

CHIEF DISTRICT MEDICAL & PUBLIC HEALTH OFFICER:ANGUL
(ZILLA SWASTHYA SAMITI, ANGUL)

Advt. No 459

Date 01/03/2021


**Tender For Supply, Installation, Operation & Maintenance Of
Gps Based Automatic Vehicle Tracking & Monitoring System
Under DMF.**

Chief District Medical and Public Health Officer- Cum District Mission Director, DHH, Angul invites proposals from eligible bidders for supply , installation , operation & maintenance of GPS based automatic vehicle tracking & monitoring system. Sealed tenders as per the terms and conditions containing tender documents must reach the O/o CDM & PHO- Cum District Mission Director, DHH, Angul, PIN-759122 on or before Dtd. 24.03.2021 through Registered post/ Speed Post/ Courier only. The envelop containing the tender documents must super scribed with "Tender for Supply, Installation, Operation & Maintenance of GPS based Automatic Vehicle Tracking & Monitoring System and 'Tender Enquiry No.- GPS-DMF ANG/2021/18." The proposals received after due date shall not be considered and the incomplete proposals with no relevant documents shall be rejected. The tender documents with other details can be download from district website i.e. www.angul.nic.in. The undersigned reserves all the right to accept and reject any or all the tenders without assigning any reason thereof.

This Tender document contains the following:

- Section I- Instruction and information for submission of Tenders
- Section II- Eligibility Criteria
- Section III- Objective and Scope of Work
- Section IV- Terms and Conditions
- Section V- Schedule of Requirement
- Section VI- Technical Specification
- Section VII- Formats of the Tender

CDM & PHO Cum District Mission Director, Angul


26/2/21
CDM & PHO -cum- Dist. Mission Director
NHM, Angul

ZILLA SWASTHYA SAMITI, ANGUL

TENDER DOCUMENT

TENDER ENQUIRY NO.: GPS- DMFANG/2021/18

<p>TENDER FOR SUPPLY, INSTALLATION, OPERATION & MAINTENANCE OF GPS BASED AUTOMATIC VEHICLE TRACKING & MONITORING SYSTEM</p>
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**Period of availability of tender document
in website :www.angul.nic.in**

Date & time of Pre-Bid Conference- 10.03.2021

Last Date & time for Submission of Tender- 24.03.2021

Address of Submission of Tender Document: CDM & PHO- Cum District Mission Director, DHH, Angul
PIN-759122

Date & time of opening of the Technical Bid: 25.03.2021 (11.00 A.M) in the
O/o CDM & PHO-Cum District Mission Director, Angul

The tender document contains total 36 Pages (including cover)

**ZILLA SWASTHYA SAMITI,
ANGUL**

**SUPPLY, INSTALLATION, OPERATION & MAINTENANCE OF GPS BASED AUTOMATIC
VEHICLE TRACKING & MONITORING SYSTEM**

Sealed tenders as per the terms and conditions contained in this Tender document are invited from eligible bidders (System Integrators) for supply, installation, operation & maintenance of GPS based automatic vehicle tracking & monitoring system, the details of which are specified at Schedule of Requirement & Technical Specifications – Section III of the tender document.

This Tender document contains the following:

- Section I – Instructions and information for submission of Tenders
- Section II – Eligibility Criteria
- Section III – Objective and Scope of Work
- Section IV – Terms and Conditions
- Section V – Schedule of Requirement
- Section VI- Technical Specification
- Section VII - Formats of the Tender

The deadline for submission of Tender is

The undersigned reserves the right to accept and or reject any or all the tenders without assigning any cause or reason thereof.

Section I

Instructions and information for submission of Tenders

Tenderers as per the eligibility criteria are required to submit their tenders in sealed envelopes as per the instructions given at Clause 5 - FORMATS AND SIGNING OF TENDERS and Clause 6 - SEALING AND MARKING OF TENDERS and must submit before the deadline given at Clause 7 - DEADLINE FOR SUBMISSION OF TENDERS of this Section.

The sealed envelope(s) containing the Tender(s) must **be delivered at the address mentioned in the Cover Page** within the Last date and time for submission of Tenders: **On or before 3 PM on 24.03.2021**.

FORMAT OF THE TENDER

The tender should be submitted in English and be set out in two main parts

- Part A - Technical Bid
- Part B – Price Bid

PART A – TECHNICAL BID

The **Technical BID** should consist of the following documents:

- a) Checklist – **Format T1**
- b) Technical Bid Submission Form in the letterhead of the firm - **(Format T2)**
- c) **Tender document cost of Rs.2,000/-** in the shape of Demand Draft in favor of **DMF, DHH, Angul** payable at Angul
- d) **Earnest Money Deposit (EMD) of Rs. 50,000 /-** in shape of Demand Draft in favor of **DMF, DHH, Angul** payable at Angul.
- e) Details of EMDs - **(Format T3)**
- f) Profile of the Firm - **(Format T4)**
- g) Photocopy of the registration certificate of the firm/company
- h) Photocopy of the GST registration certificate
- i) Photocopy of PAN
- j) Annual Turnover Statement of last three years i.e. 2017-18, 2018-19 & 2019-20 certified by the Chartered Accountant – **Format T5**
- k) Photocopies of audited annual statement of the last three years i.e. 2017-18, 2018-19 & 2019-20 and the turnover figure should be highlighted there.
- l) Manufacturer's Authorization Certificate (in case of authorized distributor/ importer) – **Format T6** (In case of GPS Device)
- m) Details of Technical Specification of the products offered – **Format T7**
- n) Technical brochures /Leaflets of the product offered
- o) Past Experience in executing similar GPS based automatic vehicle tracking & monitoring system during the last three years – **(Format T8)**
- p) Copy of work orders / contracts as mentioned in Format –T8

Note : The documents with all formats submitted in the technical bid must be duly Signed with **seal** by the Tenderer on each page.

PART B: PRICE BID

The **Price Bid** should consist of the following documents:

- a) Price Bid Submission Form on the letterhead of the firm (**Format - P1**)
- b) Price Formats (**Format - P2**)
- c) In case the VAT is payable to Govt. of Odisha, pl. furnish a copy of the OVAT registration certificate.

General Information

1. Last date and time for submission of Tenders: On or before 24.03.2021 3 PM .

2. Schedule of Tender Opening

The tenders received by the 24.03.2021 within the deadline for submission of tenders will be opened at the office address mentioned at clause 6.2

The Technical bids shall be opened in the presence of the tenderer / their duly authorized representatives (who choose to attend the tender opening) at **11.00 AM on 25.03.2021**. In the event of the specified date of Tender opening being declared a holiday for the Purchaser, the Tenders shall be opened at the appointed time and location on the next working day.

The Price bids of **only those tenderers** who meet the eligibility criteria after the assessment of it's technical bid, will be opened in the presence of the tenderer /their duly authorized representatives (who choose to attend the bid opening). The date of opening of the price bid shall be intimated to the technically qualified tenderers.

3. Amendment of Invitation

In case of any discrepancy between the Press Advertisement, other detailed provisions of the tender document and the updated version on the web, the web-version will prevail. At any time prior to last date of bid submission , the authority reserves the right to add / modify / delete any portion of this document / extension of bid, by issuance of an addendum/corrigendum, which would be published only in the web site: i.e www.angul.nic.in and will be binding on the tenderers.

4. Period of Validity of Bid

For the purpose of placing the order, the bid shall remain valid for a **period of 180 days from the date of opening of bid.**

5. Formats and Signing of Tenders

5.1 The Tender shall be neatly typed and shall be signed, by an authorized signatory (ies) on behalf of the Firm. All pages of the Tender, except for un-amended printed literature, shall be initialed by the person or persons signing the Tender.

5.2 The Tender shall contain no interlineations, erasures or overwriting. In order to correct error made by the tenderer, all corrections shall be done & initialed by the authorized signatory after striking out the original words / figures completely.

6. Sealing and Marking of Tenders

6.1 The Tenderer shall seal & mark the Tender as follows:

- a) Technical bid in one envelope super-scribed with words **“Technical Bid for - Supply, Installation, Operation & Maintenance of GPS based Automatic Vehicle Tracking & Monitoring Angul Health System vehicles”**.
- b) Price bid in one envelope super-scribed with words **“Price Bid - Supply, Installation, Operation & Maintenance of GPS based Automatic Vehicle Tracking & Monitoring.**

- c) All two envelopes (Technical and Price Bids) shall be sealed in a covering envelope super-scribed with words “**Tender for Supply, Installation, Operation & Maintenance of GPS based Automatic Vehicle Tracking & Monitoring System and “Tender Enquiry No. GPS-DMF ANG/2021/18”**”.
- 6.2 Every envelope and forwarding letter of various parts of the tender shall be **addressed to:**
- CDM & PHO cum District Mission Director,
District Head Quarters Hospital (DHH)
Angul , Pin- 759122**
- The name of the firm/company should be mentioned in the bottom left portion of each envelop.
- 6.3 Tenders may be submitted **through Speed post / Registered post / Courier**. Tenders sent through Telex / Telegrams / Fax / Email shall not be acceptable.
- 6.4 The envelopes are not sealed as per para below and marked as required above, the CDM & PHO cum District Mission Director, Angul shall assume no responsibility for the tender's misplacement or premature opening.
- 6.5 The envelope shall be sealed by signing across all joints & pasting good quality transparent adhesive tape on top of such joints & signatures.
- 6.6 The envelope shall be properly sealed and carry the name and address of the firm / company.

7. Deadline For Submission of Tenders

Tenders will be received by O/o CDM & PHO cum District Mission Director, Angul at the address specified above at clause 6.2, till **03 PM on 24.03.2021.**

8. Late Tenders

Any Tender received by O/o CDM & PHO cum District Mission Director, Angul after the deadline for submission of Tenders, as per Clause 7 above shall be returned unopened.

Section - II

Eligibility Criteria

The following are the conditions, which are to be necessarily fulfilled, to be eligible for technical evaluation of the proposed solution. Only those interested bidders who satisfy the following eligibility criteria should respond to this tender:

1. (i) The Bidders should be OEM / IT Firm / System Integrators in India registered under the Indian Companies Act, and/or any other legal entity registered in Indian Law.
(ii) Bidder should submit the documents as per Formats of the tender document.
2. The bidder should have minimum average annual turnover of **Rs. 1.00 Crore** or more in the last three financial years. A CA certificate to this effect is to be submitted (as per Format-T4) along with Technical Bid. **Certified audited copies** of balance sheets/profit & Loss Accounts / Annual Reports of last three financial years i. e. 2017-18, 2018-19 & 2019-20 should also be submitted along with Technical Bids in support of the information provided in Format-T4.
3. The bidder should have experience of execution of similar GPS-based information technology projects of related areas and must be in the business of providing Vehicle Tracking & Monitoring System based on GPS / GPRS Solutions for at least three years. The bidder should have exposure and experience in handling **at least one** Government / Corporation / PSU Project comprising of GPS based vehicle tracking solution. Work orders and a certificate regarding 'Project has been successfully & satisfactorily executed' from client should be submitted along with bid.
4. The bidder should not have been black listed by any PSU/Corporation/Board or State/Central Government in India. In this regard an **affidavit** must be submitted duly attested by the notary and the bidder.
5. The bidder must furnish the EMD of **Rs.50,000/-** and tender document cost of **Rs.2,000/-** (Non Refundable) as mentioned in the tender document in their technical bid.

SECTION-III OBJECTIVE & SCOPE OF WORK

1. OBJECTIVE OF THE PROJECT:

The objective of the project is to establish a GPS based Automatic Vehicle Tracking and Management System to monitor and manage vehicles and Mobile Health Units (MHU) running across the district to improve efficiency and effectiveness of their utility accessing information about vehicle's position, speed, fuel, stoppages, detours etc., on real-time basis so that they are optimally utilized. The data should be available through the central database where users can see the status of vehicles on digital maps along with diagnostic reports and receive real-time alerts on mobile devices.

The assignment shall cover:

- a. Establishment and maintenance of a GPS based Automatic Vehicle Tracking & Management System for all vehicles and MHUs being used in the District.
- b. Supply, installation, configuration and maintenance of all required hardware, network and software application components required for above purpose for a period of **three years**.
- c. Maintain database and furnish information (Reports) in the desired format and time interval as and when required by the department/authority.

2. SCOPE OF THE PROJECT:

Scope of work will include provision of the complete Automatic Vehicle Tracking & Management System (AVTMS) and its Management including all the software, hardware and networks components. The agency shall be required to implement end-to-end solution along with centralized call management if required at a later stage. The application should have the facility of integration with other call centers, help desks and applications if any.

2.1 Key features of the System

The GPS based device fitted in the vehicles will calculate the position of the vehicles in terms of Latitude and Longitude using GPS positioning and transfer the data to the central server through GSM/GPRS interface.

2.2 Communication System

The information captured by the GPS Device will be transmitted to the server through a mobile data service network thereby establishing a communication. The service provider will **identify the best possible connectivity** for the GPS devices, i.e. General Packet Radio Service (GPRS) / GSM (Global System for Mobile communication) based on the extent of coverage.

2.3 GPS Device

- a) The GPS equipments should be weather, water, vibration and tamper proof.
- b) Should have provision to keep the movement and all other records relating to the vehicle MIS in internal memory for at least 30 days as backup, in case of network failure and forward the same while there is network connectivity.

- c) The numbers of vehicles/GPS device required can be reduced or increased at the sole discretion of the client.
- d) The GPS device must be certified by standard organizations recognized by Govt. of India and have most advance features on battery backup/antenna/modem/ memory/ Digital I/O and other essential features.
- e) The GPS device should have an on/off button panel, linked to the MIS.
- f) The GPS Units must support for calling Pre-Programmed numbers either through dedicated keys or through Menu selection during emergencies.
- g) The Detailed Specification of the GPS Device (Minimum) is mentioned at **Section-VI**.

2.4 Vehicle MIS

- a) Should be hosted on a secure platform with 99.9% up time.
- b) Should have high security features like account authentication, complex password management, Unique encryption algorithm for securing passwords, https:// for application and Web service, Proper Error handling and input validation and firewall configured.
- c) Should have ability to provide accurately network-wide location information of the entire fleet of vehicles.
- d) Should have the ability to track vehicles in real time.
- e) To identify unauthorized halt, deviation from predefined route, monitor excessive delays.
- f) The fleet management monitor database for vehicle should contain vehicle registration number, engine number, chassis number, model, distance covered, number of days worked, route violation etc along with code for each vehicle.
- g) Should ensure that the system developed along with the application software should compatible and seamlessly communicate in sync with GPS devices / interfaces of all major makes which are available in the market.
- h) The software features should have multi-level login with authentication, management of role access at admin level.
- i) The system should capable of creation and maintenance of master level data at admin level.
- j) The system should have alert mechanism and display of vehicle position on the digitalized map with designated routes etc.
- k) Should ensure elimination of any device-related errors.
- l) Should ensure timely Backup & Restoration of all data in case of failure in online transmission for more than 25 consecutive days.
- m) Should provide representative services include reports on fuel efficiency, fuel pilferage alerts, over-speeding alerts, idle-time/ downtime reports, alert on switching off / on-of the ignition.
- n) The agency should ensure that any change in map/GIS data will not hamper the existing software functionality.
- o) SMS based reporting of instructions to vehicles and notify acknowledgement.
- p) SMS based reporting on vehicle wise movements/ Idle.
- q) Security encryption system for both signal and real-time GPS tracking.
- r) Integration with other MIS like RBSK monitoring and service delivery system etc.
- s) Integration with bio-metric devices/other attendance capturing system, in future.

2.5 Mobile App for Vehicle MIS

- a) The agency should provide an Android based Mobile App for the vehicle MIS, which should contain the following features
 - Authenticate Logging Ins with Pre defined Mobile Nos
 - Entry screen for Daily data
 - Upload of Photographs with restricted size conversion.
 - Facility for Offline Storage and Upload of data
 - Integration with Vehicle MIS
 - Vehicle MIS dashboard as report
- b) The App should be available in Play Store, which can be downloaded and used by authenticate users.
- c) Data uploaded from App should be incorporated in Vehicle MIS and Vice-Versa.

2.6 Service Support

- d) Should provide necessary manpower to support the hardware, systems software and application software in terms of data management, operational support, bug rectification and feature up-gradation for the period of warranty and comprehensive maintenance.
- e) The staff of the agency responsible for operational maintenance.
- f) The Service Provider shall provide necessary backup services with the technician, service engineers, etc to ensure smooth operation of the system in time.

2.7 Service Parameters

- a) Should agree to sign a Contract agreement /Standard Operating Procedure (SOP) with the client on providing services.
- b) A maximum of 24 hrs response capacity in case of malfunction.
- c) Immediate replacement with new devices from buffer stock within 24 hrs of the malfunction and then repair within 72 hrs of the malfunction including memory recovery.
- d) Re-Installation of Devices in case of change of the vehicle for a location.
- e) Should agree to the Liquidated damage charges defined by the client.

2.8 Other Services

- a) Designing of training module for different stake holders and supervising the Training workshops / sessions. Training to operational staff regarding operation.
- b) Should provide all hardware elements, systems software and necessary application software. The software license should however be valid until the department desires to use the system, which may be beyond 3 years.

SECTION-IV

TERMS AND CONDITIONS

1. **Earnest Money Deposit:**

EMD in shape of Demand Draft in favour of **DMF, DHH, Angul** payable at Angul is to be furnished by the tenderer along with the technical bid. Unsuccessful tenderer's EMD will be discharged/returned as promptly as possible, but not later than 21 days after issue of work order with the successful tenderer. The EMD of the successful bidder shall be returned after submission of Performance Security. No interest will be paid on EMD. The EMD may be forfeited:

2. **Price**

The price quoted should be in Indian Rupees and in the price schedule format P2 mentioned in the tender. All taxes should be clearly stated separately as mentioned in the price schedule.

3. **Evaluation and comparison of tenders:**

First stage of technical bid evaluation

- a. The tenders will be evaluated as per the eligibility criteria, terms & condition and technical specification of the tender.

Second stage of technical bid evaluation

- b. The bidder, who qualifies the first stage of technical bid evaluation, shall be eligible for second stage of technical bid evaluation (award of marks). The award of marks shall be based on the following criteria.

Criteria	Marks
Annual Turnover (Average of last three financial years)	>=1 and <= 2 Crores : 10 Marks >2 and <= 3 Crores : 15 Marks >3 and <= 5 Crores : 20 Marks > 5 Crores : 25 Marks
Experiences in Govt/PSU/Corporations/ Other Govt Undertakings-	>1000 and <= 1500 Installations : 10 Marks >1500 and <= 2000 Installation : 15

	Marks > 2000 and <= 2500 Installation : 20 Marks > 2500 installations : 25 Marks
Vehicle MIS- Evaluation to be based on Presentation	Maximum :30 Marks
Certificate of Standards for GPS Device (Based on the certificates enclosed)	Maximum :10 Marks
Certification of the Vehicle MIS Developer (ISO/CMM etc)	Maximum :10 Marks

The technical committee shall ask for demonstration of the proposed GPS based automatic vehicle tracking & monitoring system as a part of technical evaluation to the bidders who qualify the first stage of evaluation.

- c. The price bids of those bidders shall be opened whose technical bids shall secure **minimum 70 (Seventy) or more marks.**
 - d. The eligible and technically qualified firm quoting the lowest price will be selected on the basis of the price offered. The total cost of Supply, Installation and recurring charges for comprehensive maintenance for three years shall be taken into account for evaluation to arrive at the lowest responsive bidder.
4. **Work Order**
The work order shall be issued to the lowest evaluated responsive bidder by the CDM&PHO cum DMD, Angul as per the requirement.
 5. **Validity of the Bid**
For the purpose of placing the work order, the bid shall remain valid for a period of 6 months from the date of submission of bid.
 6. **Rate Contract Validity**
The rates finalized in the contract agreement with the successful bidder shall remain valid for a period of one year from the date of execution of the contract.
 7. **Performance Security:**
Within 7 days from the receipt of the letter of award / work order, the successful bidder should submit a performance security in the shape of DD or Bank Guarantee from any Nationalized/ Scheduled Bank of an amount equal to 10% of the supply and installation cost, which will be valid for 36 months. The performance security should be made in favour of the **District Mineral Fund, DHH, Angul**. The proceeds of the Performance Security shall be payable to **District Mineral Fund, DHH, Angul** as compensation for any loss resulting from the firm/Company's failure to fulfill the obligations under the scope of work and terms & conditions of the Purchase Order.
 8. **Delivery & Installation**
The delivery & installation of the GPS devices in all the vehicles as mentioned in the schedule of requirement (Section-V) are to be completed within **30 days of issue of work order.**

9. Training

Successful bidder shall provide a training manuals and user guides for the system. The Successful bidder shall also provide the training on GPS device and Tracking system at the user location. Successful bidder shall develop a training plan that ensures all users of the system receive sufficient training to successfully operate the system.

10. Delay in Supply

The time schedule for completion of the supply & installation as mentioned in Clause 8 above is very important and the supplier must take utmost care to complete the work within the time specified in clause 8. If the supply & installation is delayed for any reason for which the CDM & PHO cum DMD ,Angul or the authorities in charge of the concerned site are not responsible, a penalty @ 0.5% of the Supply and installation cost will be deducted from the payment to the supplier for each week (or a part thereof) of delay subject to maximum 4% of the purchase order/contract value.

11. Payment Terms

- I. 80% of the supply and installation cost will be released after installation of the all GPS devices in the vehicles and submission of bills along with duly signed installation certificate from the respective blocks/health facilities where the vehicles are operating and after ensuring that 10% performance security has been furnished.
- II. The balance 20% payment shall be released after 2 months successful operation of the equipment in each vehicle.
- III. The monthly recurring charges, including SIM charges for comprehensive maintenance and vehicle MIS will be paid on quarterly basis. The vendor has to raise the bills of maintenance and vehicle MIS as per the actual no. of device working. The payment will be calculated on the basis of no. of days the device has communicated with the vehicle MIS and reports have been generated.
- IV. The payment for defunct devices (which have not reported in Vehicle MIS) will be deducted from the quarterly payment, calculating the no. of days the device is defunct (as reported through Vehicle MIS).

12. Comprehensive maintenance of the equipment and Vehicle MIS

- I. The supplier has to provide comprehensive maintenance for a period of three years from the date of installation and commissioning of the AVTMS.
- II. In case of any unsatisfactory performance of equipment(s) or any claim arising out of this services, the purchaser/consignee shall promptly notify the same in writing or over phone or by E-mail to the supplier.
- III. Upon receipt of such notice/communication, the supplier shall replace the defective GPS system with a new one within a period of 24 hours and repair the defective one within a period of Max. 72 hours.
- IV. If the supplier, having been notified, fails to rectify or replace the defective goods or parts thereof within timeframe mentioned above, the purchaser may proceed to take such remedial action(s) as deemed fit by the purchaser, at the risk and expense of the supplier and without prejudice to other contractual rights and remedies, which the purchaser may have against the supplier.

13. **Spare Part /Spare Equipment**
The successful tendered will stock adequate spare part / spare equipment to provide services during the warranty period so that the equipment can be replaced within 24 hours.
14. **Inspection**
The purchaser or it's authorized representative may inspect the GPS equipment on a random basis after it's supply & installation to verify that the same is as per the technical specification
15. **Documentation**
The supplier / firm will provide the user manual / warranty card to the consignee at the time of supply.
16. **Penalties**
 - I. If the successful tendered fails to deposit the required performance security within the time specified or withdraws his tender after acceptance of his tender owing to any other reasons or unable to undertake the contract, then the contract will be cancelled and the earnest money deposit / performance security deposit shall stand forfeited by the purchaser.
 - II. Violating the tender terms and conditions & non supply / supply which is not as per technical specification will disqualify the firm to participate in the tender for a period of 3 (three) years from the date of issue of letter and its E.M.D & performance security deposit will be forfeited and no further purchase order will be placed to that firm for that item.
 - III. **If the bidder fails to render the service of replacement/ repair within stipulated timeframe, a penalty of 0.25% of the device cost will be imposed per hour beyond the repair/replacement time allowed.**
17. **Claim against Physical Damage/ Theft**
In the case of physical damage due to accident or any other reason or theft of the device, the supplier will install a new device in the place of the damaged one and claim the bill from the client accordingly with the new installation certificate and a certificate for the reason of physical damage/ theft. The bills will be paid only after realization of the valid reason of damage, not due to the fault of the supplier.
18. **Disputes & Legal Jurisdiction**
All legal disputes are subject to the jurisdiction of Angul courts or High Court of Odisha.

SECTION V

Schedule of Requirement

Sl.	Category of Vehicles	*No. of Vehicles (Approx.) in which GPS systems are to be installed
1.	Ambulances	10
2.	MHU Vehicles	03
3	FRU Vehicle	04
4	Vaccine Vans	01
	Total	18

***The no. of vehicles may increase/decrease by a factor of 10% to 15% during the contract period.**

SECTION - VI

MINIMUM TECHNICAL SPECIFICATION OF GPS DEVICE

The GPS Device being submitted for registration must comply with the minimum specifications outlined in Section 1 and Section 2 hereunder.

The minimum specifications of the vehicle mounted GPS Devices are as follows:

Compliance by the Applicant against the minimum technical specification below needs to be submitted together with documentary evidence as listed against each parameter:

- 1- The applicant should attach a certificate from any of the test agencies in Central Motor Vehicle Rules (CMVR) for testing related to automobiles, mentioned below covering all the points as per the requirement set out in Table 1 as applicable:
 - Automotive Research Association of India (ARAI)
 - International Centre for Automotive Technology (ICAT)
 - Central Institute of Road Technology (CIRT)
 - Vehicle Research & Development Establishment (VRDE)
 - or any competent Govt. body approved agency.
- 2- Component datasheet/ specification sheet from component manufacturer
- 3- Checklist to be submitted by Applicant from any of the authorized labs

Table 1: Specification/Checklist Sheet

Sl. No.	Specifications/ Checklist of GPS Devices	Validation Process	Compliance (Yes / No) and the referred page no. of technical document
1.	General Features		
1.1	GPS with any augmentation type i.e. GAGAN (Location, speed, heading, timestamp) data polling and sending frequency capability of less than or equal to 10 sec.	Test agency to verify based on the self-certification by applicant along with supporting documentary evidence with component datasheet/ specification sheet from component manufacturer.	
1.2	Location on demand on GPRS/SMS	Test agency to verify based on demonstration by applicant along with supporting documentary evidence.	
1.3	Non-volatile memory to store min 10,000 positional log	Test agency to verify based on demonstration by applicant along with supporting documentary evidence.	
1.4	Configurable backup SMS facility in case of GPRS failure	Test agency to verify based on demonstration by applicant along with supporting documentary evidence.	
2	GPS Specifications		
2.1	Parallel GPS Receiver - 20-Channel or more	Test agency to verify based on the self-certification by applicant along with supporting documentary evidence with component datasheet/ specification sheet from component manufacturer	
2.2	Acquisition sensitivity: equal to or better than (-)148 dBm Tracking sensitivity equal to or better		

	than (-)165 dBm Hot start <5s Warm start : < 30s Cold start < 40 s		
2.3	Accuracy of Less than 3-6 meter positional Accuracy, 2DRMS (on ground) or 1 mtr-2.5 mtr CEP (on ground) with vertical accuracy +/- 5 mtr	Test agency to verify based on the demonstration by applicant along with supporting documentary evidence (datasheet).	
2.4	A-GPS	Test agency to verify based on self- certification by applicant along with supporting documentary evidence with component datasheet/ specification sheet from component manufacturer	
2.5	Location Accuracy	NHM will check the location accuracy for position.	
3	Communication Module/ Network Specifications		
3.1	In - Built Quad-band GPRS module/ Modem Multi Slot GPRS GPRS class 10 or above *should comply to ETSI rel.1999	Test agency to verify based on the self- certification by applicant along with supporting documentary evidence with component datasheet/ specification sheet from component manufacturer.	
3.2	The device should have provision for the M2M embedded SIM and additionally have support M2M Robust Plastic SIM (Only one type of SIM would be used in the device at any given time) To Survive the automotive operational requirement such as vibration, temperature and humidity and provide Long life span with at least 10 years life. High stress memory support > 2Million E/W cycles per file, Outside of HSM 500k E/W cycles	Test agency to verify based on the Component data sheet/ specification sheet from component manufacturer of the SIM.	
3.3	(a)Should support all – SMS, Voice, Data, GPRS, TCP/IP (b) With multi network switching and OTA network update.	Test agency to verify based on Component data sheet/ specification sheet from component manufacturer of the SIM for point (a) Test agency to verify point (b) based on the demonstration by the Applicant.	
3.4	Devices need to support at least 2 different network providers for GPRS connectivity. The device should try and shift between various service providers in case of GPRS failure.	Test agency to verify based on the Self- certification by applicant along with supporting documentary evidence with following (if applicable):	
4	Power Characteristics		
4.1	Power Source –Vehicle Battery Input voltage range 8 – 32 volts Battery backup of minimum of 4 hours @ 60 seconds transmission	To be tested by test agency.	
5	Environmental Variables Testing		
5.1	Temperature range ; -10° C to 85° C	Testing High Temperature test : The test shall be carried out in accordance with Indian Standard IS: 9000 (Part 3/Sec 5). The device shall be subjected to the high temperature test conditions as per device specification of + 85°C. Cold Test: The test shall be carried out in	

		<p>accordance with Indian Standard (IS): 9000 (Part 2/Sec 4). The device shall be subjected to low temperature conditions as per device specification of (-) 10°C.</p> <p>Thermal Shock: The test shall be conducted as specified in IS: 9000 (Part XIV)-1978† as per device specification temperature ranges (temperature ranges from -10°C /85°C)</p> <p>Salt Spray Test: The device shall be tested as per AIS: 012/ S10250 as per teste method in IS : 9000 (Part XI)-1983</p> <p>Dust, temperature, vibration and water resistant, Tamper proof:</p> <p>Shock Test: The shock test shall be performed as per IS10250/IS 9000-part 8.</p> <p>Vibration Test: The vibration test shall be performed as per IS 9000-part 8 with the severities as per IS 10250 clause 4.1.2.</p>	
5.2	EMI /EMC	The device should meet the EMVEMC requirements as per AIS 004 (Part 3) or equivalent .	
5.3	Humidity Level: 5% to 95% non-condensing.	To be tested by Test agency For humidity cycle in cl. No. 5.2 of IS:10250	
5.4	67 rated or better.	To be tested by Test agency. The device will be tested for dust and water ingress according to IP 67 test specification.	
6	Antennae		
6.1	Should have internal GPRS antenna	Test agency to verify based on the self-certification by applicant along with supporting documentary evidence with component datasheet/ specification sheet from component manufacturer	
6.2	Should have internal GPS antenna		
7	Port/Sensors (External I/O)		
7.1	4 or more digital inputs	Test agency to verify based on the self-certification by applicant along w with supporting documentary evidence with component datasheet/ specification sheet from component manufacturer	
7.2	2 or more digital outputs (for relays, sirens etc.)		
7.3	1 or more analog inputs (For analog input like fuel, temperature etc.)		
7.4	Ignition Sensing		
7.5	1 no RS232 port		
8	Geo-fencing		
8.1	Should be capable of storing 15 or more Geo-fences	Test agency to verify based demonstration.	
8.2	Facility to update Geo- fence master in the device over the air	Test agency to verify based demonstration.	
9	Other Features		
9.1	Device should be capable of sending a packet to at least 2 different IP's.	Test agency to verify based demonstration.	
9.2	Over the Air Download of firmw are as well as configuration parameters.		
9.3	Remote administration & firmw are update over the air.		
9.4	Reverse Polarity Protection without Fuse	To be tested	
9.5	Test for Wiring Harness	To be tested as per IS 2465. Electrical Properties: The wiring harness used in the device should be tested for electrical properties as per AIS 028.	

Note: Please note that the above mentioned specifications may not be tested by O/o CDM&PHO cum DMD , Angul and the Application for registration will be processed based on the representation by the Applicant. The correctness of submissions for all these specifications is solely the responsibility of the Applicant. The Client does not bear any responsibility on the authenticity of any result or correctness of specifications whatsoever.

Protocol Testing

The vehicle mounted GPS Device shall conform to the minimum protocols as set out below:

- (a) The device should communicate with the server on TCP/IP protocol.
- (b) The message string sent to server should be either in Hex/ASCII/BIN format.
- (c) The message string should have a header to identify the type of message as below:

Device status message- Status message should include following fields:

Field	Descriptions	Validation Process	Compliance
Start Character	\$	To be demonstrated by manufacturer and to be tested.	
Header	The header of the packet/ identifier		
Vendor ID	Vendor identification header		
Firmware Version	Version details of the Firmware used in EX.1.0.0		
Packet Type	NR = Normal EA = Emergency Alert (Optional) TA = Tamper Alert HP = Health Packet IN = Ignition On IF = Ignition Off BD = Battery Disconnect BR = Battery Reconnect BL = Battery Low TS = Trip Start TE = Trip End		
Packet Status	L=Live or H= History		
IMEI	Identified of the sending unit. 15/16 digit standard unique IMEI no.		
Vehicle Reg. No	Mapped vehicle registration number		
GPS Fix	1 = GPS fix OR 0 = GPS invalid		
Date	ddmmyy		
Time	hhmmss		
Latitude	Latitude value in decimal degrees (min 6 decimal)		
Latitude Dir.	Example N=North, S= South		
Longitude	Longitude in decimal degrees (min 6 decimal)		
Longitude Dir.	Example N=North, S= South		
Speed	Speed in km/hr		
Heading	Course over ground in degree		
No of Satellites	Number of satellites available for fix		
Altitude	Altitude of the device in meters		
PDOP	Positional dilution of precision		
ODO	Total Distance Travelled in Km (from activation of unit to till last packet)		
Network Operator	Name of Network Operator		
Ignition	1= Ign On , 0 = Ign Off		
Main Power Status	0 = Vehicle Battery Disconnected 1= Vehicle Battery Reconnected		
Emergency Status (Optional)	1= On , 0 = Off		
Tamper Alert	C = Cover Closed , O = Cover Open		
GSM Signal strength	Value Ranging from 0 – 31		
MCC	Mobile Country Code		

MNC	Mobile Network Code		
LAC	Location Area Code		
Cell ID	GSM Cell ID		
NMR	Neighboring 4 cell ID along with their LAC		
Digital Input Status	4 external digital input status (Status of Input 1 to Input 3 (0=Off, 1=On))		
Digital Output Status	4 external digital input status (Status of Input 1 to Input 3 (0=Off, 1=On))		
Frame Number	Sequence no. of messages (000001 to 999999)		
Checksum	Insures No error in transmission (optional)		
End Character	Indicated End of the frame		

*** The message composition is indicative; all messages must have the minimum fields as mentioned. The field can have different sequence, difference separator, and also the string can have more data than mentioned above, but should give at least the minimum specifications mentioned above. However it would be preferred if device identification can come as the first field and subsequent fields can come in any order.

Alerts from Devices

The below table contains the listing of alerts that need to come from the tracking devices. These alerts are applicable for both live packets as well as the history packets.

Field	Descriptions	Validation Process	Compliance (Yes/No)
Location Update	Default message coming from each device	To be demonstrated by manufacturer/supplier and to be tested.	
Location Update (history)	Would be sent, if GPRS is not available at the time of sending the message		
Alert -Disconnect from main battery	If device is disconnected from vehicle battery and running on its internal battery		
Alert -Connect back to main battery	Indicate that vehicle is connected back to main battery		
Alert -Ignition ON	Indicates that Vehicle has started (ignition ON)		
Alert -Ignition OFF	Indicates that Vehicle has stopped (ignition OFF)		
Alert -GPS box opened	Message would be generated indicating GPS box opened		
Alert -Emergency state ON*	When any of the emergency button is pressed by any passenger. System should also provide location of emergency button which is pressed.		
Alert -emergency State OFF	When emergency state of vehicle is removed		

Section VII

Formats of the tender

TENDER FORMATS

NO. GPS-DMF ANG/2021/18


TECHNICAL BID

Format T1**CHECK LIST****(To be submitted in Cover A - Technical Bid)**

Note: The documents have to be arranged serially as per the order mentioned in the check list
 All the documents furnished should be page numbered and signed by the authorized signatory of the firm/company with company/firm seal.

DOCUMENTS : SUBMITTED OR NOT (Please put ✓ in the respective box)

Sl.	Details	Provided or not	If provided mention page No.(s)
TECHNICAL BID			
1.	Earnest Money Deposit in shape of DD	Yes / No	
2.	Tender Paper cost in shape of DD	Yes / No	
3.	Format –T2 duly signed by the authorized signatory with seal	Yes / No	
4.	Format –T3 duly signed by the authorized signatory with seal	Yes / No	
5.	Photocopy of the Registration certificate of the firm (Bidder)	Yes / No	
6.	Photocopy of the GST registration certificate	Yes / No	
7.	Photocopy of PAN		
8.	Format –T4 duly signed by the authorized signatory with seal	Yes / No	
9.	Format–T5 (Annual Turnover Statement for preceding 3 years signed by Auditor / CA) duly signed by the authorized signatory with seal	Yes / No	
10.	Photocopies of audited annual statement of the last three years and the turnover figure should be highlighted there.	Yes / No	
11.	Format–T6 (Manufacturing Authorization from the Manufacturer/Authorized Importer–duly signed by the authorized signatory with seal in case the bidder is the authorized distributor / importer of the GPS device.	Yes / No	
12.	Copy of IEC certificate (In case the bidder is Importer)	Yes / No	
13.	Format –T7 (Details of technical specification of the offered product) duly signed by the authorized signatory with seal	Yes / No	
14.	Technical Brochures/Leaflets of the offered product (GPS Device and Vehicle MIS)	Yes / No	
15.	Format –T8 (Performance Statement) of the bidder towards execution of GPS based automatic vehicle monitoring during the last three years	Yes / No	


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16.	Photocopies of work order in support of the information provided in Format – T8.	Yes / No	
17.	Affidavit on stamp paper duly attested by Notary and the bidder that the bidder has not been black listed by any PSU/ Corporations/ Board/ Central or State Govt in India.	Yes / No	
18.	ISO Certificate of the Manufacturer	Yes/No	
19.	CE Certificate of the Products (If any) for GPS device	Yes / No	
20.	Copy of original / downloaded Tender and schedules, duly signed by the authorized signatory	Yes / No	
21.	Cover 'B' – Price Bid formats (Format-P1,P2-A,P2-B,P2-C) in sealed Separate Envelop.	Yes / No	


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Format T2

(To be furnished in the Technical Bid)

TECHNICAL TENDER SUBMISSION FORM (On the letterhead of the Organization)

[Location, Date]

To

Re.: Tender Enquiry No. :

Dear Sir,

We, the undersigned do hereby offer to Supply, Installation, Operation & Maintenance of GPS based Automatic Vehicle Tracking and Management Systems. We are submitting our bids, which include this Technical Bid, and a Commercial Bid sealed under a separate envelope.

We accept all the tender terms & conditions of the tender under reference. We hereby declare that all the information and statements made in this bid are true and accept that any of our misrepresentations contained in it may lead to our disqualification.

Our proposal shall be binding upon us for a period for a period of one year, subject to the modifications resulting from Contract negotiations you may subsequently carry out with us to accept our tender. We undertake to carry out the work as per the terms and conditions of this tender document.

We hereby declare that my firm/company has not been debarred / black listed by any Government / Semi Government organizations. I further certify that I am the competent authority in my firm/company authorized to make this declaration.

I/We hereby agree that the Tender Inviting Authority can forfeit the Earnest Money Deposit and or Performance Security Deposit and blacklist me/us for a period of 3 years if any information furnished by us proved to be false at the time of inspection / verification and not complying with the Tender terms & conditions.

We understand you are not bound to accept any bid you receive.

Yours sincerely,

Authorized Signatory [*In full and initials*]: _____

Name and Title of Signatory: _____

Name of Organization: _____

Address: _____

(Organization Seal)

Format T3

(To be furnished in the Technical Bid)
(On the letterhead of the Organization)

DETAILS OF THE BIDDER

GENERAL INFORMATION ABOUT THE BIDDER				
1	Name of the Bidder			
	Registered address of the firm			
	State		District	
	Telephone No.		Fax	
	Email		Website	
Contact Person Details				
2	Name		Designation	
	Telephone No.		Mobile No.	
Communication Address				
3	Address			
	State		District	
	Telephone No.		Fax	
	Email		Website	
Type of the Firm (Please <input type="checkbox"/> relevant box)				
4	Private Ltd.	<input type="checkbox"/>	Public Ltd.	<input type="checkbox"/>
	Partnership	<input type="checkbox"/>	Society	<input type="checkbox"/>
	Registration No. & Date of Registration.		Proprietorship	<input type="checkbox"/>
		Others, specify		<input type="checkbox"/>
Nature of Business (Please <input type="checkbox"/> relevant box)				
5	Manufacturer			
Key personnel Details (Chairman, CEO, Directors, Managing Partners etc.)				
6	in case of Directors, DIN Nos. are required			
	Name		Designation	
	Name		Designation	
7	Whether any criminal case was registered against the company or any of its promoters in the past?			Yes / No
8	Other relevant Information			

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9	<u>GST Registration Certificate</u> Furnish the copy of the Sales Tax registration certificate
10	PAN : Furnish the copy of the PAN
11	Registration certificate / Certificate of Incorporation of the firm (furnish the copy)
12	Bank Details of the Bidder: The bidders have to furnish the Bank Details as mentioned below for return of EMD / Payment for supply if any (if selected) a. Name of the Bank : b. Name of the Account & Full address of the Branch concerned : c. Account no. of the bidder : d. IFS Code of the Bank :

Date:

Office
Seal

Signature of the
bidder / Authorized
signatory


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Format – T4
(To be furnished with the Technical bid)

ANNUAL TURN OVER STATEMENT

The Annual Turnover for the last three financial years of M/s _____
are given below and certified that the statement is true and correct.

Sl.No.	Year	Turnover (in Rs. Lakhs)
1.	2017 - 2018	-
2.	2018 - 2019	-
3.	2019 – 2020	-

Average Annual Turnover (for the above three years) in **(Rs.)** _____

Date:
Place:

Signature of Auditor/
Chartered Accountant
(Name in Capital)

Seal

Membership No.:

Registration No. of Firm

Note:

- a) To be issued in the **letter head** of the Auditor/Chartered Accountant mentioning the **Membership no.**
- b) This turnover statement should also be supported by **copies of audited annual statement** of the last three years and the turnover figure should be **highlighted** there.


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Format – T5

(To be furnished with the Technical bid)

MANUFACTURER'S AUTHORISATION FORMAT

(In case the bidder is not the Manufacturer of the GPS Equipment)

To

Ref: Tender No. _____ Dated _____ for _____.

Dear Sir/ Madam

We, _____ are the manufacturer/Authorized distributor of ----
_____ (name of equipment(s) and have the
manufacturing factory at -----.

1. M/s _____ (name and address of the agent) is our authorized distributor for sale and service of ----- (name of equipment(s))
2. We also extend our full support for maintenance services for a period of five years as required by the purchaser
3. We undertake that we have adequate infrastructure and spare part support to carry out the warranty & post warranty services.

Yours faithfully,

(Signature with date, name and designation)

For and on behalf of Messrs -----
(Name & address of the manufacturers)

Seal

Note :

1. This letter should be on the **letterhead** of the **manufacturer** and should be signed by a person having the power of attorney to legally bind the manufacturer.
2. Original letter shall be attached to the technical bid.


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Format – T6
(To be furnished with the Technical bid)
Technical Compliance Statement

DETAILS OF TECHNICAL SPECIFICATION OF THE PRODUCT (S) OFFERED BY THE BIDDER

Sl. No.	Item Name	Make	Model Name /	Country of Origin	Detail Specification of the product(s) offered* (Pl. attach the detail specifications of the product offered) – Point wise compliance to the technical specifications asked in the table-1 of Annexure-VI to be attached.	**Page nos of the Technical Brochure where Point wise compliance information as per technical specification is available
1	GPS Device					
2	Vehicle MIS				Details of Vehicle MIS features and scope to be documented in the brochure	Page Nos of the brochure where relevant information is mentioned.

(Use separate sheets if the space provided is not sufficient)

* **Leaflets/Technical Brochures** of the product offered (for **each item quoted**) must be attached in support of the information provided above.

** It is mandatory to mention the page no(s) in the format as mentioned above.

Authorized Signatory [In full and initials]: _____
 Name and Title of Signatory: _____

(Organization Seal)


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Format – T 7

(To be furnished with the Technical bid)

Performance Statement for execution of Similar projects in GPS based Automatic Vehicle Tracking and Management System
(for a period of last three years)

Name of the Firm _____

* Order placed by (Name of the Organization)	Description of the Work	Order No. and date	Quantity of ordered equipment	Value of work order (Rs.)	Date of completion of the work	No. of Vehicles covered in the GPS based AVTMS.	Has the equipment been satisfactorily functioning? (Attach a certificate from the Consignee if any)

* Note : Please furnish the **purchase order/Contract copies** of the similar projects executed, **serially** in support of the information mentioned above.

Authorized Signatory [*In full and initials*]: _____

Name and Title of Signatory: _____

(Organization Seal)


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TENDER FORMATS

TENDER ENQUIRY NO. GPS-DMF ANG/2021/18

PRICE BID

=====

FORMAT – P1

(To be furnished in the Commercial Bid)

PRICE BID SUBMISSION FORM

(On the **letterhead** of the organization)

[Location, Date]

To

Re. : Tender Enquiry No.

Dear Sir,

We, the undersigned do hereby offer to Supply, Installation, Operation & Maintenance of GPS based Automatic Vehicle Tracking and Management Systems in accordance with your Tender referenced above and our Technical Bid.

We hereby declare that if awarded the contract, our Commercial bid shall be binding upon us for a period of one year rate contract from the date of award of contract, subject to the modifications resulting from Contract negotiations you may subsequently carry out with us to accept our proposal.

We understand you are not bound to accept any Proposal you receive.

Yours sincerely,

Authorized Signatory [In full and initials]: _____

Name and Title of Signatory: _____

(Organization Seal)


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FORMAT – P2

(To be furnished in the Price Bid) On the *letterhead* of the organization)

PRICE SCHEDULE

A. INSTALLATION OF GPS

Item Name	Make & Model No.	Item Specification	Unit Price (Rs)	Qty	Total Price (Rs.) (excluding GST)	GST (if any) on & above the price mentioned in (5) (the % of tax & it's value in Rs.)	Total Price (Rs.) (Including GST)
1	2	3		4	5 = 3x4	6	
		A. <u>SUPPLY OF GPS</u> Unit Price of the GPS device with all accessories (as mentioned in the technical specification) which includes customs duty (if any), packing, insurance, forwarding / transportation (to the consignee places), training but excludes GST & installation charges.		18		GST (%): Amount:	
		B. <u>INSTALLATION OF GPS</u> Unit Price (excluding GST) of installation of GPS device with all accessories at the vehicle and commissioning it with the Vehicle MIS.		18		GST (%): Amount:	



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C. RECURRING CHARGES FOR COMPREHENSIVE MAINTENANCE OF DEVICES (INCLUDING SIM CHARGES) & VEHICLE MIS FOR 36 MONTHS Development and Comprehensive Maintenance of Vehicle MIS, Devices, Spares, Buffer Stocks, SIM recurring charges etc but excludes GST										18																		
TOTAL																												

Authorized Signatory [In full and initials]: _____

Name and Title of Signatory: _____

(Organization Seal)



 Signature: *[Handwritten Signature]*

 Date: *26/12/24*

 District Mission Director

 NHM, Angul

