - (v) Manufacturer's/ Contractor's Warranty certificate;

- (vi) Inspection Certificate issued by the nominated inspection agency, if any,
- (vii) Certificate of Origin.
- (viii) This payment will be subject to furnishing of a Bank Guarantee from any Scheduled Bank or confirmed by any Indian Nationalized Bank and encashable at Delhi/ New Delhi for an equivalent amount issued in the prescribed format of the RFP document, to safeguard the Purchaser against any loss. The Bank Guarantee will be operative from the date of dispatch to 60 days after final acceptance of buses by the Purchaser.
- (ix) Original copy of Consignee's receipt for detailed Maintenance & Service Manuals (5 sets per 100 buses or part thereof).
- (x) Sale certificate in Form 21
- (xi) Valid Temporary registration certificate,
- (xii) Road-worthiness certificate in Form 22 from the manufacturers, [Form 22-A Part-2 of the Manufacturer]
- (xiii) CNG Cylinders no. & testing certificate.
- (xiv) Delivery Challan

The above documents (i to xiv) shall also be received by the Purchaser at least one week before arrival of Buses at the port or place of arrival and if not received, the Contractor will be responsible for any consequent expenses.

- (b) Balance 20% payment would be made within 45 days against 'Final Acceptance Certificate' of the buses to be issued by the consignee, subject to recoveries, if any, either on account of non-rectification of defects/ deficiencies by the Contractor or any other charges or otherwise as per terms & conditions of contract.

29.2.2 DDP CONTRACTS:

- (a) On shipment: 80% of the CIF Price of the Buses shipped shall be paid through irrevocable, non-transferable 'Letter of Credit' opened in favour of the Contractor in a bank in his country and upon submission of documents specified in hereunder:
 - (i) Supplier's Certificate that the amounts shown in the invoice are correct in terms of the Contract and that all terms and conditions of the contract have been complied with;
 - (ii) Four copies of Supplier's invoice showing Contract number, goods description, quantity, unit price and total amount;
 - (iii) Original and four copies of the negotiable clean, on-board Bill of Lading and four copies of non-negotiable Bill of Lading;
 - (iv) Four Copies of packing list identifying contents of each package;
 - (v) Insurance Certificate;
 - (vi) Manufacturer's/ Contractor's Warranty Certificate;
 - (vii) Inspection Certificate issued by the nominated Inspection Agency;
 - (viii) Certificate of Origin;
 - (ix) This payment will be subject to furnishing of a Bank Guarantee from any Scheduled Bank or confirmed by any Indian Nationalized Bank and encashable at Delhi/ New Delhi for an equivalent amount issued in the prescribed format of the RFP document, to safeguard the Purchaser against any loss. The Bank Guarantee will be operative from the date of dispatch to the date of handing over these Buses

- to the Purchaser after commissioning;
 - (x) Original Copy of Consignee's receipt for detailed Maintenance & Service Manuals (5 sets per 100 buses or part thereof).
 - (xi) Sale certificate in Form 21
 - (xii) Valid Temporary registration certificate,
 - (xiii) Road-worthiness certificate in Form 22 from the manufacturers, [Form 22-A Part-2 of the Manufacturer]
 - (xiv) CNG Cylinders no. & testing certificate,
 - (xv) Delivery Challan
- (b) Balance 20% payment would be made within 45 days against 'Final Acceptance Certificate' of the buses to be issued by the consignee, subject to recoveries, if any, either on account of non-rectification of defects/ deficiencies by the Contractor or any other charges or otherwise as per terms & conditions of contract.
- (c) Payment of Port clearance charges, Custom clearance charges, Custom Duty & Freight charges to delivery at Consignee's end, shall be made as under:
- i) 80% of above charges shall be paid in Indian Rupees on receipt of Buses at Consignee's place at his end and submission of following documents:
 - I. Copy of original receipt of payment of Custom Duties made to Custom Authority at Indian Port,
 - II. Provisional Receipt Certificate in Original issued by Consignee,
 - III. Submission of Bank Guarantee similar to Clause 29.2.2(a)(ix) for the equivalent amount.
 - ii) Balance 20% payment would be made within 45 days against 'Final Acceptance Certificate' of the buses to be issued by the consignee, subject to recoveries, if any, either on account of non-rectification of defects/ deficiencies not attended by the Contractor or any other charges or otherwise as per terms & conditions of contract.
- 29.3. The Contractor shall not claim any interest on any overdue/ or unadjudicated payments under the contract.

30. PAYMENT PROCEDURE

- 30.1. Payment for the buses manufactured in India will be made in Indian Rupees against bills preferred by the Contractor. Any payment in the foreign exchange that the Contractor may have to make for imported components forming part of the bid will be arranged by him directly.
- 30.2. Payment for the buses, manufactured at a location outside India, will be arranged through normal banking channels except where payment through Letter of Credit (LC) has been stipulated in the contract. In the case of payment through the Letter of Credit, all charges levied by the foreign bank(s) shall be borne by the Contractor.

30.3. Where there is a statutory requirement for tax deduction at source, such deduction towards Income Tax and other taxes as applicable will be made from the bills payable to the Contractor at rates as notified from time to time.

30.4. The LC shall be opened as irrevocable and non-transferable. However, if the Contractor requests specifically to open confirmed LC, the charges of the same would be borne by the Contractor. If LC is required to be extended and or/ amended for reasons not attributable to the Purchaser, the charges thereof shall be borne by the Contractor.

31. MODIFICATION OF DRAWINGS

The Contractor, after inspection, testing and commissioning of the Buses shall correct, where necessary, his drawings and schedule of materials to conform in every respect with the final approved design and shall submit to the Purchaser three copies of the corrected drawings and 'Schedule of Materials' showing against each item the material and quantity used per bus and the revised weight.

32. SUBMISSION OF DRAWINGS

The Bidder shall be required to provide two sets of general drawings comprising of elevations – sides, front & rear ends along with main dimensions, isometric views, exterior & interior details, seating layouts, specified colour scheme etc. along with their Bid. Three complete sets of Pen drive loaded with the fabrication drawings along with *three* sets of hard copies and other documents as specified in Technical Specifications (Section VIII) shall be supplied by the Contractor to the Purchaser in advance of dispatch of the Prototype of Fully Built AC CNG Propelled Standard Size Bus of Low Floor Height from the Manufacturer's works.

33. SERVICE ENGINEERING AND COMMITMENT FOR AMC OF BUSES

33.1. The Contractor shall furnish information on the maintenance practices to be followed for these Buses manufactured to conform to Technical Specification or similar to those offered against the tender, clearly spelling out the following:

- (i) Maintenance standards including clearances and tolerances at various locations and permissible limits of wear for good riding comfort and operation.
- (ii) Inspection procedure and periodicity of various inspection schedules in detail including the gauging practices.
- (iii) Maintenance procedures in detail including preventive maintenance schedules.
- (iv) Facilities required for maintenance, giving detailed information on the following:
 - a. Plant & Machinery required for maintenance.
 - b. Gauges, Jigs and Fixtures and Tools required during maintenance
 - c. Detail list for Fast Moving/consuming spare parts required per lot of 100 buses

34. SERVICE MANUALS AND SPARE PARTS CATALOGUES

- 34.1. Detailed Maintenance & Service Manuals, Spare Parts Catalogues, Price List etc. shall be specially prepared for Buses and at least 5 sets of each for every 100 buses or part thereof of the same shall be supplied without any extra charge, along with the first supply. Detailed spare parts catalogue with illustrated parts listing all components manufactured or purchased (5 copies for every 100 buses or part thereof) shall be supplied without any extra charge. All manuals shall be sent to the Purchaser in advance of dispatch of the buses from the manufacturer's works.
- 34.2. The Contractor shall also furnish break-up of the price of the bus in respect of chassis portion, its major assemblies/ sub-assemblies/ components – tyres, batteries, CNG system - cylinders, walls, pipelines, pressure regulators, fire detection system, gas leakage detector, other fitments etc and bus body portion – structure, paneling, seats, glasses/ window assemblies, lighting/ multiplex wiring/ electrical assemblies/ sub-assemblies, LED Boards, ITS, electro pneumatically operated doors, painting, other fitments etc. The break up shall be furnished along with the prototype, to be submitted for approval of the Purchaser within 03 months of dispatch of Letter of Acceptance. The Contractor shall give an undertaking along with the price break up that the rates of the parts quoted by them are reasonable and do not exceed than the rates at which these parts are available on DGS&D/ ASRTU Rate Contract (RC), if any. In case parts are not available on Rate Contract, the Contractor shall give an undertaking that the rates they have quoted are not more than the rates at which these parts are normally available in the market. The rates of the spare parts shall be valid for three years from the date of submission of break up subject to price variation limited to the relevant price index of the Government.

35. TRAINING

- 35.1. For each lot of 100 buses or part thereof, following training shall be provided by the Contractor:
- 35.2. The Contractor shall arrange orientation training at New Delhi or DTC Depot for two days for 275 drivers in batches of 25 (total 550-man days). Similarly, orientation training shall be arranged at New Delhi / their Works / Plant / DTC Depot for 3 days for 250 technicians / supervisors / engineers / officers in batches of 25 (Total 750 man-days). Bus / fuel / available facilities with the Purchaser in case of training in DTC depots will be provided by the Purchaser and course materials will be provided by Contractor on free of cost basis. This training will be provided free of cost, as and when required by the Purchaser during the currency of Contract.
- 35.3. Contractor to ensure that the proper training given to bus crew – Conductor & Driver and technical staff –Engineers/ Supervisors/ Technicians by providing proper training facility.
- 35.4. Training can be provided at purchaser depots with 15 days prior intimation to the contractor.
- 35.5. Contractor shall submit a signed copy of attendance sheet to the purchaser after training.

36. ENVIRONMENTAL CONDITIONS

The environmental conditions specified in Technical Specification of the RFP Document are for the general guidance of the Manufacturer/ Contractor. Further specific information, if any required, shall be ascertained from the Purchaser.

37. TECHNICAL REQUIREMENTS

The Manufacturer/ Contractor is expected to provide all the items required for proper functioning of the Buses in accordance with the best current international practices whether included in these specifications or otherwise. The buses shall be highly energy efficient and shall not contribute to pollution levels.

38. USE OF PURCHASER PLANT AND EQUIPMENT

In case the Contractor considers use of Purchaser plant and equipment during testing and commissioning or for rectification of minor defects, their use, responsibility for wear and tear and damages, the rental to be paid for by the Contractor shall be laid down by the Purchaser at that time.

39. DUTIES & TAXES

- 39.1. The Bidders are required to indicate the break-up of duties and taxes payable by them in their Price Schedule. For the supplies made as per the original delivery schedule, the statutory levies as applicable on the date of supply shall be reimbursed to the Contractor at actual.
- 39.2. For the supplies made beyond the original delivery schedule, the reimbursement of statutory levies shall be governed by the provisions of the clause 12.1. In no case, Contractor shall be entitled to any increase in duties and levies imposed after expiry of original delivery period.

40. USE OF PROVEN INDIGENOUS EQUIPMENT

Several equipment for use on Buses are fully developed and proven in service in India. The Contractor shall make effort to utilize such equipment on these buses to the maximum extent possible.

41. PROVISIONAL RECEIPT CERTIFICATE

The Purchaser shall issue Provisional Receipt Certificate within three working days (excluding the Gazetted holiday) of receipt of bus(es) in good conditions as per the Contract terms and conditions along with valid required documents at Central Workshop-I of Delhi Transport Corporation, Banda Bahadur Marg, Delhi - 110 009 or any other unit of the Corporation, at the sole discretion of the Purchaser.

42. FINAL ACCEPTANCE CERTIFICATE

The Contractor shall inform about the rectification/ removal of the observed defects/ deficiencies during the Joint Final Inspection within 07 days from the date of inspection.

Thereafter, the Final Acceptance Certificate shall be issued by the Purchaser within 15 days after final inspection and satisfactory commissioning of the buses at Central Workshop-I of Delhi Transport Corporation, Banda Bahadur Marg, Delhi - 110 009 or any other unit mentioned in the Contract.

43. AMENDMENTS

The Purchaser, without prejudice, can make amendments, and/ or modifications in the Contract in writing.

44. PURCHASER ADDRESS

44.1. The list of addresses to which correspondence/ notices and documents relating to the Contract should be sent is as under:

(a) For all Policy, Contractual and Commercial matters:

i) Prior to the award of the Contract:

Chairman-cum-Managing Director, Delhi Transport Corporation, IP Estate, New Delhi -110 002. (Fax No. 011-23370877), Email address: cmd@dtc.nic.in.

ii) After the award of the Contract:

Chief General Manager, DTC Hauz Khas Bus Terminal, Delhi Transport Corporation, New Delhi 110 016, INDIA, Email address: dcgmsbu@dtc.nic.in

(b) For matters relating to design and drawings:

Chief General Manager, DTC Hauz Khas Bus Terminal, Delhi Transport Corporation, New Delhi 110 016, INDIA, Email address: dcgmsbu@dtc.nic.in

(c) For matters relating to progress of testing and commissioning, measurements and billing of these Buses:

Dy. CGM (SBU), DTC Hauz Khas Bus Terminal, Delhi Transport Corporation, New Delhi 110 016, INDIA, Email address: dcgmsbu@dtc.nic.in

SECTION VII: SCHEDULE OF REQUIREMENTS (SOR)

SECTION VII: SCHEDULE OF REQUIREMENTS (SOR)

BID No.CGM/SBU/924/2019/AC to be opened on <Due Date> at 15.30 hours (IST)

Item No.	Description of Work	Warranty Period	Tendered Quantity (Nos.)	Delivery Period	Bid Security
1	Design, Manufacture, Supply, Testing, & Commissioning of FULLY BUILT AC CNG PROPELLED LOW FLOOR BUSES conforming to BS-IV (Euro-IV) Norms or latest as per Specification given in RFP Document.	Warranty Period of 3 (three) years or 2,10,000 kms. whichever is earlier	1000	08+20 Weeks	Indian Rupees (INR) 180 Million

NOTES:

1. The Bid shall be uploaded and submitted in Two Bids System [Techno-Commercial Bid (Bid 1) and Price Bid separately] on the e-procurement portal of Government of NCT of Delhi (<https://govtprocurement.delhi.gov.in>) up to the Time and Date mentioned in Bid Invitation Notice.
2. ATTENTION OF THE BIDDERS IS INVITED TO THE "CLAUSE-17 OF "INSTRUCTIONS TO BIDDERS" REGARDING EARNEST MONEY DEPOSIT/ BID SECURITY. ANY BID NOT ACCOMPANIED WITH EARNEST MONEY DEPOSIT IN ONE OF THE APPROVED MODES SHALL BE SUMMARILY REJECTED.
3. Bidders shall quote the Price as per the format given at Annexure A1/ A2 of Section-X for FULLY BUILT AC CNG PROPELLED LOW FLOOR BUSES, of RFP Document and give the detailed break-up of the Quoted Bus Price.
4. The Bidders shall quote on the basis of "Instructions to Bidders", "General Conditions of Contract" and "Schedule of Requirements" given in the RFP document. The no deviation statement in the Commercial Terms is required to be submitted as per Annexure-1
5. The Bidders shall quote as per the Technical Specification complete in all respects. The no deviation statement in the Technical Specifications is required to be submitted as per Annexure-2
6. In case, the last Date of Bid Submission/ Opening falls on a Gazetted Holiday or the said date is subsequently declared a holiday after the Date of Publication of RFP/ Tender Document, the last Date for Submission/ Opening of the Bids shall be the next working day at the appointed Time.
7. Bids from traders, agents, brokers and middlemen will not be accepted.

8. BIDS FROM AGENTS, BROKERS AND MIDDLEMEN SHALL BE SUMMARILY REJECTED. However, Bidders who download the RFP Document from DTC website and submit the cost of RFP Document along with the Bid, their Bids will be considered.
9. FOR THE BIDDERS' GUIDANCE IN SUBMITTING COMPLETE BID, A CHECK LIST [ANNEXURE 19] HAS BEEN ENCLOSED WITH RFP DOCUMENT, WHICH MUST BE FILLED IN AND FURNISHED WITH THE BID.
10. BIDS SENT THROUGH FAX AND/ OR OTHERWISE INCOMPLETE BIDS SHALL BE SUMMARILY IGNORED.
11. The Purchaser reserves the right to increase the number of Buses ordered by him by 25% (twenty five percent) of the initially contracted numbers of Buses i.e. the number of buses ordered in the LOA at any time till the completion of delivery of the entire ordered number of Buses without any change in the Unit Price or other Terms & Conditions as stipulated in Clause-16 of GCC.
12. The Bidders shall be required to certify/ give an undertaking to the effect that the rates quoted are minimum/ reasonable & they have not quoted/ charged lower rates from any other Government Departments/ State Transport Undertakings of India for FULLY BUILT AC CNG PROPELLED LOW FLOOR BUSES conforming to the same specifications. The undertaking be certified & duly stamped by their Chartered Accountants.

**SECTION VIII:
TECHNICAL SPECIFICATIONS FOR FULLY BUILT AC CNG
PROPELLED LOW FLOOR BUSES**

SECTION VIII: TECHNICAL SPECIFICATIONS FOR FULLY BUILT AC CNG PROPELLED LOW FLOOR BUSES

1. SCOPE

1.1. The specification covers design, manufacture, supply, testing and commissioning of Fully Built AC Compressed Natural Gas (CNG) Propelled Bus of Low Floor Height for operation on Delhi roads. The bus design shall be energy efficient, environmentally friendly, safe and secured for transportation of passengers besides the following main attributes amongst others:

- i) Passenger comfort
- ii) Ergonomically designed driver's work area
- iii) Ease of repair and maintenance
- iv) Aesthetically designed interiors and exteriors
- v) Ease of boarding and alighting for all passengers
- vi) Ease of accessibility to persons with disabilities
- vii) Safety, reliability & durability
- viii) Fuel Efficient

1.1.1 The vehicle should have built in features/ technology improvements to ensure fuel economy – better mixture formation and control, fuel injection system:

- i) Fuel economy – higher conversion efficiencies and life of catalytic converter, close loop system and sensors.
- ii) Safety – reduce gas leakage –number of joints/ components in gas flow system and minimise current leakage.

1.2. The Bidder shall comply with all applicable Central, State and local laws (including Acts, Rules & Regulations). These shall include, but not be limited to, the Disability Act 1995 as well as state and local accessibility, safety and security requirements.

1.3. The word “Bus” wherever it has been used in the specification (Section VIII) means the “Compressed Natural Gas (CNG) Bus”. The bus shall meet all applicable Central Motor Vehicles Rules (CMVR) of India, AIS:052: ‘Code of Practice for Bus Body Design and Approval’ & amended upto date, statutory Norms for Safety & Emission and other norms applicable as on the date of manufacturing of bus.

1.4. Where there is conflict between the requirement as per any applicable law in force and the requirement emanating from these specifications whichever of these two is of superior/ higher standard shall prevail. Also, any specifications superior to the ones set out as Minimum Technical Specifications shall meet requirements of the contract.

1.5. Source of Data:

BIS Standards are available from Bureau of Indian Standard, Manak Bhawan, 9-Bahadur Shah Zafar Marg, New Delhi-110 002. Web site: <http://www.bis.org.in>. Similarly, AIS Standards are available from Automotive Research Association of India, Post Box No.832, Pune-411 004. Web site: <http://www.araiindia.com>. ASRTU Specifications are available

from Association of State Road Transport Undertakings, ASRTU Bhavan, Plot No 4A, PSP Block, Pocket-14, Sector-8, DWARKA, New Delhi-110 075. Web site: <http://www.asrtu.org>, E-mail address: asrtu@de12.vsnl.net.in

- 1.6. The Bidder shall furnish the technical details for assemblies/ sub-assemblies/ systems/ sub-systems/ components/ equipment as per the Technical Specification of this Section & the Proformas prescribed in the Tender Document as Annexure for life of the main bus aggregates [Annexure-12], Production Capability and Quality Control information for Techno-Commercial Evaluation [Proforma-‘A’ of Section IX], Technical Specifications of the offered bus for Evaluation of Techno-Commercial Bid [Proforma-‘B’] of Section-IX. The inspection shall be carried out as per the Inspection Plan [Annexure 11] & the Inspection Proformas enclosed as Annexure from ‘14’ to ‘18’ in the RFP document.

2. GENERAL DESIGN FEATURES

- 2.1. The full forward control CNG city bus shall have right hand drive design and be fitted with engine at the rear of the bus. The bus shall be designed and manufactured in accordance with the specifications & AIS-052: Code of Practice for Bus Body Design & Approval [Bus Code] amended up to date and AIS-153. The bus shall be designed to carry commuters including in the city area with ease of boarding and alighting especially for ladies, children & senior citizens and Persons with Disabilities (PWDs). The bus design shall be suitable for daily operation of 16 to 20 hours in city service with peak loading of over 100 passengers [@68 Kgs + 7 Kgs=75 Kgs each], average traveling speed of about 20 Kms per hour with starts/stops after every 200 to 300 m. To take care of the peak over load of about 20% the bus has to have buffer Horse Power to pull this load comfortably over a gradient of 17%, for which the Tyre rating should be such that it meets the requirement of peak hour loading.
- 2.2. The bus design shall be eco-friendly, energy efficient, safe, and comfortable with exhaust emissions maintained at specified levels [Bharat Stage IV or Euro-IV subject to meeting additional requirement, if any of any further standards as imposed by law & further improved standard as applicable on the date of registration]. Bus and its complete aggregates shall comply with the rules and regulation with respect to safety and emission notified and mandated time to time by the government and applicable at the time of the delivery and the registration of the buses. To ensure compliance, type approval certificate from the approved test agency under CMVR will be necessary for the complete bus for the applicable rules, regulation and specifications laid herein.
- 2.3. **Ambient Conditions:** The bus must be having proven design suitably modified to the climatic & operational conditions, infrastructure and road conditions in Delhi. Typical operating conditions could be temperatures of approximately 0° to 50°C, humidity level from 5% to 100%, and altitude up to 300 m. The bus manufacturer is strongly advised to ensure that buses are able to meet the severe temperature, water, humidity, height from mean sea level, rain fall conditions of Delhi during operation.
- 2.4. The bus design should be such as to meet all statutory requirements applicable for the city of Delhi in all respects. Further, the bus structure should meet the requirements of structural strength, stability, deflection, vibration, etc. amongst others for at least the following main loads:

- Static loads
 - Dynamic loads
 - Single wheel bump loads
 - Double wheel bump loads
 - Braking and acceleration loads
 - Speed Breakers, road bumps & pits, induced loads
- 2.5. The bus design and the buses shall meet all the statutory requirements besides the one prescribed herein and type approval certificate of compliance from the approved test agency, for the complete bus as per specifications laid herein, Bus Code and CMVR, will have to be produced. The Bus Code and type approval certification as per CMVR are to be furnished before the Proto-type bus inspection. The bus shall be designed with respect to its body and different aggregates/ systems/ sub systems to operate in city service for 12 years or 10,00,000 km whichever is earlier.
- 2.6. The contractor shall submit the structural design along with complete sectional drawings with dimensions and other technical specifications for inspection to DTC, along with FEA report from approved test agency as per Para 2.4 & 2.5 for approval of built up structure before building the prototype bus. They will also furnish complete bus design and other technical specifications as required at the time of submitting the bus prototype for inspection cum approval. The bus design will meet all statutory requirements besides the one prescribed herein/CMVR from the approved test agency and type approval certificate of compliance for the complete bus will have to be produced at the time of submitting the prototype. The bus shall be designed with respect to its body and different aggregates/systems /sub systems to operate in city service for at least 12 years or 10,00,000 km whichever is earlier.
- 2.7. Detailed drawings of bus structure along with complete dimensions, its components, seats, interior/ exterior fittings, electrical systems, wiring harness and other accessories along with complete details of materials used, their specifications, manufacturing tolerances etc. shall be provided to the Purchaser by the Contractor.
- 2.8. General appearance, seating layout and structural details of roof, floor, sides, front & rear show and driver's cab shall be provided by the Bidder along with their bids.
- 2.9. Main dimension of bus i.e. overall length, overall width, overall height, saloon height, pillar to pillar distance, seat pitch, number of seats (excluding seat for the driver) etc. shall be provided by the Bidder along with their bids.
- 2.10. The material used in the construction of buses shall be as per Bureau of Indian Standards (BIS)/ Automotive Industry Standards (AIS) specifications. In absence of above specifications, Association of State Road Transport Undertakings (ASRTU) specifications could be followed. Wherever Indian standards are not available, internationally acceptable standards may be referred/ followed. Specifications standards wherever indicated in the Technical Specification shall be conforming to the Specification Standards as amended up to date/ or latest. Wherever the specifications of any item have not been notified as International/ National Standard etc. the Bidder shall provide the actual specifications of that item along with the drawings of the items indicating all relevant details.

- 2.11. Suitable traps/openings with appropriate sealing shall be provided for repair and maintenance of various aggregate/ systems/ sub systems of the bus.
- 2.12. Any other provisions/ fitments required for safe and efficient operation and/ or for fulfilling statutory requirements shall be provided in the offered bus.
- 2.13. The Bidder shall ensure that the components/sub-assemblies as are fitted in each bus comply with specifications as prescribed herein and duly approved by test agency and a certificate to that extent will be furnished by the bidder.
- 2.14. **FIRE SAFETY:** The bus shall be designed and manufactured with all applicable fire safety regulations under CMVR/ Bus Code for safety of CNG buses including piping location and layout, location of rubber hose, location of exhaust, sealing from CNG gas entering passenger compartment in case of leakage, catalytic converter location, prescribed upholstery material, fire retardant cable, connectors etc. These provisions shall also include the use of fire-retardant material, CNG leakage detection system, fire detection system, fire mitigation/suppression system, escape of gases in case of any leakage, fire walls and facility for passenger evacuation [doors, windows and escape hatches] as per statutory requirements besides Bus Code. The Flammability requirements shall comply with IS 15061 as specified in CMVR. The detail list of the items has been annexed as Annexure-26 for which the Flammability test (if being fitted in the offered bus) shall be conducted by the contractor from the authorized lab against their respective standards as per inspection plan of the tender document.

3. ENGINE

- 3.1 Compressed Natural Gas (CNG) fueled engine with electronic ignition system capable of delivering adequate horse power to obtain desired performance in respect of defined acceleration levels, specific fuel consumption and emission norms. The engine should have adequate horsepower not only to propel the bus but also to operate the bus air conditioning system and all other auxiliary devices fitted to the bus, if any, efficiently while climbing up the flyover. As the bus is required for operation in city services, engine should be capable of delivery adequate horse power at lower RPM levels with a high torque over a larger RPM range particularly on the lower side. The engine should be installed at the rear of the bus. The engine shall be designed to operate for not less than 4,50,000 km without major failure or significant deterioration. The Horse Power of the Engine should be adequate and commensurate to performance requirement shall be in compliance to AIS: 153, May, 2018 or latest.

The engine and its accessories shall be easily replaceable. The engine mounting shall be such as to minimize transmission of vibrations to the bus structure specifically in the passenger area to meet NVH requirements.

- 3.2 The engine compartment shall be insulated to avoid transmission of heat and noise to the saloon area. The engine compartment shall include areas where the engine and exhaust systems are housed including the muffler. The engine compartments shall be separated by a bulkhead(s) that shall, by incorporation of fireproof materials preferably of ceramic fibre of minimum density of 128 kgs/ m³ in its construction, be a firewall. This firewall shall preclude or retard propagation of an engine compartment fire into the passenger compartment. Only necessary openings shall be allowed in the firewall, and these shall be fireproofed. Wiring may pass through the bulkhead only if connectors or other means are

provided to prevent or retard fire propagation through the firewall. Engine access panels in the firewall shall be fabricated of fireproof material and secured with fireproof fasteners. The fire detection and suppression system, complying with AIS: 135, shall be provided in engine compartment.

- 3.3 Engine should be able to operate efficiently at ambient temperatures of approximately 0° to 50°C, humidity level from 5% to 100%, and altitude up to 300 m, generally operating in the semi-arid zone as prevailing in and around the city of Delhi. Maximum rise in temperature at steering should not be more than 4 degrees beyond ambient temperature during peak summers.
- 3.4 For protection against fire risk in engine compartment, no flammable material or material liable to soak fuel, lubricant or any combustible material shall be used in the engine compartment unless the material is clad by an impermeable fireproof sheet. A partition of heat-resistant material shall be fitted between the engine compartment & any other source of heat.
- 3.5 Engine noise and emission levels must confirm to the Central Motor Vehicle Rules (CMVR)/AIS /any other Indian standards. In case of multiple norms, the most superior of these is to be adopted and as applicable for the city of Delhi.
- 3.6 The mounting of pipe/outlet for discharge of Exhaust gases and waste heat shall be as per CMVR. The entire exhaust system shall be adequately shielded to prevent heat damage to any bus component. The exhaust outlet shall be designed to minimize rain or high-pressure washing system water ingress from entering into the exhaust pipe and causing damage to the Catalytic convertor and shall not effect to the vehicle or any person at the rear/ or side of the bus. The entire exhaust pipe line after exhaust manifold shall be of stainless steel.
- 3.7 The engine shall be equipped with an electronically controlled management system and 24-volt battery electrical systems. Full electronic management of engine shall include on-board diagnostic and driver alerts for crucial parameters for Fuel system, Engine Lubrication system, Engine coolant system, Engine performance, Emission control system diagnostic details message (engine specific), The bus should have suitable audio and / or visual indication for the driver to be displayed at the dashboard to recognize the malfunctioning of (a) Speed limiting device (b) Emission control/Catalytic Convertor / after-treatment devices (c) any other systems that is crucial for safe functioning of the vehicle.
- 3.8 Additional important performance requirements are as given in the table below

Table 1: Some of the salient technical requirements of AC bus

Sr.No	Parameter Description	Specification
1	Engine Power to GVW	As per AIS:153 subject to meeting design requirements on peak load
2	Acceleration	As per AIS:153 or ≥ 0.8 m/sec/sec minimum at adequate Horse Power, whichever is superior
3	Speed 0 – 30 Kmph	As per AIS:153 or ≤ 10.5 sec maximum, whichever is superior

Sr.No	Parameter Description	Specification
4	Gradability (stand-start)	17% minimum
5	Maximum Speed at full load (GVW) (without Speed Limiter)	70 Kmph

- 3.9 Performance data/curves and other details of the engine have to be enclosed with the bid. A detailed set of calculations indicating adequacy of the said CNG engine for the city bus be provided along with all the performance parameters of the selected engine. The engine has to meet all statutory requirements (copies of necessary certificates be enclosed). To ascertain whether there is sufficient tractive force to pull over load of 20% above GVW during peak hours over 17% gradient, a certificate from approved test agency will be specifically required.
- 3.10 Engine design shall be such that it shall not be overheated during normal operating conditions of vehicle. An arrangement for audio-visual signal shall be provided in the event of engine getting overheated excessively. The Bidder shall indicate the temperature at which the signal operates. Similar arrangement for other sub-system of engine with their monitorable indicators be made on the dashboard.
- 3.11 Specific fuel consumption of CNG in grms. per kilowatt hour at standard conditions should be indicated.
- 3.12 Rear engine vehicles shall have air intake location in a manner as to provide dust free, restriction free adequate quantity of air so as to avoid any operational problem of the engine.
- 3.13 A mechanism in the engine compartment shall be provided to prevent start of the engine from driver's seat while maintenance is being carried out in the engine compartment area.
- 3.14 Speed Limiting Device**

Maximum speed of bus will be limited to 40km/hr or as prescribed in the city of Delhi through engine management system at the time of manufacturing stage itself. Any amendment thereto should only be possible by the vehicle manufacturer at the written instructions of the Transport Department of the state concerned. Type approval certificate from ICAT/ARAI / or any other test agency specified in CMV Rule 126 will be necessary for proper functioning of the speed limiting device as per AIS 018/2001 or latest. An audio-visual signal shall be provided on dashboard/instrument panel for indication of malfunctioning.

The Bidder will have to give an undertaking that he shall not pass on the software instructions for amending the speed to anybody and shall keep it confidential.

4. COOLING SYSTEM

- 4.1 Heavy-duty radiator and other subsystems of cooling system should be capable of efficiently dissipating heat from the CNG engine system. It shall be easy for filling and level checking of coolant. The cooling system shall conform to BIS: 14557-1998 or latest.
- 4.2 De-aeration tank and pressurized radiator cap shall be provided. Replacement/ maintenance of radiator and its items be also easily carried out. The radiator and other subsystems of cooling system shall be of durable, corrosion resistant type. The Bidder shall provide the details of radiator specifications, cooling capacity, coolant, and maintenance procedures etc. The Bidder shall also provide the repair and maintenance procedures of radiator along with the prototype.

5. TRANSMISSION SYSTEM

- 5.1 Multi speed Automatic transmission system shall be provided with gross input power, gross input torque & related speed compatible with engine and typical city bus driving application (speed, acceleration and tractive force required). The transmission shall automatically shift into neutral when vehicle is made stationary by applying service brakes. Transmission system to be fitted with a mechanism which makes it possible to engage reverse gear only when vehicle is stationary (applicable for automatic & automatic manual transmission). An interlock to prevent the movement of bus when service doors are in open position shall be provided.
- 5.2 The propulsion system and drive train shall provide power to enable the bus to meet the defined acceleration, top speed and sustained gradability requirements, and operate all propulsion driven accessories. In addition to Starting gradability as per AIS 003, the sustained gradability shall be assured wherein vehicle loaded at GVW.

6 SUSPENSION

- 8.1 The bus shall be fitted with air bellow suspension at front and rear. The suspension system shall be fitted with shock absorbers, suitable for trouble free operation and jerk free comfortable ride in existing road conditions of Delhi. The air suspension should be adequately protected from engine/ exhaust pipe heat etc for minimizing ageing effect on the air bellows.
- 6.2 The full air suspension system both at front & rear shall be with stabilizer bar and kneeling arrangement of minimum 60 mm at front & rear left side severally and/ or simultaneously. The reference point of measurement of kneeling shall be the center line of exit & entrance at bus floor level under unladen conditions.

7 STEERING

Hydraulic power assisted re-circulating ball type steering shall be provided.

8 BRAKING SYSTEM

- 8.1 The braking system shall be full pneumatic type with fail safe dual circuit having four-way protection valve, auto slack adjuster, Disc type (front wheel), drum brake(rear wheels) with

non-asbestos brake lining. The friction material shall be non-asbestos type having temperature and wear characteristics suitable for Intensive City operation. The braking system shall be fitted with air dryer and oil/ water separator system. The buses shall also be provided with hand operated pneumatic flick valve type parking brakes at rear wheels. The air pressure line shall be treated for corrosion resistance.

- 8.2 In the event of failure of the engine and/ or loss of air in the system, adequate provision shall be made for obtaining effectiveness of service brake system and/ or for de-activating the spring actuated brakes.
- 8.3 The bus shall be fitted with Anti-Lock Braking System conforming to IS:11852:2003 as per G.S.R. 389(E) dated 9.06.2014 as per latest requirement of CMVR.
- 8.4 The bus will be equipped with Electronic Vehicle Control System (EVSC) and meet other requirements as per AIS:153 as applicable on the date of manufacture as per requirement under CMVR.
- 8.5 An additional provision for parking brakes is also to be provided to prevent auto application of parking brakes due to loss of pressure in the Hand Break line.

9 WHEELS AND TYRES

- 9.1 Low floor Bus shall be fitted with tyres of size 11R22.5 or equivalent size, 16 PR steel radial tubeless tyres conforming to AIS-044 Part I with wheel rims of corresponding size conforming to AIS/ BIS: 10694 (part 3)-1991 or latest. The tyre shall be fresh from factories and shall not be more than six month old at the time of delivery.
- 9.2 There shall be Provision of jacking pad located on the axle/ suspension or near the wheels in support of bus structure to provide safe and effective jacking. For ease of locating jack during changing of tyres (both front and rear) axle area where jack is to rested shall be distinctively marked with yellow – black strips.
- 9.3 Suitable guards conforming to the relevant AIS standard as prescribed in CMVR shall be provided near wheels for protection against stones hurled from tyres.
- 9.4 Splash aprons of minimum 6.50mm thickness composed of rubberized fabric shall be installed behind of wheels as needed to reduce road splash and protect under floor components. The splash aprons shall extend downward to within 100mm of the road surface at static conditions. Apron widths shall be no less than tyre widths. Splash aprons shall be bolted to the bus under structure. Other splash aprons shall be installed where necessary to protect bus equipment.

10 AXLES

- 10.1 Solid beam axle & grease type front bearings & seals of reliable & proven design adequate capacity to take care of maximum Gross Vehicle Weight (GVW) & crush loading expected during life span of the bus of 12 years or 10,00,000 km whichever is earlier.

- 10.2 The bus shall be driven by a single heavy-duty axle at the rear of proven design adequate capacity to take care of maximum GVW & crush loading expected during life span of the bus of 12 years or 10,00,000 km whichever is earlier. Transfer of gear noise to the bus interior shall be minimized. The drive shaft shall be guarded to prevent it striking the floor of the coach or the ground in the event of a tube or universal joint failure.

11 CNG CYLINDERS AND THEIR MOUNTINGS

- 11.1 The CNG cylinders shall be roof mounted ahead of centre of the bus and shall be aesthetically enclosed with proper ventilation besides fulfilling other requirements. The cylinders shall conform to Indian/International standards (to be specified by the Bidder) duly approved by the Indian statutory authorities for various requirements. The CNG cylinders have to be of adequate capacity so as to facilitate a daily operation of over 250 km. per filling of CNG in cylinders of the bus at initial gas settled pressure of 200-bar at 15° C (excluding the minimum residual CNG required, if any to be retained in the cylinders). The Bidder shall provide details of the above CNG cylinders, mounting arrangement and gas storage capacity with residual quantity of gas etc. CNG storage cylinders roof mounting structure shall meet the requirements of AIS 028. Range test for 250 km for the bus will have to be carried out from Test agency approved under CMVR and certificate shall be produced.
- 11.2 The mountings, pipelines, other accessories/gadgets required in the CNG system shall be as per applicable Indian standards prescribed under CMVR. All safety requirements as per Indian standards/ rules/ regulations related to CNG cylinders, CNG system, sub system, accessories and components shall be met. The CNG cylinders fitted in the bus shall have certificates of approval from Chief Controller of Explosives (CCOE), Government of India; obtained after the date of placing of purchase order.
- 11.3 The CNG system shall be incorporated with a suitable ignition kill system, which would prevent ignition at the time of filling CNG cylinders. All the materials used in the bus design including CNG system items design shall be flame-retarding type. The CNG inlet/filling system for the bus shall be accessible only from exterior of the bus & shall be properly located on the right-hand side (Driver side) of the bus at a convenient safe level with appropriate flap size with lock in side panel and other safety gadgets fitted suitably. The CNG pressure gauge shall be behind the CNG filling receptacle for easy viewing of gas pressure through flap. A cost effective and durable gas leakage detection and Audio-visual alarm system shall be provided to detect gas leakage and potential unsafe conditions in the cylinder mounting area and engine area to alert the driver to take appropriate action in the event of leakage of CNG in the system. Suitable gas escape system shall be provided in engine compartment for CNG leakage, if any.
- 11.4 The entire CNG system accessories, components, piping joints etc. be located, routed and encased in a manner as to prevent ingress of natural gas inside the bus. The entire system shall be properly ventilated to prevent fire hazard due to accumulation/entrapping of gas. The system design should facilitate ease of repair and maintenance. The CNG filling system shall be so designed to facilitate ultra-fast filling of cylinders within maximum of 5 -7 minutes time.

- 11.5 The cylinders shall be fitted in such a manner that the punched number i.e. serial number, name of the manufacturer etc. be visible clearly when fitted in the buses.
- 11.6 All CNG system items shall conform to the relevant CMVR/CCOE, Government of India/BIS/AIS 024 & 028 and other applicable standards for the Project Area.
- 11.7 The cylinders shall be mounted and fitted in a manner as to facilitate easy replacement/ maintenance. The cylinders be inter-changeable/ replaceable with other cylinders without any modification of the system.
- 11.8 Fitment and arrangement of all CNG cylinders and its accessories, sub-assemblies etc shall be easily replaceable and or repairable
- 11.9 CNG filling valve shall be 3 way type to ensure that during the filling of CNG gas engine inlet is isolated.
- 11.10 CNG Shut-off valve shall be provided near CNG cylinders at a convenient location for easy operation in case of any emergency.
- 11.11 A detailed diagram of fast filling arrangement of CNG cylinders, piping/ tubing, safety valves, joints details and other fitments shall be provided.
- 11.12 The compliance plate for the detail of CNG cylinders etc. shall be fitted outside the bus in compliance with the relevant standards.

12 PROTECTION AGAINST FIRE RISK

- 12.1 CNG Cylinders shall be aesthetically mounted on reinforced roof structure properly protected against fire hazards. The mounting arrangement of the CNG Cylinders on roof shall be Type Approved by the authorized Testing Agency.
- 12.2 CNG FUEL FEED SYSTEM: CNG Fuel lines and all other parts of CNG fuel feed system shall be accommodated in the vehicle where they have the optimum protection and easy access.
- 12.3 To avoid any possibility of spark, wiring harness shall be so routed that it would not cross CNG joints. Gas, air and electrical lines must be separated out with no jumbling/ intermixing in the engine compartment.
- 12.4 In order to prevent leakage from coolant pipe fitted between the Compressor & Engine block and consequent damage to HT cables, all such pipelines shall be metallic single braided pipes having adjustable jubilee clips or equivalent in these CNG buses.
- 12.5 Safety base plate/ shield guard made out of suitable MS Sheet shall be provided below the CNG receptacle valve & its pipelines to safeguard the CNG filling system from any stone or flying objects etc.

- 12.6 All wires shall be routed away from heat zone areas and shall be properly fitted in fire retardant sleeves adequately shielded from heat. Also, these wires shall be prevented from sharp edges and grommets shall be used wherever unavoidable.
- 12.7 All CNG pipes other than metallic shall be as per AIS 024 and AIS 028 and preferably heavy duty metallic braided pipes. Pipes shall be isolated from excessive heat zone and electrical wiring.

13 UNDER FRAME & STRUCTURE

- 13.1 The under frame and super structure shall be suitably designed to carry dense crush load of over 100 passengers (assuming an average weight of $68+7=75$ kgs. per passenger) including sitting and standees, CNG cylinders, bus tare weight, etc. Moreover, the structure shall be designed to withstand the transit service condition of operation during its life span.
- 13.2 The bus shall be as defined in Bus Code with the super structure fabricated using steel tubing (ERW– Rectangular / Square Sections) conforming to BIS 4923-1985 or latest, of grade Yst –240.
- 13.3 The comprehensive multi-stage anti-rust treatment by way of hot phosphating/ galvanizing shall be provided to bus flooring, sides, roof, under-structure, as per BIS 3618 Class-A2/ Galvanizing of MS Structural Members as per IS: 277-2003 120 GSM coating for resistance to corrosion or deterioration from atmospheric conditions & road salts so as to enable them & frame to last for 12 years or 10,00,000 km whichever is earlier. The samples of all materials & connections shall withstand two weeks (336 hours) Salt Spray test in accordance with ASTM procedure B117 with no structural detrimental effect to normally visible surfaces & no weight loss of over 1%. The details of treatment along with certificate shall be provided with relevant specification to meet the service life of 12 years or 10,00,000 km whichever is earlier. The system of corrosion prevention of the internal surfaces of structural tubing shall be provided and details of the same be given in the offered documents.
- 13.4 After anti corrosive treatment, structural members shall be coated with red oxide/ Zinc Chromate primer & superior quality black paint.
- 13.5 The front and rear structure design shall be energy absorption type to reduce impact stresses into under frame/ side structures/ other areas of the vehicle. The damaged area of the vehicle should be easily repairable and/ or replaceable in the event of major damage.
- 13.6 The entire surface of bus under floor and sides exposed to ground shall be covered with appropriate corrosion prevention & flame-retardant paint coating for protection against harmful effects of water, mud etc and to retard flames, if any.
- 13.7 The wheel housings shall be constructed to contain tyre bursts during operation and be flame retardant in case of tyre fire.

MIG welding shall be used for steel structural member's fabrication.

- 13.8 Sufficient clearance & air circulation shall be provided around the tyres, wheels & brakes to preclude over-heating when the bus is operating
- 13.9 All the structural members shall be MIG welded with suitable gussets/ brackets of adequate size & thickness be provided on floor, side, front, rear & roof structure to ensure structure rigidity & integrity.
- 13.10 Under floor to sidewalls shall be sealed to prevent dust ingress.

14 PANELLING

- 14.1 The bus exterior side panels shall be fitted with stretched GI sheet at waist level. The exterior front-end panelling shall be of GI sheet as per BIS:277-2003 or latest -120 gsm. Zinc coating. Roof shall be of Al sheet as per BIS: 737-1986 (or latest), Aluminium Alloy H-2/31000. Rear shall be of GI sheet. Skirt panelling shall be of aluminium sheet having thickness of minimum 1.5 mm. Adequate treatment be also provided to avoid any incidence of galvanic corrosion between dissimilar metals. Panels shall not have any waviness & shall be so mounted as to present smart aesthetic exteriors. Roof exterior panelling shall be suitably provided with platforms for movement of technicians for repair & maintenance of roof mounting systems to avoid direct load on roof aluminium panelling. A walkway suitable for two persons shall be provided longitudinally to enable repairs/ maintenance/ handling of the CNG System/ Items on roof & connected with ladder at suitable location. The platform shall be fitted to roof structure with proper reinforcement.

Wherever aluminium is joined with steel or with/ any dissimilar metals together, the involved joints shall be treated with thick layer of approved quality dielectric paint conforming to relevant Indian standards, before assembly.

- 14.2. Anti-drumming compound or High-Pressure Laminate (HPS) shall be applied on inner side (enclosed surfaces) of entire paneling.
- 14.3. The whole bus body shall be thermally insulated with flame retardant Polyurethane or glass wool of minimum 40 kgs/m³ density. The bidder shall provide specifications/ BIS standards for the aforesaid insulating material. Materials superior to the ones shall also be permitted.
- 14.4. Rain gutters shall be provided to prevent water flowing from the roof onto the passenger doors, driver's side window, and exterior mirrors. When the bus is decelerated, the gutters shall not drain onto the windshield, or driver's side window, or into the door boarding area. Cross sections of the gutters shall be adequate for proper operation.

- 14.5. All interior panelling shall be of Acrylonitrile Butadiene Styrene (ABS) conforming to relevant National or International Standards. Interior panels shall be attached in such a way so that there are no exposed unfinished or rough edges or rough surfaces. Panels & fasteners shall not be easily removable by passengers.
- 14.6. All side skirt panels below stretch panel line must be no longer than 1500 mm and be of such design that any panel can be replaced with a pre-painted panel within a very short period of time. The side skirt shall be able to withstand the side impact as per the provisions of BIS: 14682-1999 or latest. Similarly the rear end shall be able to withstand the rear impact as per the provisions of BIS: 14812-2000 or latest. The skirt panel shall be openable fitted with stainless steel piano type hinges (heavy duty), to be fitted at the rub rail for the ease of maintenance purpose. However, the fixed skirt panel may not be in openable position like at wheel arches. The openable skirt panels shall be bolted at skirt level. TIG welding for fabrication of aluminium components shall be used.
- 14.7. Entire front end of the bus shall be sealed to prevent debris accumulation behind the dash and to prevent driver's feet from kicking or fouling wiring and other equipment. Front end shall be free of protrusions that are hazardous to passengers standing or walking in front of the bus during rapid acceleration.

15 PAINTS

- 15.1. All the structural members of the bus shall be treated for corrosion prevention internally as well as externally and painted wherever required. The Polyurethane (PU) painting conforming to BIS: 13213-1991 or latest shall be used for exteriors painting of the bus including interiors wherever required. Colour shade shall match to the shades as per BIS: 5-1978 or latest. In case of Matt black paint the gloss value should be upto 30 units.
- 15.2. All exterior surfaces shall be smooth & free of wrinkles & dents. Finished painted surface of the bus should be free from the following imperfections:
- Blisters or bubbles appearing in the topcoat film.
 - Chips, scratches, or gouges of the surface finish.
 - Cracks in the paint film.
 - Craters where paint failed to cover due to surface contamination.
 - Overspray.
 - Peeling.
 - Runs or sags from excessive flow and failure to adhere uniformly to the surface.
 - Chemical stains and water spots.
 - Dirt particles embedded in the paint.

16 COLOUR SCHEMES

Signal Red shade exterior colour shade. The area above window pane, service door, driver door & emergency door but below rain gutter, between the window frames including window frames shall be of black colour. The fabricated metallic sheet area of service doors, emergency door (upto waist level) & driver door (upto waist level) shall

also be painted with black colour paint. The logo/ graphics to be painted/stickers to be pasted will be intimated to the successful bidder before the completion of paneling of the proto type bus. The contractor shall provide the intimation on the seats for reservation for differently abled persons, blind person, ladies, senior citizens, the information for which will be provided by the purchaser.

17 SERVICE DOORS

- 17.1 Two service doors (Entrance & Exit) in 1200 mm wide clear aperture (without flaps) shall be fitted at front and middle nearside of the bus as per provisions of the AIS 052 (Bus Code) for Type I, NDX category. The door dimensions, shall be as per AIS 052 (Bus Code).

The unlocking devices shall be clearly marked as an emergency device & shall require two distinct actions to actuate. The overall dimensions and construction of the entrance and exit doors shall be identical so that the doors are inter-changeable. A suitable indication system shall be provided on driver's dashboard to warn that the door is 'Open' or not fully closed. Also there should be switch/ button at suitable location near passenger doors accessible to passenger to sent request signal to driver for stopping bus at the forthcoming stop or in case any if there is any emergency.

Doors shall open or close completely in not more than 4 seconds from the time of control actuation and shall be subject to the closing force requirements and the adjustment requirements. The front door shall remain in commanded state position even if power is removed or lost. Operation of & power to, the passenger door shall be completely controlled by the driver. A control or valve in the driver's compartment shall shut off of the power to, and/or dump the power from, the front door mechanism to permit manual operation of the front door with the bus shut down.

Both the entrance and the exit doors shall be of double jack knife type. The Entrance and Exit doors shall be provided with suitable support in the form of grab handles for boarding/ alighting passengers on JK door flaps. Electronic sensors shall be installed at both entrance and exit doors to retract the door automatically if any obstruction to door occurs during door closing. It must be effective until door is fully closed.

- 17.2 Front door shall be located ahead of front axle whereas rear door shall be positioned such that rear edge of gate shall be at minimum 1500 mm ahead of central line of rear axle or front edge of gate minimum 1500 mm behind central line of rear axle.
- 17.3 The entrance and exit doors shall be electro-pneumatically controlled / (suitably Automated) by the driver and/or the conductor with internal and external controls for emergency opening. In the event of an emergency, it shall be possible to open the doors manually from inside the bus by using a force not more than about 10 Kg. after deactivating pneumatic controls of each door. All door components, latches, locks and door hinges shall be as per AIS 052 Bus Code.

- 17.4 Safety provisions as mentioned in Bus code for automated Section 3.4 of AIS 052. Anti-pinching feature shall be provided so as to avoid trapping of passenger during closing of door. Additionally, actuation of automated door under normal conditions shall not be possible when Bus is in motion.
- 17.5 An audio-visual signal shall be provided at the service doors for the convenience of passengers that shall be effected during the door opening and closing cycle and for the entire duration of door in open condition.
A warning electronic chime shall be installed at the exit door only. This chime is activated before opening or closing of the exit door.
- 17.6 All footsteps and exits (both service and emergency) shall be provided with anti-skid yellow nosing.
- 17.7 Service doors shall be provided with grab handles.
- 17.8 Manually operated sunken type wrap over ramp for wheel chair of Persons with Disability (PwD) shall be fitted at entrance door and shall meet the requirements as given in the AIS 153. The ramp shall have width of 800 mm min. with anti-slip coating and load carrying capacity of 300 kg. min. Provision of anchoring of wheel chair shall be made suitably such that anchored wheel chair shall not create undue hindrance to free flow of movement of other fellow commuters. Suitable provisions shall be made for visually impaired commuters also necessary provisions to comply the requirements of Disabilities Act 1995.
- 17.9 A red "DOOR CLOSING" sign shall be installed above exit door. The sign will blink when exit door is closing.
- 17.10 A suitable device to prevent the exit door from opening as long as the bus is in motion shall be provided.
- 17.11 Service Doors operation shall be controlled with the help of three push buttons or switch:
- One green button for entrance (press once open, press again closed)
 - One black button for exit (press once open, press again closed)
 - One red master button to close both entrance and exit doors at the same time
- 17.12 All button and switches shall be labelled and located on a panel to the right as well as left side of the driver taking in to account convenience of operation and proper ergonomics except the door opening switch which shall be on left hand side of the driver. For emergency operation each door will have covered switch at suitable place both inside and outside the vehicle body.
- 17.13 Heavy-duty prominent nosing of bright yellow colour shall be used to protect the edge at entrance/exit.
- 17.14 Doors shall be fitted with heavy-duty locks with &/ without lock & key depending upon their use. Striker plate shall be fitted at the closing end of locks.

- 17.15 All the handles shall match to the decor of its fitment location or shall be chrome plated.
- 17.16 Access door shall be provided with heavy-duty sealing to avoid reduce and minimize ingress of dust into the passenger compartment. The upper & lower section of both front & rear doors shall be glassed for no less than 45% of the respective door opening area of each Section. The glazing material & glass in the front & rear doors shall be the same as in the side windows.
- 17.17 Foot step lighting: Suitable lighting source shall be provided that shall get actuated upon switching on headlights and door opened condition. It shall provide adequate ground illumination next to service doors for the distance of 1000 mm from the edge of footstep.

18 GUARD/ GUARD RAILS

Where seated passengers are likely to be thrown into service doors entrance/exit area because of heavy braking, suitable guard shall be provided. The guard height shall be minimum 800mm from the floor, and the guard shall extend inward from the wall at least 100mm more than the centre line of the seating position of the passengers who are prone to this risk. Suitable guardrails shall also be provided on front wheel boxes inside the bus over suspension system. The guarding shall be as per the provisions of the AIS-052 (Bus Code).

19 WINDOWS

- 19.1 The windows shall be in single piece fixed glass type design. The toughened glass where ever used in the body shall be 4.8 mm to 5.3 mm thickness duly conforming to IS: 2553 (Part 2) and shall be light tinted with visual transmission of light is not less than 50%. The window glasses shall be fitted / pasted aesthetically. The size and shape of the glasses shall enable the passengers to have maximum outside view without kneeling. The general requirements of window shall be as per the provisions of AIS-052. Details of window design, fitment etc. shall be provided by the bidder.
- 19.2 Windows shall have provision of suitable sealing to avoid ingress of dust and water and shall have proper/ efficient drainage system.

20 EMERGENCY EXIT

- 20.1 Emergency exits shall be provided in the bus as per the provisions of the AIS-052/ CMVR.
- 20.2 At least one emergency exit/emergency door of size 1250 x 550 mm shall be provided on opposite side of the service door.
- 20.3 One escape roof hatch having inscribed area of 70 x 50 cm shall also be provided as emergency exit.

- 20.4 For emergency exit purpose, service doors equipped with power operated system shall be provided with mechanism to be readily operable by hand.

21 HAMMERS FOR BREAKING WINDOW GLASSES DURING EMERGENCY

Adequate numbers of hammers of suitable design and weight for breaking window glasses during emergency shall be provided and suitably mounted on the interior walls of passenger saloons. Mounting of hammer shall be pilferage-proof

22 FLOOR

- 22.1 Floor design shall be low floor type without internal steps, with entrance and exit located within the low floor area at left-hand side.
- 22.2 Low floor area of bus shall be at a maximum height of 400 mm from the ground level. Low floor area shall not be less than 50% of the total saloon area (excluding front wheel boxes and driver's cab) and shall not be ramped in the longitudinal plane. The floor slope shall meet to the requirement of AIS 153.
- 22.3 The saloon floor area, which is not defined as low floor, shall only extend up to 1500 mm forward of the centre of the rear axle and or provided with steps as per the requirements of AIS-052.
- 22.4 Internal saloon height shall be minimum of 1900 mm in the rear overhang area.
- 22.5 The flooring design should allow easy cleaning including that sweeping & drainage of water.
- 22.6 The floor shall be fitted with fire retardant marine board of 19 mm thickness conforming to BIS 710-1976 or latest and shall be fire retardant as per BIS 5509-2000 or latest. The said floor shall be covered with anti-skid type silicon grain material of minimum 3mm thickness meeting Indian/ International standards (to be specified by the Bidder). The floor shall be coated with Anti-skid material of 3 mm thick anti-skid type silicon grains ISO: 877/76 for colour, IS: 5509 for fire retardancy. Adequate sealing shall be provided in the floor to prevent ingress of dust, gases, water etc. The anti-skid type silicon grain material shall have features for non-accumulation of dust.
- 22.7 Provision for wheel chaired disabled person for easy ingress, locking the wheel chair during motion and easy egress shall be made as per AIS 153.

23 GANGWAYS

The gangway shall be as per the provisions of the AIS 052 Bus Code and would meet the requirements of AIS-153. Minimum interior head room at the center line of gangway shall be 1900 mm as per Bus Code.

24 HANDRAILS AND HANDHOLDS

- 24.1 The Handrails and Handholds (Strap hangers) shall be provided as per provision of AIS-

052 and AIS-153. The surface of handrails & handholds shall be colour contrasting and slip resistant. Depending upon the size of the bay (i.e. between two consecutive roof hand rail brackets), minimum 2 to 4 numbers handholds per bay shall be provided so that every standee passenger is able to grab a hand hold. Hand holds shall comply with AIS 046. The design of handholds should also be advertisement friendly.

24.2 All handrails shall be of MS tubing of 32 mm dia. and 2 mm thick covered with PVC sleeve contrasting with the interior decor. Minimum two number of roof hand rails shall be provided in the saloon area.

24.3 Every seat shall be provided with the suitable grab handle to assist standee passengers.

25 STANCHIONS

Vertical stanchions shall be so positioned to facilitate access to seats for those standing. The stanchions shall be of 40.0 mm dia. and 3.00 mm thick M.S.Pipe covered with PVC sleeve of contrast colour with the interior decor. Each stanchion shall be provided with buzzer switch at the height of 1200 mm for the convenience of passengers to announce their wish to alight the bus. The stanchion shall be provided as per provision of AIS-052 and AIS-153.

26 STOP REQUESTS CHIMES

Sufficiently audible electronic type Stop Chimes shall be provided in the bus- one in driver's compartment & one near exit door. The interval between chimes shall be 3 to 4 seconds. In addition, a red pilot light shall also be provided on driver's dashboard when the bell push is pressed.

27 PASSENGER SEATS

27.1 The seats (design, spacing and sizing) and its anchorages shall comply AIS 052, AIS 023 specification and duly Type Approved. The passenger seats shall be front facing comfortable, durable & maintenance free of 'PP-LD' (Polypropylene Low Density)/ LDPE moulded construction meeting the performance requirements of AIS 023 and other requirements as per the AIS-052. The PP-LD/LDPE moulded seat shall be appropriately fitted with moulded flame retardant Polyurethane (PU) cushion for seat & back rest as per AIS 052. The seats shall be upholstered with waterproof expanded vinyl coated fabric to match the seat & interior décor conforming to IS 8698 of Class-A, Grade-I, Type-A. Suitable integral type seat hand grab rails shall be provided, one on top of backrest & one at the back of backrest, for seated passengers. However, the seat pitch shall be maintained as per AIS-052. A hand rest shall be provided to the gangway side of passenger seats on aisle side.

27.2 The seating layout shall be 2x2 meeting the bus code requirements. Minimum seating capacity (35 numbers excluding driver) shall be in line with the stipulation of AIS 023 (excluding driver) and space for one wheelchair with provision for seat belt, wheelchair anchorage etc. The Bidder shall also indicate standee capacity of the bus worked out as

per the system given in the bus code. The seating and standee capacity be worked out separately in line with the stipulation of AIS 023/ AIS-052.

- 27.3 In order to make distinct identity of reserved seats for ladies, 25% of the total seats excluding driver seats in 'Pink' Colour (Upholstery only) shall be provided in the buses on Conductor/ near to facilitate boarding and alighting from front door of the bus. In the event of any constraint of lesser seats available on Conductor/ near side, the remaining reserved seats for ladies will be provided in front on Driver/ off side of the bus. However, the final reservation of seats for the same shall be finalized at the time of proto- Approval.
- 27.4 There shall be four seats for senior citizens & four priority seats for Differently Abled person in the area provided in front on Driver/off side of the bus. One seat behind the driver seat shall be reserved for Blind person. However, the final reservation of seats for the same shall be finalized at the time of proto- Approval.

28 SEAT BELTS AND ITS ANCHORAGES

Seat belts shall be provided for the seats as per the provisions of CMVR, AIS-052 & AIS-153. Seat, Seat belts and its anchorages shall conform to the requirements of AIS 023, AIS 005 and AIS 015 respectively.

29 DRIVER'S WORK AREA

- 29.1 A driver door of not less than 1600 mm height and 650 mm wide with maximum space for sliding window using the material like glazing and glass as used in the other side window glasses shall be provided for entry and exit to driver's work area as per AIS-052.
- 29.2 The handholds, steps and all other requirements of driver's work area shall be as per the provisions of the AIS-052.
- 29.3 There shall be adequate leg room as described in bus code for efficient and effective foot control action.
- 29.4 The brake pedal angle shall be determined from a horizontal plane regardless of the slope of the cab floor. Specific attention shall be provided to this driver's work area to provide pleasing and healthy working atmosphere / conditions, minimize work load and operational fatigue through automation and ergonomic design.
- 29.5 The driver's work area shall have a light to provide general illumination and it shall illuminate the half of the steering wheel nearest to the driver.
- 29.6 The driver' entrance-cum-exit doors shall be provided as per Bus Code with a provision of maximum width of sliding window using the material like glazing & glass as used in the other side window glasses.
- 29.7 The drivers cab shall be fitted with a 24V DC, 200mm dia fan mounted at proper height on side structure. The colour of fan shall match the interior decor of the bus. A suitable box with the provision for lock & key arrangement is to be provided near to the driver work area for keeping the belongings of the operational staff.

29.8 DRIVER'S SEAT AND SEAT BELT ANCHORAGES:

Driver's seat with head restraint shall meet the requirement of AIS 023. The seat shall be adjustable in all three axes with a provision of adjustment of Torso angle. Driver seat belt and anchorages shall be ELR recoil type 3 point mounting as per the CMVR standards AIS:005.

28.9 DRIVER PARTITION:

Driver partition shall be provided as per the AIS-052. The partition glass shall be tinted to minimize the glare & reflection in the wind screen directly in front of the driver from interior lighting during night operation.

28.10 AIR PASSAGE FOR DRIVER:

A suitable Air Passage shall be provided for Driver at suitable location for proper inflow of air inside the driver cab.

30 DASHBOARD INSTRUMENTATION AND CONTROL SYSTEM

30.1 The bus shall have aesthetically and ergonomically designed dash board and instrument panels molded in suitable polymeric material. All the dashboard controls and instrumentation system shall be as per the AIS-052. The bus shall have dash board with full instrumentation panel containing meters and gauges to indicate important parameters like air pressure in brake tanks, coolant temperature, battery charging current, CNG fuel level, side indicators, head lights, hand brakes, engine oil pressure etc. In addition, warning lights for low engine oil pressure, high cooling system temperature & low coolant level, low air pressure and battery weak shall be provided at the driver's dash board. There should also be provision for inter lock between door exit/entry door open and vehicle movement i.e. vehicle should not move if any of the door is open. The illumination of the self-lighted symbols shall be adequate to be easily seen during day time ambient light in the driver's compartment. All the symbols and Tale tells on instrument panel shall be visible from the driver's eye points during seated position without excessive and unnatural neck movements.

30.2 SHROUD FOR WIRING HARNESS:

A suitable non- metallic, fire resistant, energy absorbing cover shall be provided for the wiring harness and other exposed parts below the instrument panel. The cover shall be so constructed that in the event of a collision it shall not cause major injury to the driver.

31 REAR-VIEW MIRRORS- INTERIOR AND EXTERIOR

Rear-view mirrors shall be provided on both sides of the bus to enable driver to have clear side/rear views. One interior rear-view mirror shall also be fitted for viewing passenger saloon area by the driver. Installation and performance requirements of the rear-view mirrors shall conform to AIS 001 and AIS 002. Additionally, front bumper-vision mirror shall be provided.

32 SUN VISOR

Adjustable sun visors (heavy duty/durable) shall be provided for the windshield & the driver's side window. Visors shall be shaped to minimize light leakage between the visors

& windshield. Visors adjustment shall be made easily by hand with positive locking & releasing devices and shall not be subject to damage by overtightening. Sun visor construction & material shall be strong enough to resist breakage during adjustment. Visors wherever deployed shall be effective in the driver's field of view at angles of more than 5° above horizontal.

33 ELECTRIC HORN

An electric horn conforming to BIS: 1884-1993 or latest/ CMVR and installation requirements conforming to AIS 014 shall be fitted in the bus.

34 LED DESTINATION BOARD SYSTEM (LDBS)

- 34.1 Alphanumeric Dual Display Technology Amber colour LED destination board system (LDBS) for electronic route display in English and Hindi of high intensity illumination with automatic brightness control shall be installed at the front, rear and side of bus with GPS triggered next bus stop announcement in the bus and display on internal display board in compliance to the IS 16490:2016 or latest. The inside display board shall be provided behind the driver's partition. The system should be compatible with GPS.
- 34.2 The display of text at front, rear and side destination boards should be possible in fixed, scrolling & alternate mode type in Hindi & English alternatively along with fixed route number in Arabic numerals. Simultaneously the route number and destinations shall be announced so as to make audible to the passengers on the bus stop. Loudspeakers integrated with the display system be fitted one at the front gate and another speaker at the rear gate especially for the persons with disabilities. The destination boards shall be compatible with Global Positioning System (GPS).
- 34.3 The inside display board shall be fitted just behind the driver partition. There shall be display of name of approaching bus stops in Hindi, English alternatively with announcement system. The system should be able to store on board up to 100 messages of 50 characters each on an average. The messages should be capable of rolling, flashing (fully or selectively) in Hindi/English symbols as per pre-programmed system. The message shall be visible to the all passengers standing/ sitting at the last seat of the bus. The illumination system will be of module display type. Present and next stops details shall be highlighted with flashing in modern commuter-friendly in Amber colour. The system shall be GPS compatible and should be able to display information of pre-recorded names of approaching bus stops in auto mode activated through GPS feed through port in controller on open standard protocol. The display system shall have the provision of flashing/ highlighting information in pre-programmed mode and through an intervention by the driver/ conductor. Adequate volume with noise free integrated voice announcement system so as to be heard by the bus commuters shall be fitted - one at the front (behind the driver alongwith LED display) and one at the rear side-inside.
- 34.4 The system shall have a programming for minimum 150 numbers of routes and 300 numbers of destinations. Further the system shall also have a programming for minimum 150 nos. of bus stops on each route. There shall be provision for feeding more destinations options against one route number. The operation of the system by the drivers shall be made on the dashboard or near to it. There shall be single point near dashboard for changing programme. The details of the memory, circuit, wiring, diagram, power

consumption etc. shall be provided by the Bidder. The Contractor shall impart detailed training to the officials / drivers of DTC with respect to programming, operation/ maintenance etc. of display system.

The updation of route master and sound files with indexing should be possible through transmission from control room over the air using GPRS and through additional port in the controller as well.

35 SPECIFICATIONS FOR INTELLIGENT TRANSPORT SYSTEM (I.T.S.)

The ITS enabled bus with On Bus Intelligent Transport System will have **ITS** Control Unit, together with bus driver display console. The bus will have Passenger Information System (PIS System) at front, rear, side and internal display board with integrated voice announcement system as per requirements given in Clause 34 above, integrated GPS device for Automatic Vehicle Location System (with compliance of AIS 140 with emergency buttons for access to every passenger in the bus , preferably protected enclosure for switch) and Security Camera Network (CCTVs) with reverse gear and display screen should meet the specification for IP based cameras and mNVR as per Detailed specification document for CCTV devices as per IS 16833:2018 : CCTV system with an inbuilt tracking system and integrated emergency System or minimum specifications as per Annexure 24, whichever is superior shall be complied. The amendment/ clarification issued by Transport Department, Govt. of NCT of Delhi regarding minimum specification for CCTVs System till the stage of Proto Type shall be applicable.

The bus should have 3 (Three) internal and one reverse surveillance IP based CCTV camera and Bus Driver Display Screen to telecast the output from each of the camera in a systematic manner, as per the aforementioned specification. The certificate of compliance (Type Approval Certificate) shall be submitted at the time of inspection of prototype from approved test agency under CMVR. In case of said items do not cover Under Type Approval Certification to be issued by Testing Agency as per CMVR, these items be got approved one time from the testing authority as per the specified standards/specifications. The architect to be finalized by the Purchaser at the time of Prototype”.

The other conditions to be complied by the OEM are as given below:

- a) **VEHICLE TRACKING SYSTEM:** To carry out on line vehicle tracking there shall be tracking device (VLT/ ATD) as per system conforming to provisions stipulated in IS 16833:2018 - Annex A with latest Amendments (with compliance of AIS 140 with emergency buttons for access to every passenger in the bus, preferably inbuilt box).
- b) The on-board equipment shall be tamperproof and theft proof.
- c) All the required cables power and signal from battery and device to device shall be laid properly as per the provision of Bus Code for electric cables.
- d) **The common minimum requirement of VHMD parameters will be-SOC level, Motor Speed in RPM, Vehicle Speed.**
- e) Reverse parking digital camera covering 150 deg. (in horizontal plane symmetrical to bus centerline) of rearward vision shall be provided along with LED display of size

200 mm minimum mounted on or near dash board. The system shall comply with provisions of AIS 145. This indirect vision system shall get activated upon engagement of reverse gear. It should give audio warning on reaching the critical distance available for reverse parking.

f) The main hardware will inter alia include the following:

- i. Front LED Display
- ii. Rear LED Display
- iii. Side LED Display
- iv. Internal LED Display with Integrated/Synchronized Voice Announcement System
- v. Amplifier, Speakers
- vi. ITS Controller with Display
- vii. GPS Device (Automatic Tracking Device) with Emergency Button (s)
- viii. Power and Communication Harness
- ix. Bus Driver Display Console 7" TFT- Screen in front of driver (including reverse view)
- x. Surveillance Cameras (3Nos.), two numbers to monitor bus interiors (doors, driver zone, ticketing zone etc.) and one no. Reverse View -IPC.
- xi. Digital video recorder mNVR) with Hard Disk 1TB -2.5" SATA HDD (Output telecast from each Camera)

36 BUMPERS

- 36.1 The bus shall be provided with front and rear bumpers of FRP moulded in three piece constructions. The bumper shall be easily repairable/ replaceable. The bumpers shall conform to the requirements of CMVR. AIS-052, National/ international standard (to be specified by the Bidder). The Bidder shall be required to provide details of the above bumpers along with drawings including thickness of bumpers, section, profile etc.
- 36.2 The reflective tape of colour as per CMVR shall be pasted over the full length of the front and rear bumper.

37 TOWING DEVICE

The bus shall have heavy-duty ring type towing devices in the front and rear bumpers area with load transfer to bus structural members. The capacity of each towing device shall be 1.2 times (minimum) the kerb weight of the bus within 30 degrees of the longitudinal axis of the bus.

38 WIND SCREEN – FRONT AND REAR

Windscreen glasses shall meet the requirements of BIS 2553: Part II-1992 or latest and that of CMVR and AIS-052. The glazing used for fitment of glasses shall be Ethylene Propylene Dien Monomer (EPDM) rubber of black colour as per AIS 085. Optionally windscreen may be pasted with suitable adhesive. The Front wind screen shall be ISI-Mark or E-Mark. Front wind screen in the bus shall be in single piece design, plain/ flat with curved corners, PVB film laminated of float Glass, 'AA' Grade safety glass of

minimum thickness of 8.0 mm with demisting feature/system. Rear windscreen shall also be in single piece design; toughened flat or curved glass of thickness of 6.0 mm. A grab handle below the windshield, centre of the front face and foot rests above the bumper at suitable height shall be provided to facilitate manual cleaning of the windscreens.

39 WIND SCREEN WIPERS

Electrically operated windscreen wiper system having two wiper arms with blades shall be provided. The wiper motor shall be heavy-duty steel body for minimum of two-speed operations. The wiper arm shall rest horizontally when not in use. The sweep angle shall be sufficiently wide for clear view during rainy days. The windscreen wiping system shall be 24V, having variable speed, with fitment of time delay relay. The windshield washer system shall deposit washing fluid on the windshield & when used with the wipers, shall evenly & completely wet the entire wiped area. The windshield washer system shall have a minimum 2.5 litres tank located for easy refilling and two Nozzles at suitable location for proper spray of fluid. Reservoir pumps, lines & fittings shall be corrosion resistant & reservoir itself shall be translucent for easy determination of fluid level. The windscreen wiping system shall be in accordance with CMVR/ BIS: 7827 Part1, 2, 3 (section 1, 2) or latest.

40 FIRE EXTINGUISHERS

Multipurpose dry powder type (Stored pressure), duly filled fire extinguishers conforming to BIS: 13849-1993 or latest, two numbers of 5 kg capacity each shall be provided as per the AIS-052. One Fire extinguisher shall be located near to the driver seat and another ahead of the rear gate's front flap duly encased & fitted with proper reinforcement. The enclosure box shall have transparent breakable glass at front cover.

41 FIRST AID KIT

First aid kit completes with items, medicines, bandages etc. shall be provided as per the provisions of CMVR & AIS-052. The kit shall be fitted near to the driver seat at appropriate position.

42 PROVISIONS FOR DIFFERENTLY ABLED PASSENGERS

There shall be provisions of requirements as given in AIS 052, AIS 153 and CMVR for accommodation and accessibility for Differently Abled Passengers. Also, there shall be accessibility to Differently Abled Passengers with wheel chair by providing a suitable wrap around type manually operated wheelchair stabilizing system along with such passenger's friendly access system at entrance door.

43 BUS DIMENSIONS AND KEY PERFORMANCE PARAMETERS

Sr. No.	Description	Low floor Bus
1	Overall length	12000 mm with minus tolerance of 100 mm.
2	Overall width	2600 mm with minus tolerance of 30 mm
3	Overall height	3800 mm Max.
4	Wheel base	6100 with tolerance of -200 and + 400 mm
5	Ground clearances within the wheel base	Not less than 240 mm
6	Ground clearance at axle	Not less than 190 mm
7	Floor height at service doors at curb weight	Not more than 400 mm
8	Front overhang	As per CMVR
9	Rear overhang	As per CMVR
10	Turning clearance radius	As per IS-9435 and IS-12222 As per CMVR
11	Ramp over angle	As per IS: 12218 Not less than 4.8 degree (Half of the Break-over angle)
12	Departure Angle	As per IS:12218 Not less than 9 degree in unladen condition
13	Approach angle	As per IS:12218 Not less than 8 degree in unladen condition
14	Seating capacity	2 x 2 with seating capacity of minimum 35 nos. (excluding driver) and space for one wheelchair with provision for seat belt, wheelchair anchorage No. of standee shall be declared by Vehicle manufacturer based on the floor space available for that purpose. Ref. Bus code AIS 052
15	Gross Vehicle Weight (GVW)	As per CMVR
16	ITS related requirements	AIS-140 & IS:16833:2018/Annexure-24 of the tender document, whichever is superior.

44 BATTERY, ALTERNATOR, SELF-STARTER

- 44.1 BATTERY: The battery system shall be 24V of minimum 180 Amps-hour capacity, sealed maintenance free high cranking performance, flame retardant Acrylonitrile Butadiene Styrene (ABS)/ Polypropylene container type lead acid batteries. The batteries shall be well secured to a hinged/ pivoted or slide out type carrier for ease of access for repair & maintenance, replacement and suitably ventilated for escape of fumes but insulated against ingress of dust and moisture. The battery box shall be mounted near to the engine compartment and shall be well secured, easily accessible & ventilated. Performance requirements of the batteries shall conform to BIS: 14257-1995 or latest.

- 44.2 Battery terminals with positive locking system (e.g. angle type terminal with provision for double bolting) duly protected against all possible short circuit risk shall be provided.
- 44.3 Each battery cable shall be covered with flame retardant corrugated flexible pipe and shall be properly encased & clamped.
- 44.4 A heavy duty relay controlled double pole battery cut off switch (isolator switch) shall be provided near the driver seat on side paneling at appropriate level for disconnecting the power supply from the battery except for safety devices such as CNG leakage detector & Fire detection system and other systems as specified. All the four connection points of the battery cut off shall be properly connected - Two points of battery cut off switch shall be connected with the battery and two points shall be connected with self-starter. The battery Cut-off switch with the power plant operating, shall not damage any components of the electrical system in off position. The battery cut-off switch shall be capable of carrying & interrupting the total circuit load.
- 44.5 Double Pole Wiring: The bus shall have 24 Volt D.C with double pole wiring for all its electrical equipment except in unavoidable circumstances. An extra precaution like double electrical insulation, which shall be waterproof confirming to the Indian Standards, shall be taken to avoid spark in the bus. Engine block and Chassis will be battery grounded for functioning of spark plug and engine sensors. Both positive & negative supply of battery can be cut off through battery cut-off switch. A separate system/ mechanism shall be provided for the discharge of electro static charge induced during the operation of vehicle. Appropriate precautions shall be taken in case of single pole wiring to avoid spark in subassemblies such as self-starter, alternator etc.
- 44.6 ALTERNATOR: An adequate capacity alternator of 24 Volt DC with consistent output to take care of high idling periods in city operation shall be provided. Alternator over voltage output protection shall be provided.
- 44.7 SELF STARTER: A pre-engaged type 24 Volt DC Self-starter of adequate capacity with relay shall be fitted in the bus and so located as to minimize ingress of oil or rain water into it. The CNG pipe, hose, electric wiring etc. shall be routed away from the self-starter assembly as far as possible.

45 ELECTRICAL EQUIPMENT AND WIRING

- 45.1 WIRING & TERMINALS: Bus shall have multiplexed wiring system by using ECUs, and circuitry avoiding point-to-point wiring and use of relays and fuses. The module shall be capable to drive capacitive, resistive and high current inductive loads. Inductive loads like wiper motors, horns etc shall be driven relays preferably through optically isolated solid-state relays. All wiring between electrical components and terminations, shall have proper electrical insulation, shall be waterproof. Except as interrupted by the master battery disconnect switch, battery and starter wiring shall be continuous cables, grouped, numbered, and/ or color-coded with connections secured by bolted terminals. Wiring harness shall not contain wires of different voltages unless all wires within the harness are sized to carry the current and insulated for the highest voltage wire in the

- harness. To avoid tempering plug in type couplers shall be avoided. The cross section of the battery cable shall not be less than 70 mm².
- 45.2 Double insulation shall be maintained as close to the terminals as possible. The requirement for double insulation shall be met by wrapping harness with plastic electrical tape or by sheathing all wires and harnesses with non-conductive, rigid or flexible conduit. Strain-relief fittings shall be provided at points where wiring enters all electrical components. Grommets of elastomeric material shall be provided at points where wiring penetrates metal structures outside of electrical enclosures. Wiring supports shall be protective and non-conductive at areas of wire contact and shall not be damaged by heat, water, solvents or chafing.
- 45.3 All cables connectors shall meet the requirements specified in AIS: 052 (Bus Code) including water tightness. Pins shall be removable, crimp contact type of the correct size and rating for the wire being terminated. Unused pin positions shall be sealed with sealing plugs. Adjacent connectors shall either use different inserts or different insert orientations to prevent incorrect connections.
- 45.4 MULTIPLEX WIRING SYSTEM: The components of the multiplex system shall be of modular design thereby providing ease of replacement. The modules shall be easily accessible for trouble-shooting electrical failures and performing system maintenance.
- 45.5 The bus body will have Multiplex Wiring System. All cabling shall be as per the provisions of the AIS-052. However, the wiring shall be flame proof conforming to BIS: 2465-1984 or latest and CNG safety requirements as provided in CMVR. Wiring shall be grouped, numbered & colour coded. Wiring harnesses from the multiplex shall not contain wires of different voltage classes unless all wires within the harness are insulated for the highest voltage present in the wiring harness. Kinking, grounding at multiple points, stretching & exceeding minimum bend radius shall be prevented.
- 45.6 The wiring looms/ harness for vehicle system of the bus shall be properly routed, encased/ concealed type so mounted to eliminate chances of any spark. The bidder shall be required to provide the details of the above Multiplex wires/ cables and battery cables, wiring loom including circuit diagram, lay out of controls etc. at the time of prototype. Wiring support shall be protective & non-conducted at areas of wire contact & shall not be damaged by heat, water, solvents or chafing.
- 45.7 All electrical fittings and lights shall be fully wired up, running in flame retardant black colour PVC sleeves as per applicable Indian standards (to be specified by the bidder) and installed in a manner to facilitate easy inspection/ rectification/ replacement etc. as & when required without disturbing internal finish/ décor of the bus. Whenever any wire or cable or PVC sleeve carrying cable etc. passes through holes in the sheet metals/ structural member, suitable rubber grommets/ Bakelite inserts shall be provided in these holes to avoid direct contact between cables and sheet metal causing damage to the insulation coating. The lay out and compliance to standards should be as prescribed in CMVR.

- 45.9 Design of the electrical, electronic & data communication systems shall be modular so that each major component, apparatus panel or wiring bundle is easily separable with standard hand tools or by means of connectors. Each module except the main body wiring harness shall be removable & replaceable. Power Plant wiring shall be an independent wiring module. Replacement of engine compartment wiring module shall not require pulling wires through any bulkhead or removing any terminals from the wires.
- 45.10 EMI/EMC: The electrical system & its electronic components shall be capable of operating in the area of the vehicle in which they will be installed. Electrical & electronic equipment shall not be located in an environment that will reduce the performance or shorten the life of the component or electrical system. No vehicle component shall generate or be affected by electro-magnetic interference or radio frequency interference (EMI/ RFI) that can disturb the performance of electrical / electronic equipment. The complete bus shall conform to AIS: 004 Part 1 for EMI and AIS: 004 Part 3 for EMC in case EMC requirement is applicable at the time of delivery.
- 45.11 All electrical & electronics hardware shall be accessible & easily replaceable. It shall be mounted on an insulating panel to facilitate replacement. The mounting of the hardware shall not be used to provide the sole source ground and all hardware shall be isolated from potential EMI/ RFI.
- 45.12 All electrical/ electronic hardware mounted in the interior of the bus shall be inaccessible to passengers & hidden from view unless intended to be viewed.
- 45.13 All electrical/ electronic hardware mounted on the exterior of the vehicle i.e. not design to be installed in an expose environment shall be mounted in a sealed enclosure.
- 45.14 All electrical/ electronic hardware & its mountings shall comply with the shock & vibration requirements.
- 45.15 FUSES: All branch circuits including battery to starting motor and battery to generator/ alternator circuits shall be protected by circuit breakers or fuses sized to the requirements of the load. Electronic Circuit protection for the cranking motor shall be provided to prevent engaging of the motor for no more than 30 seconds at a time to prevent overheating. Rated current rating of the fuse shall be 1.5 times the total circuit load current in particular circuit as specified in Bus Code. The current rating for the wire used for each circuit must exceed the size of the circuit protection being used.
- 45.17 To the extent practicable, wiring shall not be located in environmentally exposed locations under the vehicle. Wiring & electrical equipment necessarily location under the vehicle shall be insulated from water, heat, corrosion & mechanical damage. Where feasible front to rear electrical harnesses should be installed above the window line of the vehicle.
- 45.18 All electrical motors shall be easily accessible for servicing.

- 45.19 Two separate additional out-lets are to be provided with appropriate relays & fuses in wiring harness for fitment of electrical auxiliary devices/ systems to be added later on in the buses, if required.
- 45.20 CHARGING LOCATION: One AC (Alternating Current) out-let of 220V will be provided at suitable location for charging of electrical/electronic equipment like Mobile Phone and another for charging of Electronic Ticketing Machine etc. near entrance door.
- 45.21 If any electronic components have an internal clock, it shall have their own battery back up to monitor time when battery power is disconnected.
- 45.22 All electronic component suppliers shall ensure that their equipment is self-protecting in the event of shorts in the cabling and also in over voltage and reverse polarity conditions. If an electronic component is required to interface with other components, it shall not require external pull up and/ or pull down resistors.
- 45.23 RF components such as global positioning system (GPS) etc. whenever provided shall use coaxial cable to carry the signal. The RF systems require special design consideration for losses along the cable. Connectors shall be minimized, since each connector & crimp has a loss, which will attribute to attenuation of the signal. Cabling should allow for the removal of antennas or attached electronics without removing the installed cable between them.
- 45.24 Notwithstanding with the above requirements bus wiring and cabling, wires, cable connectors, cable terminator, fuses, cable color code, switches, electrical circuit, cable harnessing, layout etc. generally conform to the Bus Code and AIS:028 requirements.
- 45.25 All electric / electronic systems shall have protection against reverse polarity.
- 45.26 ISOLATION SWITCH: Isolation switch shall be provided for each electrical circuit which has RMS voltage equal to or more than 100Vrms.

46 LIGHTS AND LIGHT SIGNALLING SYSTEM

- 46.1 EXTERNAL LIGHTS AND LIGHT SIGNALING AND INDICATING SYSTEM: External lighting, light signaling and indicating systems of the bus shall comply to the CMVR and AIS-052 as amended from time to time.
- 46.2 INTERNAL LIGHTS AND LIGHT SIGNALING AND INDICATING SYSTEM: Internal light, signaling and indicating system shall provide adequate illumination inside the bus for the safe operation by the driver and the passengers during darkness other conditions of reduced visibility. Internal illumination devices are Cab Lamp, Passenger Area (Saloon) Lamps, Entry/Exit lamps, lamps for Instrument Cluster, Control Unit, Locker, Electrical Distribution, Engine Compartment etc. It is preferable to use LED based lamps where ever it is possible. In Passenger area LED lamps shall be fitted. Illumination levels for interior lighting shall be as per the requirements laid down in AIS-052.

- 46.3 LED Lights: Interior saloon lighting shall be LED Lights of High Power Cool White or equivalent with illumination level in line with AIS 052 to be mounted in two separate circuits in staggered formation for uniform lighting.
- 46.4 Cabin Light Level: Illumination level in the cabin shall be in line with AIS 052.
- 46.5 Saloon Light and Entry/Exit Door Light Level: Illumination level shall be in line with AIS :052.
- 46.6 In order to avoid glare to the driver while in motion, illumination of the area at least up to the driver partition shall be shut off while in motion by an appropriate separate switching mechanism linked with the opening & closing of the exit door. The light ON/OFF switching can be through automatic with door closing/opening or separately through manual switching by the driver.
- 46.7 Headlamps conforming to CMVR requirements including head levelling device with relay and side light etc. shall be suitably styled into front-end construction. All lighting and light signaling devices, its fitment and performance shall comply with requirements of CMVR and/or AIS 052 Bus Code.
- 46.8 White on front side and Red on rear side end out line (height marker) lights shall be fitted at both top side corners of the front and rear panel of the bus respectively.
- 46.9 Side Turn Signal Indicators, Tail light signal, Brake signal, Reverse & parking light shall be fitted as per the provisions of the CMVR. Side markers shall be provided on both sides as per bus code/ AIS 008.
- 46.10 All the lights, their wattages lighting systems shall conform to the requirements of Bus code, CMVR and other relevant AIS standards and shall be arranged aesthetically.
- 46.11 The following lights shall be actuated when the headlight are 'ON' and the doors are 'Open':
- 46.11.1 Lights provided for illuminating exit/entrance door area, the lights shall illuminate the outside area up to at least one meter when door/doors is/are opened. The lights for exit/entrance door areas shall be flushed as far as possible to avoid tripping of passengers, protrusions if any shall conform to relevant CMVR/ AIS Standards.
- 46.11.2 Exterior door lights-Lights shall be automatically switched off when the door is closed.
- 46.12 A well-lighted bus registration number plate shall be fitted at Front & rear as per the provisions of CMVR. The Contractor shall be required to comply with the directives/ regulations regarding high security number plates as notified by the Government of India. The registration number plate is also to be displayed / fitted on both sides of the bus.
- 46.13 Electrical fittings shall not be mounted on both front and rear bumpers.

46.14 A reverse buzzer shall be installed at the rear of the bus to sound intermittently when reverse gear is engaged.

46.15 A suitable light shall also be provided in the engine compartment for ease of maintenance/emergency repairing.

46.16 The bus shall be fitted with fog lamps as prescribed in CMVR.

46.17 Switches shall be fitted through evenly loaded circuits & fuses as per the bus code.

47 POLLUTION UNDER CONTROL (PUC) CERTIFICATE HOLDER

A suitable holder with clear acrylic sheet cover shall be provided in driver cab near driver seat at appropriate level for fixing of PUC certificate.

48 CONDUCTOR BUZZER

An electric buzzer shall be provided in the driver's cab. The buzzer's switch shall be provided near the rear door at an appropriate location for easy operation by the conductor.

49 CONSPICUITY

A retro-reflective tape complying with AIS 90 specifications for conspicuity will be pasted on the vehicle. In front it will be of white colour, on side of the vehicle it will have yellow colour and in the rear of the vehicle it will be of red colour. The tape and make has to be Type Approved.

50 PROVISIONS FOR ADVERTISEMENT CARD HOLDERS/EXTERIOR ADVERTISEMENT FRIENDLY DESIGN

The bus should have a provision for replaceable 'Coving Panels' (PVC panels) for advertisements on both sides of the bus. These panels of suitable size should be insertable in a bracket matching with the bus contours fixed above window frame and below roof sealing. The maximum number of panels as could be accommodated along the length shall be provided.

51 INTERIOR NOISE AND PASS BY NOISE

Interior noise level shall be in accordance with AIS: 153 as amended from time to time. Interior noise level of buses with rear engine shall not exceed 80 dB (A), when tested as per IS: 12832-2010 (Reaffirmed 2016), as amended from time to time. The pass by noise of the vehicle shall confirm to CPCB/CMVR when tested as per IS: 3028:1998 or latest rev. Type approval testing and certificate by the test agency under CMVR, rule 126 shall be produced before prototype approval.

52 BODY INSULATION MATERIAL

Body insulation material shall be Polyurethane or Glass Wool of minimum thickness of 40mm and minimum density of 40 Kg/m³. Materials superior to the ones shall also be permitted.

53 INGRESS OF DUST AND RAIN WATER

- 53.1 All body joint, front safety glass, doors, windows and hatches should be so constructed that it does not permit ingress of rainwater in the fully closed condition. It is recommended that design shall be validated by checking water proofing test as per IS:11865 latest version
- 53.2 All body joint, front safety glass, doors, windows and hatches should be so constructed that it does not permit ingress of dust in the fully closed condition. It is recommended that design shall be validated by checking dust proofing test as per IS:11739 latest version.
- 53.3 It is recommended each bus shall be verified the water proof test at the time of final inspection.

54 TOOL KIT

The Contractor shall provide a suitable tool kit and other mandatory items as per CMVR 138 (4)/ other applicable rules comprising of common tools and other essential items required. The complete list of tools in the tool kit to be supplied with every bus shall be provided to the Purchaser.

55 FASTENERS

- 55.1 All MS Solid rivets used shall conform to BIS: 2155-1962 (or latest) and all Aluminium solid rivets shall conform to AS: 280:62: JUL: 2001 (or latest). All the blind rivets shall conform to AS: 226:62: JUL: 2001 (or latest).
- 55.2 Only High Tensile (HT) steel self-locking type Nuts, conforming to Property Class-8 of BIS: 7002-1972 (or latest) & BIS: 1367 (Part-8) (or latest) shall be used in the complete bus body.
- 55.3 All the steel Hexagonal head bolts used shall be Cold Rolled, high tensile type conforming to property Class-8.8 of BIS Specification No.IS:1364-1975 (Part-I) & IS: 1367-1975 (Part-2 & 3) (or latest). These steel bolts shall be of superior quality. The nuts shall conform to IS: 1364 (Part-3) & IS: 1367 (Part-2 & 6).
- 55.4 Wood Screws, Machine Screws, Self-Tapping Screws shall be also of standard makes. All bolts, Machine Screws, Wood Screws, Plain Washers, MS Solid Rivets etc. shall be galvanized before assembly.

56 TECHNICAL INFORMATION TO BE FURNISHED BY THE BIDDERS ALONG WITH THEIR BID

The bidders shall submit techno commercial information of the buses offered as per Proforma-A of Section IX and technical specification details of the offered product as per Proforma-B of Section IX. General Drawings comprising of elevations–sides, front & rear ends along with main dimensions i.e. overall length, overall width, overall height, saloon height, pillar to pillar distance, isometric views, drawing for the cross section of the bus, exterior & interior details, seating layouts, no. of seats (excluding seat for the driver) are to be submitted along with their bid etc. However, the successive Bidder shall also submit the detailed working/ fabrication drawings of structure, final drawing for the cross section of the bus, different assemblies/ sub-assemblies, components/ sub-components of bus body (including windscreen and window glasses) etc. for inspection point of view.

All the documents details are to be submitted along with the bid in accordance to the checklist as per the Annexure- 19.

57 OPERATION AND MAINTENANCE MANUAL

At least 5 hard bound copies for every 100 buses or part thereof of Operation and Maintenance Manual containing essential technical information required for satisfactory operation, inspection and maintenance shall be supplied by the Contractor.

One set of Coloured wall charts shall also be provided of the following units for every fifty buses showing assembly details:

- i Bus lubrication points.
- ii Engine assembly
- iii Transmission system
- iv HVAC system
- v Rear axle assembly
- vi Front axle assembly
- vii Air Suspension
- viii CNG Cylinders Layout with Pipeline fitment from Receptacle to Engine
- ix Power Steering assembly
- x Self starter
- xi Alternator
- xii Fuse Box details with their rating and uses.
- xiii Electric circuit diagram of wiring harness for the complete bus.
- xiv Brake system
- xv Air curtain
- xvi Demister

58 TRAINING

For each lot of 100 buses or part thereof, following training shall be provided by the Contractor. The Contractor shall arrange orientation training at New Delhi for two days for 275 drivers in batches of 25 (total 550-man days). Similarly, orientation training at New Delhi for 3 days for 250 technicians/ supervisors/ engineers in batches of 25 (Total 750 man-days). Bus/ fuel/ available facilities with the Purchaser will be provided by the Purchaser and course materials will be provided by Contractor on free of cost basis. This training will be provided free of cost, as and when required by the Purchaser during the currency of Contract.

59 INSPECTION AND TESTING

The joint sample sealing shall be carried out for the material as per Annexure-14 and the manufacturer shall declare the bus identification number/ chassis no. for which the material is to be used. The stage inspection shall be carried out jointly by the authorized Purchaser's and bus manufacturer's representative. The structure stage inspection will be carried out for prototype bus complying to the FEA certification. The FEA certification shall be submitted at least 10 days before prototype structure stage inspection. The Pre-dispatch inspection stage (PDIs) of the buses shall be carried out jointly at the manufacturer's works after obtaining all required lab test reports duly passed from authorized lab. The Contractor shall inform at least 7 days before to the purchaser for PDIs stage inspection. The Final stage Inspection of buses shall be carried out jointly at Central Workshop-I, Delhi Transport Corporation, Banda Bahadur Marg, Delhi – 110 009 or at any other unit of the Corporation. The inspection shall be carried out as per the inspection plan (Annexure 11) & the inspection proforma at Annexure 15A,15B,15C,15D,15E and 15F. The bus shall be taken over by the Purchaser after satisfactory final inspection, testing and trials in Delhi.

The bus manufacturer shall submit the Model approval certificate from STA Delhi alongwith the following valid documents at the time of delivery of bus to the Corporation:

- i. Sale certificate in original Form 21
- ii. Valid transit insurance certificate
- iii. Valid Temporary registration certificate,
- iv. Road-worthiness certificate in Form 22 from the manufacturers, [Form 22-A Part-2 of the Manufacturer]
- v. CNG Cylinders no. & testing certificate
- vi. Delivery challan

60 MAINTENANCE SPARES AND MATERIALS

- 60.1 The contractor shall provide the details of the components/spares required for maintenance of the FULLY BUILT AC CNG PROPELLED LOW FLOOR BUSES and for the operation taking daily utilization of bus. The contractor shall also provide complete details of vendors, rate of each & every component/ spares for complete bus and the spare parts catalogue in 5 sets for every 100 buses or part thereof shall be submitted along with the prototype bus. The contractors shall ensure that during the service life of 12

years or 10,00,000 km whichever is earlier of the bus, adequate spare parts in kit form/ individual components are made available in time to the purchaser on demand along with other essential items required.

- 60.2 Supplier of buses shall ensure provision of adequate maintenance support for complete technology transfer and capacity building of the DTC to ensure minimum 92% availability of the buses during the warranty period. The maintenance support shall ensure there is complete skillset generation within DTC and the dependence of the bidder for maintenance is negligible at the end of agreed warranty period. The maintenance support shall include but not limited to the following:
- 60.2.1 Training of workmen/supervisors/mechanics/any other staff on the replacement of bus parts
- 60.2.2 Assistance, by the way of demonstration whenever applicable, to the staff of the DTC in adhering to the standard maintenance protocol for the buses (daily checks), preventive and breakdown maintenance) to ensure 92% availability of the buses on daily basis.
- 60.2.3 Capacity building of drivers/supervisors/and any other staff members to ensure efficient and professional operations.
- 60.2.4 Support and supervision in any major maintenance requirement including repairs arising out of accidents and breakdowns.
- 60.2.5 Spares and after sales service: The supplier shall ensure availability of spare parts and after sales services in DTC for the buses offered in the bid by furnishing an undertaking on the official letterhead for the entire life of the buses i.e. 12 years or 10,00,000 km whichever is earlier. The suppliers will share the OEM details of the spares with DTC enabling to make procurement of spares from OEM.

61 MAINTAINABILITY

The bus shall be manufactured/ fabricated in such a manner that facilitates easy access for repair & maintenance, removal, replacement of various bus components/ assemblies/ sub-assemblies/ systems by providing suitable traps/ flaps etc. Also removal and re-fitment of engine, transmission, radiator etc. shall be easy for repair & maintenance purpose. Radiator coolant/water filling and CNG filling shall be easily accessible with suitable closures with locking arrangement/-holding arrangement.

62 WARRANTY/ GUARANTEE

The fully built bus shall be covered under Warranty/ Guarantee for a period of three years or operation of buses up to 2,10,000 Kms., individually for each bus whichever is earlier from the date of placement in service after registration from Transport Department, Delhi ("**Warranty Period**"). All the assemblies, sub-assemblies, fitments, components would be covered under Warranty Period as per Clause-24.0 of General Conditions of Contract.

63 GENERAL REQUIREMENTS

- a. The Purchaser reserves its right to alter, modify, change the specifications as per requirement to suit the latest provisions of CMVR/ any other Notifications, safety aspects, emission aspects besides any practical/ operational difficulties etc. faced by the Purchaser. The Vehicle Manufacturer shall ensure that all the alterations, changes or modifications in the specifications, if necessary, as mentioned above shall be carried out in the buses built by them as per the advice of the Purchaser without attributing any additional cost. Complete bus has to be type approved from the approved test agency under CMVR as per specifications laid herein before any proto type is given to DTC.
- b. Details of structural members, their material specifications & dimensions i.e. cab & saloon flooring, cross bearers, various angles, floor longitude, main body pillars, dummy/stump pillars, cant rail, vent rail, waist rail, skirt rail, wheel arch section, sole bar, seat rail, roof sticks & roof longitudes, diagonal bracing, Rub rail tube, stretch & body panel stiffeners, gussets etc. shall be provided by the vehicle manufacturers along with their bids.
- c. Similarly, details of Aluminium sheets/sections & their alloys/specifications, rub rail, decorative mouldings, wire cover, wearing strips, footsteps edging, various panel beadings, window frames and its sections, finishers, water gutter channel, roof grab rail brackets and other brackets (Aluminium/ plastic moulded) shall be provided by the vehicle manufacturers along with their bids.
- d. All edges shall be rounded off and shall not cause injury to bus occupants.
- e. Complete bus shall be rattling free.
- f. All the rivets and bolts holes shall be jig drilled as far as possible or manually drilled. Rivet heads neatly formed and each bolt/ rivet shall be tightened after full mating of the surfaces to be fastened.
- g. All safety aspects should be considered while designing and fabricating the bus.
- h. Continuous piano type hinges and tower bolts of stainless steel shall be used as per relevant Indian standards.
- i. Similarly, Aluminium extruded sections & beadings, wherever not painted shall be anodized.
- j. All flaps wherever provided should have heavy-duty support to keep it open for ease of maintenance.
- k. All miscellaneous M.S pipes shall be cold phosphate with the coating of 2.16 to 2.70 gm/m² or galvanized or by any other anti-rust pre-treatment process conforming to Indian/ international standards (to be specified by the Bidder).

- l. All M.S pipes used in the bus shall be ERW conforming to BIS 3601:1984 or latest, of grade WT –160.
- m. All rubber items used on the bus body shall be made of Ethylene Propylene Dien Monomer (EPDM) rubber of black colour conforming to the Indian/ International Standards to be specified by the Bidder. The quality of EPDM material shall be as per the AIS 085 Standard. EPDM rub rail of aesthetic profile shall be fitted in anodized extruded aluminium channel between stretch panel and skirt rail longitudinally at the widest portion of the bus.
- n. Every trap/-opening flap shall be secured in a manner that the vibrations can't dislodge it. Lifting devices must not protrude above the flap.
- o. Ease of accessibility to engine & other aggregates for easy maintenance shall be ensured. Assemblies / units shall be so mounted that they are easily accessible & can be removed without disturbing other components / assemblies.
- p. All structure, body, and panel-bending mode frequencies, including vertical, lateral, and torsional modes, shall be sufficiently removed from all primary excitation frequencies to minimize audible, visible, or sensible resonant vibrations during normal service.
- q. Exterior projections/protrusions if any shall conform to the provisions of relevant CMVR/ IS/ AIS-052. The exterior rear-view mirrors and required lights and reflectors are exempted from the protrusion requirement. Advertising frames shall protrude no more than 22 mm from the body surface and shall have the exposed edges and corners rounded to the extent practicable. Grilles, doors, bumpers and other features on the sides and rear of the bus shall be designed to minimize the ability of unauthorized riders to secure toeholds or handholds. The exterior body features shall be shaped to allow complete & easy cleaning by automatic bus washers without snagging washer brushes or retaining water & dirt.
- r. Hydraulic Grease Nipples shall be provided for ease of proper lubrication & maintenance.
- s. The front panels, bumpers and grill should be designed such that there are no pointed or sharp protrusions to minimize injuries to vulnerable road users in case of impact.
- t. For proper air ventilation, 200 mm 24V DC cabin fan shall be provided on each side pillar on both side of the bus and one fan in driver's cabin.
- u. All internal & External structure members including MS sheets shall be galvanized or phosphated. In case due to technical constraints if MS structural members are used the same should be subjected to corrosion prevention treatment by applying iron or zinc phosphate by dipping method or by other superior method. After drilling and welding operations corrosion prevention treatment shall be carried out by spraying or brushing. In order to prevent intermediate galvanic corrosion proper coating and sealing shall be done. Drilled and welded contacts shall be ensured by applying the rust preventive coating.

64 QUALITY ASSURANCE

- a. The Contractor shall use materials including fasteners conforming to relevant Indian/ International standards and shall get the same pre-tested before use, meeting requirements of all the specified parameters to ensure quality of the material specified. However, random sample of materials as per the list given in the Annexure-‘13’ picked up and duly sealed by the representative of Purchaser in the presence of the Contractor, out of the purchased lot at the works of the manufacturer or out of the bus under fabrication/ completed bus and will be sent for testing the quality of components at CIRT, Pune/ ARAI/ BIS approved testing laboratories/NABL Lab/I-Cat, Manesar/CPRI, Bengaluru (for fuse testing) having testing facilities for testing all the parameters of the specifications of the materials/ items. In the event of failure of samples in lab tests the testing shall be conducted in the same way again from the fresh lot. The Contractor shall replace the failed materials by those duly passed in lab tests.
- b. In the event of failure of material/ items in laboratory test, failure of material/ items (removed from the completed bus) in laboratory test, acceptance decision about the bus be taken by the Purchaser after obtaining recoveries from the supplier.
- c. Wherever, the failure of material on one parameter or more than one parameter, the recoveries for the complete lot of materials used in the bus plus 20% damages thereof shall be made from the Contractor.
- e. The Contractor shall provide the bill of material along with quantum used in a bus for each of the item/ component/sub component & any spare etc. and raw material used in the manufacturing of the bus to decide the lot for sample testing etc.
- f. The alternate brand meeting the contract specifications may be allowed with prior intimation to the Purchaser subject to meeting the required specification/ standard. The Contractor shall be responsible to inform about any change in name of manufacturer of item/ material to be used in bus body fabrication to the Purchaser. However, for the items covered in type approval Certifications, the alternate brand/manufacturer will be considered only if supported with the Extended type approval Certifications. Also, Contractor shall stop using any item/ material from a lot lot fails whose sample has been failed in the lab test during testing.
- g. All type of fuses shall be tested as per AIS 028 upto 25 Amp and fuses of higher ratings as per relevant/ manufacturer standard.

65 STATUTORY REQUIREMENTS

The Contractor shall meet all statutory requirements in respect of each and every item of the bus. The Contractor shall also obtain the Type Approval certificates etc. for bus & any other items from the testing agencies specified in the CMVR namely Vehicle Research & Development Establishment, Ahmednagar of the Ministry of Defence of the

Government of India or Automotive Research Association of India, Pune or CIRT, Pune specified by the Central Government on the date of testing/ Type Approval.

Type Approval Certificate shall include all the test reports carried out by the test agency in support of Contractor's claim of compliance to the specification as laid herein. It would be Contractor's responsibility to provide the tender specifications to the agency while seeking Type Approval certificate. Contractor shall provide details of make/type/model of various units like engine, automatic transmission system, propeller shafts, front axle, rear axle, radiator, alternator, starter, regulator, batteries, tyres, steering, instruments on the panel, air compressor, shock absorbers, air bellows etc. shall be furnished. The Type Approval Certificate complete in all respect shall be furnished at least 10 days before the inspection of prototype of bus. However, the one-time testing of HVAC System, shall be carried out from the authorized agencies, in case the said system is not covered under Type Approval Certification to be issued by the Testing Agency.

66 MANUFACTURER'S NAMEPLATE

Manufacturer's nameplate may be fixed as per the following locations:

- a. One inside at front left of the bus
- b. One outside at rear right of the bus
- c. Only one logo, if any, outside the front face preferably in the centre.

67 HEATING, VENTILATION AND AIR CONDITIONING (HVAC) CLIMATE CONTROL SYSTEM:

- (a) The HVAC system shall be provided for heating as well as cooling of the interior whole compartment of the Bus as per the environmental conditions of Delhi.
- (b) The whole bus body shall be thermally insulated with flame retardant Polyurethane or glass wool of minimum 40 kgs/m³ density as per bus code.
- (c) The bus shall be provided with aesthetically roof mounted Air-conditioning system (i.e. evaporator and condenser unit) at the rear of the centre of the bus driven by main engine conforming to Indian/International standards. The system shall be so mounted to facilitate ease of access for repair & maintenance. Proper care shall be taken for insulating the system for optimum efficiency. Proper AC ducting shall be installed inside saloon for uniform distribution of air-conditioned flow. Air conditioning system shall be CFC free.
- (d) A properly sized alternator/charging system shall be selected to support the Air-conditioning system and to improve reliability & efficiency of the system. The system shall be designed to meet any future regulations on refrigerant etc.

- (e) Automatic Electronic temperature control arrangement shall be provided for AC system.
- (f) In case of AC failure, proper air ventilation in the form of 24V DC, 200mm cabin fan shall be provided on each side pillar on both side of the bus and one fan in driver's cabin.
- (g) A high output two speed demister shall also be fitted in the driver's cabin to draw fresh air.
- (h) A suitable & proper AC ducting shall be provided for the centralized air conditioning as per recommendations for the AC unit for effective and smooth airflow to cover the entire saloon area with proper insulation and jointing to the condenser and evaporator units to minimize/ eliminate chances of any leakage.
- (i) The Air Conditioning System-Specifications and test procedure for type approval will be as under:

Sr. No.	Description	Specifications
1	Specifications	a) For up to 42°C of saloon temperature and b) For > 42°C of saloon temperature
2	Target results	a) 24± 4°C (up to 42°C) b) Temperature gradient of 15° (> 42°C of saloon temperature) e.g. If the saloon temperature is 45°, then the target temperature inside the bus is 45° - 15° = 30° c) Minimum average air velocity at air vent is 4.5 m/s
3	Procedure	1. Soak for 1 hour 2. At 2000 rpm 3.Upto 42°C: pull down time 30 minutes (maximum) (for more than 42°C of saloon temperature, pull down time within 40 minutes (maximum)) 4. Thermocouple to be placed over place minimum 20 numbers. at nose level
4	AIR CURTAINS	Air Curtains on entry/exit gates to avoid loss/gain of heat and or cool air when doors are frequently opened for boarding/alighting of Passenger with min air flow of 1000±50 m³/hr at each gate. The automatic switch 'on' & 'off' of the air curtain shall be linked with the service door on which it is fitted. The air curtains shall operate only with the operation of HVAC system. There shall be provision of automatic switch 'on' & 'off' for operation of air curtains with opening and closing of the service doors respectively. Type of air curtains at entry exit gates their power

Sr. No.	Description	Specifications
		consumption etc be accounted for while deciding engine power, etc.
5	Additional requirements	
5.1	Air circulations and ventilation in driver's area	An air passage/duct/roof hatch to be provided at a suitable location for proper inflow of air inside the driver cab/saloon. Drivers work area to be provided with blower or suitable device (200 mm diameter fan) to ensure proper ventilation. These devices may be capable of 3 – speed adjustment.
5.2	Maximum noise levels inside the saloon (irrespective of AC/fuel type/engine location)- as per AIS 153	80 dba

SECTION IX: TECHNO-COMMERCIAL EVALUATION PROFORMAS

TECHNO COMMERCIAL EVALUATION

PROFORMA - A

[PART 1: PRODUCTION CAPABILITY AND QUALITY CONTROL]

Sl. No.	Details	To be filled in by the Bidder			Documents to be Submitted by the Bidder.
1	Name of the Firm & Registered Office Address				
2	Address :				
(a)	Factory with Telephone & e-mail address				Registration Certificate of the Factory and License for manufacturing Buses
(b)	Office with Telephone & e-mail address				
3	Status of the Firm				
(a)	Proprietary/ Partnership/ Company/ Corporation.				Proprietorship Certificate, Partnership Deed/ Company Certificate
4(a)	Name & Address of Proprietors / Partners/ Directors (Separate Sheet may be added, if required).				
4(b)	Name of the person authorized to sign the Tender Document:				Certificate for authorized person.
5	Annual Turnover and Income Tax paid for the last three years. (Rs. In Millions)	Year	Turnover	Income Tax Paid	Copy of the Balance Sheet
		2016-17			
		2017-18			
		2018-19			
6	Total Capital invested (As on 31 st March, 2019) (Rs. In Millions)				
(a)	Land investment (Rs. In Millions)				
(b)	Building investment (Rs. In Millions)				
(c)	Plant & Machinery (Rs. In Millions)				
(d)	Inventory (Rs. In Millions)				
(e)	Others with details, if any (Rs. In Millions)				

Sl. No.	Details	To be filled in by the Bidder			Documents to be Submitted by the Bidder.
7	Area of the Factory				
(a)	Total Land Area (Sq. Meters)				
(b)	Built up Area (Sq. Meters)				
8	Connected Electrical Load in KW.				
9	No. of Personnel employed				
(a)	Professionals	2016-17	2017-18	2018-19	
	MBA				
	M.Tech.				
	Engg. Graduate				
	Diploma Engg.				
	ITI Certificate				
	Total				
(b)	Others				
	Arts Graduates				
	Science Graduates				
	Commerce Graduates				
	High School & above				
	Others				
	Total				
10	Bus Design & Evaluation Facilities:				
	In house facilities (Yes Or No)				
	If no, then Name & Address of the Firm to carry out the work Out-sourced				
	(Furnish the following details in both the cases i.e. In house facilities and Out-sourced facilities)				
11	Type & Value of Machinery & Equipment Installed in working condition, required for Bus Body fabrication (for offered Design) (Separate Sheet may be added, if required)				
	In house	Yes/ No			
	Out sourced	Yes/ No			
12	Details of Inspection Equipment for Quality				

Sl. No.	Details	To be filled in by the Bidder	Documents to be Submitted by the Bidder.
	Assurance available In-house. (The details of Inspecting Equipment for Receipt Stage, In process Stage of Inspection and Final Inspection)		
13	Details of Inspection Equipment for Quality Assurance of Out-sourced work. (The details of Inspecting Equipment for Receipt Stage, In process Stage of Inspection and Final Inspection)		
14	Total Bus building/ Production Capacity per Month		Documents Necessary in compliance to 13.1 (e) of Section V
(a)	Buses of Present Design (CNG buses)		
(b)	Buses of other Design (CNG/ Diesel)		
(c)	Total Estimated Capacity		
(d)	Commitments on Date of Tender		
(e)	Net Buffer Capacity		
15	Inventory of Material normally carried		
(a)	In terms of Value (Rs. In Millions)		
(b)	In terms of Period (Months)		
16	Type Approval (Name of the Testing Agency alongwith Certificate Number & Date)		
(a)	The CNG Bus offered	Yes/ No	Copy of the Type Approval
(b)	Other chassis/Bus Chassis	Yes/ No	Copy of the Type Approval
17	Design Collaboration: - Address & other details - Proof of Collaboration		
18	Manufacturing Collaboration - Address & other details - Proof of Collaboration		
19	Quality Certificate (from reputed/ recognized Firm)		Copies of Certificates

Sl. No.	Details	To be filled in by the Bidder	Documents to be Submitted by the Bidder.
	- Certificate No. - Date of Validity.		
20	Details of Safety Critical Items with their Type Approval certificate No. and Date (wherever applicable)		Copies of Certificates
21	Details of		
(i)	Quality Management System Certification (e.g. ISO: 9001:2015)		Copies of Certificates
(ii)	Environment Management System (e.g. ISO: 14001-2015)		Copies of Certificates
(iv)	Others, if any		Copies of Certificates
22	Submission of General Drawings of the offered Design of the bus as mentioned in Clause-56 of Technical Specification Section – (VIII).	Yes/ No.	

- A) No. and Type of CNG Propelled Chassis and/ or complete CNG Buses during at least preceding 3 years ending on 31st March'2019:

S. No.	Year	P.O Ref	Name of the Customer	In-house Yes/No	Outsourced Yes/ No	Name & Address of the Firm. If Outsourced	No. & Type of CNG Chassis/ Buses built			
							Present (Low Floor Design)	CNG Chassis/ Buses	Other Design	Total
1										
2										
3.										

Note: Have the buses been satisfactorily commissioned and giving trouble free services?) (Attach certificates from the Purchasers/ Customers)

*P.O. - Purchase Order

- B) Types & Models of the different Hardware Facilities.

S. No	Description	In-house Yes/ No	Out-sourced Yes/ No	Name & Address of the firm. If Outsourced.	Details
1	No. of Work Stations				
2	Make/ Model				
3	Capacity				
4	Man Power - Details Employees for Design and Evaluation purpose & their Qualifications.				

- C) Manufacturing Facilities

S. No	Description	In-house Yes/ No	Out-sourced Yes/ No	Name & Address of the firm. If outsourced.	Details
1.	Components fabrication				
2.	Body Parts				
3.	Phosphating/ Galvanizing (Zinc coating) Treatment processes				
4.	Different Jigs & Fixtures				
5.	Chassis Type				
6.	Bus Aggregates				
6.1	- CNG Engine				
6.2	- Transmission				
6.3	- Front Axle				
6.4	- Rear Axle				

S. No	Description	In-house Yes/ No	Out-sourced Yes/ No	Name & Address of the firm. If outsourced.	Details
6.5	- Air Suspension				
6.6	- Radiator				
6.7	- Power Steering				
6.8	- Wheels				
6.9	- Tyre				
6.10	- CNG Cylinders				
6.11	- Brake System				
6.12	- Other Assemblies/				
6.13	- Sub- Assemblies/ Aggregates.				

D) Testing facilities of Aggregates:

S. No	Description	In-house Yes/ No	Out-sourced Yes/ No	Name & Address of the firm. If Out sourced.	Details
1	CNG Engine				
2	Transmission System				
3	Final Drive				
4	Electrical System				
5	Bus Body Components				
6	Chemical/ Metallurgical Testing				

(The Bidder shall furnish the details for the Sample Testing/ Type Approval/ Conformity of Production (COP) (as applicable) of each aggregate of the Vendor during the last two years minimum.)

N.B.: Please note that misrepresentation of facts/ falsification of information on the part of the Bidder is liable to rejection of Tender and forfeiture of their Earnest Money Deposit by the Purchaser, besides any other action as deemed fit.

Name: _____
Address: _____

Telephone No: _____
e-mail address: _____

Signature with Date & Name of Authorized Person signing
(NAME OF THE FIRM & SEAL)

List of Documents/ Items required along with General Performance Data (Documents shall be enclosed duly signed attested by the authorized person of the firm)

1. Registration Certificates of the Factory.
2. Proprietorship Certificate/ Partnership Deed/ Company Registration Certificate)
3. Copies of Balance Sheets for the last three years.
4. Complete list of Instruments/ Equipment required for Inspection at the Receipt Stage, In-process Stage and Final Stage.
5. Copies of the Type approval of the complete bus, Aggregates/Safety Critical Items as applicable to be submitted along with the bid document or before PDI of the prototype bus.
6. Copies of Documents in respect to the Design Collaboration.
7. Copies of Documents in respect to the Manufacturing Collaboration.
8. Certificate of Authorization for the Person to sign the RFP Document.
9. Copies of Quality Management System Certificates.
10. Copies of Quality System Certificates.
11. Copies of Environment Management System Certificates.
12. Copies of Certificates from previous Purchasers/ Customers for satisfactorily commissioning & trouble-free services for the Present Design/ other Design of Buses by the Bidder.
13. Submission of the General Drawings of the offered Design of the Bus.
14. Time Schedule (PERT CHART) for various Activities involved in Delivery of Prototype Bus.

Note: Please note that wherever Certificates have been cited, Copies may please be enclosed.

PROFORMA 'B'

TECHNO-COMMERCIAL EVALUATION
(PART-2 TECHNICAL SPECIFICATIONS OF THE OFFERED BUS)

(Information is to be provided by the bidder against each of the items mentioned below)

N.B.: Please note that misrepresentation of facts/falsification of information on the part of the bidder is liable to rejection of tender and forfeiture of their Earnest Money Deposit by the Purchaser, besides any other action as deemed fit

Note: The Bidders are requested to take note of the following instructions for providing technical information of their offered Bus:

1. The specifications given against various items/features/parameters are only in brief. Details may kindly be seen in section VIII.
2. Specification standards wherever indicated in the Technical Specification (Section VIII) conforming to the specification standards as amended up to date/latest.
3. Wherever dimensions are indicated the same shall be subject to standard tolerances as applicable.
4. Wherever "ISI mark" or "E-mark" item is being offered clearly specified with respect to relevant standard applicable for the material to be used in the offered bus.
5. Kindly specify the certificate mark being used (whether Indian Standard ISI mark or E mark) and to give the number also.
6. No change in the manufacturer's brands or brands as indicated by the contractor in the bid and/ or in the contract in normal course is allowed and the contractor is at liberty to mention as many brands as possible in the bid itself. However, the alternate brand meeting the contract specifications may be allowed with prior intimation of the Purchaser subject to meeting the required specification. For the items covered in type approval Certifications, the alternate brand/manufacturer will be considered only if supported with the Extended type approval Certifications.

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
	TYPE OF OFFERED FULLY BUILT CNG BUS	AC	
1	Details of Bus Manufacturer		
1.1	Name & Address		
1.2	Telephone No.		
1.3	Fax No.		
1.4	E-mail Address:		
1.5	Contact Person:		
1.6	Type & General Commercial Description(s):		
1.7	Plant/(s) of Manufacture (addresses)		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
2	Type approval of bus (If available submit with the Bid otherwise 10 days before the inspection of prototype)		
2.1	Approval certificate no.		
2.2	Date		
2.3	Name of approving agency		
3	Bus Structure Design for Finite Element Analysis (FEA) (If available submit with the Bid otherwise 10 days before the inspection of Structure Stage Inspection of the prototype)		
3.1	Approval certificate no.		
3.2	Date		
3.3	Name of approving agency		
4	Bus Characteristics		
4.1	Type of Control	Full forward control	
4.2	General appearance, seating layout and structural details of roof, floor, sides, front & rear show, Cross section drawing of the bus and driver's cab: Enclosed separately:-Yes/ No.		
4.4	Comfort Category:		
4.5	Position of CNG Engine		
4.5.1	Dimension (in mm) (Specify drawing reference):		
5	Bus Dimensions:		
5.1	Overall Length (mm): (Over Body excluding bumper)	12000 mm (Minus tolerance of 100mm)	
5.2	Overall Width (mm): (At sole bar/Floor level at extreme points)	2600mm (Minus tolerance of 30mm)	
5.3	Overall Height(unladen) (mm): (At extreme point)	As per CMVR(maximum 3800mm)	
5.4	Wheelbase(mm)	6100 with tolerance of -200 and + 400 mm	
5.5	Overhang (mm) :		
5.5.1	Rear Overhang	As per CMVR	
5.5.2	Front Overhang	As per CMVR	
5.6	Wheel Track mm:		
5.6.1	Front		
5.6.2	Rear		
5.7	Max. Stable Inclination:		
5.7.1	Left		
5.7.2	Right		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
5.8	Angle of Approach (Unladen)	As per IS:12218	
5.9	Angle of Departure(Unladen)	As per IS:12218	
5.10	Ramp Over Angle (Half of the Break over angle)	As per IS:12218	
5.11	Axle Clearance(mm)	Not less than 190 mm.	
5.12	Wheel Area Clearance(mm)		
5.13	Low Floor Height above ground (mm) (Unladen) (with bus un-kneeled):	Maximum 400 mm	
5.13.1	At Front Service Door		
5.13.2	At Rear Service Door		
5.14	Minimum Ground Clearance (mm) (with bus un-kneeled):		
5.15	Slope of Floor(if any, with horizontal - longitudinal plane) :	As per AIS:052/ AIS: 153.	
5.16	Minimum turning circle Dia. (mm)	As per IS:9435 and IS:12222	
5.17	Minimum turning Clearance circle Dia. (mm)	As per IS:9435 and IS:12222	
5.18	Saloon Height (mm)(Center of Gangway):	As per AIS:052	
5.18.1	At Front Axle:		
5.18.2	At Rear Axle		
5.18.3	Other areas	As per AIS:052	
5.19	Gangway:	As per AIS:052	
5.20	Gradability (Stand-start)(With AC ON if installed)	Sufficient tractive force to pull over load of 20% during peak hours over 17 % gradient.	
6	Bus Body		
6.1	Overstructure:		
	Sectional dimensional Details of all/complete Super-structural Members like-main body/dummy pillar, cant rail, vent rail, waist rail, wheel arch section, seat rail, roof stick & longitudes, diagonal bracing, rub rail,stretch & body panel stiffener etc. as per the following format for each:	Super-structure using CRCA steel tubes (ERW) conforming to minimum BIS:4923-1997 (or latest) of Grade-Yst 240 at least, IS: 808-1989 & IS:2062 for angles IS:513 for formed angles	
	Manufacturer		
	Shape		
	Size		
	Thickness		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
6.2	Understructure:		
6.2.1	Sectional dimensional Details of all/complete Super-Structural Members like- - cross bearer for flooring, angles, formed angles, floor longitudes, skirt rail, sole bar & gussets etc. any other member as per the following format for each:	Super-structure using CRCA steel tubes (ERW) conforming to minimum BIS: 4923-1997 (or latest) of Grade-Yst 240 at least. IS: 808-1989 & IS:2062 for angles IS:513 for formed angles	
i	Manufacturer		
ii	Type		
iii	Material		
iv	Shape		
v	Size		
vi	Thickness		
vii	Standard		
7	Paneling		
7.1	Interior		
7.1.1	Manufacturer		
7.1.2	Material	Acrylonitrile Butadiene Styrene (ABS) conforming to relevant National or International Standards	
7.1.3	Thickness		
7.1.4	Standard (National or International Standards)		
7.1.5	Details for Panels sizes:		
7.2	Exterior :		
7.2.1	Roof paneling		
7.2.2	Manufacturer		
7.2.3	Material	Aluminium Sheets	
7.2.4	Thickness		
7.2.5	Standard	BIS –737-1986(or latest) Aluminium alloy H-2/31000 (minimum)	
7.2.6	Details for Panels sizes:		
7.3	Stretch Panel:		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
7.3.1	Manufacturer		
7.3.2	Material	GI Sheets	
7.3.3	Thickness		
7.3.4	Standard	BIS: 277-2003 (or latest) Class – VIII medium coating of Zinc nominal weight 120 gms/M ²	
7.4	Skirt Panel:		
7.4.1	Manufacturer		
7.4.2	Material	Aluminium Sheets	
7.4.3	Thickness	Minimum 1.5mm	
7.4.4	Standard	BIS –737-1986(or latest) Aluminium alloy H-2/31000 (minimum)	
7.5	Front end :		
7.5.1	Manufacturer		
7.5.2	Material	GI Sheets	
7.5.3	Thickness		
7.5.4	Standard	BIS: 277-2003 (or latest) Class – VIII medium coating of Zinc nominal weight 120 gms. /M ²	
7.6	Rear End		
7.6.1	Manufacturer		
7.6.2	Material	Aluminium Sheets	
7.6.3	Thickness		
7.6.4	Standard	BIS –737-1986(or latest) Aluminium alloy H-2/31000 (minimum)	
7.7	Other side Panel:		
7.7.1	Manufacturer		
7.7.2	Material		
7.7.3	Thickness		
7.7.4	Standard		
8	Insulation for Roof & side Structure		
i.	Manufacturer		
ii.	Material	Flame retardant polyurethane or glass wool	
iii.	Density	40kgs/m ³ minimum	
iv.	Specification / Standard		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
v.	Any other detail		
9	Insulation for Engine Compartment		
i.	Manufacturer		
ii.	Fire-retardant Material		
iii.	Density	128 kgs/m3	
iv.	Specification / Standard		
v.	Any other detail		
10	Aluminium Extruded section		
10.1	Section dimensions Details of all/complete Aluminium sections used in the bus like: rub rail, decorative moulding, wearing strip, foot step edging, panel beading, any other aluminum extruded sections as per the following format:		
i	Manufacturer		
ii	Specification / Standard	IS: 733-1974 (or latest) for Solid Section, IS: 1285-1975 or latest for Extruded Round Tube & Hallow Section and IS: 738-1977or latest for Drawn Tubes, Alloy 63400, tempering WP.	
iii	Any other detail		
iv	Material and Mechanical Properties of Super-structural Members		
10.8	Roof grab rail brackets		
i.	Aluminum extruded/ Plastic moulded		
ii.	Manufacturer		
iii.	Specification / Standard		
iv	Any other detail		
11	Floor Materials		
11.1	Manufacturer		
11.2	Material	Marine board	
11.3	Thickness	19mm thick	
11.4	Standard	BIS: 710-1976 (or latest) & Fire Retardant as per BIS: 5509-2000 (or latest).	
11.5	Anti – Skid material		
i.	Manufacturer		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
ii.	Material	Anti-skid type Silicon Grains material	
iii.	Thickness	3mm thickness	
iv.	Standard	Indian/ International Standards.	
11.6	Ramp (manually operated) to be fitted on floor at rear entrance door used for wheelchair for differently abled persons.	As per AIS-153	
i.	Useable surface of ramp	Minimum 800 mm wide	
ii.	Material		
iii.	Load carrying capacity	Minimum 300 Kg	
iv.	Details of device to prevent the wheel chair rolling off the sides when the length exceeds 1200 mm		
v.	Other details		
11.7	Space for one wheel chair	As per AIS-153	
i.	Length	1300 mm minimum	
ii.	Width	750 mm minimum	
12	Details of Assemblies: Make, Type etc.		
12.1	Engine:		
12..1.1	Manufacturer:		
12.1.2	Type:	Compressed Natural Gas Fuel Engine with electronic ignition system and exhaust emissions maintained at specified levels [Bharat Stage IV or Euro-IV subject to meeting additional requirement, if any of any further standards as imposed by law & further improved standard as applicable on the date of manufacture].	
12.1.3	Model Number		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
12.1.4	No. of Cylinders		
12.1.5	Bore(mm):		
12.1.6	Stroke(mm):		
12.1.7	Displacement		
12.1.8	Compression Ratio		
12.1.9	Spark Plug :		
12.1.9.1	Type		
12.1.9.2	Manufacturer		
12.1.10	Air Fuel Regulation system:		
12.1.10.1	Type		
12.1.10.2	Manufacturer		
12.1.11	Type of Combustion:		
12.1.12	Maximum power output :		
12.1.12.1	(Out put ___ PS at ___ RPM)		
12.1.12.2	(Output ___ HP at ___ RPM)		
12.1.12.3	(Output ___ KW at ___ RPM)		
12.1.13	Maximum Torque (NM): (Specify the torque with RPM)	Adequate Torque.	
12.1.14	Crankcase Oil Capacity(Ltrs.) (Including oil filters):		
12.1.15	Turbocharger, if any.:		
12.1.15.1	Make		
12.1.15.2	Model		
12.1.15.3	Other Details:		
12.1.16	Performance Details:		
12.1.16.1	Engine performance Information/ Graphs to be attached in this form:	Performance data/ curves & other details of the engine shall be provided by the bidder	
i.	Engine speed vs. road speed		
ii.	Torque vs. engine speed		
iii.	Horsepower vs. engine speed		
iv.	Fuel consumption vs. engine speed		
12.1.16.2	Engine Mounted on vehicle performance:		
i.	Vehicle speed vs. time (both loaded & unloaded)		
ii.	Vehicle speed vs. gradient (both loaded & unloaded)		
iii.	Acceleration		
iv.	Change of speed vs. time		
v.	Maximum Speed, full load(KMPH):		
12.1.17	Specific fuel consumption in gms. per Kw hour at standard conditions		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
12.1.21	Weight of engine		
i.	Dry		
ii.	Wet		
12.1.22	Catalytic Converter:		
i.	Manufacturer		
ii.	Type		
iii.	Type Approval Certificate Number & Date:		
12.1.23	Air Filter		
i.	Manufacturer:		
ii.	Type:		
12.1.24	CNG Fuel Filter:		
i.	Manufacturer:		
ii.	Type:		
12.2	Transmission		
12.2.1	Manufacturer		
12.2.2	Type	Multi-speed automatic transmission system.	
12.2.3	Model Number		
12.2.4	Speeds	Related speed compatible with engine.	
12.2.5	Gear Ratios	With suitable ratios compatible with Engine.	
i.	Forward		
ii.	Reverse		
12.2.6	Shift Speeds (Kms/hour):		
i.	1 st – 2 nd		
ii.	2 nd – 3 rd		
iii.	3 rd - 4 th		
iv.	4 th - 5 th		
v.	5 th – 6 th (if applicable)		
12.2.7	Oil Capacity(Ltrs):		
12.2.8	Other Details:		
12.3	Front Axle:		
12.3.1	Manufacturer:		
12.3.2	Type:	Solid beam Axle & Grease type front bearing & seals of reliable and proven design.	
12.3.3	Model:		
12.3.4	Gross Axle Weight:		
12.3.5	Axle Capacity		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
	(Adequate capacity to take care of maximum GVW & crush loading.)		
12.4	Rear Axle:		
12.4.1	Manufacturer:		
12.4.2	Type:	Reliable & proven design of adequate capacity to take care of maximum GVW.	
12.4.3	Model:		
12.4.4	Gross Axle Weight:		
12.4.5	Axle Capacity: (Adequate capacity to take care of maximum GVW & crush loading.)		
12.4.6	Axle Ratio:		
12.4.7	Oil Capacity(Ltrs):		
12.5	Air Suspension System		
12.5.1	Front		
i.	Manufacturer:		
ii.	Type	Air Bellows with Stabilizer bar	
iii.	Capacity		
iv.	Standard		
12.5.2	Rear		
i.	Manufacturer:		
ii.	Type	Air Bellows with Stabilizer bar	
iii.	Capacity		
iv.	Standard		
12.5.3	Front Shock Absorbers:		
i.	Type:		
ii.	Manufacturer:		
iii.	Standard/Standard mark		
12.5.4	Rear Shock Absorbers		
i.	Type		
ii.	Manufacturer		
iii.	Standard/Standard mark		
12.5.5	Kneeling Effect:	Minimum 60mm	
12.6	Wheels & Tyres:		
12.6.1	Wheel Rims:	AIS/ BIS: 10694 (part 3)-1991 or latest	
12.6.1.1	Make		
12.6.1.2	Size (Corresponding size to the tyres)		
12.6.1.3	Type		
12.6.2	Tyres:		
12.6.2.1	No. & Arrangement of Wheels:		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
i.	Front:	Two	
ii	Rear:	Four	
12.6.2.2	Manufacturer		
12.6.2.3	Type	Steel Radial Tubeless as per AIS: 044 Part-1.	
12.6.2.4	Size	11 R 22.5-16 PR	
12.6.2.5	Inflation Pressure - Unladen:		
i.	i) Front:		
ii.	ii) Rear:		
12.6.2.6	Inflation Pressure - Laden:		
i.	i) Front:		
ii.	ii) Rear:		
13	Power Steering:		
13.1	Manufacturer		
13.2	Model		
13.3	Type	Hydraulic Power Assisted re- circulating ball type.	
13.6	Power Steering Fluid Capacity:		
13.9	Steering Wheel Diameter (mm)		
14	Brakes:		
14.1	Make of Fundamental Brake System		
14.2	Type		
14.3	Brake Operation Effort		
14.4	Brake Chambers Size.		
14.4.1	Front		
14.4.2	Rear		
14.5	Brake Discs/Drums		
14.5.1	Front:(Discs)		
i.	Manufacturer		
ii.	Diameter(mm)		
14.5.2	Rear (Drums)		
i.	Manufacturer		
ii.	Diameter(mm) (Internal)		
14.6	Brake Lining		
14.6.1	Front:		
i.	Manufacturer		
ii.	Type		
iii.	Brake Linings Per Shoe		
14.6.2	Rear:		
i.	Manufacturer		
ii.	Type		
iii.	Brake Linings Per Shoe		
14.7	Slack Adjuster's Type.	Auto Slack Adjuster.	
14.7.1	Front		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
i.	Manufacturer		
ii.	Other details		
14.7.2	Rear:		
i.	Manufacturer		
ii.	Other details		
14.8	Performance Details: (With respect to speed & braking distance)		
14.9	Performance Details: (Parking Brakes with respect to gradient)		
14.10	Parking Brake:		
i.	Make		
ii.	Model		
iii.	Type	Pneumatic flick valve type	
iv.	Location		
v.	Lining Material		
14.11	Air dryer		
i.	Manufacturer		
ii.	Type		
14.12	Provision for obtaining effectiveness of service brake system and/or for deactivating the spring actuated brakes in case of loss of air in the system or failure of Engine. Details be enclosed separately: Yes/No		
15	Radiator:		
15.1	Manufacturer:		
15.2	Type:	Heavy-duty Radiator with de-aeration tank & pressurized cap.	
15.3	Model:		
15.4	Total Cooling System Capacity (Ltrs.)		
15.5	Surge Tank, Capacity		
15.6	Engine Thermostat Temperature Setting:		
15.7	Initial Opening($^{\circ}$ C)		
15.8	Fully Opened($^{\circ}$ C):		
15.9	Overheat Alarm System		
15.10	Overheat Alarm Temperature Sending Unit Setting($^{\circ}$ C):	Arrangement for audio-visual signal shall be provided in the event of engine getting over-heated excessively.	

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
15.11	Shutdown Temperature Setting(°C):		
15.12	Type of coolant		
15.13	Specification / Standard		
15.14	Water mix ratio		
15.15	Life / Drainage period (Kms)		
16	Air Reservoir Capacity(Cubic Cm):		
i	No. of Reservoir		
ii	Type		
16.1	Supply Reservoir		
16.2	Primary Reservoir		
16.3	Parking Reservoir		
16.4	Accessory Reservoir		
16.5	Other Reservoir Type		
17	Doors:		
17.1	Front	Ahead of the front axle	
i.	Height:		
ii.	Width:		
iii.	Door aperture (without Flaps)		
iv.	Clear door width (in fully open condition)		
v.	Type of door	Electro-pneumatically controlled	
vi.	Details for the Hand rails/ Hand hold / Handles to be provided on the door.		
17.2	Rear	At the rear of the Rear Axle	
i.	Height:		
ii.	Width:		
iii.	Door aperture (without Flaps)		
iv.	Clear door width (in fully open condition)		
v.	Type of door	Electro-pneumatically controlled	
vi.	Position of Service Door from the Centre of the Rear Axle.	As per AIS-052	
vii.	Details for the Hand rails/ Hand hold / Handles to be provided on the doors.		
17.3	Operating Equipment:		
i.	Manufacturer		
ii.	Type & details of Operating Equipment:		
iii.	Opening/Closing time :		
iv.	Positions of controls		
v.	Standard		
vi.	Control Circuit (Schematic diagram) Enclosed Separately:-		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
vii.	Details for the Electronic sensor.		
17.4	Door Hinges and locks :	As per Indian standard/AIS-052	
17.4.1	Door Hinges:		
i.	Type		
ii.	Manufacturer		
iii.	Standard		
17.4.2	Door-lock		
i.	Type		
ii.	Manufacturer		
iii.	Standard		
18	Safety Glasses:		
18.1	Front Windscreen (Laminated):	As per IS:2553(Part-2) –1992 or latest	
i.	Manufacturer:		
ii.	Identification		
iii.	Type:	Single piece design, plain/ flat with curve at sides, PVB film laminated safety glass.	
iv.	Numbers:	One	
v.	Sizes:		
vi.	Thickness:	Minimum 8 mm.	
vii.	Wind Shield Mounting arrangement		
18.2	Side Window Glass:	As per IS:2553(Part-2) –1992 or latest	
i.	Manufacturer		
ii.	Identification		
iii.	Type:	Flat and light tinted (As per CMVR) Fixed type toughened glass	
v.	Sizes:		
vi.	Thickness:	4.8 mm to 5.3 mm.	
vii.	Glass Mounting Arrangement:		
18.3	Rear Windscreen:	As per IS:2553 (Part-2) –1992 or latest	
i.	Manufacturer:		
ii.	Identification		
iii.	Type:	Curved toughened glass with plain/flat at centre.	
iv.	Numbers:	Single piece	

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
v.	Sizes:		
vi.	Thickness:	6 mm	
vii.	Wind Screen Mounting Arrangement		
18.4	Emergency Exit Windows Glass:	As per IS:2553(Part-2) –1992 or latest	
i.	Manufacturer:		
ii.	Identification		
iii.	Type:		
iv.	Numbers:		
v.	Sizes:		
vi.	Thickness:		
vii.	Glass Mounting Arrangement:		
18.5	Driver's Door Window Glass:	As per IS:2553(Part-2) –1992 or latest	
i.	Manufacturer:		
ii.	Identification		
iii.	Type:		
iv.	Numbers:		
v.	Sizes:		
vi.	Thickness:		
vii.	Glass Mounting Arrangement:		
18.6	Front Service Door Glasses:	As per IS:2553(Part-2) –1992 or latest	
i.	Manufacturer:		
ii.	Identification		
iii.	Type:		
iv.	Numbers:		
v.	Sizes:		
vi.	Thickness:		
vii.	Glass Mounting Arrangement:		
18.7	Rear Service Door Glasses:	As per IS:2553 (Part-2) –1992 or latest	
i.	Manufacturer:		
ii.	Identification		
iii.	Type:		
iv.	Numbers:		
v.	Sizes:		
vi.	Thickness:		
vii.	Glass Mounting Arrangement:		
18.8	Driver's Partition Glass:	As per IS:2553 (Part-2) –1992 or latest	
i.	Manufacturer:		
ii.	Identification		
iii.	Type:	Tinted	

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
iv.	Numbers:		
v.	Sizes:		
vi.	Thickness:		
vii.	Glass Mounting Arrangement:		
18.9	EPDM Rubber		
i.	Manufacturer:		
ii.	Type:		
iii.	Colour	Black	
iv.	Standard/Standard mark	AIS 085	
18.10	Adhesive material for fixing of glass:		
i.	Manufacturer:		
ii.	Type:		
iii.	Colour		
iv.	Standard		
18.11	Details for any other type of glass on the same above pattern, if any.		
18.12	The Details of window design, fitment etc. Enclosed separately --YES/NO:		
19	Passenger Seats:		
19.1	Manufacturer		
19.2	Type of seats	PPLD/LDPE	
19.3	Total Seating capacity:	Minimum 35 Nos. (Excluding Driver)	
19.4	Standard / Standard mark:	As per AIS-023, Standard AIS-052 & BIS Standard	
19.6	Seat Layout:	2x 2	
19.8	Seat Base		
	Seat base standard/specification and relevant dimensions	As per AIS-023	
i.	Width of available space for one seating position:	As per AIS-023	
ii.	Depth of Seat Base:		
iii.	Seat Width:		
iv.	Seat Base Height from ground:		
19.9	Seat Pad material:		
i.	Type:	Moulded Polyurethane cushion	
ii.	Manufacturer:		
iii.	Standard/ Specification:	As per Bus Code	
	Standard/ Specification & relevant dimensions	As per AIS-023 & AIS-052	
iv.	Thickness:		
v.	Dimensions (L x W)		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
19.10	Seat Back Rest		
i.	Height of Backrest:		
ii.	Width of Backrest:		
19.11	Seat Back Pad material:		
i.	Type:	Moulded Polyurethane cushion	
ii.	Manufacturer:		
iii.	Standard/ Specification:	As per Bus Code	
	Standard/ Specification & relevant dimensions	As per AIS-023 & AIS-052	
iv.	Thickness:		
v.	Dimensions (W x H)		
19.12	Upholstery:		
i.	Type:	Fire retardant expanded vinyl coated fabric, Type A , Class A	
ii.	Manufacturer:		
iii.	Standard:	IS: 8698	
iv.	Thickness:	As per IS: 8698 Grade I	
19.13	Clearance space for seated passengers facing partition:	As per AIS-023	
19.14	Minimum Foot Room:	As per AIS-023	
19.15	Free Height over seating position:	As per AIS-023	
19.16	Area for seated passengers (Sqm.):		
19.17	Area for Standee passengers (Sqm.):		
19.18	Standee capacity: (Supported by calculation as per Bus Code)		
19.19	Seat Frame structure material:		
19.19.1	Frame section size:		
20	Driver's seat:		
20.1	Name of Manufacturer:		
20.2	Type of seat		
20.3	Standard / Standard mark:	As per AIS-023	
	Standard/ Specification & relevant dimensions	As per AIS-023 & AIS-052	
20.5	Seat Base		
i.	Depth of Seat Base:		
ii.	Seat Width:		
iii.	Seat Base Height from ground:		
20.6	Seat Pad material:		
i.	Type:		
ii.	Manufacturer:		
iii.	Standard:		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
iv.	Thickness:		
v.	Dimensions (L x W)		
20.7	Seat Back Rest		
i.	Height of Backrest:		
ii.	Width of Backrest:		
20.8	Seat Back Pad material:		
i.	Type:		
ii.	Manufacturer:		
iii.	Standard:		
iv.	Thickness:		
v.	Dimensions (W x H)		
20.9	Upholstery:		
i.	Type:		
ii.	Manufacturer:		
iii.	Standard:		
iv.	Thickness:		
20.10	Seat Frame structure material:		
i.	Frame section size:		
20.11	Head Restraint:		
i.	Name of Manufacturer:		
ii.	Type:		
21	Weight:		
21.1	Bus kerb weight Kg.:		
i.	Front Axle:		
ii.	Rear Axle:		
iii.	Total		
21.2	Gross Bus Weight Kg.:		
21.3	Maximum permissible weights Kg.:		
i.	Front Axle:		
ii.	Rear Axle:		
22	Air Compressor:		
22.1	Manufacturer:		
22.2	Type:		
23	Paint:		
23.1	Manufacturer:		
23.2	Type:	PU Paint (Two-pack system).	
23.3	Standard	BIS: 13213-1991 (or latest) Standards	
23.4	Primer		
i.	Manufacturer:		
ii.	Type:		
23.5	Putty		
i.	Manufacturer:		
ii.	Type:		
23.6	Surfacer		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
i.	Manufacturer:		
ii.	Type:		
23.7	Other Items Required Before applying PU Paint:		
i.	Name of the Items:		
ii.	Manufacturer:		
iii.	Type:		
23.8	Standard for Colour Shades:	Shades – IS: 5-1978 (or latest).	
23.9	No. of paint coats		
23.10	Other details.		
23.11	Anti-Rust treatment:		
23.11.1	Hot Treatment		
i.	Type of treatment	Phosphating/ Galvanizing (Zinc coating)	
ii.	Standard/specification	BIS:3618 for Phosphating/ IS 277-2003,120gsm for Galvanizing (Zinc coating)	
iii.	Coating	Class-A-2 for Phosphating/ IS 277-2003,120gsm for Galvanizing (Zinc coating)	
23.12	The details of corrosion prevention of the internal surfaces of structural tubing. Enclosed separately-YES/NO		
23.13	Other details		
23.14	Cold phosphating of M. S. Pipes		
i.	Type of treatment process		
ii.	Standard/specification		
iii.	Details for the chemical name, their manufacturer & their brand name etc.		
iv.	Other details		
24	CNG Cylinder:		
24.1	Manufacturer:		
24.2	Type:	CNG Cylinders	
24.3	Conforming standards:	Conforming to Indian Standards duly approved by statutory authority for various requirements with certificate of	

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
		approval from Chief Controller of Explosive (Govt. of India, Nagpur).	
24.4	No. of Cylinders:		
24.5	Capacity of each Cylinder		
24.6	Total Capacity of all Cylinders:	Adequate capacity to facilitate daily operation of over 250 KMs per filling of CNG in Cylinders of the bus at initial gas settled pressure of 200 Bar at 15° C (excluding the minimum residual CNG required if any to be retained in the Cylinders)	
24.7	Mounting location of the Cylinders:		
24.8	Total Time for filling full capacity CNG starting from minimum residual CNG required:	Ultra-fast filling within maximum of 5 – 7 minutes.	
24.9	Mounting arrangement of CNG cylinders for stability :		
24.9.1	Standard		
24.9.2	Material:		
24.9.3	Lay out		
24.10	Pipe lines & other accessories (Safety valve, joints etc.)		
24.10.1	Manufacturer		
24.10.2	Standard		
24.11	The details of the CNG system and its items along with the proof of their conforming to all statutory & other safety requirements. Enclosed separately- YES/NO		
24.12	The details Diagram of fast filling arrangement of CNG cylinders, piping/tubing, safety valves, joints details and other fitments. Enclosed separately- YES/NO		
25	Speed limiting device:		
25.1	Type		
25.2	Temper proof (Yes/No.)	Dully approved	

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
		/certified as per AIS –018/2001 or latest, Temper proof and be adjusted to applicable speed limit of 40 KMPH in Delhi	
25.3	Name of Type Approval Agency alongwith Certificate No & date		
25.4	Other details:		
26	Interior Lighting & Illumination:		
26.1	Driver Cab Lighting:	Shall illuminate the half of the steering wheel nearest the driver.	
i.	Manufacturer:		
ii.	Type:		
iii.	Number:		
iv.	Illumination Intensity:		
v.	Standard/Standard Mark		
26.2	Passenger Compartment Lighting:		
i.	Manufacturer:		
ii.	Type:	LED Lights	
iii.	Number of Lights:		
iv.	Illumination Intensity:		
v.	Standard/Standard Mark		
26.3	Engine Compartment Lighting:	Suitable light for illuminating the engine compartment.	
i.	Manufacturer:		
ii.	Type:		
iii.	Standard/Standard Mark		
26.4	Other Area Lighting:		
i.	Illumination Intensity:		
ii.	Manufacturer:		
iii.	Type:		
iv.	Standard/Standard Mark		
v.	Number of Fixtures (with locations):		
27	Batteries:		
i.	Manufacturer:		
ii.	Model:		
iii.	Type:	Sealed maintenance free type lead acid batteries	

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
iv.	Capacity (Amps. Hrs.)	24 V, Minimum 180 Amps. Hours	
v.	No. of batteries.		
vi.	Standard	BIS: 14257-1995 (or latest).	
28	Passenger Exterior Lighting:		
28.1	Number Plate Light:	As per CMVR/AIS.	
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Number:		
iv.	Colour:		
v.	Standard/Standard Mark		
vi.	Wattage.		
28.2	Tail Light:	As per CMVR/AIS.	
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Number:		
iv.	Colour:		
v.	Standard/Standard Mark		
vi.	Wattage.		
28.3	Front Parking Light:	As per CMVR/AIS.	
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Number:		
iv.	Colour:		
v.	Standard/Standard Mark		
vi.	Wattage.		
28.4	Rear Parking Light:	As per CMVR/AIS.	
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Number:		
iv.	Colour:		
v.	Standard/Standard Mark		
vi.	Wattage.		
28.5	Stop Light:	As per CMVR/AIS.	
i.	Name of Manufacturer		
ii.	Type:		
iii.	Number:		
iv.	Colour:		
v.	Standard/Standard Mark		
vi.	Wattage.		
28.6	Reversing Light:	As per CMVR/AIS.	
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Number:		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
iv.	Colour:		
v.	Standard/Standard Mark		
vi.	Wattage.		
28.7	Front Direction Indicator:	As per CMVR/AIS.	
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Number:		
iv.	Colour:		
v.	Standard/Standard Mark		
vi.	Wattage.		
28.8	Rear Direction Indicator:	As per CMVR/AIS.	
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Number:		
iv.	Colour:		
v.	Standard/Standard Mark		
vi.	Wattage.		
28.9	Side Direction Indicator:	As per CMVR/AIS.	
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Number:		
iv.	Colour:		
v.	Standard/Standard Mark		
vi.	Wattage.		
28.10	Emergency Signaling Equipment (Front):		
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Number:		
iv.	Colour:		
v.	Standard/Standard Mark		
vi.	Wattage.		
28.11	Emergency Signaling Equipment (Rear):		
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Number:		
iv.	Colour:		
v.	Standard/Standard Mark		
vi.	Wattage.		
28.12	Emergency Signaling Equipment (Side):		
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Number:		
iv.	Colour:		
v.	Standard/Standard Mark		
vi.	Wattage.		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
28.13	Height marker lights:	White & Red at both top side corners. (As per CMVR)	
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Number:		
iv.	Colour:		
v.	Standard/Standard Mark		
vi.	Wattage.		
28.14	Head Lights:		
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Number:		
iv.	Colour:		
v.	Standard/Standard Mark		
vi.	Wattage.		
28.15	Entrance/ Exit Door Light:		
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Number:		
iv.	Colour:		
v.	Standard/Standard Mark		
vi.	Wattage.		
28.16	Fog Lamp:		
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Number:		
iv.	Colour:		
v.	Standard/Standard Mark		
vi.	Wattage.		
29	DRIVER CABIN FAN:		
i.	Manufacturer		
ii.	Type/Model		
iii.	Size		
iv.	Colour		
29 A	Passenger CABIN FAN:		
i.	Manufacturer		
ii.	Type/Model		
iii.	Size		
iv.	Quantity		
v.	Colour		
30	Relay(s) for head light:		
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Numbers:		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
iv.	Standard/Standard Mark		
31	Relay(s) for others if any :		
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Numbers:		
v.	Standard/Standard Mark		
32	Fuses:	All branch circuits including battery to starting motor & battery to generator/ alternator circuit shall be protected by circuit breaker or fuses size to the requirement of the load. Rated current rating of the fuse shall be 1.5 times the total circuit load current of the electrical equipment as specified in Bus Code.	
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Identification:		
iv.	Numbers:		
v.	Standard/Standard Mark		
33	Electrical Cables:	As per Bus Code.	
i.	Name of Manufacturer:		
ii.	Conductor Cross Section:		
iii.	Standard/Standard Mark	As per AIS 052 Flame proof conforming to IS: 2465-1984 (or latest).	
iv.	Insulation Class:		
34	Saloon Wiring:		
i.	Name of Manufacturer:		
ii.	Conductor Cross Section:		
iii.	Standard/Standard Mark		
iv.	Insulation Class:		
35	Battery Cable:		
i.	Name of Manufacturer:		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
ii.	Conductor Cross Section:	Minimum 70 mm ²	
iii.	Standard/Standard Mark	IS: 2465-1984 (or latest).	
iv.	Insulation Class:		
36	Relay controlled Battery Cut-off Switch (isolator switch):	Heavy-duty type shall be capable of carrying & interrupting total circuit load.	
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Location:		
iv.	Standard / Standard mark:		
v.	Details of relay:		
37	Switches:		
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Standard/Standard Mark	As per IS: 9433-1980	
38	P.V.C Sleeve/Conduit/casing :		
i.	Name of Manufacturer		
ii.	Type:		
iii.	Size		
iv.	Colour		
v.	Other details:		
39	Electrical Circuit:		
40	Alternator:		
i.	Manufacturer		
ii.	Type:	Adequate Capacity 24V DC with consistent output to take care of high idling period.	
iii.	Model:		
iv.	Output at Idle (Amps.):		
v.	Output at Maximum Speed (Amps.):		
vi.	Maximum Warranted Speed (r.p.m.):		
vii.	Speed at Idle (r.p.m.):		
viii.	Drive Type:		
ix.	Standard/Standard Mark		
x.	Provision of Alternator over voltage output protection.- YES/NO		
41	Starter Motor:		
41.1	Manufacturer:		
41.2	Type:	Pre-engaged type of adequate capacity	

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
		with relay 24V DC.	
41.3	Model:		
41.4	Standard/Standard Mark		
41.5	Relay(s) for self-starter:		
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Other details:		
42	Mirrors:		
42.1	Right side exterior:	As per AIS: 001 & 002.	
i.	Type:		
ii.	Dimensions		
iii.	Manufacturer:		
iv.	Standard/Standard Mark		
42.2	Left side exterior:	As per AIS: 001 & 002.	
i.	Type:		
ii.	Dimensions		
iii.	Manufacturer:		
iv.	Standard/Standard Mark		
42.3	Interior Rearview Mirror:	As per AIS: 001 & 002.	
i.	Type:		
ii.	Dimensions		
iii.	Manufacturer:		
iv.	Standard/Standard Mark		
42.4	Front Bumper Area view Mirror:		
i.	Type:		
ii.	Dimensions		
iii.	Manufacturer:		
iv.	Standard/Standard Mark		
43	Destination Signs:		
43.1	Manufacturer:		
43.2	Type:	Alphanumeric Dual Display Technology Amber colour LED based electronic route display system in English and Hindi of high intensity illumination with automatic brightness control shall be installed at the front, rear and side of bus with	

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
		GPS triggered next bus stop announcement in the bus and display on internal display board. Destination boards should comply with IS 16490 BIS standards	
43.3	Front:		
43.3.1	Route Number:		
i.	Character Length (mm):		
ii.	Character Height (mm):		
iii.	Number of Characters:		
43.3.2	Route Name/Destination:		
i.	Character Length (mm):		
ii.	Character Height (mm):		
iii.	Number of Characters:		
43.4	Side:		
43.4.1	Route Number:		
i.	Character Length (mm):		
ii.	Character Height (mm):		
iii.	Number of Characters:		
43.4.2	Route Name/Destination:		
i.	Character Length (mm):		
ii.	Character Height (mm):		
iii.	Number of Characters:		
43.2.3	Run Number:		
i.	Character Length (mm):		
ii.	Character Height (mm):		
iii.	Number of Characters:		
iv.	Message Width(mm)		
43.5	Rear:		
46.5.1	Route Number:		
i.	Character Length (mm):		
ii.	Character Height (mm):		
iii.	Number of Characters:		
43.5.2	Route Name/Destination:		
i.	Character Length (mm):		
ii.	Character Height (mm):		
iii.	Number of Characters:		
43.6	Interior Display:		
43.6.1	Route Number:		
i.	Character Length (mm):		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
ii.	Character Height (mm):		
iii.	Number of Characters:		
43.6.2	Route Name/Destination:		
i.	Character Length (mm):		
ii.	Character Height (mm):		
iii.	Number of Characters:		
43.6.3	Run Number:		
i.	Character Length (mm):		
ii.	Character Height (mm):		
iii.	Number of Characters:		
iv.	Message Width(mm)		
43.7	Dimensions of destination boards :	Sizes shall be as per IS: 16490	
43.7.1	Front :		
i.	Length:		
ii.	Breadth:		
iii.	Depth:		
43.7.2	Rear :		
i.	Length:		
ii.	Breadth:		
iii.	Depth:		
43.7.3	Side :		
i.	Length:		
ii.	Breadth:		
iii.	Depth:		
43.7.4	In Side display:		
i.	Length:		
ii.	Breadth:		
iii.	Depth:		
44	Intelligent Transport System (ITS)	AIS-140 & IS 16833:2018/ Annexure-24 of the Tender document, whichever is superior.	
i	ITS Controller with Display		
	Manufacturer:		
	Type		
ii	GPS Device with Emergency button		
	Manufacturer:		
	Type		
45	Communication System:		
45.1	P.I. System:	As per Bus Code.	
45.1.1	Amplifier:		
i.	Manufacturer:		
ii.	Model:		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
45.1.2	Microphone:		
i.	Manufacturer:		
ii.	Model:		
45.1.3	Interior. Speakers:	Two	
i.	Manufacturer:		
ii.	Model:		
iii.	Number:		
45.1.4	Exterior. Speaker:	Two	
i.	Manufacturer:		
ii.	Model No.:		
iii.	Number:		
46	Emergency Exit:	Number of Exits-As per Bus Code.	
46.1	Emergency Doors:	As per Bus Code/CMVR	
46.2	No. & type of Emergency Doors:	As per Bus Code/CMVR	
46.3	Position of First Emergency Doors:		
46.4	Dimension of First Emergency Door:		
i.	Height		
ii.	Width		
46.5	Position of Second Emergency Doors, If Provided		
46.6	Dimension of Second Emergency Door, if Provided:		
i.	Height		
ii.	Width		
46.7	Emergency Door – Warning Devices	As per Bus Code.	
i.	Name of the Manufacturer:		
ii.	Position of Device:		
46.8	Emergency Doors Locks & Hinges:	Shall comply with safety requirements as per Indian Standards.	
46.8.1	Door Lock:		
i.	Name of Manufacturer:		
ii.	Type :		
iii.	Standard/Standard Mark		
46.8.2	Door Hinge:		
i.	Name of Manufacturer:		
ii.	Type :		
iii.	Standard/Standard Mark		
47	Emergency Windows		
47.1	No. of Emergency Windows:		
47.2	Position of First Emergency Window:		
47.3	Dimension of First Emergency Window:		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
i.	Height		
ii.	Width		
iii.	Area (H x W in cm ²):	Minimum 4000 cm ² It shall be possible to inscribe in this area a 50 cm high and 70 cm wide rectangle	
47.4	Position of Second Emergency Window, If provided:		
47.5	Dimension of Second Emergency Window, If provided:		
i.	Height		
ii.	Width		
iii.	Area (H x W in cm ²):	Minimum 4000 cm ² It shall be possible to inscribe in this area a 50 cm high and 70 cm wide rectangle	
47.6	Emergency Windows – Warning Devices	As per Bus Code	
i.	Name of the Manufacturer:		
ii.	Position of Device:		
47.7	Emergency Window Locks & Hinges:	Shall comply with safety requirements as per Indian Standards.	
47.7.1	Lock:		
i.	Name of Manufacturer:		
ii.	Type :		
iii.	Standard/Standard Mark		
47.7.2	Hinge:		
i.	Name of Manufacturer:		
ii.	Type :		
iii.	Standard/Standard Mark		
48	Escape Hatch:	As per Bus Code.	
i.	No. of Emergency Hatches:	At least one.	
ii.	Type	Ejectable or Hinged type as per Bus Code.	
iii.	Position of Emergency Hatches:		
iv.	Height		
v.	Width		
vi.	Area (LxW in cm ²)	Minimum 4000 cm ² It shall be possible to inscribe in this	

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
		area a 50 cm high and 70 cm wide rectangle	
49	Driver Partition:	As per Bus Code.	
49.1	Distance of partition with respect to rear edge of driver seat(mm): (Rear most position of Driver Seat):		
49.2	Other details of partition with material etc.:		
50	Driver Area:	As per Bus Code.	
i.	Width from the right side wall(mm):		
ii.	Distance from H-point to Roof Top(mm):		
iii.	Distance between Heel Point & H-point(mm):		
iv.	Distance of H-point from Floor(mm):		
v.	Distance of lower end of steering wheel from driver seat back(mm):		
vi.	Thigh clearance of steering wheel (mm)		
51	Sun Visor:		
51.1	At windshield		
i.	Manufacturer		
ii.	Type		
iii.	Material		
51.2	At the driver's side window		
i.	Manufacturer		
ii.	Type		
iii.	Material		
52	External Projections:	Design to minimize the ability of unauthorized riders to secure footholds or hand holds. (As per Bus Code)	
i.	Ornaments(mm):		
ii.	Projection of Head Light(mm):		
iii.	Radius of curvature of individual item (mm):		
iv.	Radiator Grills (Applicable of on external surface):		
v.	Gap between individual elements:		
53	Wind Screen Wiper:	Electrically operated with two wiper arms & blades, wiper motor heavy-duty steel body with minimum 2-Speed operation. Wiping	

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
		system as per CMVR/ BIS: 7827 Part-1, 2, 3(Sec.1 & 2) or latest.	
i.	Type:		
ii.	No. of Wipers:		
54	Wiper Motor:	Variable speed with time delay relay.	
i.	Name of Manufacturer:		
ii.	Type		
iii.	Standard/Standard Mark		
iv.	Rated Voltage:	24V	
v.	Frequency of wiping:		
55	Wiper Arm:		
i.	Length:		
ii.	Manufacturer		
56	Wiper Blade:		
i.	Length:		
ii.	Manufacturer		
iii.	Rubber Material:		
iv.	Type of Fixing:	As per IS:7827, Part-3, Sec-2 : 1985	
57	Wind Screen Washer:		
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Number of Nozzles	Two	
iv.	Spray Area:		
v.	Location of Nozzles	Suitably located.	
vi.	Tank capacity:		
58	Equipment for Occupant's Safety:	CMVR & as per Bus Code.	
58.1	Driver Seat Belt:	Conforming to AIS: 005	
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Standard/Standard Mark		
58.2	Passengers seat belt:	Conforming to AIS: 005	
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Standard/Standard Mark		
58.3	Driver Seat Belt Anchorage:		
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Standard/Standard Mark	Conforming to AIS:	

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
		015.	
58.4	Passenger Seat Belt Anchorage:		
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Standard/Standard Mark	Conforming to AIS 015.	
iv.	Number:		
58.5	Wheel chair seat belt		
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Standard/Standard Mark		
58.6	Wheel Seat Belt Anchorage:		
i.	Name of Manufacturer:		
ii.	Type:		
iii.	Standard/Standard Mark		
59	Bumper:		
59.1	Front:		
i	Manufacturer:		
ii.	Material:	FRP	
iii.	Width:		
iv.	Thickness:		
v.	External Projection:		
vi.	Clearance between Bumper & Body:		
59.2	Rear:		
i	Manufacturer		
ii.	Material:	FRP	
iii.	Width:		
iv.	Thickness:		
v.	External Projection		
vi.	Clearance between Bumper & Body:		
60	Fuel Filler:	Flap Type with Lock in skirt panel & other safety gadgets fitted suitably.	
i.	Aperture:		
ii.	Type:		
iii.	Size:		
iv.	Position:	Exterior right hand side (driver side) at a convenient safe level.	
v.	Type of lock:		
vi.	Type Approval Certificate No & Date of Ultra fast filling Bus receptacle alongwith full filling capacity time		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
61	Fire Extinguisher:		
i.	Number:	2 Nos.	
ii.	Type:	Dry chemical powder type.	
iii.	Total Capacity:	10 Kgs.	
iv.	Name of Manufacturer:		
v.	Standard/Standard Mark:	BIS: 13849-1993 or latest, ISI Marked	
62	Towing Device:		
62.1	Front		
i.	Name of Manufacturer:		
ii.	Type:	Heavy Duty ring type.	
iii.	Capacity:	1.2 times (minimum) the kerb weight of the bus.	
62.2	Rear		
i.	Name of Manufacturer:		
ii.	Type:	Heavy Duty ring type.	
iii.	Capacity:	1.2 times (minimum) the kerb weight of the bus.	
63	First Aid Box:	As per provision of CMVR & Bus Code	
i.	Number:		
64	Reflector and Reflective tape:	As per CMVR.	
64.1	Front:		
i.	Name of Manufacturer:		
ii.	Type :		
iii.	Standard/Standard Mark		
iv.	Colour:		
v.	Size		
64.2	Rear:		
i.	Name of Manufacturer:		
ii.	Type :		
iii.	Standard/Standard Mark		
iv.	Colour:		
v.	Size		
64.3	Side:		
i.	Name of Manufacturer:		
ii.	Type :		
iii.	Standard/Standard Mark		
iv.	Colour:		
v.	Size		
65	Ignition Kill System:	Suitable Ignition Kill	

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
		System	
i.	Manufacturer:		
ii.	Type:		
iii.	Other details:		
66	Gas Leakage Detectors:	Cost effective and durable gas leakage detection alarming system.	
i.	Manufacturer:		
ii.	Type:		
iii.	Standard/Standard Mark		
iv.	No. of leakage detectors :		
v.	Locations :		
vi.	Other details		
67	Dashboard:	Ergonomically designed moulded type dash board and instrument panel.	
67.1	Manufacturer:		
67.2	Material:		
67.3	Dashboard Instrumentation:	Location of gauges, indicators and controls, as per bus code	
67.3.1	Air Pressure Gauge:		
i.	Manufacturer:		
ii.	Type:		
iii.	Numbers:		
67.3.2	Coolant Temperature Gauge/Indicator:		
i.	Manufacturer:		
ii.	Type:		
iii.	Temperature range:		
67.3.3	CNG Fuel Gauge/Indicator:		
i.	Manufacturer:		
ii.	Type:		
iii.	Range details		
67.3.4	Panels for:		
i.	Side Indicators:		
ii.	Headlight:		
iii.	Hand brake:		
iv.	Others, if any:		
67.3.5	Engine Oil Pressure Gauge/Indicator:		
i.	Type:		
ii.	Manufacturer:		
iii.	Range:		
67.3.6	Engine Oil Temperature Gauge:		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
i.	Type:		
ii	Manufacturer:		
iii.	Range:		
iv.	Alarm/ Indication at high temperature range		
67.3.7	Engine Oil Level Gauge/indicator:		
i.	Type:		
ii	Manufacturer:		
iii.	Range:		
67.3.8	Radiator Coolant Level Gauge/indicator:		
i.	Type:		
ii.	Manufacturer:		
iii.	Range:		
iv.	Alarm/ Indication at high & low level range.		
67.3.9	Low Battery Indicator/ Device		
i.	Type:		
ii.	Manufacturer:		
iii.	Alarm/ Indication at low battery charge		
67.3.10	Speedometer:		
i.	Type:		
ii.	Manufacturer:		
iii.	Ratio:		
iv.	Range of the speed (Zero to maximum)(Kms./hour):		
v.	Maximum Kms. reading:		
vi.	Other details:		
67.3.11	Engine RPM Meter:		
i.	Type:		
ii	Manufacturer:		
iii.	Range:		
iv.	Other details:		
68	Controls on Dashboard:	Location as per bus code	
68.1	Engine Start Switch (with key):		
i.	Type:		
ii.	Standard/Standard Mark		
iii.	Manufacturer:		
iv.	Other details:		
68.2	Wind Shield Wiper Switch:		
i.	Type:		
ii.	Manufacturer:		
iii.	Other details:		
68.3	Height marker light Switch:		
i.	Type:		
ii	Manufacturer:		
iii.	Other details:		
69	Handrails, Handholds, Stanchions		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
69.1	Position of Handrails, Handholds, Stanchions (attach dimension layout):		
69.2	Type of Anti-slip Coating/ Covering on stanchions & hand rails:	Colour contrasting and slip resistant PVC sleeve matching to the colour of interior décor	
69.3	Handrails:		
i.	Type:	ERW MS Pipe covered with 2 mm PVC sleeve matching to the colour of interior décor	
ii.	Manufacturer:		
iii.	Dimensions:	32 mm Dia. With thickness of 2 mm.	
iv.	Standard	IS: 3601	
v.	Other details:		
69.4	Handholds:	As per Bus Code	
i.	Type:	Colour contrasting and slip resistant	
ii.	Manufacturer:		
iii.	Dimensions:		
iv.	Other details:		
69.5	Stanchions:		
i.	Type	Vertically fitted, M.S. tubing with colour contrasting and slip resistant PVC sleeve matching to the colour of interior décor	
ii.	Manufacturer:		
iii.	Dimensions:	40 mm dia & 3.00 mm thick	
iv.	Other details:	High visibility bell pushes shall be fitted at a height of 1.2 meter on all alternate stanchions on both sides in the Bus.	
70	Entrance/Exit Guard:		
i.	Height from the Floor:	800mm minimum	

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
ii.	Projection from the side wall:	At least 100mm more than the centerline of the sitting position of the Passenger.	
71	Advertisement Card Holders:		
i.	Design detail of the Card holders		
ii.	Size for the Insertible Card (PVC Panels)	Size will be decided at the time of prototype.	
iii.	Nos. of Holders		
iv.	Material detail for the Holders		
72.	Fire Detection and Alarm System		
	Manufacturer		
	Standard	AIS-135	
73.	Fire suppression system		
	Manufacturer		
	Standard	AIS-135	
74	Intelligent Transport System(ITS): CCTVs		
74.1	Mobile network video recorder (m NVR)		
i	Make		
ii	Model No/Part code		
iii	Quantity		
74.2	Rugged housing for m NVR		
	Material		
	Dust and water protection	IP 66	
74.3	Panic Button		
i	Make		
ii	Model No/Part code		
iii	Quantity		
74.4	Driver Display Console	7" TFT LCD	
I	Make		
II	Model No.		
74.5	Automatic Tracking Device System		
I	Make		
II	Type		
74.6	Surveillance Camera		
I	Make		
II	Type	IP	
III	Quantity		
74.7	ITS Controller		
	Make		
75	Technical information to be furnished by the Bidders alongwith the Bid:		

Sl. No.	Description	Specifications	
		Purchaser requirement	Offered by Bidder
	The details for the Technical information to be furnished by the Bidders alongwith the Bid as per Clause-56 Section-VIII. Enclosed separately __ Yes/ No		

SECTION X: PRICE SCHEDULES

SECTION X: PRICE SCHEDULES

**ANNEXURE A1: PRICE SCHEDULE FOR FULLY BUILT AC CNG PROPELLED LOW
FLOOR BUSES MANUFACTURED IN INDIA**

Refer Financial Proposal Format (*Part II of RFP Document*)

**ANNEXURE A2: PRICE SCHEDULE FOR FULLY BUILT AC CNG PROPELLED LOW FLOOR
BUSES MANUFACTURED OUTSIDE INDIA**

Refer Financial Proposal Format (*Part II of RFP Document*)

SECTION XI:
BID FORM, PRICE SCHEDULES, ANNEXURES AND OTHER FORMATS

SECTION XI: BID FORM, PRICE SCHEDULES, ANNEXURES AND OTHER FORMATS

ANNEXURE 1: PROFORMA FOR STATEMENT OF DEVIATIONS

[TERMS & CONDITIONS STIPULATED IN INSTRUCTIONS TO BIDDERS, GENERAL
CONDITIONS OF CONTRACT & SCHEDULE OF REQUIREMENTS (Section V, VI & VII)]

Reference: Bid No.CGM/SBU/924/2019/AC

Date of Opening:

We undertake that there is no deviation from the terms and conditions stipulated in the in Instructions to Bidders, General Conditions of Contract & Schedule of Requirements (SECTION V, VI & VII)]

We accept in full all the Clauses of Instructions to Bidders, General Conditions of Contract & Schedule of Requirements (Section V, VI & VII of the RFP Document) of the RFP Document without any Deviation.

Signature and Seal of the Bidder

ANNEXURE 2: PROFORMA FOR STATEMENT OF DEVIATIONS

[TECHNICAL SPECIFICATIONS (Section VIII)]

We undertake that there is no deviation from the terms and conditions stipulated in the in Technical Specifications (Section VIII)

We accept all the Clauses of Technical Specifications (Section VIII) of the RFP Document without any Deviation.

Signature and Seal of the Bidder

ANNEXURE 3: PROFORMA FOR SUBMISSION OF BID

(Note: This Annexure forms part of the Bid)

Bidders are required to fill up all the blank spaces in this Bid Proforma and its enclosures.

Reference: Bid No.CGM/SBU/924/2019/AC

Date of Opening:

The Chairman-cum-Managing Director,
Delhi Transport Corporation,
I.P. Estate, New Delhi-110 002.

1. Having examined the 'Instructions to Bidders', 'General Conditions of Contract', 'Technical Specifications', 'Schedule of Requirements' and the Proformas/ Annexures (Section IX to XI) for the above Bid, we, the undersigned (Complete address as given in **Annexure 10A**), offer to design, manufacture, supply, test and commission and Guarantee the whole of the said Scope of Work in conformity with the said Conditions of Contract and Technical Specifications for the sum mentioned in the Price Bid (**Bid 2**) of the Bid submitted separately or such other sum as may be ascertained in accordance with the conditions. The details of the Make/ Model as well the quantity of the buses offered are given in the **Annexure 10 A**. The details of the items/ services for which we have submitted our Technical Bid and for which we have quoted the rates in our Price Schedules are given in Format as per **Annexure A1** and **Annexure A2** of Section X as applicable.
2. We acknowledge that this Annexure forms an integral part of the Bid. We also confirm acceptance of Proformas / Annexure given in Section IX to XI of the RFP Document.
3. We undertake, if our Bid is accepted, we shall commence the manufacturing of Buses as per delivery schedule offered by us to complete the Supply, Testing and Commissioning of the Buses as per the Delivery Schedules as given in **Annexure-10 B** and to guarantee satisfactory working of the buses/ fulfill our obligations under the Warranty for the period as per RFP Document.
4. If our Bid is accepted we will furnish a Bank Guarantee for Performance as Security for the due performance of the Contract. The amount and form of such guarantee will be in accordance with 'General Conditions of Contract'.
5. We have independently considered the amount shown in 'General Conditions of Contract' as pre-estimated liquidated damages and agree that they represent a fair estimate of the damages likely to be suffered by you in the event of the work not being completed in time.
6. We agree to abide by this Bid for a minimum period of **120 days** from the date of opening and it shall remain binding upon us and may be accepted at any time before the expiration of that period or any extended period mutually agreed to.
7. We agree to Clause 16 of 'General Conditions of Contract' on increase in number of buses ordered.
8. This bid, together with any further clarification/ confirmation given by us and your written acceptance thereof, shall constitute a binding contract between us.

9. We understand that you are not bound to accept the lowest or any offer you may receive against this bid. We also agree that you may change/ modify the evaluation criteria as specified in the RFP document.
10. If our Bid is accepted, we understand that we are to be held solely responsible for the due performance of the Contract.

Dated _____ day of _____

Signature & Name: _____ in the capacity of
_____ duly authorised to sign Tenders for and on behalf of

Address _____

Witness:

Signature: _____

Name: _____

Address: _____

Occupation: _____

ANNEXURE 4: PROFORMA OF BANK GUARANTEE FOR EARNEST MONEY/ BID SECURITY
(ON BANK'S LETTERHEAD WITH ADHESIVE STAMP)

To,

The Chairman-cum-Managing Director
Delhi Transport Corporation,
IP Estate, New Delhi-110 002.

Reference: Bid No.CGM/SBU/924/2019/AC

Date of Opening:

1. KNOW ALL MEN by these presents that we _____ of _____ (Name of Bank) having our registered office at _____ (hereinafter called "the Bank") are bound unto _____ (hereinafter called "the Purchaser") in the sum of _____ for which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents.
2. WHEREAS _____ (NAME OF BIDDER) (hereinafter called "the Bidder") has submitted its Bid dated _____ against Purchaser's Bid No.CGM/SBU/924/2019/AC Due on hereinafter called "the Bid".

AND WHEREAS the Bidder is required to furnish a Bank Guarantee for the sum of

AND WHEREAS _____ (Name of Bank) have, at the request of the Bidder, agreed to give this guarantee as hereinafter contained without demur.

3. We further agree as follows:
 - (a) That the Purchaser may without affecting this guarantee grant time or other indulgence to or negotiate further with the Bidder in regard to the conditions contained in the said bid and thereby modify these conditions or add thereto any further conditions as may be mutually agreed upon between the Purchaser and the Bidder.
 - (b) That the guarantee hereinbefore contained shall not be affected by any change in the constitution of our Bank or in the constitution of the Bidder.
 - (c) That any account settled between the Purchaser and the Bidder shall be conclusive evidence against us of the amount due hereunder and shall not be questioned by us.
 - (d) That this guarantee commences from the date hereof and shall remain in force till _____
 - i) the Bidder in case its bid is accepted by the Purchaser, executes a formal agreement after furnishing the Performance Guarantee as per Clause 37.0 of "Instructions to Bidders", or

- ii) Sixty days after the date of validity or the extended date of validity of the bid, as the case may be:
- (e) That the expression 'the Bidder' and 'the Bank' herein used shall, unless such an interpretation is repugnant to the subject or context, include their respective successors and assigns.

4. THE CONDITIONS of this obligation are:

- (a) if the Bidder withdraws its Bid during the period of Bid validity specified in the Form of Tender, or
- (b) if the Bidder does not accept the correction(s) of its Bid price in terms of the Instructions to Bidder.
- (c) if the Bidder having been notified of the acceptance of its Bid by the Purchaser during the period of Bid validity:
 - i) fails or refuses to furnish the Performance Security in accordance with Instructions to Bidders, and/ or
 - ii) fails or refuses to enter into a Contract within the time limit specified in the Instructions to Bidders, and/ or
 - iii) fails in any manner whatsoever to perform any act or do anything as may be required of Bidder in terms of Instructions to Bidders and/ or Letter of Acceptance.

We hereby undertake to unconditionally and irrevocably, without demur or any further requirement, forthwith pay to the Purchaser at DELHI the above amount upon receipt of the Purchaser, first written demand, without the Purchaser having to substantiate its demand.

SIGNATURE OF _____
AUTHORISED OFFICIAL OF THE BANK

NAME OF OFFICIAL: _____
DESIGNATION: _____
STAMP/ SEAL OF THE BANK

SIGNATURE OF THE WITNESS: _____

NAME OF THE WITNESS:
ADDRESS OF THE WITNESS:

ANNEXURE 5A: PROFORMA FOR PERFORMANCE STATEMENT

Bid No.CGM/SBU/924/2019/AC

Date of Opening:

- i) Details may be given for all types of Bus Chassis/ Complete Buses supplied by the Bidder in past three years.
- ii) Details are to be furnished for the supplies made by the Bidder in three years (ending on 31st March) prior to the year in which the date of Opening of Bid falls.

S. No.	Contract placed by (full Address of Purchaser)	Contract No. & Date	Description and Quantity of Buses Ordered	Value of Contract	Date of Completion of Delivery (as per Contract)	Remarks indicating reasons for Late Delivery, if any.	Has the Buses been satisfactorily commissioned and giving trouble-free service? (attach a Certificate from Purchaser)
1	2	3	4	5	6	7	8

SIGNATURE AND SEAL OF THE BIDDER

ANNEXURE 5B: PROFORMA FOR PERFORMANCE STATEMENT

Bid No.CGM/SBU/924/2019/AC

Date of Opening:

- i) Details may be given for CNG Bus Chassis/ Complete CNG Buses supplied by the Bidder in past three years.
- ii) Details are to be furnished for the supplies made by the Bidder in three Years (ending on 31st March) prior to the year in which the Date of Opening of Bid falls.

S. No.	Contract placed by (full address of Purchaser)	Contract No. & Date	Description and Quantity of Buses Ordered	Value of Contract	Date of Completion of Delivery (as per Contract)	Remarks indicating reasons for Late Delivery, if any	Has the Buses been satisfactorily commissioned and giving trouble-free service (attach a Certificate from Purchaser))
1	2	3	4	5	6	7	8

SIGNATURE AND SEAL OF THE BIDDER

ANNEXURE 6: PROFORMA OF CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT is made on the <date> between Delhi Transport Corporation having principle place of business at Strategic Business Unit, Hauz Khas Bus Terminal, Delhi Transport Corporation, New Delhi-110 016 hereinafter called "the Purchaser" of the one part and M/s. <Name of the Contractor> having its principle place of business at hereinafter called "the Contractor" of the other part.

WHEREAS the Purchaser is desirous that certain Goods and Services should be provided by the Contractor, viz. Design, Manufacture, Supply, Testing & Commissioning of Buses including prescribed warranty period of 3 years or 2,10,000 Km whichever is earlier and has accepted the Bid submitted by the Contractor for these goods and services.

NOW

THIS AGREEMENT WITNESSETH as follows:

1. In this agreement words and expression shall have the same meaning as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents of DTC's Global RFP No.CGM/SBU/924/2019/AC as amended by Amendment No.CGM/SBU/924/2019/AC/____ dated _____ & the Contractor's Bid No. _____ Dated _____ shall be deemed to form and be read and constructed as part of this Agreement, viz:
 - a. Instructions to Bidders
 - b. General Conditions of Contract
 - c. Technical Specifications
 - d. Prices Schedules as submitted by Contractor/ Bidder along with their Bid
 - e. Contractor Bid No..... dated..... submitted in Proformas 'A'/'B' of Section-IX of RFP Document with Annexure & subsequent letters.
 - f. Letter of Acceptance (LOA) bearing No.CGM/SBU/924/2019/AC/____ dated _____ and terms and conditions.
 - g. Amendments in the Contract, if any.
 - h. Other conditions agreed to and documented as listed below:
 - i. Bid's Commercial Terms
 - ii. Agreed Bidder's Time Schedule for execution of Contract
 - iii. Warranty for the Buses
 - iv. Any other conditions as applicable
3. In consideration of the payments to be made by the Purchaser to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Purchaser to provide the buses and services and guarantees the same to be in conformity in all respects with the provisions of the Contract.
4. The Purchaser hereby covenants to pay the Contractor in consideration of the provision of buses and services and guarantee of the same, the Contract Price at the times and in manner prescribed by the Contract.
5. The Contractor agrees that the essence of Contract and other contractual obligation shall

become effective from the date of Letter of Acceptance i.e. LOA. The Contractor further agrees that pre-estimated damages mentioned in RFP Document, are fair and genuine pre-estimate and not by way of penalty. The Contractor shall not dispute the same in future in any manner.

IN WITNESS WHEREOF the parties here have caused their respective Common Seals to be hereunto affixed (or have hereunto set their respective hands and seals) the day and year first above written.

SIGNED, SEALED AND DELIVERED

By the said

Name

On behalf of the Purchaser

In the presence of

Witness

Name

Address.....

By the said

Name.....

On behalf of the Contractor

In the presence of

Witness

Name

Address.....

ANNEXURE 7: AFFIDAVIT PROFORMA

(On Non-Judicial Stamp Paper of appropriate value Notarized)

An agreement has been entered between Delhi Transport Corporation, Govt. of NCT of Delhi (herein after called as 'Purchaser') and M/s _____ (complete address) (herein after called as 'Supplier/ Contractor') vide LOA No. _____ dated _____ for supply of _____.

WHERE AS Clause 36.3 of 'Instructions to Bidders' require for an undertaking in conformity with the requirement of Clause-43 of 'Instructions to Bidders', to the affect that the Supplier/ Contractor has not given any commission to any official of the Purchaser/ Delhi Government or any other agencies engaged with the procurement process indulged in any other corrupt or fraudulent practice in securing the Contract.

NOW, THEREFORE, the Contractor Solemnly affirm and declare on oath that we have not given any commission to any official of the Purchaser/ Delhi Government or any other agencies engaged with the procurement process or indulged in any other corrupt or fraudulent practice in securing the Contract in conformity with the requirement of Clause-43 of 'Instructions to Bidders' of the RFP Document of above LOA.

AND THEREFORE, verified at Delhi on this date of _____ 2019 that the contents of my affidavit are true, no part of it is false and nothing material has been kept concealed, which is given duly signed and sealed unconditionally and without any demur or reservation or protest.

SIGNATURE AND SEAL OF THE CONTRACTOR

WITNESS

**ANNEXURE 8: PROFORMA OF BANK GUARANTEE FOR 10 % CONTRACT VALUE
TOWARDS PERFORMANCE GUARANTY/ SECURITY**

The Chairman-cum-Managing Director,
Delhi Transport Corporation,
IP Estate, New Delhi - 110 002.

Contract No. Date

1. This Deed of Guarantee made this day of _____ between Bank of _____(hereinafter called the "Bank") on the one part, and Chairman-cum-Managing Director, Delhi Transport Corporation(hereinafter called "the Purchaser") of the other part.
2. Whereas Chairman-cum-Managing Director, Delhi Transport Corporation(DTC) has awarded the Contract for (Description of Item)(hereinafter called the Contract) to:
_____(Name of Contractor)
(hereinafter called the Contractor).
3. AND WHEREAS the Contractor is bound by the said Contract to submit to the Purchaser a Performance Security for a total amount of Rs.
_____(Amount in Figures and words).
4. NOW, WE THE UNDERSIGNED _____(Name of Bank)_____ do hereby unconditionally and irrevocably undertake to pay to the Purchaser an amount _____ not exceeding Rs. _____(Rupees _____ only) without any demur, merely on a demand in writing from the Purchaser stating that the amount claimed is due and payable by the Contractor. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. We, the Bank, further undertake to pay to the Purchaser (DTC) any money so demanded notwithstanding any dispute raised by the Contractor in any manner whatsoever and our liability under these presents is absolute, unconditional, unequivocal and irrevocable.
5. We, the Bank, further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement.
6. This Guarantee is valid for a period of _____(Duration in calendar months in figures and words) from the date of signing). The initial period for which this Guarantee will be valid must be for at least six (6) months longer than the anticipated expiry date of warranty period of last bus as stated in the 'General Conditions of Contract'. We undertake not to revoke this guarantee during its currency without the written consent of the Purchaser.
7. At any time during the period in which this Guarantee is still valid, if the Purchaser agrees to grant a time extension to the Contractor if the Contractor fails to

complete the works within the time of completion as stated in the Contract, or fails to discharge itself 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 Purchaser and at the cost of the Contractor.

8. The Guarantee hereinbefore contained shall not be affected by any change in the Constitution of the Bank or of the Contractor.
9. The neglect or forbearance of the Purchaser in enforcement of payment of any moneys, the payment whereof is intended to be hereby secured or the giving of time by the Purchaser for the payment hereof shall in no way relieve the Bank of their liability under this deed.
10. We, the Bank, undertake not to revoke this Guarantee except with the previous consent of the Purchaser in writing. This Guarantee shall be valid up to _____ and we undertake to renew/extend this Guarantee from time to time till the completion of performance by the Contractor of its obligations under the Contract and/or as demanded by the Purchaser.
11. The expressions "the Purchaser", "the Bank" and "the Contractor" hereinbefore used shall include their respective successors and assignees.

In witness whereof I/We of the Bank have signed and sealed this guarantee on the _____ day of _____ 2019 _____ being herewith duly authorised.

For and on behalf of the _____ Bank

Signature of Authorised Bank official
Name:
Designation:
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
Signature
Name
Address

Witness 2
Signature
Name
Address

**ANNEXURE 9: INDICATIVE PROFORMA FOR SUBMISSION OF MONTHLY PROGRESS
REPORT AGAINST THE CONTRACT**

Contract No. CGM/SBU/924/2019/AC

Dated _____

Description	Due date	Date of Submission/ Delivery
-------------	----------	------------------------------

1. Prototype Approval:
2. Submission of Design/ Drawings for Approval:
3. Approval of Design/ Drawings:
4. Commencement of manufacturing activity:
5. Progress of Deliveries:

Activity during the Month	Cumulative Total
---------------------------	------------------

- | | |
|-----|---|
| (a) | Delivery of Buses (in Nos.) |
| (b) | Inspection of Buses Completed (in Nos.) |
| (c) | Inspection call given (in Nos.) |
| (d) | Under manufacturing at different stages (in Nos.) |

* Separate PERT Chart etc. be also submitted giving details of Activities & Time Schedule.

**ANNEXURE 10A: PROFORMA FOR DETAILS OF BIDDERS INCLUDING THEIR
COLLABORATORS**

The Chairman-cum-Managing Director,
Delhi Transport Corporation,
I.P. Estate, New Delhi-110 002.

Bid No. CGM/SBU/924/2019/AC

Date of Opening:-----

Bidder:-

- i. Name:
- ii. Address:
- iii. Telephone No.:
- iv. Fax No.:
- v. e-mail address:
- vi. Contact Person:

2. Collaborator, if any:-

- i. Name:
- ii. Address:
- iii. Telephone No.:
- iv. Fax No.:
- v. e-mail address:
- vi. Contact Person:
- vii. Details of the Collaboration Agreement to be furnished:

3. Make & Model offered

4. Quantity offered

Date:

Name & Signature of Authorised

Signatory on behalf of Bidder

Place:

Address:

ANNEXURE 10B: MONTHLY DELIVERY SCHEDULE OF BUSES

Bid No. CGM/SBU/924/2019/AC

Date of Opening:

MONTHLY DELIVERY SCHEDULE OF BUSES

S. No.	Month	Elapsed time from date of LOA	Cumulative Total No. of Buses
1	2		4
	Prototype to be completed in 08 Weeks		
	<u>Supplies:</u>		
1	Delivery Milestone No. 1: to achieve supply and commissioning of 1 st lot of 40 Buses (including Prototype Bus)	Twelve (12) Weeks	40
2	Delivery Milestone No. 2: to achieve supply and commissioning of 2 nd and 3 rd lot of 240 Buses each	Twenty (20) Weeks	520
3	Delivery Milestone No. 3: to achieve supply and commissioning of 4 th and 5 th lot of 240 Buses each (100% supply and commissioning of quantity of 1000 Buses as per LOA)	Twenty-Eight (28) Weeks	1000

Note:

- We confirm that we shall supply the buses as per Delivery Schedule offered above. We understand that Purchaser reserves the right to place Contract with monthly Delivery Schedule as per details given above.
- In case of split order, the delivery schedule for ordered quantity for each Contractor to be reduced proportionately.

Date:

Name & Signature of Authorized
Signatory on behalf of Bidder

Place :

Address :

ANNEXURE 11: INSPECTION PLAN

1. MATERIAL INSPECTION:

1.1 QUALITY OF MATERIAL:

1.1.1 The materials to be used in manufacturing of buses shall conform to the specified Bureau of Indian Standards (BIS)/ Automotive Industry Standards (AIS) surpassing the performance & other requirements as given in the AIS 052. In the absence of above specifications, Association of State Road Transport Undertakings (ASRTU) Specifications could be followed. Wherever Indian standards are not available, internationally acceptable standards may be referred/ indicated such as ECE, JIS, DIN, ASTM, ISO etc. for quality assurance of material. Specifications standards wherever indicated in the Technical Specification shall be conforming to the Specifications/Standards as amended up to date/ or latest. Wherever the specifications of any item have not been notified as International/ National Standard etc. the Bidder shall provide the actual specifications of that item along with the drawings of the items indicating all relevant details. In this case the Bidder shall also submit the certificate for non-availability of International/National standard etc. The Bidder shall be required to satisfy about all the relevant standards for the material to be used in manufacturing of buses before submitting their Bids.

1.1.2 The Bus Manufacturer can use the material out of the lot, which has been approved by the lab. It is necessary to furnish latest Lab Test Report (as per specification of the contract from CIRT, Pune/ ARAI, Pune/ BIS approved Labs/NABL approved Labs/ ICAT, Manesar/ CPRI Bengaluru (for fuse testing) to the Purchaser before use in manufacturing of Buses.

1.1.3 The random samples of items as per the list (Annexure-'13') will be picked up by the Purchaser's representative and the manufacturer jointly and sealed for onward transmission by the manufacturer to the lab for inspection as per the required specification/ standards. 'ISI' or 'E' marked items of the concerned country used in manufacturing of the bus need no testing except flammability test and testing of all type of fuses.

1.1.4 The bus manufacturer shall be required to obtain type approval of all safety critical items/ materials notified in CMVR from the authorized testing agencies listed under rule 126 of CMVR before use. The bus manufacturer will be required to provide a list of such items along with their Certificates to the Purchaser.

1.1.5 The cost of all tests, analysis, and patent rights shall be borne by the Manufacturer.

1.2 PURCHASE OF MATERIAL:

1.2.1 Bills must specify the quality, standard, grade etc. of the supplied material. Inspecting officer shall satisfy himself of these details vis-à-vis those specified in the contract. The material conforming to specified quality & grade as specified in tender document and conforming to BIS/ AIS/ASRTU Specifications etc. of the tender document shall be used. Bus Manufacturers will provide documentary proof by way of bill etc. to the Inspecting officer for his satisfaction.

1.2.2 In addition, copies of the bills of the respective Manufacturers from whom these materials had been purchased shall be furnished to the purchaser, and these should also be having the details of the quality & grade etc.

1.3 In case of items/ material to be used as per specified BIS/ AIS/ASRTU Standards, the Bus Manufacturer shall be required to show & furnish a copy of the Lab Test Certificate from the BIS approved Labs near the location of the Bus Manufacturer in respect of the material proposed to be used in the manufacturing of the Bus body. 'ISI' or 'E' marked items of the concerned country used in manufacturing of the bus need no testing except flammability test & Fuse testing. Also, the lab testing will not be compulsory, in case value of any item consumed in bus body fabrication is less than 0.5 % of DDP rate of the bus as per Letter of Acceptance (LOA) subject to the condition that the Contractor shall make available list of all such items with rates, quantity and total value, duly certified by Chartered Accountant at the time of supply of prototype bus to the Purchaser. However, the lab testing shall be compulsory in respect of inflammable items/ material on flammability parameter and all types of fuses used in manufacturing of buses irrespective of value of the items being less than 0.5% of the DDP rate of the bus. The Contractor will maintain the record for all pre-tested material as item wise, lot wise/invoice wise, quantity per bus, number & identification of buses involved per invoice and lab test report. The same record shall be provided to the inspecting officer at any stage of inspection. However, the Contractor shall maintain and furnish the records of material as per Annexure-15-B, 15-C & 15-F. The same record shall be provided to the inspecting officer at any stage of inspection/ at any time.

1.4 The Chairman-cum-Managing Director (CMD)/ Managing Director (MD) or his authorized representative shall have full powers to inspect all the materials, components, fittings, sub-assemblies etc., works and/ test the materials at the Bus Manufacturer's premises during manufacturing or fabrication of the bus at all time with & without notice to his entire satisfaction. As per report prepared through such inspection, a notice shall be served upon the Bus Manufacturer for rectification of defects observed. The CMD/MD or his authorized representative shall also have full powers to reject any of the work which he may consider defective whether in material, manufacturing or workmanship and to order the removal of the same and the Bus Manufacturer shall forthwith replace such rejected material or workmanship with other material or workmanship as per the agreed Specifications/ Drawings, Terms & Conditions as the case may be to the entire satisfaction of the CMD/MD or his authorized representative whose decisions on such subject are to be treated as final and shall be promptly attended to by the Bus Manufacturer at his own cost, charges & expenses. In the event of dispute between the inspecting officer and the manufacturer, the decision of the purchaser shall be final and binding.

1.5 The manufacturer shall provide free of charge all facilities at his manufacturing premises viz. office space, equipment, tools, labour, gauges, drawings and specifications required for this purpose without extra charge to the inspecting officer(s)/ official(s) for the proper performance of his work regarding inspection and testing under this contract.

1.6 The contractor shall conform in all respect to the provisions in this behalf as contained in the Motor Vehicle Act, 1988 (or latest) [MVA] as amended up to date and the Central Motor Vehicle Rules, 1989 (or latest) [CMVR] currently in force in Delhi or to any other statutory modifications or enactment thereof in such Act & Rules from time to time.

1.7 Without prejudice to the powers of the CMD/ MD or his authorized representative to reject any of the work which he may consider defective either in material, manufacturing or

workmanship, if the CMD/ MD reluctantly does accept any poor material, poor manufacturing or poor workmanship, it is open to the CMD/ MD or his authorized representative to impose such percentage reduction in the contract prices as in his opinion would be justifiable and reasonable in the circumstances and the Bus Manufacturer shall be bound to agree to such percentage reduction without any complaint whatsoever later on.

1.8 Inspection, as above said, at the premises of the Bus Manufacturer during manufacturing/fabrication of buses shall not debar the Purchaser from any further inspection of the buses, but within Warranty Period. And that any defect found at any stage which was not detected in previous inspection shall be the sole responsibility of the Bus Manufacturer and the action taken on such defect shall be as per relevant clause of the terms & conditions of the contract depending upon the time of detection of defects i.e. whether at the time of receipt of bus at the premises of the Purchaser or during Warranty Period etc.

2. ALTERATION, ADDITION/ DELETION, DEVIATION, DEFECTS/ DEFICIENCIES:

2.1 That the Bus Manufacturer shall manufacture the bus strictly in accordance with the technical specifications of the contract. The Bus Manufacturer is not allowed to make any alteration, addition/ deletion, and deviation or leave any defect/ deficiency in the manufacturing of the bus.

2.2 The representatives of the Purchaser shall inspect the bus manufacturing at the works of the Bus Manufacturer and at various stages of fabrication and their clearance shall be taken before proceeding further such as proto-structure stage inspection, Pre-Dispatch Inspection stages [PDIs] & Final Inspection [FI] stages. The inspection shall be carried out as per the enclosed Annexures '15 A' to '15F' of the tender document. However, the above stage inspection no way exonerates the manufacturer from obligations in respect of quality and performance of the bus or relieve the warranty obligations of the manufacturer. Further, the purchaser shall also carry out jointly structure stage inspection, paneling stage randomly right to inspect at any point of time during manufacturing of the buses Further, the purchaser shall has the right to inspect at any point of time during manufacturing of the buses. The bus shall not be dispatched prior to PDIs & removal of defects and deficiencies observed during the PDIs. The bus manufacturer shall ensure the availability of all the passed lab test reports of the material/items used in the manufacturing of buses before requesting for PDIs Board at his premises.

2.3 FINAL INSPECTION: The final inspection of the fully built bus shall be carried out jointly in the presence of Bus Manufacturer's representative at Purchaser's Central Workshop-I, Banda Bahadur Marg, Delhi-110 009 or at any other unit of the Corporation.

2.3.1 The Bus Manufacturer shall note that the bus shall be manufactured and supplied to the Purchaser with zero defects. In case, any defects/ deficiencies/ discrepancies are brought to the notice of the Bus Manufacturer during inspection at various stages, the same shall be immediately removed in all the buses under manufacturing before clearance is given by the Purchaser. In case, any defects/ deficiencies observed at various stages and not rectified by the Bus Manufacturer before the commissioning of the completed buses at Purchaser Central Workshop-I, Delhi – 110 009 or at any other unit of the Corporation, the Bus Manufacturer shall be solely responsible for any mishap/ mis-happening and liable for levy of damages/ compensation for the damages caused and the same shall be recovered from the outstanding payments/ performance security etc.

2.4 The Bus Manufacturer shall note that in case of defects/ deficiencies not attended/ rectified by him at his works during bus manufacturing, the same shall result in delay in releasing the payment for the bus in order to enable the Purchaser to work out the cost of recovery to be made from his bills.

2.5 However, in case any alteration/ addition/ deletion/ deviation, defects/ deficiencies in any manner is found or detected in the bus at the time of commissioning of the bus, the Purchaser shall have the right to recover full cost of the material/ fitment etc. with 20% of the cost of the material/ fitment etc. as compensation/ damages from the bills of the Bus Manufacturer towards sub-standard material/ fitment used. The Purchaser shall also have a right to make recovery as determined by the Chairman-cum-Managing Director or his authorized representative after costing for defects/ deficiencies, deviations, alterations etc.

2.6 For the purpose of recovery of compensation and damages, no notice will be required to be issued to the Bus Manufacturer. However, after the cost is assessed and evaluated, as per Final Inspection of the bus carried out jointly, the Purchaser will send the statement in respect of the recovery/ deductions made with details of the defects & deficiencies etc. Assessment of the cost of the material fitment etc. will be made by the CMD/ MD or his authorized representative, which shall be final and binding upon the Bus Manufacturer.

2.7 That the Bus Manufacturer shall be responsible and liable to deliver fully built bus in accordance with the technical specifications, terms & conditions of the contract at Purchaser's Central Workshop-I, Banda Bahadur Marg, Kingsway Camp, Delhi-110 009 or at any other unit of the Corporation from 06.00 hours to 19.00 hours on working days. At the time of delivery, either the Bus Manufacturer himself or his authorized representative is bound to be present for joint inspection of fully built bus. In case, the Bus Manufacturer is not present or does not depute his authorized representative at the time of delivery of the bus, he will not be allowed to urge or say at the later stage that the bus was inspected in his absence. The inspection shall be carried out by the team of Officials/ Officers of the Purchaser and the defects, deficiencies, change in specifications, additions/ alterations, deviations etc will be noted down and the same will be got signed by the two witnesses of the Purchaser or the Bus Manufacturer's representative as the case may be.

3.0 SAMPLE TESTING

3.1 PRE-TESTING & RANDOM SAMPLES

3.1.1 Random samples of items/ material used as indicated in Annexure -13 shall be picked up jointly from the lot of each batch of the quantity of buses as per the invoiced quantity of these items procured by the Bus Manufacturers at his premises by the Inspecting officer in the presence of the authorized representative of the concerned Bus Manufacturer duly sealed & dispatched to CIRT, Pune/ARAI, Pune/ BIS approved Testing Lab/ NABL approved Labs/ICAT, Manesar/CPRI Bengaluru (for fuse testing) having testing facilities for testing all the parameters of the specifications at the cost of manufacturer. The Bus Manufacturer shall not be allowed to use these items in manufacturing of buses unless the material procured, conform to relevant specifications in Lab Test on all the parameters.

3.1.2 The Purchaser's Inspecting officer shall provide four unique stickers for each sample i.e. one sticker to be affixed on the sealed sample, one sticker pasted on Annexure-'14' Sample Sealing Proforma while picking up random sample at the works of the Contractor, one sticker

shall be provided to the Contractor for forwarding the sealed sample to the Testing Laboratory with direction to be pasted on the Lab Test Report of the sealed sample duly stamped by the Testing Laboratory and the remaining one sticker shall be retained by the Purchaser for record. All the four stickers of the sealed sample shall be signed by the representative of the Purchaser and the Contractor. Also the Testing Laboratory should be directed to send photocopy of the Lab Test Report simultaneously to the Purchaser also. In case of loss of the sticker meant for affixing on test report, re-sampling from the same lot will be arranged by the contractor as per procedure outlined above. Also in case of consumption of entire quantity of material in the lot, the sample shall be drawn from the bus where the material of the same lot was used, at the cost of the contractor.

3.2 The Purchaser reserves its right to take a sample of any material being used or used for the purpose of manufacturing of bus either during the progress of work at his works by the Inspecting officer deputed at his works in the presence of the Bus Manufacturer or his authorized representative or from the completed bus during the Warranty Period after dismantling any of the part or portion of the bus in the presence of the Contractor or his authorized representative and send the same to CIRT, Pune/ ARAI, Pune/ BIS approved Lab./ NABL approved Labs/ICAT, Manesar/CPRI Bengaluru (for fuse testing), for testing purposes regarding its standard quality etc. at the cost of the Contractor. The samples will be got tested as per BIS/ equivalent International Standards as mentioned in the specifications. The Test Report of such sample as given by the Laboratory shall be final and binding on both the Parties. The samples will be got tested as per Specifications as per contract. The cost of Testing Charges shall be initially borne by the Bus Manufacturer and in the event of any such sample passing in lab test, the cost of Testing Charges will be reimbursed by the Purchaser to the Contractor. In such cases, the Bus Manufacturer shall be required to replace the failed material/ items in respect of the above samples taken out from the bus lot with pass material/ item meeting the specified standards at its own cost.

3.2.1 In case of the test failure or defective due to workmanship or Sub-standard, the Bus Manufacturer shall be required to replace/ rectify the defective/ sub-standard material and/ or workmanship. In case of non-rectification, full cost of defective material/component/ workmanship shall be recovered from the Bus Manufacturer along with 20% as damages/ compensation from the bills of the Bus Manufacturer or from the Security Deposit lying with the Purchaser and the same shall be binding on him. The recoveries shall be made from the bills/ Security Deposit/ any other due amount of the Bus Manufacturer. In case the amount is found more than the Security Deposit, the Purchaser can recover the same from any of the pending bills or outstanding payment or through process of Law from the Bus Manufacturer. The decision of the CMD/ MD or his authorized representative regarding the amount of recovery referred to above shall be final to which the Bus Manufacturer shall have no objection and the said decision shall be binding on him. However, such inferior quality of Sub-standard/ non-specified material shall not be returnable to the Bus Manufacturer.

3.2.2 However, the Bus Manufacturer shall be solely responsible for any mishap/ mis-happening and liable for levy of damages/ compensation for the damages caused on account of non-rectification consequent to test failure or defective due to workmanship or Sub-standard/ non-specified material.

3.3 The Contractor shall be responsible for sample size/ quantity of items as per the requirement of the specified Testing Laboratory for lab testing purpose. In case of re-sampling of such

samples due to inadequate size/ quantity, the same shall be carried out at the risk & cost of the Contractor and any delay on account of the same will be on the part of bus manufacturer.

3.4 In case the sample size/quantity is not sufficient/adequate for testing as per standard from the finished item, the test specimen will be supplied by the manufacturer of that item declaring that the same has been picked up from the same lot from which the item has been manufactured and supplied to the Contractor. The Contractor shall furnish invoice of material (duly endorsement of the above by the manufacturer of the item) to the purchaser.

4.0 FOREIGN BIDDERS:

4.1 In case of foreign Bidders (where buses are being manufactured outside India), testing of material shall be carried out from Testing Labs duly authorized by appropriate authority in their country at their cost. The requirement of samples of testing shall be considered to have met on submission of a Test Report from authorized Test Agency for certification of vehicle, accessories and components by their respective Governments. Proof of testing the sample from out of the quantity/ lot used in the supplied buses has to be submitted by the Contractor in the form of copy of his Purchase Order, Invoice and Bills for payment of testing etc., details of vendors & as per the specified requirements.

4.2 Notwithstanding to the above provisions, the Purchaser also reserves its right to send its inspection team for inspection at various stages of the production/ ensuring quality control of the buses/ picking up the samples and getting those tested as per the international specifications and any other action as in the case of buses manufactured in India.

ANNEXURE 12: LIFE OF SOME OF THE BUS AGGREGATES

Sr. No	Item	Aggregate life in Km before reconditioning	Life in Km for each reconditioning	Ex-factory price in Rs. Per unit	Cost of reconditioning in Rs. Per unit per reconditioning	No of recondition s available
1	Engine					
2	Oil filter					
3	Air filter					
4	Automatic Transmission					
5	Radiator					
6	Front axle					
7	Rear axle					
8	Steering Assembly					
9	Air suspension					
10	Battery					
11	Alternator					
12	Self-starter					
13	Pneumatic door cylinder					
14	Catalytic converter, if fitted					
15	CNG receptacle					
16	Oil & water separator					
17	First stage regulator					
18	Second stage regulator					
19	Ignition coil					
20	Carburetor					
21	DC/DC converter					
22	Commander					
23	Trigger box					
24	Relay					
25	Speed governor					
26	Oxygen					

Sr. No	Item	Aggregate life in Km before reconditioning	Life in Km for each reconditioning	Ex-factory price in Rs. Per unit	Cost of reconditioning in Rs. Per unit per reconditioning	No of recondition s available
	sensor					
27	Control box (Air/ Fuel)					
28	Governor speed (gas valve & over speed)					
29	Shut off Valve					
30	Air dryer					
31	Turbo Charger					
32	Fire detection system					
33	Fire suppression system					
34	Tyres					
35	Compressor (AC)					
36	Evaporator					
37	Condenser					
38	Demister					
39	AC Blowers					
40	Heating system					
41	Alternator (AC)					
42	Any others					

The guaranteed life of the bus: -----Years-----Kms.

ANNEXURE 13: LIST OF THE MATERIALS FOR PRE-TESTING & THEIR RANDOM SAMPLES

SI No	Items to be tested	Test Requirements	Specifications
1	CR Tubular Section	One sample to be tested out of the lot of buses as per the invoiced quantity	BIS: 4923-1997(or latest) of grade Yst-240
2	Phosphating/ Galvanizing	One sample to be tested out of the lot of buses as per the invoiced quantity	BIS: 3618-1966 (or latest) Class A-2 for Phosphating & BIS:277-2003 or latest -120 gsm for Galvanizing (Zinc Coating) and two weeks (336 hours) Salt Spray Test for both in accordance with ASTM procedure B 117 with no structural detrimental effect to normally visible surfaces & no weight loss of over 1%.
3	LT Wire	One sample to be tested out of the lot of buses as per the invoiced quantity	As per AIS 052 Flammability test as per BIS: 2465-1984 (or latest)

NB:

1	In case of material having 'ISI' mark or 'E' mark, the above testing will not be required except Phosphating/ Galvanizing, and flammability test.
2	If the material is procured from more than one manufacturer, the number of samples as per above details for testing shall be separate for each manufacturer.
3	The Contractor shall be responsible for sample size/ quantity of items as per the requirement of the specified Testing Laboratory for lab testing purpose.
4	In case the sample size/quantity is not sufficient/adequate for testing as per standard from the finished item, the test specimen will be supplied by the manufacturer of that item declaring that the same has been picked up from the same lot from which the item has been manufactured and supplied to the Contractor. The Contractor shall furnish invoice of material (duly endorsement of the above by the manufacturer of the item) to the purchaser.

ANNEXURE 14: SAMPLE TESTING PROFORMA

DTC, CWS-1, B.B.MARG, DELHI-9

Sticker SR. No.
Name of VM:
Nomenclature:
Specification:
Lot No.....No. of Veh...Dt. of sample sealing.....
Auth. Rep. of VM: R.I.(DTC) Manager(VI)

SAMPLE TESTING PROFORMA

NAME OF FULLY BUILT BUS MANUFACTURER:- _____

PLACE: _____

DATE OF SAMPLE SEALING: _____

TYPE OF BUSES:- CNG CITY LF AC

ITEM:-

Descrip-tion	Qty/Bus	Bill No. & Date	Qty	Manufac-turer's Name	Lot No. / Type	No. of Buses involved	Samples No. on Sticker	Fully built Bus identification nos./ Chassis Nos.	Specifi-cation/ Test require-ments	Qty. reqd. for Sample Testing

The above sample is picked up and sealed in the presence of the followings.

Signature of DTC Representative(s)

Signature of authorized representative
of fully built bus fabricator with seal

ANNEXURE 15A: PHOSPHATING TREATMENT STAGE PROFORMA

_(Fully Built Low Floor AC City Bus)

Name of Bus Manufacturer: _____ Place: _____ Date:- _____

1. Phosphating stages:

S.No.	Phosphating Process Details	Chemical Brand/ Make	Temperature in °C of Tank
i)	Degreasing		
ii)	De-rusting		-----
iii)	Phosphating		
iv)	Passivation		

- 2 Heating Arrangement:
3. Rinsing Tank Water Flow System:
4. Material Details:

I	II	III	IV	V	VI	VII	VIII	IX
S. No.	Item	Required/ specified	Quantity per Bus as per Bill of Material	No. of buses	Fully built Bus identification nos./ Chassis Nos.	Bill/ Invoice No.	Manufacturer's Name	Remarks
A.	<u>OVER STRUCTURE</u>	Steel						
	i) Main Body Pillar	Tubes						
	CR Rectangular/Square	(ERW)						
	Tubular	conforming						
	ii) Dummy / Stump Pillar	to						
	CR Rectangular/Square	minimum						
	Tubular	BIS:4923-						
	iii) Cant Rail	1985 of						
	CR Rectangular/Square	Grade-Yst						
	Tubular	240 at						
	iv) Vent Rail	least						
	CR Rectangular/Square							
	Tubular							
	v) Waist Rail							
	CR Rectangular/Square							
	Tubular							
	vi) Wheel arch section							
	CR Rectangular/Square							
	Tubular							
	vii) Roof Stick							
	CR Rectangular/Square							

I	II	III	IV	V	VI	VII	VIII	IX
S. No.	Item	Required/ specified	Quantity per Bus as per Bill of Material	No. of buses	Fully built Bus identification nos./ Chassis Nos.	Bill/ Invoice No.	Manufacturer's Name	Remarks
	Tubular viii)Roof Longitude CR Rectangular/Square Tubular ix)Diagonal Bracing CR Rectangular/Square Tubular x) Rub Rail Tube CR Rectangular/Square Tubular Details of shape , size and thickness of the Rub Rail Tube / Stretch Panel support Tube are to be provided xi) <u>Stretch and Body Panel Stiffener</u> CR Rectangular/Square Tubular xii)<u>M.S. Gussets:</u> Triangular, Rectangular, Angles and 'C'-Channels. Xiii) Any other as per Contract							
B)	<u>UNDER STRUCTURE</u> i) <u>Saloon flooring</u> CR Rectangular/Square Tubular ii)<u>Cross bearers</u> Square and rectangular tubes & C Channels iii) <u>Floor Longitudes</u> U/ C Channels iv) <u>Skirt rail</u> CR Rectangular/Square Tubular v) <u>Sole bar</u> CR Rectangular/Square Tubular vi) <u>M.S. Gussets:</u> Triangular, Rectangular, Angles and 'C'-Channels. vii) Any other as per Contract							

5. Any other Miscellaneous Component.
6. Visual Inspection of Phosphating component.
7. Sample of Phosphating sealed on_____ Sticker No._____
8. Any other details / defects & deficiencies as per the terms and Conditions of the Contract:

Representative of bus
Manufacturer with seal.

Inspected by

ANNEXURE 15B: SUPER STRUCTURE INSPECTION PROFORMA

_(Fully Built Low Floor AC City CNG Bus)

Name of Bus Manufacturer:- _____ Place:- _____

Type of bus: _____ Date of Inspection: _____

Chassis No.: _____ Engine No.: _____

1. STRUCTURE MEMBER DETAILS:

S. No.	Nomenclature	Required/Specified	Observations
(i)	Main/Dummy/ Stump Pillar (Rectangular/ Sq. Tube)		
(ii)	Cant/Vent Rail (Rectangular/sq. tube)		
(iii)	Waist Rail (Rectangular /Sq. Tube)		
(iv)	Wheel Arch Section (Rectangular/Sq. Tube)		
(v)	Roof Stick (Rectangular/Sq. Tube)		
(vi)	Roof Longitudes. (Rectangular/Sq. Tube)		
(vii)	Diagonal Bracing (Rectangular/Sq. Tube)		
(viii)	Stretch & Body Panel Stiffener (Rectangular/Sq. Tube)		
(ix)	Gussets		
(x)	Saloon Flooring (Rectangular/Sq. Tube)		
(xi)	Cross Bearer (Rectangular/Sq. Tube/ Formed Section/ Channels)		
(xii)	Floor Longitudes (Rectangular/Sq. Tube / 'U/C'-Section)		
(xiii)	Skirt Rail (Rectangular/Sq. Tube)		
(xiv)	Sole Bar (Rectangular/Sq. Tube)		
(xv)	Any other Detail as per Contract		

2. BUS DIMENSIONS:-

S. No.	Nomenclature	Required/Specified	Observations
(i)	Over all width (mm)		
(ii)	Over all height (Unladen) at entrance point.		
(iii)	Over all length (mm over body excluding bumper)		
(iv)	Floor Height above ground (mm)		

S. No.	Nomenclature	Required/Specified	Observations
(v)	Min. ground clearance (mm) with bus.		
(vi)	a) Door aperture (clear) - Front - Rear b) Height		
(vii)	Position of Rear service door from the center of the Rear Axle		
(viii)	Interior head room (center of gangway) a) At Front Axle b) At Rear Axle		
(ix)	Saloon Height at gangway		
(x)	a) Type of welding on structure b) Quality of welding		
(xi)	Whether anti-rust paint is used after welding		
(xii)	For remaining structural dimensions		
(xiii)	Any other as per Contract		

3. Inspection of structure for alignment/diagonal /dimensions (should remain equal on both sides).
4. Any other details / defects & deficiencies as per the terms and conditions of the Contract:
5. Details of Lab test reports of:
 - a) CR tubular section.
 - b) Phosphating/ Galvanizing
 - c) Any Other

The above inspection has been carried out on the basis of FEA analysis report and the drawings based on it, In addition to the technical details already submitted by the manufacturer.

It is certified that the material used in the structure is as per specification with pass Lab test.

Representative of bus Manufacturer
with Seal:

Inspected by

ANNEXURE 15C: PANELING INSPECTION PROFORMA

_(Fully Built Low Floor AC City CNG Bus)

Name of Manufacturer: _____ Place: _____
Type of bus: _____ Date of Inspection: _____
Fully built Bus identification nos./Chassis Nos. _____

Sl. No.	Nomenclature	Required as per Contract	Quantity per Bus as per Bill of Material	Invoice /Bill Nos.	Total Qty.	No. of Buses	Lab test Report details	Remarks
1.	ABS Paneling (Acrylonitrile Butadiene Styrene)	As per Contractual Specification						
2.	Aluminium Sheet	BIS: 737-1986 or latest Aluminium Alloy H-2/31000(min.)						
5	GI Sheets	Galvanized panel as per BIS:277-2003(or latest) Class-VIII medium coating of zinc nominal weight 120 gms/ square meter.						
5.2	Marine Board 19mm thick	BIS 710-1976(or latest) & Fire retardency as per BIS: 5509-2000(or latest).						
5.4	Any other item as per Contract							

6. Any Other details/ defects & deficiencies as per the terms and conditions of the Contract:-

**Signature of the Representative of
the bus manufacturer with seal**

Inspected by

ANNEXURE 15D: PRE- DESPATCH INSPECTION PROFORMA

Name of Fully Built Bus Manufacturer: _____

Place _____ Date of Inspection _____

Bus Identification No. _____ Chassis No. _____

Type of bus _____ Engine No. _____

Clause No. of Proforma' __, of Section __	Description (As per Annexure/ Tender Details for the Technical details have been asked)	Specifications		Observations during Inspection
		Purchaser Requirement	Contractual Specifications	

Signature of the auth. representative of the bus manufacturer with seal

Name and Signature of DTC Inspection Board

ANNEXURE 15E: FINAL INSPECTION PROFORMA

Name of the Bus Manufacturer		Place of Inspection	
Chassis No		Engine No	
Type of Bus		Date of inspection	

A.	Presentability of the bus w.r.t.:		
1	Electrical lightings and fittings		
2	Painting		
3	General appearance		
4	Any damage observed during transit		
B.	Status of defects/ discrepancies observed during various stages and Pre-dispatch Inspection at the works of bus manufacturer:		
i			
ii			
iii			
C.	Verification of pre-dispatch inspection report containing following documents:		
i	All the lab test reports related to the bus.		
ii	Top-sheet		

D	Inspection of assemblies and sub-assemblies as per the following details applicable for AC Low Floor CNG Buses			
5	Engine:			
	Manufacturer		Type	
	Model No.		Engine No.	
6	Transmission			
	Manufacturer		Type	
	Model No.		S. No.	
7	Front Axle:			
	Manufacturer		Type	
	Model No.		Capacity	
8	Rear Axle:			
	Manufacturer		Type	
	Model No.		Capacity	
9	Suspension system			
	Front -Manufacturer		Type	
	Rear - Manufacturer		Type	
10	Shock absorber:			
	Manufacturer		Type	
11	Wheel Rims:			
	Make		Size	
	Type			
12	Tyres:			

D	Inspection of assemblies and sub-assemblies as per the following details applicable for AC Low Floor CNG Buses		
	Manufacturer		Type
	Size		
13	Power steering:		
	Make		Type
	Other details		
14	Brakes:		
	Make		Type
	Other Details		
15	Cooling system(Radiator):		
	Manufacturer		Type
	Model		
16	CNG Cylinders:		
	Manufacturer		Capacity
17	Alternator:		
	Manufacturer		Type
	Model		
18	Starter Motor:		
	Manufacturer		Type
	Model		
19	Destination Board Dimensions:		
	Front		Side
	Rear		Inner
20	Wind screen wiper Motor:		
	Manufacturer		Voltage & Load Rating in Watts
	Frequency of wiping		
21	Fire Extinguisher:		
	Make		Type
	Capacity		Quantity
22	Driver Cabin Fan:		
	Manufacturer		Type
	Colour		Size
23	Passenger cabin fans		
	Manufacturer		Type
	Colour		Size
	Quantity		
24	Security Camera (CCTVS) network for video surveillance-IP cameras		
	Manufacturer		Type
	Quantity		
25	Emergency Buttons		
	Manufacturer		No. of buttons

D	Inspection of assemblies and sub-assemblies as per the following details applicable for AC Low Floor CNG Buses			
26	HVAC system & aggregates			
27	Fire Detection System	Make		
28	Fire mitigation/suppression system	Make		
29	Mobile network video recorder (m NVR)			
i	Make			
ii	Model No/Part code			
iii	Quantity			
30	Rugged housing for m NVR			
i	Material			
ii	Dust and water protection			
31	Driver Display Console			
i	Make			
ii	Model No.			
32	Automatic Tracking Device System			
i	Make			
ii	Type			
33	ITS Controller			
i	Make			
27	Any other items as per Contract			
28	Any other defects/ discrepancies observed as per the terms and conditions of the Contract :			
29	Defects / discrepancies observed during Test-trial run :			
30	Any other			
	Remarks, If any:			

Signature of the Auth.
representative of the bus
manufacturer with seal

Name and Signature
of DTC Inspection
Board

ANNEXURE 15F: TECHNICAL DETAIL OF CHASSIS

(Chassis-wise to be furnished by the Contractor)

Name of Fully Built Bus _____
Manufacturer: _____

Place _____ Chassis No. _____

Bus Identification No. _____
Allotted No. _____

Engine No. _____

Type of bus _____

S. No.	Assembly/Sub-Assembly	Details	S. No.	Assembly/Sub-Assembly	Details
1	Engine Assembly		viii	Stop light	
i	Model		ix	Revering light	
ii	Make		x	Front Indicator Light	
2	Transmission		xi	Side Indicator Light	
i	Type/Model No.		xii	Flasher	
ii	Make		xiii	Electrical horn with push button	
3	Front Axle		xiv	Panel lights	
i	Model No		a	Side indicators	
ii	Make		b	Head lights	
4	Air Suspension-		c	Hand brakes	
i	Manufacturer		xv	Battery cable	
i	Front - Manufacturer		xvi	Reverse beeper	
ii	Rear - Manufacturer		xvii	Battery cut off	
5	Radiator		xviii	switch	
i	Manufacturer		8	Rear Axle	
6	Gauges/Indicators		i	Model No	
i	Speedometer Km/hr		ii	Make	
ii	Voltmeter with Charge indicator		9	Power Steering	
iii	Air Pressure		i	Make	
iv	Engine Oil Pressure		10	Shockers	
v	Coolant Temp. Gauge		i	Front-Make	
vi	CNG Fuel Gauge		ii	Rear-Make	

S. No.	Assembly/Sub-Assembly	Details	S. No.	Assembly/Sub-Assembly	Details
vii	Engine Oil temp. Gauge				
viii	Transmission Oil Temp. Gauge		11	Fire Retardant	
ix	Engine oil level gauge			Corrugated Sleeve on wiring	
x	Engine RPM meter		vii	- Any other module/item	
xi	Temp. Gauge				
xii	Radiator coolant level gauge				
xiii	Low battery indicator device		12	First stage regulator	
xiv	Any other		13	Second stage regulator	
7	Electrical system		14	Catalytic converter	
i	Starter switch		15	Ignition kill system	
ii	Head lights		16	Electric Control Panel	
iii	Head lights relay & Other Relays		17	Ignition Coil	
iv	Regn. plate light		18	Ignition Key No	
v	Tail light				
vi	Front parking light				
vii	Rear parking light				
i	DCDC converter				
iii	Transmission Control Module(TCM)				
iv	Central Body Control Unit(CBCU)				
v	MUXZB				
vi	-Relay				

21 Tyre: Tyre details shall be inspected as per format detailed below

Sr No	Manufacturer	Size	Load Rating	Speed Rating	Manufacturing Date*	Tyre No	Position
1							F.R
2							F.L.
3							R.R.I.
4							R.R.O.
5							R.L.I.
6							R.L.O.
7							Spare Wheel

* Tyres shall not be older than six months at the time of PDI

22 Batteries: Poly Propylene Type Container Batteries

S.No.	Battery no.	Battery make	Capacity	Volt	No of Plates
1					
2					

23 CNG Cylinders

S. No.	Manufacturer /Capacity	Cylinder no.	Date of approval	S. No.	Manufacturer /Capacity	Cylinder no.	*Date of approval
1				6			
2				7			
3				8			
4				9			
5				10			

* Date of Approval shall be after the Date of placement of Purchase Order

24 Other items as per contract:-

.....

Signature of the bus manufacturer
with seal

ANNEXURE 16: TOP SHEET

- 1 Name of Bus Manufacturer _____ 2 Place _____
- 3 Chassis No. _____ 4 Engine No. _____
- 5 Structure approved on _____ 6 Structure Approved/ Inspected by _____
- 7 Date _____ 8 Any other detail _____
- 9 Lab Test details:-

S. No	Item	Manufacturer	Invoice No.& date	Sample Lot No Type	Date of Sample Sealing	Sticker No.	No of Buses	Identification No. of Buses	Lab test Report No.	Lab's observation Pass/Fail
i.	C.R. Tubular Section									
ii.	Phosphating/ Galvanizing (Zinc Coating) Treatment									
iii.	L.T. Wire									
iv.	Any other Un-specified Item									

10. Pre-dispatch inspection report:

It is certified that all the above reports /corresponding invoices has been checked by the inspecting authority and the test reports are complete in all specified parameters.

Signature of the auth.
representative of the bus
manufacturer with seal

Name and Signature of
DTC Official/Officer

ANNEXURE 17: PROVISIONAL RECEIPT CERTIFICATE

Name of the Bus

Manufacturer: _____ Place of receipt: _____

Chassis No. _____ Engine No. _____

Type of Bus: Low Floor AC CNG Bus

Date of receipt _____

The fully built bus has been received subject to the final inspection to be carried out jointly with the authorized representative of M/s _____ However, the following observations made during the preliminary Inspection at the time of receipt of the above said Bus.

1) Shortage of Loose Items, if any:-

2) Shortage of Documents, if any:-

3) Visual Inspection Report (damage/ defect/ discrepancies occurred during transit of the bus and the same is to be rectified by M/s _____ before offering for final inspection): -

4) The bus is provisionally received subject to final inspection.

Signature of the auth. Representative
of the bus manufacturer with seal

Name and Signature of DTC Inspector

ANNEXURE 18: FINAL ACCEPTANCE CERTIFICATE

(Fully Built AC City CNG Low Floor Bus)

Ref. No. _____ Dated: _____
Name of the Bus _____
Manufacturer: _____ Place of Final Inspection: _____
Chassis No. _____ Engine No. _____
Type of Bus: _____ Date of receipt _____

The above said fully built bus have been finally accepted subject to the recoveries (to be intimated by the costing section) to be made from M/s _____ against the following defect/deficiencies which have not been removed/attended and the same were observed during the final inspection carried out jointly with M/s _____.

S.No.	Defect/ Deficiencies	Requirement as per Contract	Amount of Recovery	
			Rs.	P.

Signatures of the Authorized representative
of the Bus Manufacturer DTC

Inspected by

ANNEXURE 19: CHECK LIST

(MUST BE SUBMITTED ALONGWITH TECHNO COMMERCIAL BID)

(A) The following Check List is intended to help the Bidders in submitting Bid which are complete. Incomplete Bid is liable to be rejected. Bidders are advised to go through the list carefully and submit Bids complete in all respect.

(B) Bidders are also required to submit the Check List, duly marked, along with their Bid.

Each copy of the Bid shall include the following:

1. Packet – I containing sealed Techno-Commercial Bid & Sealed Cover of Earnest Money/ Bid security duly marked & sealed Yes/ No
2. Packet – II containing sealed Price Bid duly marked and sealed Yes/ No
3. Following Proformas/ Documents need to be submitted apart from the Documents mentioned at Serial number 5- 22 below:
 - a) Techno-Commercial Bid:
 - i) 'Production Capability and Quality Control' as per Proforma A of Section IX Yes/ No
 - ii) 'Technical Specifications' as per Proforma B of Section IX Yes/ No
 - b) Price Bid in Format A1/A2 of Section X and sealed separately Yes/ No.
4. Techno-Commercial Bids prepared in 2 sets and marked as 'ORIGINAL' & 'COPY' Yes/ No
5. a) Quoted Price in figures & words Yes/ No
b) Checked Rates in Unit & Total Yes/ No
6. Proforma for Deviation from Commercial Terms and Conditions Attached (Annexure-1) Yes/ No
7. Proforma for Statement of Deviations from Technical Specifications attached (Annexure-2) Yes/ No
8. Proforma for submission of Bid attached (Annexure-3) Yes/ No
9. Bank Guarantee for Earnest Money/ Bid Security attached (Annexure-4) Yes/ No
10. Annexure-10 A attached Yes/ No
11. Annexure-10 B attached Yes/ No

12. Letter of Authority (Power of Attorney) enclosed Yes/ No
13. All pages of RFP Document Serial numbered on Right Hand Top Corner & RFP Document enclosed Yes/ No
14. Each Page/ Documents of the Bid signed and stamped by Authorised Person and Yes/ No
15. Complete Summary of Documents enclosed Yes/ No
16. Set of General Drawings, Pen Drive etc. showing Exteriors & Interiors, Front & Rear Ends, Plans, Dimensions, Seating Layout etc. of the offered Bus
Yes/ No
17. Proforma for Performance Statement
- | | | |
|--|--------------|---------|
| (a) Details of all Types of Buses supplied | Annexure-5 A | Yes/ No |
| (b) Details of CNG Buses supplied | Annexure-5 B | Yes/ No |
18. Undertaking as per Annexure- 23 Yes/ No
19. Integrity Pact as per Appendix 27.....Yes/ No
20. Following Documents as required with the Technical Evaluation
- | | |
|--|---------|
| Proformas attached (Section IX): | Yes/ No |
| i. Registration Certificates of the Factory | |
| ii. License for manufacturing Buses. | |
| iii. Proprietorship Certificate/ Partnership Deed/ Company Certificate | |
| iv. Copies of Balance Sheets for the Last Three Years. | |
| v. Complete list of Instruments/ Equipment required for inspection at the Receipt Stage, In-process Stage and Final Stage. | |
| vi. Copy of the Type Approval of complete Bus, Aggregates/ Safety Critical Items as applicable to be furnished if available otherwise along with the Prototype. | |
| vii. Copies of Documents in respect of Design Collaboration. | |
| viii. Copies of Documents in respect to the Manufacturing Collaboration. | |
| ix. Certificate for the Person with regard to its Authorization to sign the Tender Document. | |
| x. Copies of Quality Management System Certificates. | |
| xi. Copies of Quality System Certificates. | |
| xii. Copies of Environment Management System Certificates. | |
| xiii. Copies of Certificates from previous Purchasers/ Customers for satisfactorily commissioning & trouble free services for the Present Design/ other Design of Buses by the Bidder. | |
| xiv. Time Schedule (PERT CHART) for various Activities involved in Delivery of Prototype Bus | |

ANNEXURE 20: FORMAT FOR BANK GUARANTEE FOR 80% PAYMENT

To,

The Chairman-cum-Managing Director,
Delhi Transport Corporation,
IP Estate, New Delhi - 110 002.

This deed of Guarantee made this day of _____ between (Name of Bank) _____ (hereinafter called the "Bank") of the one part, and the Chairman-cum-Managing Director, Delhi Transport Corporation, IP Estate, New Delhi - 110 002 (hereinafter called "the Purchaser") of the other part.

Whereas Chairman-cum-Managing Director, Delhi Transport Corporation has awarded the Contract bearing No. ----- dated -----for [Description of Item] (hereinafter called the Contract) to Name of Contractor (hereinafter called the Contractor)].

In accordance with the provisions and Terms & Conditions of the Contract to provide for 80% payment amounting to Rs. , _____ (*name and address of Contractor*) (hereinafter called "the Contractor ") shall deposit with the Chairman-cum-Managing Director, Delhi Transport Corporation, IP Estate, New Delhi - 110 002 (*name of Purchaser*) a bank guarantee to guaranty his proper and faithful performance under the said Clause of the Contract in an equivalent amount of 80% of (*amount of guarantee in figures and words*).

We, the (*bank or financial institution*), as instructed by the Supplier, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to the Chairman-cum-Managing Director, Delhi Transport Corporation, IP Estate, New Delhi - 110 002 (*name of Purchaser*) on his first demand through Demand draft payable at DELHI without objection/demur on our part.

We further agree that no change or addition to or other modification of the terms of the Contract to be performed thereunder or of any of the Contract documents which may be made between the Chairman-cum-Managing Director, Delhi Transport Corporation, IP Estate, New Delhi - 110 002 (*name of Purchaser*) and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment received by the *Contractor* under the Contract until _____ (date).

Yours truly,

Signature and seal :
Name of bank/
Financial Institution :
Address :
Date :

**ANNEXURE 21: DETAILS OF SHIPPING ARRANGEMENT FOR LINER CARGOES IN
RESPECT OF C & F/CIF /TURNKEY/F.O.R. CONTRACTS FOR IMPORTS**

1. (a) **SHIPMENT FROM PORTS OF U.K. INCLUDING NORTHERN IRELAND (ALSO EIRE), FROM THE NORTH CONTINENT OF EUROPE (GERMANY, HOLLAND, BELGIUM, FRANCE, NORWAY, SWEDEN, DENMARK, FINLAND AND PORTS ON THE CONTINENTAL SEABOARD OF MEDITERRANIAN (i.e. FRENCH AND WESTERN ITALIAN PORTS), TO PORTS IN INDIA**

The Seller should arrange shipment of the goods by vessels belonging to the member Lines of the India-Pakistan-Bangladesh Conference. If the Seller finds that the space on the 'Conference Lines' vessels is not available for any specific shipment, he should take up with India-Pakistan-Bangladesh Conference. Conferity House, East Grinstead, Sussex (UK), for providing shipping space and also inform the Shipping Co-ordination Officer, Ministry of Surface Transport, New Delhi, (Cable :TRANSCHART, NEW DELHI, Telex : VAHAN IN -031-61157, 61158, 61159)

The seller should arrange shipment through the Government of India's Forwarding Agents, M/s Schenker & Co., 2000-Hamburg (Cable : SCHENKER CO., HAMBURG) OR obtain a certificate from them to the effect that shipment has been arranged in accordance with instructions of the Ministry of Surface Transport, (TRANSCHART), New Delhi

(b) SHIPMENT FROM PORTS OF U.K. INCLUDING NORTHERN IRELAND

Goods under this contract would be shipped by the national shipping companies of the Contracting Parties operating bilateral shipping service and vessels under the flag of third countries in accordance with the Agreement between the Government of German Democratic Republic and the Government of the Republic of India in the Field of Merchant Shipping signed on 9.1.1979, as amended up-to-date.

(c) SHIPMENT FROM ADRIATIC PORTS OF EASTERN ITALY AND YUGOSLAVIA

The seller should arrange shipment of the goods by vessels belonging to the following Indian member lines;

1. The Shipping Purchaser of India Ltd.
2. The Scindia Steam Navigation Co., Ltd.
3. India Steamship Co., Ltd.

For the purpose of ascertaining the availability of suitable Indian vessels an granting dispensation in the event of their non-availability, the Seller should give adequate notice about the readiness of each consignment from time to time at least six weeks in advance of the required position to M/s Schenker & Co. 2000 HAMBURG (Cable: SCHENKER CO., HAMBURG) and also endorse a copy thereof to the Shipping Co-ordination Officer, Ministry of Surface Transport, New Delhi (Cable: TRANSCHART, NEW DELHI, Telex : VAHAN IN -031-61157, 61158, 61159)

The Seller should arrange shipment through the Government of India's Forwarding Agents M/s Schenker & Co., Hamburg (Cable: SCHENKERCO., HAMBURG) or obtain certificate from them to the effect that shipment has been arranged in accordance with the instructions of the Ministry of Surface Transport, (TRANSCHART), New Delhi

(d) SHIPMENT FROM POLAND & CZECHOSLOVAKIA

(i) IMPORTS FROM POLAND

Shipment under this contract would be made by the National flag lines of the two parties and vessels of third flag conference lines, in accordance with the agreement between the Govt. of the Republic of India and the Govt. of the Polish People's Republic regarding Shipping Co-operation dated 27.6.1960 as amended up-to-date

(ii) IMPORTS FROM CZECHOSLOVAKIA

Goods under this contract would be signed by the National flag lines of the two parties and vessels of the third flag conference lines, in accordance with the Agreement co-operation in shipping between India and Czechoslovakia signed on 3.11.1978 and ratified on 19.12.1979, as amended up-to-date

Shipping arrangement should be made by the Sellers in consultation with the Resident, Representative of the Indian Shipping Lines in Gdynia, Co., Morska Agencja W.Gdyniul, Pulaskiego 8, P.O. Box 246, Gdynia (Poland) – Telex: MG PL. 054301, Tel.: 207621), to whom details regarding contract number, nature of cargo, quantity, port of loading discharging, name of Government consignee, expected date of readiness of each consignment etc. should be furnish at least six weeks in advance of the required position, with a copy thereof endorsed to the Shipping Co-ordination Officer, Ministry of Surface Transport, (Chartering Wing), New Delhi (Cable : TRANSCHART, NEW DELHI, Telex : VAHAN IN –031-61157, 61158, 61159)

(e) SHIPMENT FROM U.S.S.R.

Shipment under this contract should be made in accordance with the agreement between the Government of the Republic of India and the Government of U.S.S.R on Merchant Shipping 1976, as amended up-to-date, by vessels of Indo-Soviet shipping Service.

(f) SHIPMENT FROM JAPAN

The shipment of goods should be made of India vessels to the maximum extent possible subject to a minimum of 50%

The Seller should arrange shipment of the goods in consultation with the Embassy of India in Japan, Tokyo to whom details regarding contract number, nature of cargo, quantity, port of loading/discharge, name of the Govt. Consignee, expected date of readiness of each consignment etc. should be furnished at least six weeks in advance of the required position

Note: The copies of such contracts are to be endorsed both to the Attached (commercial) embassy of India in Japan, Tokyo, and the shipping Co-ordination Officer, Ministry of Surface Transport, New Delhi

(g) SHIPMENT FROM AUSTRALIA, ALGERIA, BULGARIA, ROMANIA, EGYPT

The seller shall arrange shipment of the goods by Indian flag vessels to the maximum extent possible subject to a minimum of 50%. For the purpose of ascertaining the

availability of suitable Indian vessels, the seller shall give adequate notice of not less than six weeks about the readiness of each consignment to the Shipping Purchaser of India Ltd. SHIPPING HOUSE, 245, Madame Cama Road, Bombay – 400 021 9CABLE: SHIPINDIA BOMBAY) and also endorse a copy thereof to the Shipping co-ordination Officer, Ministry of Surface Transport, New Delhi: (Cable: TRANSCHART, NEW DELHI, Telex: VAHAN IN –031-61157, 61158, 61159)

(h) SHIPMENT FROM PAKISTAN

The shipment of cargoes should be made by Indian vessels to the maximum extent possible subject to a minimum of 50%.

Shipping arrangement should be made by the Sellers in consultation with M/s Mogul Line Ltd., 16-Bank Street, Fort, Bombay – 400023 (Cable : MOGUL BOMBAY; Telex : 011-4049 MOGUL), to whom, details regarding contract number, nature of cargo, quantity, port of loading/discharging, name of Government consignee, expected date of readiness of each consignment etc., should be furnished atleast six weeks in advance of the required position with a copy thereof endorsed to the Shipping Co-ordination Officer, Ministry of Surface Transport New Delhi : (Cable : TRANSCHART, NEW DELHI, Telex : VAHAN IN –031-61157, 61158, 61159)

(i) SHIPMENT FROM U.S. ATLANTIC & GULF PORTS

The Seller should arrange shipment of the goods by vessels belonging to the member lines of the India-Pakistan-Bangladesh-Ceylon and Burma Outward Freight Conference. If the Seller finds that the space of the 'Conference Lines' vessels is not available for any specific shipment, he should take up with India-Pakistan-Bangladesh-Ceylon and Burma Outward Freight Conference, 19, Rector Street, New York N.Y. 10006 USA, for providing shipping space and also inform the Shipping, Co-ordination Officer Ministry of Surface Transport New Delhi: (Cable : TRANSCHART, NEW DELHI, Telex : VAHAN IN –031-61157, 61158, 61159)

(j) SHIPMENT FROM ST.LAWRENCE AN EASTERN CANADIAN PORTS

The Seller should arrange shipment of the goods by vessels belonging to the following shipping Lines.

- (1) The Shipping Purchaser of India Ltd.
- (2) The Scindia Steam Navigation Co. Ltd.

If the Seller finds that the space in the vessels of these Lines is not available for any particular consignments, he should inform the Shipping Co-ordination Officer, Ministry of Surface Transport New Delhi: (Cable : TRANSCHART, NEW DELHI,

Telex : VAHAN IN –031-61157, 61158, 61159) immediately so that dispensation from the shipping lines concerned to use alternative lifting may be sought

(k) SHIPMENT FROM WEST COAST PORTS OF U.S.A. CANADA AND OTHER AREAS NOT SPECIFICALLY MENTIONED ABOVE

The Seller should arrange shipment of the goods by Indian vessels to the maximum extent possible subject to a minimum of 50%. For the purpose of ascertaining the availability of suitable Indian vessels and granting dispensation in the event of their non-availability, the Seller should furnish the details regarding contract number, nature of cargo, quantity, port of loading/discharge, name of Govt., consignee and expected date of readiness of each consignment, etc. to the Shipping Co-ordination Officer, Ministry of Surface Transport New Delhi: (Cable : TRANSCART, NEW DELHI, Telex : VAHAN IN -031-61157, 61158, 61159) at least six weeks in advance of the required position.

2. BILLS OF LADING

(i) C.I.F./C&F)/TURNKEY SHIPMENTS

The Bills of lading should be drawn to indicate Shipper and 'Consignee' as under:

SHIPPER: The C.I.F. (C&F)/TURNKEY SUPPLIERS concerned.

CONSIGNEE: As per consignee's particulars in the contract (The name and address of the 'Port Consignee' and 'Ultimate' both should be indicated).

(ii) F.O.R. SHIPMENTS

The Bills of lading should be drawn to indicate shipper Consignee as under:

SHIPPER : The F.O.R. suppliers concerned

CONSIGNEE: Suppliers' Indian Agent on order

Note:

1. Moreover the name of the 'Purchaser and 'Ultimate' Consignee should appear in the body of the Bills of Lading as the 'Notify' or as a remark.
2. Two non-negotiable copies of the Bills of Lading indicating the freight amount and discount, if any allowed, should be forwarded to the Shipping Co-ordination Officer, Ministry of Surface Transport, (Chartering Wing), New Delhi after the Shipment of each consignment is affected.
3. The seller should avoid the use of over-aged vessels for the Shipment of the goods under the contract and if so used the cost of additional. Insurance, if any, shall be borne by the seller.

**ANNEXURE 22: DETAILS OF SHIPPING ARRANGEMENTS OF LINER CARGOES IN
RESPECT OF F.O.B./F.A.S CONTRACTS FOR IMPORTS**

1. Shipping arrangements will be made by the Ministry of Surface Transport (Chartering Wing), New Delhi: (Cable: TRANSCHART, NEW DELHI, Telex: VAHAN IN –031-61157, 61158, 61159), through their respective forwarding Agents/Nominees as mentioned below, to whom adequate notice about the readiness of cargo for shipment should be given by the Sellers from time to time at least six weeks in advance of the required position for finalizing the shipping arrangements.

Sr No	Area	Forwarding Agents/Nominees
(a)	U.K. including Northern Ireland (also Eire), the North Continent of Europe (Germany, Holland, Belgium, France, Norway, Sweden, Finland and Denmark) and ports on the Continental Sea Board of the Mediterranean, (i.e. French and Western Italian Ports) and also Adriatic Ports	M/s Schenker & Co. 2000 HAMBURG – 11, POB No. 110313 (Cable: SCHENKERCO. HAMBURG) Telex: 217004-33 SHD 212675 Telephone No. 040/361350
(b)	U.S.A., Canada, Mexico & South America, Brazil	M/s OPT Overseas Project Transport Inc., 46, SELLERS STREET, KEARNY, NEW JERSEY 07032 Tel : (201) 998-7771 Telex : 673-3586 Fax (201) 98807833
(c)	Japan	The First Secretary (Commercial) Embassy of India, Tokyo, Japan (Cable: INDEMBASSY TOKYO) Telex: INDEMBASSY J024850 Telephone : 262 2391
(d)	Australia, Algeria, Bulgaria, Romania, Czechoslovakia, Egypt, GDR	The Shipping Purchaser of India Ltd., Shipping House 229/232 Madama Cama Road. Bombay – 400 021 (Cable : SHIP INDIA BOMBAY) Telex : 31-2209 SCID IN Telephone : 232666, 232785
(e)	Russia, Ukraine, etc. (U.S.S.R. Block)	The Secretaries, Indo-Soviet Shipping Service, C/o The Shipping Purchaser of India Ltd., Shipping 'House, 245, Madame Cama Road, Bombay – 400 021 (Cable : SHIP INDIA BOMBAY FOR SOVIND SHIP) Telex : 31-2209 SCID IN Telephone : 232666

Sr No	Area	Forwarding Agents/Nominees
(f)	Poland	The Secretaries, Indo-Soviet Shipping Service, C/o The Shipping Purchaser of India Ltd., Shipping 'House, 245, Madame Cama Road, Bombay – 400 021 (Cable : SHIP INDIA BOMBAY FOR INDOPOL) Telex : 3165119 SCID IN Telephone : 232666
(g)	Pakistan	The Mogul-Line Ltd., 16, Bank Street Fort, Bombay – 400 023 (Cable : MOGUL BOMBAY) Telex : 011-4049 (MOGUL) Telephone : 252785
(h)	Other areas not specifically mentioned above	The Shipping Co-ordination Officer, Ministry of Surface Transport New Delhi: (Cable : TRANSCHART, NEW DELHI, Telex : VAHAN IN –031-61157, 61158, 61159)

2. **BILLS OF LADING:** The Bills of Lading should be drawn to indicate 'Shipper and Consignee' as under:

SHIPPER: The Government of India

CONSIGNEE: As per consignee's particulars in the contract, (The name and address of the 'Port Consignee and Ultimate Consignee' should both be indicated)

3. Two non-negotiable copies of the Bill of Lading indicating the freight amount and discount, if any allowed, should be favoured to the Shipping Co-ordination Officer, Ministry of Surface Transport, (Chartering Wing), Parivahan Bhawan, New Delhi after the shipment of each consignment is effected.
4. The Seller should avoid the use of over-aged vessels for the shipment of the goods under the contract and if so used, the cost of additional insurance, if any, shall be borne by the Seller.

ANNEXURE 23: FORMAT OF UNDERTAKING

(on the Letter Head of Bidder)

We hereby certify and confirm that we in the capacity of vehicle manufacturer (VM) shall be bound to participate mandatorily for the Comprehensive Annual Maintenance Contract (AMC) Bid to be subsequently released by DTC.

We also hereby confirm that the necessary authorization certificate will be issued to the interested bidder among our authorization network. If the interested bidder having required experience for maintaining AC Low Floor CNG Buses, the Experience certificate will be issued by us.

We also ensure supplies of genuine VM/ OEM or their recommended spare parts for maintenance of quoted model of AC Low Floor CNG Buses to the interested bidder among our authorization network.

Name of the Bidder

.....

Signature of the Authorized Person

.....

Name of the Authorized Person

Dated this Day of, 2019

ANNEXURE 24: SPECIFICATION AND COMPLIANCE OF IP CAMERA

A. Specification and Compliance of IP camera

S. No.	Minimum Specifications
1.	The IP camera should have colour camera (monochrome in night with IR on).
2.	The IP camera shall have fixed, 3.6 mm lens.
3.	The IP camera shall have minimum 2 megapixels, 1920 x 1080 pixels camera resolution.
4.	The IP camera shall have 1/3" CCD or 1/3" CMOS progressive scan image sensor.
5.	The IP camera shall support H.265, H.264, MPEG-4 and M-JPEG Video Compression.
6.	The IP camera shall support G.711 or G.726 Audio Compression.
7.	The IP camera shall support 1 to 25 fps for different resolution.
8.	The IP camera shall have a minimum illumination of 0.01 Lux at F1.2 with IR Off and 0.0 Lux with IR On.
9.	The IP camera shall have shutter time of 1/50 sec to 1/100 000 sec.
10.	The IP camera shall have built-in infrared LEDs with range of minimum 10 m, Auto Day/Night.
11.	The IP camera shall have ruggedness of: a) Rugged, vibration, shock and tamper proof metal housing, and b) Anti-vibration installation with multipoint locking mechanism in horizontal and vertical direction.
12.	The IP camera shall have either built-in microphone or separate microphone
13.	The IP camera shall support Image enhancement of auto-tracking white balance (ATW), automatic gain control, wide dynamic range (WDR) and Automatic backlight compensation (BLC).
14.	The IP camera shall receive power from mNVR through power-over-Ethernet.
15.	The IP camera shall support automatic motion detection, Camera Tamper alerts
16.	The IP camera shall support RJ45 10/100 M ethernet interface.
17.	The IP camera support ONVIF Profile S compliant.
18.	The IP camera shall comply to IP66 rating

S. No.	Minimum Specifications
19.	The IP camera shall support below mention protocols: • HTTP; TCP; UDP; NTP
20.	The IP camera shall support below mention streaming methods: • Unicast, Multicast

B. Specification and compliance of Mobile NVR

S. No.	Minimum Specifications
1.	The mNVR shall have one video output.
2.	The MNVR shall have four channel video inputs.
3.	The mNVR shall have one audio output.
4.	The mNVR shall have two-way communication (2 nos.) within bus mobility environment to communicate with CCC operator
5.	The mNVR shall support H.265 and H.264 video compression standards.
6.	The mNVR shall support G.711 or G.726 audio compression standards.
7.	The mNVR shall support dual streams, both streams independently configurable for each camera resolution and frame rate.
8.	The mNVR shall support 1080p/ 720p/ 4CIF/ 2CIF/ CIF/ QCIF (can be set independently for each channel, for both streams) recording resolutions.
9.	The mNVR shall support 1 to 25 fps for all channels at 1080p resolution and frame rate can be set independently for each camera, for both streams or vehicle having four CCTV cameras.
10.	The mNVR shall have a minimum of four input (NO/NC) and two output alarm sensors.
11.	The mNVR shall have storage of 1 TB, solid state drive (SSD) with suitable anti-vibration mechanism storage to be pluggable and easily removable, secure and protected by lock for vehicles
12.	The mNVR will record in normal, schedule based, alarm triggered, motion detection mode. Alarms triggered modes may include alarms triggered via digital I/O input, For example, emergency button, emergency door Open, brake on, reversing, mNVR enclosure open.
13.	The mNVR will support event based recording and tagging: a) Pre-recording – 1 to 30 min, and b) Post-recording – 1 to 30 min.
14.	The mNVR shall support configurable shut down delay after ignition off – up to 24 h (Configurable in hours and minutes)
15.	The mNVR shall have facility of integrated PoE switch supporting peak power requirement for four CCTV cameras with infrared on and integrated PoE switch supporting peak power requirement for all CCTV cameras within Bus with infrared on.

S. No.	Minimum Specifications
16.	The mNVR shall have network/communication interfaces as: a) LAN – 1 RJ45 interface (in addition to the camera ports), and b) Wi-Fi – 802.11/b/g/n (optional). c) Built-in 4G/LTE module, supporting both 2G, 3G and 4G/LTE (at least 900, 1800 and 2100 MHz frequency bands), Support for SMS, voice, data (GPRS, TCP/IP) with multiple network OTA switching capabilities.
17.	Support embedded SIM/UICC (As per GSMA guidelines / DoT (TEC) guidelines) to cater to the automotive operational requirement such as vibration, temperature and humidity and provide long life span with at least 10 years life and more than 1 million read/write cycles.
18.	Device shall have built-in/integrated 3 axis accelerometers and 3 axis gyroscopes for accessing driving conditions such as rapid acceleration, sudden braking and hard turn.
19.	System shall have provision of secured data transmission to the backend from the devices through secured channel. Secured channel means encrypted data transmission from device to backend using a secured tunnel on communication medium such as 'Secured dedicated APN or 2G/3G/4G/LTE network'
20.	It will provide the following additional information: a) GPS data via RS 232/Ethernet to other on-bus devices, and b) Receive route number information from other on-board devices and transmit to back end. It will support transmission mode.
21.	Always –On, turned 'On' by: a) Emergency button, or b) SMS or telephone or alerts from I/O.
22.	The mNVR shall have ONVIF profile S compliant.
23.	The mNVR shall support the external interfaces 1 RS232, 1 USB 2.0.
24.	The mNVR have external GSM & GPS antenna.
25.	The mNVR shall have minimum five configurable image settings (one to be the best quality).
26.	The mNVR shall have tamper-proof watermark.
27.	The mNVR video over-written to be configurable to support: A) Cyclic overwriting (oldest recording to be overwritten). b) Event tagged recording not to be overwritten for a longer period (7 to 30days, configurable).
28.	The mNVR shall have all input and output connections to be vibration/shock resistant and locking as per BIS (IS 16833) shock and vibration test.
29.	The mNVR shall have LED indicators for power, recording, network.
30.	The mNVR shall be capable of communicating system health parameters over 2G/3G/SMS along with: a) Capable of sending health parameters (cameras not-functioning, cameras tamper, storage error, storage full, video loss, camera cover) at specified frequency to the server

S. No.	Minimum Specifications
	b) Capable of sending images, video and snapshot (of configurable resolution, (1080p, 720p, 4CIF, CIF, 2CIF, QCIF) from each camera to the server at specified frequency (configurable). c) Capable of detecting failure, error or tamper of cameras or any component and sending alert to server.
31.	The system shall support over the air configuration parameters for mNVR and cameras and over the air upgrade of firmware.
32.	The system shall support independently configuration of motion detection zones for each camera.
33.	The system shall have built in RTC, drift not more than 10s at any time.
34.	The mNVR should provide video and audio download facility for the desired date/time and duration. It should be possible to connect a laptop to mNVR through network cable on RJ45 port and open mNVR's user interface in a standard browser using a standard URL such as http://dvr with no/minimum configuration requirement of the laptop's network settings.
35.	After entering user-id and password, it will be possible to search, view, select and download video clips of desired duration and date/time in standard formats such as (.avi) or (.mpg). It will not be possible to delete any video or change configuration settings using this set of user-id and password.
36.	The system shall be capable of: a) In normal situation, the mNVR will send system health status data and images from cameras to the backend server, at configurable frequency over 4G/LTE network. On press of an emergency button, the mNVR will automatically send the video from cameras to the backend server over 4G/LTE at configurable frame rate and configurable resolution. b) In case the vehicle moves to an area where 4G coverage is not present, the mNVR will automatically shift to 3G/EDGE/GPRS (2G) connectivity to send the system health status data. Also, in such case, on press of an emergency button, the mNVR will automatically shift to a lower frame rate and resolution (both configurable/self-adaptive) and send the video from cameras to the backend server over 3G/ EDGE/GPRS (2G).
37.	The mNVR shall be powered from the battery of the vehicles. The mNVR should be capable of working on a wide range of voltage (say 8 to 32 V), in order to account for the fluctuations of the vehicle battery voltage. Also, it should be possible to have a delayed shut-down after ignition off, so that cameras can keep on recording for a specified period (say 1 h) After ignition switch-off.
38.	The system should support any operational GNSS system (Location, speed, heading, time stamp) data polling and capable of sending this data at a frequency shall be 5 s during vehicle operation and not less than 10 min. Device shall be capable for operating in L and/or S band and include support for NAVIC/IRNSS (Indian Regional Navigation Satellite System).
39.	The system shall have feature of location on demand on minimum 3G and configurable backup SMS facility in case of 4G/LTE//3G/GPRS failure.
40.	The system shall have external GPS antenna.

S. No.	Minimum Specifications
41.	The System shall capable of store minimum 40,000 positional logs.
42.	The system's GNSS module shall have an acquisition equal to or better than (-) 145 dBm with GNSS/ 140 dBm with IRNSS (NAVIC as applicable.)
43.	The system's GNSS module shall have a tracking sensitivity equal to or better than (-) 160 dBm with GNSS/153 dBm with IRNSS (NAVIC as applicable).
44.	The system shall have positional accuracy of less than 6 m 2DRMS (on ground) or 2.5 m CEP (on ground).
45.	The system's GNSS module should have: a) The capability of hot start < 10s b) The capability of warm start < 60s c) The capability of cold start < 120s The above timing shall be applicable after MNVR boots up.
46.	The system should have the A-GPS (Assisted GPS) support.
47.	The system shall have the capability to send serving and adjacent cell ID as well as network measurement report (NMR).
48.	The system shall have the over the air capability as: a) Download of firmware as well as configuration parameters, b) Remote administration and firmware update over the air, and c) Device should be capable of sending a packet to two different IP addresses.
49.	USB 2.0 interface or better
50.	Support (802.11 b/g/n) 2.4 GHz LAN- minimum 10m range
51.	Support easy configuration
52.	Support external SD card for backup
53.	Support data export from mNVR

C. Specification and compliance of Rugged Housing for mNVR

S. No.	Features	Description
1.	Material:	Enclosure: Sheet steel
2.	Door:	Sheet steel, all-round foamed-in PU seal
3.	Surface finish:	Enclosure and door: Dipcoat primed, powder-coated on the outside, textured paint
4.	Mounting plate:	Zinc-plated
5.	Dust & water protection	IP 66
6.	IK Code:	IK08

S. No.	Features	Description
7.	Supply includes:	Enclosure with hinged door(s) with lock mechanism, of all-round solid construction
		Gland plate(s) in enclosure base
		Mounting plate
8.	Material thickness:	Enclosure: 1.38 mm
		Door: 1.75 mm
		Mounting plate: 2.5 mm
9.	General	Suitable for proposed mNVR providing temper proof, shock proof, vibration proof and fire proof enclosure

D. Specification and compliance of Panic Button

S. No	Parameter	Description
1.	The panic buttons will be 'Normally Closed' (NC) type. The form factor of emergency buttons will be such that the button is easy to press in the case of an emergency, and simultaneously also minimizes the possibility of accidental or unintended press thereby causing a false alert.	
2.	Emergency button shall be suitable for installation and operation in Bus environment. Terminals for connecting the power and data cables should be suitable to mobility environment to minimize false alerts while maximizing the life of the push button.	
3.	Switching frequency	Min. 500 cycle per hour
4.	Mechanical life	Over 1 million operations.
5.	Operating Position	All positions.
6.	Enclosures Material	Cast Aluminium and CRCA Sheet
7.	Degree of protection	IP-66, flame resistant
8.	Casing	The panic button should be provisioned with transparent flap casing to avoid any unintentional activation of panic alerts.

E. Specification and compliance of Display (7")

S. No.	Parameter	Specification
1.	Size	Minimum 7" TFT LCD with arrow keys and number buttons
2.	Luminance	400cd/m2
3.	Viewing angle	70/70/50/70 (L/R/U/D)
4.	Resolution	800 × 480 or better
5.	Back-light Type	LED
6.	Video Inputs	Two (compatible with the proposed mNVR)
7.	Functionality	Live view and play back
8.	Power Source	mNVR

ANNEXURE 25: KEY TERMS AND CONDITIONS OF ANNUAL MAINTENANCE CONTRACT

1. The Vehicle Manufacturers (VM) cum Contractor directly and also through their authorized network meeting eligibility requirement shall be required to submit their comprehensive AMC offer for maintenance of buses up to 7,50,000 kilometers tentatively in 12 years operation for complete bus system inclusive of consumables, spare parts, replacement of assemblies/ subassemblies, systems/sub-systems etc taking into account preventive/ docking/ routine maintenance including on account of normal wear & tear, minor/ major repairs/ over-hauling of assemblies/ sub-assemblies and break downs, fire as well as accidental repairs (mechanical & body), tyre cut/ damage, broken lights and routine mechanical/ body repairs etc. inclusive of labour cost to ensure 92% availability during warranty period and 90% availability after warranty period. The Contractor shall be responsible for carrying out repairs/ maintenance/ servicing etc for complete buses (including supply of consumables, replacement & fitment of spare parts/ body parts/ aggregates/ assemblies/ sub-assemblies etc.) upto 7,50,000 kilometers. The Contractor shall be required to carry out all accidental repairs of buses under comprehensive AMC whether attributable to the Contractor or to the Purchaser or due to natural calamities or otherwise. Only CNG fuel shall be provided by the Purchaser during AMC period.
2. The buses are expected to be operated daily in one or more shifts. Depot-wise Fleet availability of 92%/ 90% buses shall be calculated using shift wise availability of buses on daily basis to be summed up on monthly basis. A bus made available for morning out shedding as per Depot out-shedding schedule latest by 9 AM shall be considered available for the morning shift. Similarly, a bus made available for evening out shedding as per Depot out-shedding schedule latest by 6 PM shall be considered available for the evening shift. It implies that the Contractor shall make available depot-wise fleet availability of 92%/ 90% of buses in the shifts (Morning & Evening) to be summed up on monthly basis. If the bus fails to go on scheduled duty because of some maintenance/ mechanical defects/ breakdown but leaves the depot after 9 AM/ 6 PM i.e. late, it will not be considered available for that shift. Besides, if the bus breaks down enroute after leaving the depot on shift duty and could not complete the scheduled kilometers, a pre-estimated damage shall be recovered amount equal to miss kms. multiply by prevailing Basic AMC rate of that bus at that time. For every Bus, record will be maintained by the Purchaser. The Contractor can also inspect the records, if so desires.
3. These buses shall be attended at Purchaser Depots as well as for minor repairs on line to minimize down time. The Contractor shall be required to remove the breakdown bus from the spot immediately to save traffic jam/ inconvenience to other road users. The maximum breakdown response time/ attending the breakdown/ removal of breakdown bus on line shall be 4 hours within Delhi or in immediate vicinity of Delhi (i.e. time required for Contractor's maintenance engineers to report to the site and attending the breakdown after a request call/email is made or letter is written). The Contractor shall be required to maintain a minimum of adequate number of Recovery Vans/ Cranes so that the

breakdown bus is immediately removed from the roads to clear the traffic jam. During AMC Period, the Contractor shall be required to deploy well-trained resident Engineers/ Technicians/ trained staff/ manpower etc. to attend to the maintenance/ repairs and servicing of bus(es) and for quality assurance/ control/ checking/ preventive maintenance/ record-keeping etc. prior to the scheduled departure of each bus.

4. The cost of repairs i.e. cost of spare parts & labour charges on account of the accidental buses attributable to the purchaser bus crew or due to war, civil commotions, strikes, floods, earthquake, explosion etc. and not attributable to defects/ mechanical failures/ fire, shall be borne by the Purchaser. The cost of spare parts chargeable shall be as per the approved price list and for labour charges based on the Government's notified minimum wages rates for skilled staff applicable in Delhi and will be revised as per the Government notifications on minimum wages. The cost of repairs on account of minor scratches, dents & paint touching shall also not be charged to the Purchaser and the bus will be repaired at the cost of the Contractor. In case of replacement of metallic parts/ components/ spares/ items/ material/ tyres, a rebate @ 5% of the approved price list shall be given by the Contractor to the Purchaser towards retaining the aforesaid unserviceable/ defective parts/ items by the Contractor in lieu of scrap value of metallic/ such other parts.
5. The Purchaser shall provide existing maintenance facilities available in the Depot on 'as is where is basis' to the Contractor. However, in case of Depots where AC Low Floor Bus maintenance facilities are not there, the Purchaser shall be responsible to provide Service Pits & Six Rooms to the Contractor besides Effluent Treatment Plant, Tower Lights, Water Softening Plant.

The Contractor will be responsible to make his own arrangement for Plant & Machinery, Tools, Jigs & Fixtures, Washing Plant required for proper maintenance of buses.

The Contractor is required to create maintenance facilities at DTC's Depots within three months from the date of issue of Letter of Acceptance (LOA). No pre-estimated damages towards non-availability of 92%/ 90% of buses shall be levied on the Contractor in case where AC Low Floor Bus maintenance facilities are not there, for next four months due to any delay in creation of facilities of Service Pits & Six Rooms to the Contractor besides Effluent Treatment Plant, Tower Lights, Water Softening Plant i.e. no pre-estimated damages for 6 (3 + 3) months from the date of issue of LOA.

6. Payment for AMC will be made on monthly basis. After every month, the Contractor will submit the bills and the Purchaser will arrange the payment within 30 days of receipt of bills complete in all respect with the required supporting documents subject to recoveries, if any, on account of pre-estimated damages towards failure to make available 92%/ 90% buses for operation/ water & electricity charges etc on monthly basis and any other charges recoverable as per Terms and Conditions of the Contract. Tax Deduction at Source (TDS)/ CGST/SGST will be deducted at source from the payment of the Contractor as per applicable law.

7. Eligibility Conditions for Bidder:

Vehicle Manufacturers (VM) and/ or authorized network with satisfactorily experience of at least two years ending on 31st March, 2019 for maintenance of CNG Fully built AC Low Floor Buses. In case of authorized network of VM, a certificate from VM is required to be issued certifying that the prospective Bidder for AMC services is in the authorized network of VM and the experience certificate for satisfactorily maintaining Low floor AC CNG buses and has not been black listed till date by the VM. An authorization by VM is also required to be issued to the prospective Authorized Network Bidder to participate in the Bid and will ensure supplies of genuine VM/ OEM or their recommended spare parts to the authorized network bidder for maintenance of these AC Low Floor Buses. The prospective bidder should be Proprietorship Firm or a Company registered under the Indian Companies act, 2013 or a Partnership Firm registered under Partnership Act, 1932.

8. **Capping of pre-estimated damages:** The pre-estimated damages shall be capped to 10% max on monthly basis in case the assured daily shift wise fleet availability is achieved during the month. However, there will be additional damages on the number of buses which are short during the month in case of non-achievement of assured daily shift wise fleet availability for the reasons attributed on the part of the service provider of AMC services during the contract period.

9. Award Criteria of AMC Contract

The Purchaser will consider the Bidder whose Bid has been determined to be responsive, complete and in accordance with the Bid Documents and whose offer on evaluation has been determined to be the **LOWEST (L-1)** acceptable offer for award of contract.

Further subject to the condition that in case L-1 bidder in tender for supply of buses is L-2 bidder in tender for AMC Services, then the said Bidder needs to match the L-1 rates as quoted by other bidder (who will be L-2/ L-3 in tender for supply of buses and would match L-1 rates for 35% split quantity) for contract for AMC services.

ANNEXURE 26: LIST OF ITEMS FOR FLAMMABILITY TEST

(if being fitted in the offered bus)

Sr. No.	Item	Testing Standard
1	ABS Sheet	IS:15061
2	ABS Escape hatch	IS:15061
3	Adhesive tape used in paneling etc.	IS:15061
4	Anti-skid Silicon grain (Grey)	IS:15061
5	Anti-skid Silicon grain (Yellow)	IS:15061
6	Ceiling light lens	IS:15061
7	Corrugated sleeve use for battery cable	IS:15061
8	Door closing indicator	IS:15061
9	Driver Seat & passenger Seat	IS:15061
10	Engine insulation	IS:15061
11	FRP (Invertor cover, Dash board/Driver area, bottom panel)	IS:15061
12	Glass wool	IS:15061
13	Honey comb insulation	IS:15061
14	PVC sleeve for wiring	IS:15061
15	PVC beading for joining ABS Sheet	IS:15061
16	Roof hand hold strap assly.	IS:15061
17	Roof inner cover	IS:15061
18	Seat belt 3 point (Driver Seat/Wheel Chair)	IS:15061
19	Seat belt 2 point (Passenger seat/Wheel chair locking)	IS:15061
20	Safety belt red (Wheel chair area)	IS:15061
21	Sunvisor (Driver window & wind screen)	IS:15061
22	Wheel chair back rest/Lazy back of wheel chair area	IS:15061
23	Yellow PVC strip for foot step edge	IS:15061
24	Yellow sleeve for grab rail & stanchion pipe	IS:15061
25	PVC Black film for partition glass	IS:15061
26	Marine board	IS:5509
27	LT wire	IS:2465
28	AC Louvers	IS:15061

ANNEXURE 27: INTEGRITY PACT

This Pact made this [●] day of [●] between Delhi Transport Corporation having its office at I P Estate, New Delhi hereinafter called the DTC (which term shall unless excluded by or is repugnant to the context, be deemed to include its officers, and shall also include its successors and assigns) of the one part

AND

[●] represented by [●] of the other part, hereinafter called the "Bidder/Contractor" (which term shall unless excluded by or is repugnant to the context be deemed to include its heirs, representatives, successors and assigns of the Bidder/ Contractor)

WHEREAS the DTC intends to award, under laid down organizational procedures, tender/ contract for [●]. The DTC, while discharging its functions on business principles, values proper compliance with all relevant laws and regulations, and the principles of natural justice, ethics, equity, fairness and transparency in its relations with the Bidders/ Contractors.

WHEREAS the DTC is desirous to make its business mechanism more transparent, thus to ensure strict adherence of the aforesaid objectives/goals, the DTC hereby adopts the instrument developed by the renowned international non-governmental organization " Transparency International" (T I) headquartered in Berlin (Germany). The DTC will appoint an Independent External Monitors (IE) who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

AND WHEREAS the Bidder is submitting a tender to the DTC for [●]. In response to the NIT (Notice Inviting Tender) dated [●] Contractor is signing the contract for execution of [●]

NOW, therefore,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to

Enabling the DTC to obtain the desired said stores/equipment/execution of works at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling DTC to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the DTC will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

1. Commitments of the DTC;

- 1.1 The DTC undertakes that no official of the DTC, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.
 - 1.2 The DTC will, during the pre-contact stage, treat all BIDDERS alike, and will provide to all BIDDERS the same information and will not provide any such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to other BIDDERS.
 - 1.3 All the officials of the DTC will report to the appropriate authority office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.
2. In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the DTC with full and verifiable facts and the same is prima facie found to be correct by the DTC, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the DTC and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the DTC the proceedings under the contract would not be stalled.

3. Commitments of Bidders/Contractor.

The Bidder/Contractor commits itself to take all measures necessary to prevent corrupt practice, unfair means and illegal activities during any stage of its bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following: -

- 3.1 The Bidder/Contractor will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the DTC, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.
- 3.2 (i) The Bidder/Contractor further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the DTC or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract

- with the DTC for showing or forbearing to show favour or disfavour to any person in relation to the contract or any other contract with the DTC.
- 3.2 (ii) The Bidder /Contractor has not entered and will not enter with other bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specification, certifications, subsidiary contracts, submission or non-submission of bids or any actions to restrict competitiveness or to introduce cartelization in the bidding process.
- 3.3 The Bidder/Contractor shall, when presenting his bid, disclose the name and address of agents and representatives and Indian BIDDERS shall disclose their foreign principals or associates.
- 3.4 The Bidder/Contractor shall when presenting his bid disclose any and all the payments he has made or, is committed to or intends to make to agents/brokers or any other intermediary, in connection with this bid/contract.
- 3.5 The Bidder/Contractor further confirms and declares to the DTC that the BIDDER is the original manufacturer/integrator/ authorized government sponsored export entity of the stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the DTC or any of its functionaries, whether officially or unofficially to the award of the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.
- 3.6 The Bidder/Contractor, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the DTC or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.
- 3.7 The Bidder/Contractor will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.
- 3.8 The Bidder/Contractor will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
- 3.9 The Bidder / Contactor shall not use improperly, for purposes of competition or personal gain ,or pass on to others, any information provided by the DTC as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The Bidder / Contractor also undertake to exercise due and adequate care lest any such information is divulged.
- 3.10 The Bidder/Contractor will inform to the Independent External Monitors. i) If he receives demand for an illegal/undue payment/benefit. ii) If he comes to know of any unethical or illegal payment/benefit. iii) If he makes any payment to any DTC's associate(s)

- 3.11 The Bidder/Contactor commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.
- 3.12 The Bidder/Contactor shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.
- 3.13 If the Bidder/Contractor or any employee of the Bidder/Contractor or any person acting on behalf of the Bidder/ Contractor, either directly or indirectly, is a relative of any of the officers of the DTC, or alternatively, if any relative of an officer of the DTC has financial interest/stake in the Bidder's/Contractor's firm, the same shall be disclosed by the Bidder/Contractor at the time filing of tender. The term 'relative' for this purpose would be as defined in Section 6 of the Companies Act 1956.
- 3.14 The Bidder/Contractor shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the DTC.
- 3.15 That if the Bidder/ Contractor, during tender process or before the award of the contract or during execution of the contract/work has committed a transgression in violation of section 2 or in any other form such as to put his reliability or credibility as Bidder/Contractor into question, the DTC is entitled to disqualify him from the tender process or to terminate the contract for such reason and to debar the BIDDERS from participating in future bidding processes.

4. Previous Transgression

- 4.1 The Bidder/Contractor declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify Bidders' exclusion from the tender process.
- 4.2 The Bidder/Contractor agrees that if it makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason and he may be considered for debarment for future tender/contract processes.
- 4.3 That the Bidder/Contractor undertakes to get this Pact signed by the subcontractor(s) and associate(s) whose value of the work contribution exceeds Rs 0.5 crore.(Rupees zero point five crore) and to submit the same to the DTC along-with the tender document/ contract before contract signing.
- 4.4 That sub-contractor(s)/ associate(s) engaged by the Contractor, with the approval of the DTC after signing of the contract, and whose value of the work contribution exceeds Rs 0.5 Crs. (Rupees Zero point five crore) will be required to sign this Pact by the Contractor, and the same will be submitted to the DTC before doing/ performing any act/ function by such subcontractor(s)/ associate(s) in relation to the contract/ work.

- 4.5 That the DTC will disqualify from the tender process all Bidder(s) who do not sign this Pact or violate its provisions or fails to get this Pact signed in terms of section 4.3 or 4.4 above.
- 4.6 That if the Contractor(s) does/ do not sign this Pact or violate its provisions or fails to get this Pact signed in terms of Section 4.3 or 4.4 above. DTC will terminate the contract and initiate appropriate action against such Contractor(s).
5. Earnest Money, Security Deposit, Bank guarantee, Draft, Pay order or any other mode and its validity i/c Warranty Period, Performance guarantee/Bond.

While submitting bid, the BIDDER shall deposit an EMD/SD/BG/DRAFT/PAY ORDER ETC I/C WARRANTY PERIOD, PG/BOND, VALIDITY ETC., which is as per terms and conditions and details given in NIT / tender documents sold to the Bidders.

6. Sanctions for Violations/Disqualification from tender process and exclusion from future Contacts.
- 6.1 Any breach of the aforesaid provisions by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle the DTC to take all or any one of the following actions, wherever required: -
- (i) To immediately call off the pre contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(s) would continue.
 - (ii) To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER.
 - (iii) If the DTC has disqualified / debarred the Bidder from the tender process prior to the award under section 2 or 3 or 4, the DTC is entitled to forfeit the earnest money deposited/Bid Security.
 - (iv) To recover all sums already paid by the DTC, and in case of an Indian BIDDER with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from a country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the BIDDER from the DTC in connection with any other contract or any other stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.
 - (v) To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the BUYER, along with interest.
 - (vi) To cancel all or any other Contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the DTC resulting from such cancellation/rescission and the DTC shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.
 - (vii) To debar the BIDDER from participating in future bidding processes for a minimum period of three years, which may be further extended at the discretion of the DTC.

- (viii) To recover all sums paid in violation of this Pact by BIDDER(s) to any middleman or agent or broker with a view to securing the contract.
 - (ix) In case where irrevocable Letters of Credit have been received in respect of any contract signed by the DTC with the BIDDER, the same shall not be opened.
 - (x) Forfeiture of Performance Security and Subsidy Bank Guarantee in case of a decision by the BUYER to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.
 - (xi) That if the DTC have terminated the contract under section 2 or 3 or 4 or if the DTC is entitled to terminate the contract under section 2 or 3 or 4, the DTC shall be entitled to demand and recover from the contractor damages equivalent to 5% of the contract value or the amount equivalent to security deposit or performance bank guarantee, whichever is higher.
 - (xii) That the Bidder / Contractor agrees and undertakes to pay the said amount without protest or demur subject only to condition that if the Bidder/Contractor can prove and establish to the satisfaction of the DTC that the disqualification / debarment of the bidder from the tender process or the termination of the contract after award of the contract has caused no damage to the DTC.
- 6.2 The DTC will be entitled to take all or any of the actions mentioned at para 6.1(i) to (xii) of this Pact also on the Commission by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in Chapter IX of the Indian Penal code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.
- 6.3 That if the Bidder/Contractor applies to the DTC for premature revocation of the debarment and proves to the satisfaction of the DTC that he has installed a suitable and effective corruption prevention system and also restored/recouped the damage, if any, caused by him, the DTC may, if thinks fit, revoke the debarment prematurely considering the facts and circumstances of the case, and the documents/evidence adduced by the Bidder/Contractor for first time default.
- 6.4 That a transgression is considered to have occurred if the DTC is fully satisfied with the available documents and evidence submitted along with Independent External Monitor's recommendations/suggestions that no reasonable doubt is possible in the matter.
- 6.5 The decision of the DTC to the effect that a breach of the provisions of this Pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the Independent External Monitor(s) appointed for the purpose of this Pact.
- 7. Allegations against Bidders/Contractors/ Sub-Contractors/ Associates:**
- That if the DTC receives any information of conduct of a Bidder/ Contractor or Sub-Contractor or of an employee or a representative or an Associates of a Bidder, Contractor or Sub- Contractor which constitute corruption, or if the DTC has substantive suspicion in this regard, the DTC will inform the Vigilance Department for appropriate action.

8. Independent External Monitors (s),

- 8.1 That the DTC is in the process of appointing competent and credible Independent External Monitors (s) for this Pact.
- 8.2 The task of the Independent External Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact. He will also enquire into any complaint alleging transgression of any provision of this Pact made by the Bidder, Contractor or DTC.
- 8.3 That the Independent External Monitor is not subject to any instructions by the representatives of the parties and would perform his functions neutrally and independently. He will report to the Chairperson of the Board of the DTC.
- 8.4 That the Bidder / Contractor accepts that the Independent External Monitor has the right to access without restriction to all project documentation of the DTC including that provided by the Bidder/Contractor. The Bidder/Contractor will also grant the Independent External Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation including minutes of meeting. The same is applicable to Sub - Contractors and Associates. The Independent External Monitor is under obligation to treat the information and documents of the DTC and Bidder/ Contractor / Sub- Contractors/ Associates with confidentiality.
- 8.5 That as soon as the Independent External Monitor notices, or believes to notice, a violation of this Pact, he will so inform the management of the DTC and request the management to discontinue or heal the violation, or to take other relevant action. The Independent External Monitor can in this regard submit his recommendations/ suggestions. Beyond this, the Independent External Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- 8.6 That the DTC will provide to the Independent External Monitor sufficient information about all meetings among the parties related to the project provided such meetings could have an impact on the contractual relations between the DTC and the Contractor / Bidder. The parties offer to the Independent External Monitor the option to participate in such meetings.
- 8.7 That the Independent External Monitor will submit a written report to the Chairperson of the Board of the DTC within 2 weeks from the date of reference or intimation to him by the DTC and, should the occasion arise, submit proposals for correcting problematic situations.
- 8.8 That if the Independent External Monitor has reported to the Chairperson of the Board a substantiated suspicion of an offence under relevant Anti- Corruption Laws of India and the Chairperson has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Department, the Independent External Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

8.9 The word 'Independent External Monitor' would include singular and plural.

9. Facilitation of Investigation.

In case of any allegation of violation of any provisions of this Pact or payment of commission, the DTC or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such Examination.

10. Law and Place of Jurisdiction.

That this Pact is subject to Indian Law. The place of performance and jurisdiction is the Corporate Headquarter /the Regional Headquarter / office of the DTC, as applicable.

11. Other Legal Actions

11.1 That the changes and supplements as well as termination notices need to be made in writing.

11.2 That if the Bidder / Contractor is a partnership or a consortium, this Pact must be signed by all the partners and consortium members or their authorized representatives.

12. Pact duration (Validity)

12.1 That this Pact comes into force when both the parties have signed it. It expires for the Developer 12 months after the initial/extended term. It expires for the Contractor/sub-contractor 12 months after the final payment under the respective contract, and for all other Bidders 3 months after the contract is awarded.

12.2 That if any claim is made / lodged during this period, the same shall be binding and continue to be valid despite the lapse of this Pact as specified herein before, unless it is discharged/determined by Chairman of the DTC.

12.3 That should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

13. Company Code of Conduct

Bidders are also advised to have a company code of conduct (clearly rejecting the use of bribes and other unethical behavior) and a compliance program for the implementation of the code of conduct throughout the company.

14. The parties hereby sign this Integrity Pact at _____ on _____

Purchaser (Buyer)	BIDDER
Name of the Officer	CHIEF EXECUTIVE OFFICER
Designation	Witness
DTC	1. _____
Witness	2. _____
1. _____ 2. _____	



REQUEST FOR PROPOSAL

Through e-procurement Portal of Government of NCT of Delhi
(<https://govtprocurement.delhi.gov.in>)

FOR

**SUPPLY OF 1000 FULLY BUILT AC CNG PROPELLED
LOW FLOOR BUSES**

GLOBAL RFP NUMBER: CGM/SBU/924/2019/AC

Part I	Request for Proposal ("RFP")
Part II	Financial Proposal Format

Issued By



DELHI TRANSPORT CORPORATION

(Government of NCT of Delhi)

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Prepared by

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SECTION X: PRICE SCHEDULES

ANNEXURE A1: PRICE SCHEDULE FOR FULLY BUILT AC CNG PROPELLED LOW FLOOR BUSES MANUFACTURED IN INDIA

Refer Financial Proposal Format (*Part II of RFP Document*)

(Applicable for Indigenous Bidders and Foreign Bidders, who intend to supply buses manufactured by them in India)

The Chairman-cum-Managing Director
Delhi Transport Corporation,
IP Estate, New Delhi - 110 002.

Reference: Bid No.CGM/SBU/924/2019/AC

Date of Opening:

We, M/s (Name of the Bidder/ Firm) hereby certify that we shall supply Fully Built AC CNG Propelled Low Floor Buses manufactured in India from the manufacturing premises fitted with modern equipment.

The production methods, quality control and testing of all materials and parts manufactured or used by us are/ shall be open to inspection by the representative of the Purchaser. We hereby offer to supply the following items at the price indicated below: -

PRICES FOR BUSES IN INDIAN RUPEES (INR):

Item No.	Description & Model No.	Quantity and Unit	Each Bus DDP Destination Price (at Purchaser's Central Workshop-1, Delhi)	Total DDP Destination Price (at Purchaser's Central Workshop-I, Delhi)
A	B	C	D	E = C x D
1	Fully Built AC CNG Propelled Low Floor Buses	1000		

Total Price of Buses in Words in INR

BREAK UP OF PRICE IN 'COLUMN D' IN INDIAN RUPEES (INR):

Basic Price	Packing Charges, if any	GST	Other levies	Forwarding Charges	Insurance Charges	Freight to Destination	Any other Charges	DDP Destination (at Purchaser's Central Workshop-I, Delhi) Price per Unit
1	2	3	4	5	6	7	8	9

- It is hereby certified that we have understood the Instructions to Bidders, General Conditions of Contract (including Option Clause 16 thereof), Technical Specification,

Schedule of Requirements and all other terms and conditions given in the RFP Document and have thoroughly examined the Specification given in the RFP Document. We are fully aware of the type of Bus required and our offer is to supply the Buses strictly in accordance with the requirements and according to the terms of RFP Document. We agree to abide by the conditions of the RFP Document.

2. We hereby offer to supply the buses detailed above or such portion thereof as the Purchaser may specify in the Letter of Acceptance/ Contract at the price quoted and agree to hold this offer open for acceptance for a period of 240 days from the Date of Opening of Tender.

IMPORTANT NOTES:

- (i) In case of discrepancy between Unit Price and Total Price, the Price as favourable to the Purchaser shall prevail.
- (ii) In case of difference between the Price in figures & words, the Price quoted in words will prevail.
- (iii) instructions contained in the 'Instructions to Bidders', 'General Conditions of Contract', 'Technical Specification' & 'Schedule of Requirements' may be carefully studied before filling up this 'Price Schedule'.
- (iv) The Bidder shall clearly indicate breakup of prices in their bids in respect of Bus Price including government taxes/ levies etc. as applicable at the time of filling their bids.

**SIGNATURE AND SEAL
OF THE BIDDER**

ANNEXURE A2: PRICE SCHEDULE FOR FULLY BUILT AC CNG PROPELLED LOW FLOOR BUSES MANUFACTURED OUTSIDE INDIA

(Applicable for Foreign Bidders, who intend to supply Buses manufactured by them from Outside India)

The Chairman-cum-Managing Director
Delhi Transport Corporation,
IP Estate, New Delhi - 110 002 (India)

Reference: Bid No.CGM/SBU/924/2019/AC

Date of Opening:

We, M/s (Name of the Bidder firm) hereby certify that we shall supply the Fully Built AC CNG Propelled Low Floor Buses manufactured from the manufacturing premises fitted with modern equipment. The production methods, quality control and testing of all materials and parts manufactured or used by us are/ shall be open to inspection by the representative of the Purchaser. We hereby offer to supply the following items at the price indicated below:

A. FOB/ CIF PRICE FOR BUSES (IN INDIAN RUPEES/ US DOLLARS/ EUROS)

S. No	Description & Model No.	Quantity & Unit	Country Of Origin	Country of Shipment	FOB Price (Each Bus)	Ocean Freight per unit from port of despatch to Indian Port Unit price	Insurance charges to destination station i.e. Delhi (Unit price)	CIF Price (Each Bus)
1	2	3	4	5	6	7	8	9=6+7+8
1	Fully Built AC CNG Propelled Low Floor Buses	1000 Buses						

(B) PRICE IN INDIAN RUPEES OF EACH BUS FOR DELIVERY AT DESTINATION (FROM INDIAN PORT TO PURCHASER'S CENTRAL WORKSHOP-I, DELHI):

S. No.	Description & Model No.	Port Charges	Custom Duty	Custom Clearance Charges	Freight up To Destination	Other charges	Total Price for one bus in Indian Rupees delivery at Purchaser's Central Workshop-I
1	2	3	4	5	6	7	8 = 3 + 4 + 5 + 6+7

Total FOB Price for 1000 Buses (in Figures & Words) (i.e. Col 6 of Table "A" X 1000):

Total CIF Price for 1000 Buses (in Figures & Words) (Col 9 of Table "A" X 1000):

Total DDP Price for 1000 Buses (in Figures & Words) (Col 9 of Table "A" Plus Col 8 of Table "B") X1000):

1. It is hereby certified that we have understood the Instructions to Bidders, General Conditions of Contract (including Option Clause 16 thereof), Technical Specification, Schedule of Requirements and all other terms and conditions given in the RFP Document and have thoroughly examined the Specification given in the RFP Document. We are fully aware of the type of Bus required and our offer is to supply the Buses strictly in accordance with the requirements and according to the terms of RFP Document. We agree to abide by the conditions of the RFP Document.
2. We hereby offer to supply the Buses detailed above or such portion thereof as the Purchaser may specify in the Letter of Acceptance/ Contract at the price quoted and agree to hold this offer open for acceptance for a period of **240** days from the Date of Opening of Tender.

IMPORTANT NOTES:

- (i) In case of discrepancy between Unit Price and Total Price, the Price as favourable to the Purchaser shall prevail.
- (ii) In case of difference between the Price in figures & words, the Price quoted in words will prevail.
- (iii) Instructions contained in the 'Instructions to Bidders', 'General Conditions of Contract', 'Technical Specification' & 'Schedule of Requirements' may be carefully studied before filling up this 'Price Schedule'.
- (v) The Bidder shall clearly indicate breakup of prices in their bids in respect of Bus Price including government taxes/ levies etc. as applicable at the time of filling their bids.

**SIGNATURE AND SEAL
OF THE BIDDER**