



Bid Number/बोली क्रमांक (बिड संख्या):  
GEM/2024/B/5314511  
Dated/दिनांक : 22-08-2024

### Bid Document/ बिड दस्तावेज़

Bid Details/बिड विवरण	
Bid End Date/Time/बिड बंद होने की तारीख/समय	12-09-2024 11:00:00
Bid Opening Date/Time/बिड खुलने की तारीख/समय	12-09-2024 11:30:00
Bid Offer Validity (From End Date)/बिड पेशकश वैधता (बंद होने की तारीख से)	120 (Days)
Ministry/State Name/मंत्रालय/राज्य का नाम	Ministry Of Heavy Industries And Public Enterprises
Department Name/विभाग का नाम	Department Of Heavy Industry
Organisation Name/संगठन का नाम	N/a
Office Name/कार्यालय का नाम	National Automotive Board
Total Quantity/कुल मात्रा	38
Item Category/मद केटेगरी	TOUGHBOOK , PROTECTION COATING , CLEANING AGENT , SEAT PAD ACCELEROMETER , WIRE ROPE POTENTIOMETER , TRIAXIAL ACCELEROMETER , LVDT 200mm , LVDT 300mm , LINEAR STRAIN GAUGE TO MEASURE STRAIN , ROSETT STRAIN GAUGES
MSE Exemption for Years of Experience and Turnover/ अनुभव के वर्षों से एमएसई छूट	No
Startup Exemption for Years of Experience and Turnover/ अनुभव के वर्षों से स्टार्टअप छूट	No
Document required from seller/विक्रेता से मांगे गए दस्तावेज़	Certificate (Requested in ATC),Additional Doc 1 (Requested in ATC),Additional Doc 2 (Requested in ATC),Additional Doc 3 (Requested in ATC),Additional Doc 4 (Requested in ATC),Compliance of BoQ specification and supporting document *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer
Bid to RA enabled/बिड से रिवर्स नीलामी सक्रिय किया	No
Type of Bid/बिड का प्रकार	Two Packet Bid
Primary product category	TRIAXIAL ACCELEROMETER
Time allowed for Technical Clarifications during technical evaluation/तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय	2 Days

**Bid Details/बिड विवरण**

<b>Inspection Required (By Empanelled Inspection Authority / Agencies pre-registered with GeM)</b>	No
<b>Evaluation Method/मूल्यांकन पद्धति</b>	Item wise evaluation/
<b>Financial Document Required/वित्तीय दस्तावेज की आवश्यकता है।</b>	Yes

**EMD Detail/ईएमडी विवरण**

Advisory Bank/एडवाइजरी बैंक	ICICI
Schedule 1 EMD Amount/ईएमडी राशि (In INR)	15000
Schedule 2 EMD Amount/ईएमडी राशि (In INR)	4000
Schedule 3 EMD Amount/ईएमडी राशि (In INR)	5000
Schedule 4 EMD Amount/ईएमडी राशि (In INR)	30000
Schedule 5 EMD Amount/ईएमडी राशि (In INR)	25000
Schedule 6 EMD Amount/ईएमडी राशि (In INR)	90000
Schedule 7 EMD Amount/ईएमडी राशि (In INR)	30000
Schedule 8 EMD Amount/ईएमडी राशि (In INR)	30000
Schedule 9 EMD Amount/ईएमडी राशि (In INR)	15000
Schedule 10 EMD Amount/ईएमडी राशि (In INR)	15000

**ePBG Detail/ईपीबीजी विवरण**

Advisory Bank/एडवाइजरी बैंक	ICICI
ePBG Percentage(%) / ईपीबीजी प्रतिशत (%)	5.00
Duration of ePBG required (Months) / ईपीबीजी की अपेक्षित अवधि (महीने).	36

(a). EMD EXEMPTION: The bidder seeking EMD exemption, must submit the valid supporting document for the relevant category as per GeM GTC with the bid. Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption from EMD. Traders are excluded from the purview of this Policy./जेम की शर्तों के अनुसार ईएमडी छूट के इच्छुक बिडर को संबंधित केटेगरी के लिए बिड के साथ वैध समर्थित दस्तावेज प्रस्तुत करने हैं। एमएसई केटेगरी के अंतर्गत केवल वस्तुओं के लिए विनिर्माता तथा सेवाओं के लिए सेवा प्रदाता ईएमडी से छूट के पात्र हैं। व्यापारियों को इस नीति के दायरे से बाहर रखा गया है।

(b). The EMD Amount will be applicable for each schedule/group selected during Bid creation.

(c). EMD & Performance security should be in favour of Beneficiary, wherever it is applicable./ईएमडी और संपादन जमानत राशि, जहां यह लागू होती है, लाभार्थी के पक्ष में होनी चाहिए।

**Beneficiary/लाभार्थी :**

NATRAX

NATIONAL AUTOMOTIVE BOARD, Department of Heavy Industry, N/A, Ministry of Heavy Industries and Public Enterprises

(National Automotive Test Tracks)

**MII Purchase Preference/एमआईआई खरीद वरीयता**

MII Purchase Preference/एमआईआई खरीद वरीयता	Yes
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**MSE Purchase Preference/एमएसई खरीद वरीयता**

MSE Purchase Preference/एमएसई खरीद वरीयता	Yes
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1. Preference to Make In India products (For bids < 200 Crore):Preference shall be given to Class 1 local supplier as defined in public procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. The minimum local content to qualify as a Class 1 local supplier is denoted in the bid document. If the bidder wants to avail the Purchase preference, the bidder must upload a certificate from the OEM regarding the percentage of the local content and the details of locations at which the local value addition is made along with their bid, failing which no purchase preference shall be granted. In case the bid value is more than Rs 10 Crore, the declaration relating to percentage of local content shall be certified by the statutory auditor or cost auditor, if the OEM is a company and by a practicing cost accountant or a chartered accountant for OEMs other than companies as per the Public Procurement (preference to Make-in -India) order 2017 dated 04.06.2020. Only Class-I and Class-II Local suppliers as per MII order dated 4.6.2020 will be eligible to bid. Non - Local suppliers as per MII order dated 04.06.2020 are not eligible to participate. However, eligible micro and small enterprises will be allowed to participate .The buyers are advised to refer the OM No.F.1/4/2021-PPD dated 18.05.2023.

[OM No.1 4 2021 PPD dated 18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017.

2. Purchase preference will be given to MSEs having valid Udyam Registration and whose credentials are validated online through Udyam Registration portal as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail themselves of the Purchase preference, the bidder must be the manufacturer / OEM of the offered product on GeM. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises and hence resellers offering products manufactured by some other OEM are not eligible for any purchase preference. In respect of bid for Services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service and Buyer will decide eligibility for purchase preference based on documentary evidence submitted, while evaluating the bid. If L-1 is not an MSE and MSE Seller (s) has / have quoted price within L-1+ 15% (Selected by Buyer) of margin of purchase preference /price band defined in relevant policy, such MSE Seller shall be given opportunity to match L-1 price and contract will be awarded for 25% (selected by Buyer) percentage of total quantity. The buyers are advised to refer the OM No. F.1/4/2021-PPD dated 18.05.2023 [OM No.1 4 2021 PPD dated 18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017. Benefits of MSE will be allowed only if seller is validated on-line in GeM profile as well as validated and approved by Buyer after evaluation of documents submitted.

3. Estimated Bid Value indicated above is being declared solely for the purpose of guidance on EMD amount and for determining the Eligibility Criteria related to Turn Over, Past Performance and Project / Past Experience etc. This has no relevance or bearing on the price to be quoted by the bidders and is also not going to have any

impact on bid participation. Also this is not going to be used as a criteria in determining reasonableness of quoted prices which would be determined by the buyer based on its own assessment of reasonableness and based on competitive prices received in Bid / RA process.

#### Pre Bid Detail(s)

Pre-Bid Date and Time	Pre-Bid Venue
23-08-2024 10:00:00	NATRAX Pithampur

#### Evaluation Method ( Item Wise Evaluation Method )

Contract will be awarded schedulewise and the determination of L1 will be done separately for each schedule. The details of item-consignee combination covered under each schedule are as under:

Evaluation Schedules	Item/Category	Quantity
Schedule 1	Toughbook	1
Schedule 2	Protection Coating	1
Schedule 3	Cleaning Agent	1
Schedule 4	Seat Pad Accelerometer	2
Schedule 5	Wire Rope Potentiometer	6
Schedule 6	Triaxial Accelerometer	10
Schedule 7	Lvdt 200mm	4
Schedule 8	Lvdt 300mm	4
Schedule 9	Linear Strain Gauge To Measure Strain	5
Schedule 10	Rosett Strain Gauges	4

#### TOUGHBOOK ( 1 pieces )

**(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)**

#### Technical Specifications/तकनीकी विशिष्टियाँ

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**Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा**

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Anuj Kumar	454774,National Automotive Test Tracks (NATRAX) Agra - Mumbai Highway(NH-3), Next to Pithampur Flyover (From Indore) (Near Pithampur) District :- Dhar State :- Madhya Pradesh	1	180

### PROTECTION COATING ( 1 pieces )

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

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1	Anuj Kumar	454774,National Automotive Test Tracks (NATRAX) Agra - Mumbai Highway(NH-3), Next to Pithampur Flyover (From Indore) (Near Pithampur) District :- Dhar State :- Madhya Pradesh	1	180

### CLEANING AGENT ( 1 pieces )

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

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**SEAT PAD ACCELEROMETER ( 2 pieces )**

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

**Technical Specifications/तकनीकी विशिष्टियाँ**

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S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्र	Delivery Days/डिलीवरी के दिन
1	Anuj Kumar	454774,National Automotive Test Tracks (NATRAX) Agra - Mumbai Highway(NH-3), Next to Pithampur Flyover (From Indore) (Near Pithampur) District :- Dhar State :- Madhya Pradesh	2	180

**WIRE ROPE POTENTIOMETER ( 6 pieces )**

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

**Technical Specifications/तकनीकी विशिष्टियाँ**

Buyer Specification  
Document/क्रेता विशिष्टि दस्तावेज़

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1	Anuj Kumar	454774,National Automotive Test Tracks (NATRAX) Agra - Mumbai Highway(NH-3), Next to Pithampur Flyover (From Indore) (Near Pithampur) District :- Dhar State :- Madhya Pradesh	6	180

**TRIAxIAL ACCELEROMETER ( 10 pieces )**

**(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)**

**Technical Specifications/तकनीकी विशिष्टियाँ**

Buyer Specification  
Document/क्रेता विशिष्टि दस्तावेज़

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1	Anuj Kumar	454774,National Automotive Test Tracks (NATRAX) Agra - Mumbai Highway(NH-3), Next to Pithampur Flyover (From Indore) (Near Pithampur) District :- Dhar State :- Madhya Pradesh	10	180

### LVDT 200mm ( 4 pieces )

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

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S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Anuj Kumar	454774,National Automotive Test Tracks (NATRAX) Agra - Mumbai Highway(NH-3), Next to Pithampur Flyover (From Indore) (Near Pithampur) District :- Dhar State :- Madhya Pradesh	4	180

### LVDT 300mm ( 4 pieces )

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

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1	Anuj Kumar	454774,National Automotive Test Tracks (NATRAX) Agra - Mumbai Highway(NH-3), Next to Pithampur Flyover (From Indore) (Near Pithampur) District :- Dhar State :- Madhya Pradesh	4	180

### LINEAR STRAIN GAUGE TO MEASURE STRAIN ( 5 pieces )

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

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1	Anuj Kumar	454774,National Automotive Test Tracks (NATRAX) Agra - Mumbai Highway(NH-3), Next to Pithampur Flyover (From Indore) (Near Pithampur) District :- Dhar State :- Madhya Pradesh	5	180

### ROSETT STRAIN GAUGES ( 4 pieces )

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

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**Buyer Added Bid Specific Terms and Conditions/क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें****1. Generic**

OPTION CLAUSE: The Purchaser reserves the right to increase or decrease the quantity to be ordered up to 25 percent of bid quantity at the time of placement of contract. The purchaser also reserves the right to increase the ordered quantity by up to 25% of the contracted quantity during the currency of the contract at the contracted rates. Bidders are bound to accept the orders accordingly.

**2. Scope of Supply**

Scope of supply (Bid price to include all cost components) : Supply Installation Testing Commissioning of Goods and Training of operators and providing Statutory Clearances required (if any)

**3. Buyer Added Bid Specific ATC**

Buyer Added text based ATC clauses

the terms and conditions including scope of work, technical specifications, delivery, payment terms, Eligibility criteria, evaluation parameters etc all shall be as per attached document.

BIDDERS ARE REQUESTED TO UPLOAD THE COMPLETE SIGNED COPY OF THIS TENDER INCLUDING ATTACHMENTS IN TECHNICAL BID UNDER ATC ACCEPTANCE TAB.

BIDDER ARE REQUIRED TO FILL THE CONTRACT VALUE AS PER SCHEDULE D OF FINANCIAL BID FORMAT and THE COMPLETE FINANCIAL BID SHOULD BE UPLOADED IN APPROPRIATE PLACE (PRICE BREAKUP TAB).

FOR ANY CLARIFICATION PLEASE FEEL FREE TO CONTACT AT 8376093255.

**4. Buyer Added Bid Specific ATC**

Buyer uploaded ATC document [Click here to view the file.](#)

**Disclaimer/अस्वीकरण**

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority in Buyer Organization, whereby Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specifications and / or terms and conditions governing the bid. If any clause(s) is / are incorporated by the Buyer regarding following, the bid and resultant contracts shall be treated as null and void and such bids may be cancelled by GeM at any stage of bidding process without any notice:-

1. Definition of Class I and Class II suppliers in the bid not in line with the extant Order / Office Memorandum issued by DPIIT in this regard.
2. Seeking EMD submission from bidder(s), including via Additional Terms & Conditions, in contravention to exemption provided to such sellers under GeM GTC.
3. Publishing Custom / BOQ bids for items for which regular GeM categories are available without any Category item bunched with it.
4. Creating BoQ bid for single item.
5. Mentioning specific Brand or Make or Model or Manufacturer or Dealer name.
6. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
7. Floating / creation of work contracts as Custom Bids in Services.
8. Seeking sample with bid or approval of samples during bid evaluation process. (However, in bids for [attached categories](#), trials are allowed as per approved procurement policy of the buyer nodal Ministries)
9. Mandating foreign / international certifications even in case of existence of Indian Standards without specifying equivalent Indian Certification / standards.
10. Seeking experience from specific organization / department / institute only or from foreign / export experience.
11. Creating bid for items from irrelevant categories.
12. Incorporating any clause against the MSME policy and Preference to Make in India Policy.
13. Reference of conditions published on any external site or reference to external documents/clauses.
14. Asking for any Tender fee / Bid Participation fee / Auction fee in case of Bids / Forward Auction, as the case may be.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

[This Bid is also governed by the General Terms and Conditions/ यह बिड सामान्य शर्तों के अंतर्गत भी शासित है](#)

In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws./जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में भारत के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला सक्षम प्राधिकारी के पास पंजीकृत हो।बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इसका अनुपालन न करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्यवाई का आधार होगा।

---Thank You/धन्यवाद---

**NOTICE INVITING TENDERFOR**

<p>नेशनल ऑटोमोटिव टेस्ट ट्रैक्स)NATRAX), नेशनल ऑटोमोटिव बोर्ड )NAB) के तहत एक ऑटोमोटिव टेस्टिंग एंड सर्टिफिकेशन सेंटर है, जो भारी उद्योग मंत्रालय, भारत सरकार द्वारा गठित एक स्वायत्त निकाय है। NATRAX को लगभग 3000 एकड़ भूमि पर पीथमपुर, जिला धार, (मध्य प्रदेश, भारत) के पास, सभी प्रकार के ऑटोमोबाइल के व्यापक परीक्षण और मूल्यांकन के लिए स्थापित किया गया है।</p>	<p><b>National Automotive Test Tracks (NATRAX)</b> is an Automotive Testing &amp; Certification Centre under National Automotive Board (NAB) which is an autonomous body under Ministry of Heavy Industries, Government of India. NATRAX has been set up on approx. 3000 acres of land for comprehensive testing and evaluation of all types of automobiles ranging from 2 wheelers to heavy commercial vehicles.</p>
<p>कृपया ध्यान दें, NATRAX, आदेश संख्या P-45021/2/2017-पीपी (बीई-II) दिनांक 4 जून 2020, के अनुसार उद्योग और आंतरिक व्यापार, भारत सरकार के संवर्धन विभाग द्वारा जारी "सार्वजनिक खरीद (मेक इन इंडिया को प्राथमिकता), आदेश 2017- संशोधन" पर आदेश और इस संबंध में अन्य दिशानिर्देशों का पालन करेगा</p>	<p>Please note that, NATRAX shall follow the order on "Public Procurement (Preference to Make in India), Order 2017- Revision" issued by Department for Promotion of Industry and Internal Trade, Government of India, as per their Order Number P-45021/2/2017-PP (BE-II) dated 4th June 2020 and other guidelines in this regard.</p>
<p>एमएसएमई और स्टार्टअप्स के लिए छूट: एमएसएमई और स्टार्टअप्स पंजीकृत फर्मों को भारत सरकार की नीति के अनुसार पूर्व अनुभव और टर्नओवर और निविदा और ईएमडी से छूट दी जाएगी। प्रासंगिक प्रावधानों के अनुसार गुणवत्ता और तकनीकी विशिष्टताओं को पूरा करने के अधीन बोली मूल्यांकन के दौरान छूट और छूट का विस्तार किया जाएगा</p>	<p>Exemption for MSME &amp; Start-ups: MSME &amp; start-ups registered firms shall be exempted from prior experience &amp; turnover and Tender &amp; EMD, as per the policy of Govt. of India. The exemption and relaxation shall be extended during Bid evaluation subject to meeting quality and technical specifications in accordance with relevant provisions</p>

The details of the tender are as mentioned below;

<b>Particular</b>	<b>In Hindi</b>	<b>In English</b>
<b>Origin of bidders</b>	<p>केवल भारतीय बोलीदाता ही इस निविदा में भाग ले सकते हैं, हालांकि बोलीदाता भारत के बाहर से अपने तकनीकी साझेदार या OEM रख सकते हैं और बोली केवल INR में होनी चाहिए।</p> <p>इस निविदा में न्यूनतम पात्रता मानदंड का मूल्यांकन केवल भारतीय बोलीदाताओं के दस्तावेजों के आधार पर किया जाएगा, विदेशी बोलीदाताओं के आधार पर नहीं।</p> <p>संपूर्ण जिम्मेदारी केवल भारतीय बोलीदाता की होगी।</p>	<p><b>Only Indian bidders can participate</b> in this tender, however Bidder can have their technical partner(s) or OEM(s) from outside India and <b>the quote should be in INR Only.</b></p> <p>The Minimum eligibility criteria in this tender shall be evaluated based on documents of Indian Bidders only and not the foreign Bidders.</p> <p>The overall responsibility shall with the Indian bidder only.</p>
<b>Tender No.</b>	<b><u>NATRAX/PROC/T&amp;D/24-25/60</u></b>	<b><u>NATRAX/PROC/T&amp;D/24-25/60</u></b>
<b>Name of work</b>	<p>NATRAX- पीथमपुर (इंदौर के पास), मध्य प्रदेश में "प्रयोगशाला भवन में ----- की आपूर्ति, स्थापना, परीक्षण और कमीशनिंग (SITC)".</p>	<p>"Supplying, Installation, Testing and Commissioning (SITC) Sensors and Data Acquisition for Road Load Data Acquisition; after sale service; maintenance support; and training to its key personnel, operators &amp; mechanics at NATRAX-Pithampur" (near Indore), Madhya Pradesh.</p> <p><b>The list of instrument is attached at <u>Annexure-A</u>.</b></p> <p>Bidder can participate for all the items or any</p>

		One, the financial bid evaluation shall be done items wise and order shall be issued to Item wise Lowest quoted Bidder. However, the technical qualification shall be same for all as set out in this tender document.
Minimum Eligibility Criteria	1. कानूनी रूप से वैध इकाई: बोली लगाने वाला अनिवार्य रूप से कानूनी रूप से वैध इकाई या तो मालिकाना फर्म, साझेदारी फर्म, प्राइवेट लिमिटेड कंपनी के रूप में होना चाहिए। जेबी/कंसोर्टियम के रूप में बोली लगाने वाले को अनुमति नहीं है	1. <b>Legal Valid Entity:</b> The Bidder shall necessarily be a legally valid entity either in the form of Proprietary firm, Partnership firm, Private Limited Company. <b>Bidder in the form of JV/consortium is not permitted</b>
	2. वित्तीय क्षमता: पिछले 3 वित्तीय वर्षों (2021-22, 2022-23 & 2023-24) में संलग्न "प्रविष्टि ए" के अनुसार औसत वार्षिक वित्तीय कारोबार होना चाहिए।	2. <b>Financial Capacity:</b> Should have the Average Annual Financial turnover as per attached "Annexure A" in the last 3 financial years (2021-22, 2022-23 & 2023-24).
	3. तकनीकी क्षमता: "समान कार्य*" में न्यूनतम 5 वर्ष का अनुभव होना चाहिए और पिछले 5 वर्षों के दौरान न्यूनतम 3 समान कार्य पूरे करने चाहिए।  "समान कार्य"- बोली लगाने वाले द्वारा भारत के भीतर या भारत के बाहर भी किसी भी ऑटो उद्योग/शैक्षिक संस्थान/अनुसंधान संस्थान के लिए 'ऑटोमोटिव उपकरण/उपकरण/मशीनों की आपूर्ति स्थापना परीक्षण और कमीशनिंग, सफलतापूर्वक पूरा किया जाना चाहिए।	3. <b>Technical Capability:</b> Should have minimum 5 years' experience in " <u>similar works</u> *" and also completed minimum 3 <u>similar works</u> during last 5 years.  " <b>Similar Works</b> *" should have successfully completed Supply Installation Testing & Commissioning of 'Automotive Equipments/ Instruments/Machines' for any auto industry/Educational Institution/Research Institution within India or outside India also.
Bid Security Amount (EMD)	ईएमडी का मूल्य Annexure-A के अनुसार, राष्ट्रीय मोटर वाहन परीक्षण ट्रैक के पक्ष में होगा और पीथमपुर में एक शाखा वाले अनुसूचित बैंक से कम से कम 180 दिनों के लिए वैध निम्न में से किसी भी रूप में होगा (तकनीकी बोली के साथ संलग्न किया जाए।) 1. पीथमपुर में देय डीडी। 2. बैंक गारंटी। 3. बैंकर्स चेक। एमएसएमई/एनएसआईसी/स्टार्टअप पंजीकृत बोलीदाताओं को वैध पंजीकरण प्रमाणपत्र प्रस्तुत करने पर ईएमडी से छूट दी जाएगी।	The Bidder should value of the EMD shall <b>be as per Annexure-A</b> favouring <b>National Automotive Test Tracks</b> payable at Pithampur, MP, from any scheduled bank in India, valid for at-least 180 days from a scheduled bank having a branch at Pithampur and shall be in any of the following forms <b>(To be enclosed along with the technical bid).</b> 1. DD payable at Pithampur. 2. Bank Guarantee. 3. Banker's Cheque. For MSME/NSIC/Startups registered bidder the EMD shall be exempted subject to submission of valid registration certificate.
Cost of tender documents	मुफ्त	Free of cost
Sale of tender documents	संपूर्ण "निविदा दस्तावेज़" NATRAX वेबसाइट GeM से डाउनलोड किए जा सकते हैं। या "नेशनल ऑटोमोटिव टेस्ट ट्रैक्स" (NATRAX) NH-52, ओल्ड आगरा-मुंबई हाईवे, पीथमपुर फ्लाईओवर के पास, पोस्ट खंडवा (पीथमपुर के पास, जिला धार (म.प्र.)) के कार्यालय से सीधे	The complete "Tender Documents" can be downloaded from GeM OR interested bidders may collect soft copy directly from below address; National Automotive Test Tracks (NATRAX) NH-52, Old Agra-Mumbai Highway, Near to Pithampur Flyover,

TENDER DOCUMENTS

	<p>प्राप्त किया जा सकता है। या आप नीचे दिए गए ईमेल पर संपर्क कर सकते हैं। <a href="mailto:a.prabhakar@natrip.in">a.prabhakar@natrip.in</a> <a href="mailto:anuj.kumar@natrip.in">anuj.kumar@natrip.in</a> &amp; -----</p>	<p>Post Khandwa (Near Pithampur), Dhar district, Madhya Pradesh OR may contract / write at <a href="mailto:a.prabhakar@natrip.in">a.prabhakar@natrip.in</a> &amp; <a href="mailto:anuj.kumar@natrip.in">anuj.kumar@natrip.in</a> &amp; -----</p>
<p>निविदा दस्तावेज जारी करने की अवधि/ Period of issue of tender documents.</p>	<p>GeM के अनुसार /As per GeM Portal</p>	
<p>Date for pre bid clarification meeting</p>	<p>GeM के अनुसार /As per GeM Portal</p>	
<p>Last date/Time for submission of Sealed Bids</p>	<p>GeM के अनुसार /As per GeM Portal</p>	
<p>Date/Time of opening of technical bids.</p>	<p>GeM के अनुसार /As per GeM Portal</p>	
<ul style="list-style-type: none"> <li>NATRAX बिना कोई कारण बताए निविदा को अस्वीकार/संशोधित/रद्द करने का अधिकार सुरक्षित रखता है।</li> <li>दस्तावेज को हिंदी और अंग्रेजी दोनों भाषाओं में तैयार किया गया है; हालाँकि किसी भी विसंगति के मामले में अंग्रेजी प्रबल होगी।</li> <li>सफल बोलीदाता काम लेने से पहले NATRAX के साथ इंटीग्रिटी कोड समझौते पर हस्ताक्षर करने की आवश्यकता है। किसी भी बोलीदाता को, किसी भी समय इस समझौते पर हस्ताक्षर करने से मना करने की अनुमति नहीं है; किसी के मना करने पर, NATRAX के पास बोलीदाता की EMD (MSME फर्म के मामले में EMD राशि का दावा (जब्त करने के सभी अधिकार होंगे।</li> </ul>	<ul style="list-style-type: none"> <li>NATRAX reserves the right to reject/modify/cancel the tender without assigning any reason thereof.</li> <li>The document has been prepared in both the language Hindi &amp; English; however in case of any discrepancy the English shall prevail.</li> <li>The successful bidder needs to sign an Integrity code agreement with NATRAX before awarding the work. No bidder is allowed to refuse to sign this agreement at any time if someone refusing; NATRAX shall have all the rights to forfeit the EMD of bidder (claim of EMD amount in case of MSME Firm).</li> </ul>	

**National Automotive Test Tracks (NATRAX)**

NH-52, Old Agra-Mumbai Highway, Near to Pithampur Flyover, Post Khandwa (Near Pithampur, Dist. Dhar (M.P.).

Phone: +91-8376093255, Email: [a.prabhakar@natrip.in](mailto:a.prabhakar@natrip.in); [anuj.kumar@natrip.in](mailto:anuj.kumar@natrip.in)

Website: [www.natrax.in](http://www.natrax.in)

**Annexure A**  
**List of Instruments**

<b>Sr. No.</b>	<b>Name of instruments/equipments</b>	<b>Required Qty</b>	<b>Required Item wise EMD</b>	<b>Required (item wise) minimum average turnover (MEC-2)</b>
1	Seat Pad Accelerometer	2	Rs. 30,000.00	Rs. 10 Lakh
2	Wire Rope Pots	6	Rs. 25,000.00	Rs. 10 Lakh
3	Triaxial accelerometer	10	Rs. 90,000.00	Rs. 10 Lakh
4	LVDT 200mm	4	Rs. 30,000.00	Rs. 10 Lakh
5	LVDT 300mm	4	Rs. 30,000.00	Rs. 10 Lakh
6	Linear Strain Gauge to measure strain in know direction	5	Rs. 15,000.00	Rs. 10 Lakh
7	Rosett Strain Gauges	4	Rs. 15,000.00	Rs. 10 Lakh
8	Cleaning Agent	1	Rs. 5,000.00	Rs. 10 Lakh
9	Protection Coating	1	Rs. 4,000.00	Rs. 10 Lakh
10	Toughbook	1	Rs. 15,000.00	Rs. 10 Lakh

**In case offering all the listed items the MEC-2 (minimum average turnover shall be Rs. 1.00 Cr.) and EMD shall be Rs. 2,59,000.00**



## राष्ट्रीय ऑटोमोटिव परीक्षण ट्रैक

NATIONAL AUTOMOTIVE TEST TRACKS

निविदा दस्तावेज/ TENDER DOCUMENTS

निविदा सं./ TENDER NO. NATRAX/PROC/T&D/24-25/60

नैट्रैक्स, पीथमपुर में

रोड लोड डेटा अधिग्रहण के लिए सेंसर और उपकरणों की आपूर्ति, स्थापना, परीक्षण और  
कमीशनिंग

SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF

**SENSORS & INSTRUMENTS FOR ROAD LOAD DATA ACQUISITION**

AT NATRAX, PITHAMPUR

**मुख्य निविदा दस्तावेज़/ Main tender document**

**नैट्रैक्स-पीथमपुर / NATRAX-Pithampur**

<p>नेशनल ऑटोमोटिव टेस्ट ट्रैक्स (NATRAX) NH-52, पुराना आगरा-मुंबई हाईवे, पीथमपुर फ्लाईओवर के पास, पोस्ट खंडवा (पीथमपुर के पास) धार जिला, मध्य प्रदेश-454774 फ़ोन: +919893892310, फ़ैक्स – 07292-256101</p>	<p><b>National Automotive Test Tracks (NATRAX)</b> NH-52, Old Agra- Mumbai Highway, Near to Pithampur Flyover, Post Khandwa (Near Pithampur) Dhar District, Madhya Pradesh-454774 Phone: +919893892310, Fax – 07292-256101 Email: <a href="mailto:a.prabhakar@natrip.in">a.prabhakar@natrip.in</a>; <a href="mailto:anuj.kumar@natrip.in">anuj.kumar@natrip.in</a></p>
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DISCLAIMER



## TENDER DOCUMENTS

1. This Tender Document (“Tender Document”) is being issued by National Automotive Board (“NAB”) for the selection of a successful bidder for designing, manufacturing, assembling and functional testing prior to shipment, delivery, installation, integration of systems and system checking, testing and commissioning of the Equipment, and supply of special tools, requisite softwares, supply of spares and training to the personnel, operators and mechanics of NATRAX and necessary after sales service and maintenance support, etc (hereinafter collectively referred to as the “**Works**”).
2. The information contained in this Tender Document is being provided for the limited purposes of enabling the interested parties (“**Bidders**”) to submit a binding proposal (“**Bid**”) for performing, executing and implementing the Works and for no other purpose. In no circumstances shall NATRAX, or its advisers, consultants, contractors, servants and/or agents incur any liability arising out of or in respect of the issue of this Tender Document, or the selection procedure.
3. The possession of the Tender Document or use in any manner contrary to any applicable law is expressly prohibited. The Bidders shall inform themselves and shall observe any applicable legal requirements.
4. The information does not purport to be comprehensive or to have been independently verified. Nothing in this Tender Document shall be construed as legal, financial or tax advice. NATRAX will not be liable for any costs, expenses, however so incurred by the Bidders in connection with the preparation and submission of the Bids.
5. NATRAX reserves the right to amend this Tender Document and any information contained herein at any time by notice, in writing, to the Bidders.
6. Nothing in this Tender Document is, nor shall be relied upon as, a promise or representation as to NATRAX’s ultimate decision in relation to the selection process of the successful Bidder for the execution of the Contract (defined hereinafter). The Bidder(s) shall not, therefore, assume that they will have the opportunity to revise their Bids following submission except as provided in this Tender Document. However, NATRAX reserves the right to change the basis of or the procedures (including the timetable) relating to the bidding process, reject any, or all, of the Bids, not to invite a Bidder to proceed further, not furnish a Bidder with additional information nor otherwise to negotiate with a Bidder at any time. NATRAX does not undertake to accept the lowest or indeed any Bid.
7. No person other than The Head Procurement & Store OR one authorized by NATRAX to give any information or to make any representation not contained in this Tender Document and, if given or made, any such information or representation shall not be relied upon as having been so authorized.
8. This Tender Document is confidential and personal to each Bidder. The Bidders shall note they are required to sign and submit as part of the Technical Bid, as provided in “Form b Letter of Undertaking” of this Tender Document, a Letter of Undertaking to NATRAX which, inter alia, prohibits disclosure of any information as therein defined to any person or body corporate except as permitted by such Letter of Undertaking. The Bidders shall promptly return this Tender Document to NATRAX upon request or as specified in this Tender Document and shall not retain any copies thereof nor use the same for any purpose whatsoever other than for submission of the Bid to NATRAX for the Works. Any failure to furnish or comply with the terms of the Letter of Undertaking shall entitle NATRAX to disqualify the relevant Bidder.

TENDER DOCUMENTS

9. Any summaries or descriptions of documents or contractual arrangements contained in any part of this Tender Document are only indicative and cannot be and are not intended to be comprehensive, nor any substitute for the underlying documentation (whether existing or to be concluded in the future), and are in all respects qualified in their entirety by reference to them.
10. NATRAX its advisers, consultants, contractors, servants, agents do not accept any responsibility for the legality, validity, effectiveness, adequacy or enforceability of any documentation executed, or which may be executed, in relation to the Works. NATRAX shall enter into a contract with the successful Bidder for performance, execution and implementation of the Works ("**Contract**"). No legal or other obligation shall arise between the successful Bidder and NATRAX unless and until the Contract has been formally executed by NATRAX and the successful Bidder and any conditions precedent to the effectiveness of the Contract have been fulfilled. NATRAX reserves the right not to proceed with the bidding process and to cancel the selection procedure, or any part thereof, at any time.
11. Nothing in this Tender Document shall constitute the basis of the Contract which may be concluded in relation to performance, execution and implementation of the Works nor shall such documentation/information be used in construing the Contract. Each Bidder must rely on the terms and conditions contained in the Contract, when, and if, finally executed, subject to such limitations and restrictions which may be specified in such Contract. Any reference to this Tender Document in the Contract with NATRAX or any correspondence between NATRAX and the Bidder shall not be construed as this Tender Document forming part of such contract.
12. The Bidder is prohibited from any form of collusion or arrangement by a Bidder (or its advisers or consultants) in an attempt to influence the selection and award process. Giving or offering of any gift, bribe or inducement or any attempt to any such act on behalf of the Bidder towards any officer/employee of NATRAX or to any other person in a position to influence the decision of NATRAX or any other person associated with the bidding process, for showing any favour in relation to this Bid or any other contract, shall render the Bidder to such liability/penalty as NATRAX may deem proper, including but not limited to rejection of the Bid and forfeiture of the Earnest Money Deposit.
13. Laws of the Republic of India are applicable to this Tender Document. The courts at Madhya Pradesh shall have exclusive jurisdiction in relation to any disputes arising from this Tender Document.
14. Each Bidder's acceptance of delivery of this Tender Document constitutes its agreement to, and acceptance of, the terms set forth in this Disclaimer. By acceptance of this Tender Document, the recipient agrees that this Tender Document and any information herewith supersedes document(s) or earlier information, if any, in relation to the subject matter hereof.

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## MAIN TENDER DOCUMENT

### 1. INTRODUCTION

National Automotive Test Tracks (NATRAX) "Employer" is a unit of National Automotive Board ("NAB"), an autonomous body constituted by Ministry of Heavy Industries & Public Enterprises, Government of India. NATRAX invites sealed tenders from the experienced and reputed bidders in the prescribed proforma for performing, executing and implementing the Works on the terms and conditions contained in this Tender Document and in the Contract. Brief description of Works and the timelines for tenders are summarised in the table below.

<b>Origin of bidders</b>	<p><b>Only Indian bidders can participate</b> in this tender, however Bidder can have their technical partner(s) or OEM(s) from outside India and <b>the quote should be in INR Only.</b></p> <p>The Minimum eligibility criteria in this tender shall be evaluated based on documents of Indian Bidders only and not the foreign Bidders.</p> <p>The overall responsibility shall with the Indian bidder only..</p>
<b>Description of Work</b>	Supply, Installation, Testing & Commissioning of Sensors and data acquisition for Road load data acquisition; after sale service; maintenance support; and training to its key personnel, operators & mechanics at NATRAX-Pithampur.
<b>Earnest Money Deposit</b>	<p>The EMD of Rs. 1,60,000/- is to be submitted in favor of "National Automotive Test Tracks" payable at "Pithampur MP" in any of the following forms valid for at least 6 months from a scheduled bank having a branch at New Delhi.</p> <p>(To be enclosed along with the technical bid).</p> <ol style="list-style-type: none"> <li>1. DD payable at Pithampur.</li> <li>2. Bank Guarantee.</li> <li>3. Banker's Cheque</li> </ol> <p><b>Note: MSME's and Startups are exempted from the submission of EMD, subject to submission of valid certificate.</b></p>
<b>Purchase preference to Micro and Small Enterprises (MSEs)</b>	<p>Purchase preference will be given to MSEs as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail the Purchase preference, the bidder must be the manufacturer of the offered product in case of bid for supply of goods. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises. In respect of bid for Services, the bidder must</p>

	<p>be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service. If L-1 is not an MSE and MSE Seller (s) has/have quoted price within L-1+ 15% (Selected by Buyer) of margin of purchase preference /price band defined in relevant policy, such Seller shall be given opportunity to match L-1 price and contract will be awarded for 25%(selected by Buyer) percentage of total QUANTITY. The buyers are advised to refer the OM No.F.1/4/2021-PPD dated 18.05.2023 OM_No.1_4_2021_PPD_dated_18.05.2023 for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017.</p> <p>Please note that, NATRAX shall follow the order on “Public Procurement (Preference to Make in India), Order 2017-Revision” issued by Department for Promotion of Industry and Internal Trade, Government of India, as per their Order Number P-45021/2/2017-PP (BE-II) dated 4th June 2020 and other guidelines in this regard.</p>
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## 2. MODALITIES

The Tender Documents can be downloaded/collected from NATRAX website [www.natrax.in](http://www.natrax.in) & CPPP Portal by registration online, and may be collected from NATRAX office (at National Automotive Test Tracks (NATRAX) NH-52, Old Agra-Mumbai Highway, Near to Pithampur Flyover, Post Khandwa (Near Pithampur, Dist. Dhar (M.P.)), from 12.00 Hrs on ----/---/----- to 17.00 Hrs on ----/---/----- . bidder is requested to please write an email on the given email ids regarding the tender documents with the complete contact details.

## 3. INSTRUCTIONS TO BIDDERS

- 3.1 The Bidder must ensure that he meets all the requirements spelt in “Annexure III – Bidder’s Company Requirements”.
- 3.2 The Bidders are expected to carefully examine all the contents of the Tender Document including instructions, conditions, terms, specifications and drawings and take them fully into account before submitting their Bid. Failure to comply with the requirements as detailed in these documents shall be at the Bidder’s own risk. Bids which are not responsive to the requirements of the Tender Document will be rejected.
- 3.3 While all efforts have been made to avoid errors in the drafting of the Tender Document, the Bidders are advised to check the same carefully. No claim on account of any errors detected in the Tender Document shall be entertained.
- 3.4 Bidders should study the drawings (if applicable) and Tender Documents carefully and thoroughly before quoting and get clarifications, if required, from NATRAX in this context.
- 3.5 The Bid prepared by the Bidder and all correspondence and documents relating to the tender exchanged between the Bidder and NATRAX shall be in the English language.

- 3.6 Each of the Bid documents should be stamped and signed by the person or persons submitting the Bid in token of his/their having acquainted himself/ themselves with the Tender Documents in entirety including all the Annexures and Forms. Any Bid not complying with the terms and conditions as set out in this Tender Document and/or not signed by authorised person may be rejected at the discretion of NATRAX.
- 3.7 The Bid submitted on behalf of a Firm shall be signed by all the Partners of the Firm or by a Partner who has the necessary authority on behalf of the Firm to submit the Bid.
- 3.8 The Bidder must obtain for himself on his own responsibility and at his own expenses all the information which may be necessary for the purpose of preparation and submission of the Bid and for entering into a Contract, must examine the Drawings, must inspect the sites of the Works, acquaint himself with all local conditions, means of access to the sites, nature of the Works and all matters pertaining thereto.
- 3.9 The Bidder must obtain for himself on his own responsibility and at his own expenses all the information which may be necessary for the purpose of preparation and submission of the Bid and for entering into a Contract, must examine the Drawings, must inspect the sites of the Works, acquaint himself with all local conditions, means of access to the sites, nature of the Works and all matters pertaining thereto.
- 3.10 The successful Bidder is bound to carry out any items of work necessary for the completion of the Works even though such items are not included in the quantities and drawings to achieve end results and deemed to be priced in the Financial Bid. No claim on this account shall be entertained.

#### **4. SCOPE OF WORK**

- 4.1 The scope of Work shall be as described under “Annexure I - Scope of Supply”.
- 4.2 The successful Bidder shall perform, execute and implement the Works strictly in accordance with Drawings, details, specifications, standard engineering practices and instructions of NATRAX and in accordance with the terms and conditions of the Contract and shall co-operate with the other contractors / suppliers appointed by NATRAX for carrying out related works at the project site to ensure that the Works proceed smoothly without any delay and to the satisfaction of NATRAX.
- 4.3 The Work shall be carried out strictly in compliance with the requirements of the authorities concerned and deviation on any account will not be permitted.
- 4.4 Any subcontracting by the successful Bidder for performance, execution and implementation of the Works shall be with the prior consent of NATRAX.
- 4.5 The successful Bidder should make his own arrangement to obtain all materials required for performing, executing and implementing the Works.

#### **5. EARNEST MONEY DEPOSIT**

- 5.1 The Bids shall be accompanied by an **Earnest Money Deposit** in the form of Demand Draft drawn in favour of “National Automotive Test Tracks” payable at Pithampur (MP), as per “Form c - Earnest Money Deposit”. Alternatively, the Bids shall be accompanied with an EMD Bank Guarantee issued by a scheduled bank

having a branch at New Delhi of the said amount for Earnest Money Deposit valid for a period of at least **180 days** from the last date of submission of Bids, as per "Form c - Earnest Money Deposit".

- 5.2 A Bid which is not accompanied by such Earnest Money Deposit will be construed as non-compliant bid and shall be rejected.
- 5.3 The Earnest Money Deposit of the unsuccessful Bidders will be returned without any interest after execution of the Contract by NATRAX with the successful Bidder.
- 5.4 The Earnest Money Deposit of the successful Bidder will be returned upon the successful Bidder furnishing the Performance Bank Guarantee.
- 5.5 A Bidder shall forfeit Earnest Money Deposit in favour of NATRAX in case, such Bidder -
  - 5.5.1 fails to start the work as may be indicated in the Letter of Acceptance or fails to execute the Contract within a period of 30 days from the date of issue of the Letter of Acceptance;
  - 5.5.2 without the written consent of NATRAX, has withdrawn its Bid during the validity period of the Bids and any extensions thereto;
  - 5.5.3 after opening of the financial bid, alters the quoted rates/conditions in the Bid;
  - 5.5.4 fails to provide /furnish the Performance Bank Guarantee within stipulated period mentioned in the in the Letter of Acceptance;
  - 5.5.5 does not reply to any queries that may be raised after opening of technical/financial bids.
  - 5.5.6 if the bidder does not accept the corrections made by NATRAX to its Bid Price pursuant to "Examination of Financial Proposal and Correction of Arithmetical Errors" under Annexure V- Evaluation parameters.
- 5.6 In case of the extension of the Bid validity period in the manner stated in Clause 9, the validity of the Earnest Money Deposit shall be extended for a further period of 60 (sixty) days.

## **6. SUBMISSION OF BIDS**

Bidders are required to submit their Bids in two parts in a sealed envelope, superscribed "**Bid for Tender No. NATRAX/PROC/T&D/24-25/-----**" **on the top of envelop, containing** two separate sealed envelopes, as given below. The sealed bids shall be submitted at the NATRAX, Pithampur before the closure of bid submission date/time, as specified in this document/NIT.

### **6.1 Part -1: The Technical Bid**

- 6.1.1 The first sealed envelope marked as "**Technical Bid for Tender No. NATRAX/PROC/T&D/24-25/60**" shall contain two copies of the Technical Bid documents, marked as:
  - ORIGINAL TECHNICAL BID FOR TENDER NO. NATRAX/PROC/T&D/24-25/60.
  - COPY OF TECHNICAL BID FOR TENDER NO. NATRAX/PROC/T&D/24-25/60.

6.1.2 Each original and copy shall contain the following duly filled Forms:

Form a) Letter for Submission of Technical Proposal

Form b) Letter of Undertaking

Form c) Earnest Money Deposit

Form d) Performance Bank Guarantee and form of Demand

Form d0) Checklist

Form d1) Deviations Suggested

Form d2) Detailed Technical Specifications

Form d3) References

Form d4) Service Support

Form d5) Bidder's Organisation, Company Profile and Sub-Contractors

Form d6) Description of Approach, Methodology, Work and Training Plan

Form dx) Instructions for filling the forms

Form e) Form of Financial Bid

Form f) Form for Technical/Commercial queries

Form g) Form for Indemnity Bond

6.1.3 **Further, the Technical Bid must include a copy of the Financial Bid of the Bidder without any information on the prices.** The purpose of this copy of the Financial Bid included in the Technical Bid is to ensure that Bidder has followed the format provided for the Financial Bid and has not included any additional terms and conditions as part of its Financial Bid. In case, any information on prices is included in this copy of the Financial Bid, NATRAX may disqualify the Bidder and reject its Bid.

6.1.4 Further, the Bidder shall be required to submit a soft copy of the Technical Bid in MS Word / MS Excel format (AutoCAD and PDF formats in case of drawings). The soft copy should be placed in the envelope containing Original Technical Bid.

6.1.5 In case of any discrepancy between the original and any of the copy (including soft copy), the original shall supersede.

## **6.2 Part-2: The Financial Bid**

6.2.1 The second sealed envelope shall contain two copies of the Financial Bid, marked as:

- ORIGINAL FINANCIAL BID FOR TENDER NO. NATRAX/PROC/T&D/24-25/60.
- COPY OF FINANCIAL BID FOR TENDER NO. NATRAX/PROC/T&D/24-25/60.

6.2.2 Each copy shall contain, duly filled and signed by an authorised person from the Bidder's Company, the following information:

Form e) Form of Financial Bid



- 6.2.3 Further, the Bidder shall be required to submit a soft copy of the Financial Bid in MS Excel format. The soft copy should be placed in the envelope containing original Financial Bid.
- 6.2.4 In case of any discrepancy between the original and any of the copy (including soft), the original shall supersede.
- 6.2.5 **The Bidders may quote for complete list of required instruments OR for any one as per their area of business and the total quoted value covers all its risks, obligations and liabilities set out in or to be reasonably inferred from this Tender Document, interface management, detailed design, detailing, coordination, value engineering, specialist system procurement, provision, erection and/or installation, testing, commissioning, documentation, training, defects remediation and related works for the respective Instrument/Instruments.**

The rates shall be quoted in INR only **including but not limited to matters in respect of the delivery up to the site (NATRAX), all taxes (as GST, IGST etc.).**

### **6.3 Manner of submission**

- 6.3.1 The two-part Bid shall be accepted at the NATRAX, Pithampur, on the scheduled date as per NIT.
- 6.3.2 NATRAX may, at its discretion, extend the deadline for submission of Bids by issuing an addendum, in which case all rights and obligations of NATRAX and the Bidders previously subject to the original deadline will thereafter be subject to the extended deadline.
- 6.3.3 **Any Bid received by NATRAX after the deadline for submission of Bids will be rejected** and returned unopened to the Bidders unless NATRAX decides otherwise under Clause 6.3.4.
- 6.3.4 NATRAX reserves the right to, without limitation, without incurring any obligation or liability vis-à-vis any Bidder and without expressing any cause or reason thereof, at any time and at its sole discretion to independently verify, disqualify, reject and/or accept any and all Bids or other information and/or evidence submitted by or on behalf of any Bidder, including without limitation pursuant to and/or in connection with:
- (a) Receipt of a Bid after the submission deadline;
  - (b) Failure to submit necessary supporting documentation following a specific request by or on behalf of NATRAX.
- 6.3.5 **Bids sent telegraphically or through other means of transmission (telefax, etc.) which cannot be delivered in a sealed envelope or password protected file shall be treated as defective, invalid and shall stand rejected.**

**Note: bidders are requested to please submit the documents after numbered and seal and sign on every page it is also requested to please do not submit loose documents, the documents should be submitted after binding.**

## **7. DEVIATIONS**

- 7.1 In case the Bidder fail to respond to any of the requirements, the Bidder is given the opportunity of explaining why the proposed solution is equivalent or better to the Minimum Requirement by filling document **"Form d1) Deviations Suggested"**.

- 7.2 In case, NATRAX finds any deviation which is not declared as part of the deviation statement submitted by the Bidder, NATRAX reserves the right to reject the bid.

## 8. AMENDMENT TO TENDER DOCUMENT

- 8.1 Addenda / Corrigenda to the Tender Document may be issued by NATRAX prior to the last date of submission of the Bids to clarify the documents or to reflect any modifications etc. All such addenda / corrigenda shall be treated as an integral part of the Tender Document.
- 8.2 In order to afford prospective Bidders reasonable time for preparing their tenders after taking into account such amendments, NATRAX may, at its discretion, extend the deadline for submission of tenders.
- 8.3 In case after issuance of addenda, any Bidder who has already submitted its Bid, does not resubmit its Bid, it shall be deemed that such Bidder does not intend to modify its Bid on the basis of the addenda and the addenda have been taken into account.

## 9. VALIDITY OF BIDS

- 9.1 Bids shall be unconditional, firm and remain valid and open for acceptance for a period of **180 days** from the last date of submission of Bids. Any Bid having validity lower than that specified above shall be rejected by NATRAX as being non-responsive. However, NATRAX may request the Bidders to extend the Bid unconditionally beyond the Bid validity period up to an additional period of sixty (60) days without any modification and without giving any reason thereof. Conditional extension of bid validity shall not be accepted and NATRAX reserves right to reject such bid/s and proceed with the bidding process with the remaining bidders.
- 9.2 If a Bidder withdraws or revokes his offer after last date of submission of Bids, the Bidder is liable to be disqualified and the Earnest Money Deposit submitted by such Bidder is liable to be forfeited. Any Bidder shall not be allowed to carry out any revision / correction / modification in his Bid after the last date of submission of Bids.
- 9.3 In case NATRAX calls the Bidder for negotiations/clarifications then this shall not amount to cancellation or withdrawal of original offer. NATRAX reserves right to finalise the technical scores by conducting such negotiations/seeking clarifications as per clause 11.2.1, till the start date/time of the financial bid opening and prior to declaration of technical scores as per clause 11.3.3.

## 10. CLARIFICATIONS TO BIDDER'S QUERIES

The Bidders are requested to raise their queries, if any, by email at [a.prabhakar@natrip.in](mailto:a.prabhakar@natrip.in) & [anuj.kumar@natrip.in](mailto:anuj.kumar@natrip.in) , by specified date and time in NIT. Subsequent to this, NATRAX will invite Bidders and address all the queries received from all the Bidders together at day, place and time informed by NATRAX, through online mode only. The link for the meeting shall be shared with those bidders who will submit the queries by **specified date in NIT**. The contact details of the Bidder shall be required to be furnished at the time of purchase of Tender Documents NATRAX reserves the right not to respond to questions raised or provide clarifications sought, in their sole discretion, if it is considered that it would be inappropriate to do so. Nothing in this section shall be taken or read as

compelling or requiring NATRAX to respond to any question or to provide any clarification.

## **11. BID EVALUATION PROCESS**

The bidding evaluation process will be as follows:

### **11.1. Technical Bids Opening**

- 11.1.1 The Technical Bid shall be opened on **scheduled date and time in NIT** at the NATRAX Pithampur in the presence of the Bidders or their duly authorised representatives who choose to remain present at the time of opening the Bids.
- 11.1.2 The sealed technical bid envelop shall be opened in the presence of Bidders or their duly authorized representatives at the time mentioned in Clause 11.1.1, in the presence of the members of the NATRAX's Procurement Committee.
- 11.1.3 A letter of authorization shall be submitted by the Bidder's representative at the time of opening of Bids.
- 11.1.4 Absence of Bidders or their duly authorized representatives shall not impair the legality of the bid opening process.
- 11.1.5 All Bidders or their duly authorized representatives shall be required to sign the main bid envelopes by way of confirmation of sealed bid status at the time of opening of bids.
- 11.1.6 After identification signing, the NATRAX's Procurement Committee representative shall open the main bid envelope. After opening, Bidders or their duly authorized representatives shall be required to sign the technical and financial bid envelopes of all the Bidders.
- 11.1.7 Refusal to sign the bid envelopes by any of the Bidder or his duly authorized representative may disqualify such Bidder from the evaluation process at the discretion of members of the NATRAX's Committee present at the time of opening of the Bids.
- 11.1.8 The Technical Bid envelopes shall thereafter be opened and a preliminary scrutiny of contents of each of the Technical Bids as specified in the Tender Documents shall be carried out.
- 11.1.9 The bids shall be declared to be 'Valid' or 'Invalid' at the conclusion of preliminary scrutiny process, at the discretion of the members of the Procurement Committee present on the spot. The decision on declaring the Bid is also subject to the submission of valid EMD of requisite amount and prima facia appearance of the bidding documents on totality. The decision on declaring the Bid as valid or invalid shall not be postponed except under exceptional circumstances.
- 11.1.10 Bids declared invalid shall be returned on the spot to the respective Bidders. In case, the Bidder or it representative whose Bid has been declared invalid is not present at the time of opening of the Bids, the Bid shall be returned to the Bidder by Registered / Speed Post or Courier. No correspondence or claim whatsoever from such Bidders shall be entertained or responded by NATRAX.
- 11.1.11 For the valid Bids, the signed envelopes containing the Financial Bids shall be kept safely in sealed condition.

### **11.2 Technical Bid Evaluation**

- 11.2.1 During the technical bid evaluation process, NATRAX may ask clarifications to the bidder through E-mail/ Fax, for confirming and consolidating their technical offers.
- 11.2.2 All such clarifications are required to be answered by the bidder by E-mail/Fax, within the time specified by NATRAX. The signed hard copies of the same need to be submitted to NATRAX and shall be deemed to be the part of the tender documents.
- 11.2.3 All valid bids shall be evaluated to arrive at Technical Score and the technically qualified bids shall be determined, as specified in “**Annexure V - Evaluation Parameters**”.
- 11.2.4 Only the technically qualified bidders shall be intimated for financial bid opening in writing (email/letter).

### **11.3 Financial Bids Opening**

- 11.3.1 The Financial Bids of all the technically qualified Bidders shall be opened on the appointed date and time in presence of the qualified Bidders/their authorized representative, who choose to be present at the time of opening of the financial bids.
- 11.3.2 No Bidder shall be allowed to propose/carry out any revision / correction / modification in his Price Bid offer. Only NATRAX can ask for such revisions from all, in view of the boundary conditions like fluctuations in rate/change in the scope of supply etc. during the technical bid evaluation period.
- 11.3.3 The score of each qualified Bidder in technical evaluation shall be announced, if integrated bid evaluation system (Sum of Technical & financial scores) is followed. In case Segregated bid evaluation system, the scores shall not be declared.
- 11.3.4 All the technically qualified Bidders/their authorized representative present at the time of opening of the Financial Bids shall be asked to sign the Bid price declaration sheet, against their respective Technical Bid evaluation score.
- 11.3.5 Any Bidder objecting to the same shall be disqualified.
- 11.3.6 Financial Bid of the remaining qualified Bidders shall be opened in the presence of Bidders or their authorized representatives and the bid price of all the bidders shall be declared.
- 11.3.7 Each qualified Bidder or their authorized representative shall be required to sign again on the Bid price declaration sheet, against their respective price declared. Any Bidder objecting to the same shall be disqualified.
- 11.3.8 Absence of Bidders or their authorized representatives shall not legally impair the process.

### **11.4 Financial Bid Evaluation**

- 11.4.1 All valid financial bids shall be evaluated/ scrutinized “Item wise “as per “**Annexure V - Evaluation Parameters**”

### **11.5 Determination of the Successful Bidder**

- 11.5.1 The best evaluated bid shall be determined as per **Annexure V- Evaluation Parameters**”
- 11.5.2 **In case of integrated bid evaluation system**, the Bidder with the highest integrated score shall be deemed as the successful Bidder (“**Successful Bidder**”).

11.5.3 In case more than one Bidder gets highest integrated score then the Successful Bidder shall be determined as follows –

11.5.3.1 The Financial Bid Evaluation scores of such Bidders with the highest integrated score shall be compared and the one with higher Financial Bid Evaluation score shall be declared as the successful Bidder.

11.5.3.2 In case, the scores for the Financial Bid offered by such Bidders are also equal, such Bidders shall be called by NATRAX for negotiation on price and the Bidder offering lower price shall be declared as the successful Bidder.

11.5.3.3 In case, there is a deadlock even after negotiation on price, then the final decision taken by NATRAX shall be binding on the Bidders.

11.5.4 **In case of segregated bid evaluation system**, the bidder meeting the minimum eligibility criteria, with the lowest price bid shall be deemed as the successful bidders.

11.5.5 However, NATRAX does not undertake to accept the lowest or indeed any bid, in all the above cases as mentioned in the clause 6 of the disclaimer.

## **12. CONTRACT NEGOTIATIONS**

12.1 The Contract negotiations (if any) will be held before the issuance of Letter of Acceptance/ Notification of Award with Lowest Quoted Bidder (L-1) Only.

12.2. If there is a suspicion of cartel formation or counter offer to the lowest bid (L1) or the financial bid is unbalanced, front loaded or substantially in variance with the updated estimates in the opinion of NATRAX, NATRAX may require the successful bidder to produce detailed price analyses for any or all items of the Financial Bid, to demonstrate the internal consistency of those prices with the market price and schedule proposed.

12.3. The negotiation shall conclude with a revised offer letter from the successful bidder, affecting the discounts if any and accepted by NATRAX.

12.4. If negotiation fails, original bid of the successful bidder shall be considered. However, NATRAX reserve the right to reject all the bids.

## **13. NATRAX's RIGHT TO ACCEPT OR REJECT ANY OR ALL BIDDERS**

NATRAX reserves the right to accept or reject any bid, and to annul the tender process and reject all Bids, at any time prior to award of Contract without assigning any reasons for such acceptance/ rejection, or to divide the Contract between/amongst Bidders without thereby incurring any liability to the affected Bidder or Bidders or any obligations to inform the affected Bidder or Bidders of the grounds for NATRAX's action. The Bidders shall not have any cause of action or claim against NATRAX for rejection of their bids.

## **14. NOTIFICATION OF AWARD**

14.1 Prior to the expiry of the period of Bid validity prescribed, NATRAX will issue to the Item wise Successful Bidder, the "Letter of Acceptance (LOA)" Item wise. The Successful Bidder shall return copy of LOA to NATRAX duly acknowledging and signed by the authorized signatory, within seven [7] days of receipt of the same by him.

- 14.2 The Letter of Acceptance shall constitute a part of the Contract.
- 14.3 After the execution of "The Contract agreement" with the successful bidder, NATRAX will promptly notify all the unsuccessful Bidders and discharge/ return their Earnest Money Deposit.
- 14.4 No correspondence will be entertained by NATRAX from the unsuccessful Bidders.

## **15. SIGNING OF CONTRACT AND ISSUANCE OF PURCHASE ORDER**

- 15.1 The Successful Bidder shall enter into and duly sign the Contract for performance, execution and implementation of the works within **thirty [30] days** from the date of acceptance of LOA. But the written acceptance by NATRAX of a Bid will constitute a binding Contract between NATRAX and the person so tendering, whether such formal agreement is not subsequently executed.
- 15.2 Upon receipt of the Performance Bank Guarantee (PBG)/Performance Security (PS), as per clause 18.1, NATRAX shall prepare the Contract Agreement, which shall indicatively be in the format included in "Annexure X - Format for Contract Agreement" duly incorporating all the terms of agreement between the two parties and send the same to the successful Bidder within **Twenty one [21] days** of the date of receipt of the "Letter of Acceptance" duly acknowledged and signed by the successful Bidder. The Contract shall be governed by the conditioned spelt out in "Annexure IX - General Conditions of Contract", "Annexure VIII - Special Conditions of Contract", "Annexure IV - Technical Conditions of Contract" and this Tender Document.
- 15.3 The Successful Bidder shall return the Contract duly signed by the authorized signatory within **seven [7] days** of receipt of the Contract from NATRAX. NATRAX shall have Contract duly signed by the authorized signatory. The Successful Bidder shall get the correct amount of stamp duty adjudicated by the registrar of Stamps, Madhya Pradesh and have the Contract duly stamped and executed. One copy of the Contract duly signed by NATRAX and the Successful Bidder through their authorized signatories will be sent by NATRAX to the Successful Bidder, on receipt of the Performance Bank Guarantee, as per clause 18.1.
- 15.4 After the execution of 'Contract Agreement', NATRAX shall issue the **Purchase Order**, (P.O) as per the Annexure XI, within **Fifteen [15] days**, which shall be binding both the parties.
- 15.5 The contractor shall acknowledge the purchase order and sign with the remarks 'Accepted'. Further the contractor shall issue the acceptance letter (on their letter Head) to NATRAX, **along with the complete proposed shipment plan and details of utility/civil/site readiness requirements**, within **Fifteen [15] days** of receipt of the purchase order.
- 15.6 The contractor shall submit the Indemnity Bond as per the format given in "Form g)" prior to shipment/despatch of the equipment.

## **16. NON-EXCLUSIVITY**

The right of the Successful Bidder to perform executes and implements the Works or any part thereof pursuant to the Contract, is not exclusive and shall not prevent NATRAX from granting a similar right to other parties.

**17. PROCESS TO BE CONFIDENTIAL**

- 17.1 Except the public opening of Bids, information relating to the examination, clarification, evaluation and comparison of Bids and recommendations concerning the award of Contract shall not be disclosed to Bidders or other persons not officially concerned with such process.
- 17.2 Any effort by a Bidder to influence NATRAX or any of its functionaries in the process of examination, clarification, evaluation and comparison of tenders and in decisions concerning award of contract, may result in the rejection of the Bid.
- 17.3 As part of his Technical Bid, the Bidder shall be required to furnish an undertaking for confidentiality as “**Form b - Letter of Undertaking**”.

**18. PERFORMANCE BANK GUARANTEE**

- 18.1 Within **fifteen** [15] days of the date of acceptance of the LoA, the Successful Bidder shall execute a Performance Bank Guarantee as per the form (d), from a scheduled Bank, for an amount equivalent to the **Five Present (5%)** or as per the prevailing rates issued by GOI, of the contract value, which shall be kept valid for the entire period of warranty. The PBG shall be made in INR only.
- 18.2 The Performance Bank Guarantee of the Successful Bidder will be invoked and forfeited if the Successful Bidder fails to comply with the conditions of Contract.

**19. TERMS OF PAYMENT**

- 19.1 The terms of payment shall be as described in “**Annexure VII - Terms of Payment**”.

**20. GENERAL**

- 20.1 NATRAX reserves the right to, without limitation, without incurring any obligation or liability vis-à-vis any Bidder and without expressing any cause or reason thereof, at any time and at its sole discretion amend or supplement the Tender Document and/or the selection process or the dates or other terms and conditions relating thereto, suspend and/or cancel the selection process.
- 20.2 NATRAX reserves the right to, without limitation, without incurring any obligation or liability vis-à-vis any Bidder and without expressing any cause or reason thereof, at any time and at its sole discretion to independently disqualify, reject and/or accept any and all Bids or other information and/or evidence submitted by or on behalf of any Bidder, including without limitation pursuant to and/or in connection with receipt of a Bid after the submission deadline and/or determination that a Bidder will be unable to fulfil the requirements of the Tender Document.
- 20.3 The decisions and/or the exercise of discretion by NATRAX shall not be challenged by any Bidder and are final.



- 20.4 Any failure by NATRAX to exercise any rights hereunder, pursuant hereto and/or in connection herewith, shall not be a waiver of those or any other rights unless expressly stated as such in writing by NATRAX.
- 20.5 The Bidders and their respective officers, employees, agents and advisers must not engage in any collusive tendering, anti-competitive conduct or any other similar conduct with any other Bidder or any other entity in relation to the preparation or lodgement of Bids or otherwise in any aspect of the Works.

**21. LIST OF ANNEXURES**

The Annexures to this document are as listed below -

*Annexure I: Scope of Supply*

*Annexure II: Site Description*

*Annexure III: Bidder's Company Requirements*

*Annexure IV: Technical Conditions of the Contract (TCC)*

*Annexure V: Evaluation Parameters*

*Annexure VI: Acceptance Criteria*

*Annexure VII: Terms of Payment*

*Annexure VIII: Special Conditions of Contract (SCC)*

*Annexure IX: General Conditions of Contract (GCC)*

*Annexure X: Format for Contract Agreement*

*Annexure XI- Format for Purchase Order (P.O)*

**22. LIST OF FORMS**

The Forms to this document are as listed below -

*Form a) Letter for Submission of Technical Proposal*

*Form b) Letter of Undertaking*

*Form c) Earnest Money Deposit*

*Form d) Performance Bank Guarantee and form of Demand*

*Form d0) Checklist*

*Form d1) Deviations Suggested*

*Form d2) Detailed Technical Specifications*

*Form d3) References*

*Form d4) Service Support*

*Form d5) Bidder's Organisation, Company Profile and Sub-Contractors*

*Form d6) Description of Approach, Methodology, Work and Training Plan*

*Form dx) Instructions for filling the forms*

*Form e) Form of Financial Bid*

*Form f) Form for Technical/Commercial queries*

*Form g) Form for Indemnity Bond*





# **NATIONAL AUTOMOTIVE TEST TRACKS**

## **TENDER DOCUMENTS**

**TENDER NO. NATRAX/PROC/T&D/24-25/60**

**SUPPLY, INSTALLATION, TESTING & COMMISSIONING**

**OF**

**SENSORS & INSTRUMENTS FOR ROAD LOAD DATA  
ACQUISITION**

### **Annexure I Scope of Supply**

**NATRAX-Pithampur**

#### **National Automotive Test Tracks (NATRAX)**

NH-52, Old Agra- Mumbai Highway, Near to Pithampur Flyover, Post Khandwa  
(Near Pithampur)

Dhar District, Madhya Pradesh-454774

Phone: +919893892310, Fax – 07292-256101

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Email: [sriharisj@natrax.in](mailto:sriharisj@natrax.in)

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## 1) ELEMENTS TO BE SUPPLIED

### a) Introduction- NATRAX- Pithampur

NATRAX-Pithampur is located on Mumbai Highway near Pithampur Industrial area at a distance of about 40 kms from Indore city on National Highway 3. The land is predominately flat is spread over an area of 3000 acres. NATRAX serves as a comprehensive test facility and comprises of Proving Ground (Test Tracks) and Vehicle Dynamics Lab (Centre of Excellence).

The scope of this tender includes the following elements:

Location	Scope of Supply	Technical Requirement
NATRAX - Pithampur	Supply, Installation, Testing & Commissioning of Sensors and data acquisition for Road load data acquisition; after sale service; maintenance support; and training to its key personnel, operators & mechanics at NATRAX-Pithampur	As per Annexure-IV: TCC
<p><b>List of the instruments covered under the scope of this tender, bidder may quote for all the instruments OR in parts.</b></p> <p><b>However, if Bidder is offering in parts they have to confirm the same in the technical bid through an undertaking.</b></p>		
Sr. No.	Name of instruments/equipments	Required Qty
1	Seat Pad Accelerometer	2
2	Wire Rope Pots	6
3	Triaxial accelerometer	10
4	LVDT 200mm	4
5	LVDT 300mm	4
6	Linear Strain Gauge to measure strain in know direction	5
7	Rosett Strain Gauges	4
8	Cleaning Agent	1

9	Protection Coating	1
10	Toughbook	1

The description of the equipment to be installed is included in the Annexure IV TCC. A complete list of derivable in table format shall be included in "Form d2 Detailed Technical Specifications".

## 2) RESPONSIBILITIES

The Bidder shall have total responsibility for the process including all phases of Supply, Installation and functional testing of the equipment, shipment, and installation, integration of systems, training and system checking for all the elements listed in the current document.

The Bidder is requested to take into account all information provided in the Tender Document and its Annexure. The offer shall be suitable to the requirements listed in the complete document.

The Bidder is requested to fill "Form d2" with the detailed specifications of their proposal, as well as "Form d0" the checklist for the specifications offered against the requirements of the tender. If any proposed specification deviates from the Minimum Requirements, the Bidder shall fill a proforma in "Form d1", for the deviations if any.

The Bidder shall be responsible for the complete commissioning of equipment at NATRAX-Pithampur.

Additionally, the Successful Bidder for this tender is also responsible for:

### a) Responsibilities over the equipment manufactured by Subcontractors/ Technical Partners

The Bidder shall take complete responsibility over the equipment supplied under this tender that is manufactured by any of his Subcontractors. The Bidder is required to submit all the information requested across the tender for the Subcontractors.

### b) Integration responsibilities

The Bidder is fully responsible for all the supplied equipment and its integration.

### c) Documentation

At the time of equipment delivery, the supplier is required to provide, for equipment, a manual in English containing: description of the equipment with detailed drawings and specs, instructions on the operation of the system, detailed software control commands, safety organs/disturbances and possible causes, and full maintenance details. The equipment shall be installed in various locations.

Calibration certificates shall be included in the documentation.

Documentation shall be delivered in two Hard Copies and in two Soft Copies (CD or DVD format).

#### **d) Installation and integration**

The Supplier shall deploy an Implementation Team with demonstrable skills and experience in order to achieve the requested quality of Installation.

The work plan proposed by the Bidder for the implementation of the equipment needs to justify that it will be suitable for achieving the implementation of the project.

The work is to be completed within stipulated time from the date of award of contract by way of Letter of Acceptance, as mentioned in the milestones appearing above.

Bidder is required to submit, together with its Offer, a detailed timing plan that shall include all phases of supply and installation of the equipment. Any on-site service requirements will also be included in this timing to allow the correct building services to be catered for by NATRAX. This implementation plan shall be included in document "Form (d6) Description of Approach, Methodology, Work and Training Plan".

The proposed layout shall be consistent with building layout appearing in "Annexure II Sites Description", and shall be provided in "Form d6 - Description of Approach, Methodology, Work and Training Plan".

After being awarded, the Successful Bidder shall be required to work out details of interfaces with interior works and general utilities required for the proper installation of the equipment supplied, within three weeks from the award of work, by submission of a detailed project stating all requirements in a comprehensive way for interior work contractor.

The target completion period including commissioning and acceptance shall be as **Six (6) months from the acceptance of purchase order (PO)**.

#### **e) Cables and connections**

All connections between any of the elements supplied as per this tender document, and any connection required to the equipment are the responsibility of the Successful Bidder.

Electrical power from the distribution cabinets to the equipment, including cable, switches and protection shall be NATRAX's responsibility. Equipment shall be supplied with all the cables and required accessories for the equipment operation.

#### **f) Software and Display**

NATRAX requires system upgrade with the latest software version free of cost, if any, within a period of five years after commissioning. The referred system up gradation shall be applicable in the event of:

- Critical releases on the software
- New Operating System adoption
- Accumulation of minor upgrades in the software

If Hardware up gradation is required in order to achieve the software up gradation, this will also be included free of charge. This includes, as an example, the Computer, connections and communications cards. The supplier is also responsible for completing the tests for commissioning the upgraded software.

### **g) Calibration**

Equipment shall be supplied with the required NABL calibration certificate or similar international calibration certificate.

Traceable calibration certificates shall be available by the time of pre-acceptance, and shall be included in the documentation delivered by the supplier. Calibration schedule shall also be included in the documentation.

Arrangement of calibrated material or equipment for the final acceptance is the responsibility of the equipment supplier. Calibration tools and plan need to comply with International Standards and Accreditation.

The Annual Maintenance Contract shall include an annual certification of the main equipment.

### **h) Climatic Conditions**

The supplier is responsible for the required performances to be reached under the climatic conditions appearing in “Annexure II Sites Description”, except when explicitly stated that the equipment will be installed in an acclimatised environment. If no explicit statement is done on the availability of acclimatisation, and operating conditions are specified, the most restrictive between those and the general climatic conditions of the Centre shall be taken into account.

### **i) Health & Environmental Requirements**

All above calibration equipments must meet the Environmental, Health and Safety aspects (CE or equivalent). Certificates shall be included in the Documentation. If hazardous material is used please provide MSDS (Material Safety Data Sheet)

### **j) Layouts, requirements on equipment placement and Schematics**

The Bidder is also required to deliver, together with its Offer, a detailed implementation layout. This layout shall be according to the Site Layouts appearing in “Annexure II Sites Description, Attachment. A”, and shall be provided as per “Form d6 - Description of Approach, Methodology, Work and Training Plan”

### **k) Pre-acceptance and Acceptance Tests**

The acceptance test shall consist in proving the performance of the equipment, as per the performance standards and automotive test standards defined in the documents comprising “Annexure VI - Acceptance Criteria”.

The Bidder shall also propose a complete and detailed protocol for the on-site Final Acceptance. This information shall be submitted in “Form d6”.

### **l) Complete list of deliverables**

The Bidder is requested to provide, in Form d2, a complete list of deliverables reflecting all the elements included in its Offer. The list should be grouped as per test rig and test site.

## **3) EXCLUSIONS**

NATRAX will provide electrical supply (via local isolators), water, fuels and compressed air adjacent to the equipment. It will be the responsibility of the equipment supplier to make all the connections from these service points to the equipment.

General Information on Building and Available Utilities is explained in “Annexure II Sites Description”.

## **4) WARRANTY, TECHNICAL SERVICE AND MAINTENANCE**

The requirements for the Service Support are:

### **a) Service Support**

The Bidder is required to provide a complete service support to NATRAX with trained manpower.

The bidder will be responsible for the service support for the whole scope.

The Bidder shall commit a maximum response time of 24 hours, which means that in case of any breakdown within 24 hours, the Bidder’s personnel should reach the site, assess the cause of the breakdown, take necessary action to resolve the issue and submit the corrective actions schedule.

Each Subcontractor, if any, shall also provide a direct contact point to be used for Service Support, should NATRAX require to, anytime during the equipment lifetime.

The Subcontractor shall also commit to support the Bidder in case specialised staff is required in order to repair a breakdown or perform maintenance of the equipment. If Subcontractors have service support set up in India it shall be available to NATRAX site as a direct contact point being considered as a positive deviation for evaluation. The Bidder is requested to fill the corresponding part of “Form d4) Service Support”.

### **b) Warranty**

The Bidder shall be required to provide a comprehensive warranty of two years from date of acceptance, for equipment supplied under this tender, including the following:

- The Bidder shall commit cumulative down time not exceeding 300 natural hours a year including the time required for preventive maintenance and irrespective of the working hours.
- Any preventive maintenance and/or repair for breakdown shall be carried out by the Bidder and Technical Partners at their own cost. No charge on this account (including cost of calibration, spare parts, wear parts, consumables to be changed during maintenance, travel and accommodation expenses, etc.) will be borne by NATRAX.
- The preventive maintenance will be carried out by supplier or his technical partners’, as per service manual or at a frequency of 6-months whichever is earlier. Preventive maintenance will not be performed by representative personnel, but by employees of manufactures Company or his technical partners for equipment under their scope of supply.
- Every six months, supplier or his technical partners’, for equipment under their scope of supply, will inspect the equipment and submit a report on overall health & maintenance status of the equipment

In addition of the above, the performance of all the equipment shall be guaranteed for the first five years from the date of acceptance, meaning that acceptance tests could be performed from time to time, if the instrumentation subsystem fails to pass the acceptance test, the supplier shall be responsible for performing any corrective action required for restoring the performance.

The Bidder is requested to fill the corresponding part of “Form d4) Service Support” explicitly stating his agreement with each and all of the above conditions.

### **c) Annual Maintenance Contract (AMC)**

The AMC for the three following years after Warranty expires shall be quoted year-wise separately. During this period the Bidder shall comply with all the terms and conditions as mentioned above in the warranty with a difference that the spare parts cost during this period shall be borne by NATRAX. Particularly, breakdown repair costs due to labour activities required by breakdown calls shall be included in the quoted AMC.

The Bidder shall include a complete list of actions/services included in the AMC.



The AMC shall include the calibration of the equipment. The equipment to calibrate shall be listed

The preventive maintenance will be carried out by skilled personnel, at a frequency specified by the Bidder at time of Technical Bid Submission. Non-critical repairs shall be done during the maintenance working period.

The AMC shall take into account assistance to breakdowns/repairs that have to be solved immediately.

The Bidder is requested to fill the corresponding part of "Form d4) Service Support", explicitly stating his agreement with each and all of the above conditions.

#### **d) Spares, Consumables & Wear Parts**

The Bidder shall be required to provide a list of critical / essential spare parts (not consumables) without prices in "Form d4) Service Support", and with their unitary prices along with the Financial Bid. These prices shall be quoted on yearly basis for 4 years period (i.e 1-year warranty & 3-years AMC).

The specific tools, wires, connectors, etc. required for the maintenance and for minor repairs in-house of the equipment shall be listed and provided.

### **5) TRAINING & OPERATIONS SUPPORT**

#### **a) Installation and commissioning training**

During Acceptance of the facilities at NATRAX Pithampur, NATRAX team will be trained on the job. This training shall not be shorter than 1 weeks and shall include operational, maintenance & end-user training on each equipment. Training should be done by certified engineer.

#### **b) Operation Support**

The Bidder shall be required to provide operation support for at least 3 weeks. During this period the Bidder shall deploy engineer at the centre as per site requirement to assist the NATRAX team in operation of the equipment. Unless specified by NATRAX, the 3 weeks shall be split as follows: two after commissioning and one week that may be split into days during the following year.



# **NATIONAL AUTOMOTIVE TEST TRACKS**

## **TENDER DOCUMENTS**

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**SUPPLY, INSTALLATION, TESTING & COMMISSIONING**

**OF**

**SENSORS & INSTRUMENTS FOR ROAD LOAD DATA ACQUISITION**

### **Annexure II Site Description**

**NATRAX-Pithampur**

#### **National Automotive Test Tracks (NATRAX)**

NH-52, Old Agra- Mumbai Highway, Near to Pithampur Flyover, Post Khandwa  
(Near Pithampur)

Dhar District, Madhya Pradesh-454774

Phone: +919893892310, Fax – 07292-256101

Email: [a.prabhakar@natrip.in](mailto:a.prabhakar@natrip.in); & [anuj.kumar@natrip.in](mailto:anuj.kumar@natrip.in)

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## 1. GENERAL SITES DESCRIPTION

### 1.1. NATRAX, Pithampur

#### Introduction

The Project site is located on Mumbai Highway near Pithampur Industrial area at a distance of about 40 kms from Indore city on National Highway 3. The land is predominately flat is spread over an area of 3000 acres.

#### Access & Climatic Conditions

S.No.	Parameter	Description
1.	Access to the Project Site	Connected by highway from Indore.
2.	Altitude above sea level	530 m
3.	Land size	3000 Acres approx..
4.	Topography	Small gradient land
5.	Climatic conditions	<ul style="list-style-type: none"><li>• Hot &amp; dry in the summer months.</li><li>• Rainy months: July – August. Moderate rainfall.</li><li>• Temperature ranges between 45 °C high and 10°C low (in winter).</li></ul>

## 2. DESCRIPTION OF THE BUILDINGS

### 2.1. CIVIL WORKS

#### 2.1.1. Layout

The Layouts of the proposed Lab buildings shall be shared with successful bidder.

#### 2.1.2. Walls

External walls will be made out of bricks or concrete blocks, covered either with a metal cladding with the adequate thermal/acoustic insulation, or with an adequate painted finishing.

The rest of internal walls with 10cm width bricks, plaster coated and adequate painted finishing.

Offices area will be built with light partitions, to allow flexible distribution of space.

The walls within the test areas will be made of concrete blocks (minimum 20cm width) and metal profiles required for equipment support.

#### 2.1.3. Roof

Construction is done with gradient to both sides, to ensure suitable water drainage (according to local standards).

Some openings will be available on the roof for the exhaust extraction chimneys and the ventilation outlets.

### 2.2. Available Utilities

#### 2.2.1. Electricity

The Bidder for this tender is responsible for the electrical network from NATIS electric point to the test equipments. The rest of the areas shall be taken care of by the Civil Works and General Utilities supplier.

The power supply system will include the necessary circuits to provide electricity to the rig within the laboratory.

#### Facility at NATRAX, Pithampur:

- Available supply: AC Supply, (3phase, 415 Volts, 50Hz) & (Single phase, 220Volts, 50 Hz).
- DG Backup available
- Online UPS System
- Electrical supply for test equipment.
- Electrical supply for utilities (chillers, cooling towers etc.)
- Cable trays and cabling to supply all cabinet form LV cabinet, as well as cabling of all different utilities (power and control).
- A suitable lighting distribution enables a correct light level within the different areas and thus to allow a comfortable operation.
- Sockets for general use in, test cell, workshops and control rooms. Additional requirements will be provided based on the bidders requirements.

#### 2.2.2. Fire Protection Systems

All the building will be equipped with suitable fire fighting systems. The type of system will vary depending on the building or Laboratory use.

The Bidder for this tender is responsible only for the fire protection system in the test equipment and its communication with the general fire protection system. The rest of the areas shall be taken care of by the Civil Works and General Utilities supplier (like workshops, storage areas, etc...).

The Supplier shall certify the fire fighting system according to the local authorities' regulations.

In case of fire inside the building, suitable extinguishing systems will be available. Depending on the room usage, and considering risk factors, people inside the room or not, etc., automatic or manual extinguishing systems should be installed.

In case of sprinkler network, water pumping system will be electrically supplied from a UPS cabinet if electric pumps are used, optionally diesel pumps can be arranged.

Fire detection: Smoke detection is considered in all the rooms.

Gas detection: No gas detectors will be available.

Fire extinguishing: Hydraulic pump station, plate benches and workshop.

An automatic water extinguishing system consisting in a sprinkler network will be available: Materials & samples reception, sample storage, environmental testing zone, 3D measuring devices, office for fatigue & certification laboratory, office for CAE, social area.

### **2.2.3. Fire and gas detection system**

The buildings will be equipped with fire detection and alarm systems, which will be linked to the main control system in order to stop test procedures, disconnect supply services and enable visual and acoustic warning signals. The system includes the following.

- Fire/Smoke detection in offices and workshops.
- Smoke and flame detection in test rooms.
- Gas detection in test rooms, fuel system and calibration gases if present.

#### **2.2.3.1. Fire extinguishing**

For fire extinguishing and depending on the room usage plus considering risk factors, automatic or manual extinguishing systems are proposed.

There are four different systems that can be considered:

- Type 1 Automatic extinguishing: Employed for high risk areas and where there is no presence of people for manual activation. The extinguishing agents that can be used are FM200 mainly for Testing areas, CO2 in power transformer areas and foam on areas where flammable liquids are stored.
- Type 2 Automatic water extinguishing: Water sprinkler network to be fed by the main network
- Type 3 Manual water extinguishing: water hydrant and hoses, for manual usage.
- Type 4 Powder/Foam portable extinguishers: to be located at low-risk areas and distributed uniformly according local rules

### **2.2.4. Information Technologies**

**2.2.4.1. LAN**

For Internet, e-mail and file sharing services a LAN network should be installed and shared by all buildings. Distribution to rest of buildings from the main network will be done by means of optical connection.

**2.2.4.2. Telephone**

The telephone installation will consist in a telephone central, and digital internal network for telephone handsets and fax machines and telephone and fax lines connected to the main central.



# **NATIONAL AUTOMOTIVE TEST TRACKS**

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**SENSORS & INSTRUMENTS FOR ROAD LOAD DATA  
ACQUISITION**

**Annexure III Bidder's Company Requirements**

**NATRAX-Pithampur**

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**National Automotive Test Tracks (NATRAX)**

NH-52, Old Agra- Mumbai Highway, Near to Pithampur Flyover, Post Khandwa  
(Near Pithampur)

Tender No. NATRAX/PROC/T&D/24-25/60



Dhar District, Madhya Pradesh-454774  
Phone: +919893892310, Fax – 07292-256101  
Email: [a.prabhakar@natrip.in](mailto:a.prabhakar@natrip.in); & [anuj.kumar@natrip.in](mailto:anuj.kumar@natrip.in)

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## 1. BIDDER'S COMPANY REQUIREMENTS

### 1.1. Bidder

The bidder is the company designing and manufacturing, supplying and executing the project under this tender. The same bidder would be the purchaser of the tender document and NATRAX would interact only with this bidder in terms of entertaining the bidder for tender document clarifications, evaluation and considering for selection, award of contract and the subsequent execution of the contract.

The Bidder shall be a Company which shall be an OEM or OEM Supplier, or the singly Authorized partner of an OEM or an authorized system integrator (SI) of the OEM of the Tendered Equipment who is willing to undertake total scope of work. A bidder can submit only one bid. One OEM can authorize only one Authorized partner for the execution of this work/solution. Conversely, one vendor can represent only one OEM for the execution of this job.

The Bidder may include in its offer for complete equipment from different suppliers. However, these suppliers shall act as Technical Partners, and not as pure subcontractors.

The bidder shall explicitly commit, in the form indicated in brackets, to:

- taking the responsibility over the integration of the different subsystems and the rest of the lab (Form d6)
- taking the responsibility over the final performances of the equipment installed, and the compliancy with the requirements of the tender (Form d6)
- offering the same conditions of Warranty and Service Support for the equipment supplied under its Offer, as per the requirements appearing in this tender (Form d4)
- remaining as the main contact point for NATRAX for all design, implementation (Form d6) and service support actions (Form d4)

### 1.2. Bidder's Experience

The following applies to the Bidder. "Bidder should have a minimum 5 years of experience in the relevant business/similar works" pertaining to the equipments mentioned in this tender document. The bidder shall submit a proof of such a business. This information shall be provided in "Form d5) Bidder's Organisation, Company Profile and Sub-contractors".

Indian experience should also be clearly spelled out by the bidder in such a document.

Bidder is also required to provide a full list of similar projects of all kinds handled by them in the last 5 years in “Form d3) References” . .

### **1.3.Similar References**

Bidder is requested to provide a full list of projects in order to demonstrate the following requirements, in “Form d3) References”, along with the details of the projects, filling as many Pro-formas as required.

#### *1.3.1. Bidder as an Integrator*

The bidder shall demonstrate relevant experience for integration of similar projects, if applicable.

### **1.4.**

*Note: Preference shall be given to bidders as per Order No. P-45021/2/2017-PP (BE-II) dated 4th June 2020, issued by Department for Promotion of Industry and Internal Trade, Government of India subject to submission of necessary documents in this regard by the bidders.*



# **NATIONAL AUTOMOTIVE TEST TRACKS**

## **TENDER DOCUMENTS**

**TENDER NO. NATRAX/M&E/VDY/RLDA**

**FOR**

**SUPPLY, INSTALLATION, TESTING & COMMISSIONING  
OF  
SENSORS AND INSTRUMENTS FOR ROAD LOAD DATA  
ACQUISITION**

**Annexure IV-a- Technical Specification (TCC)-  
SENSORS & INSTRUMENTS FOR ROAD LOAD  
DATA ACQUISITION**

**NATRAX-Pithampur**

### **National Automotive Test Tracks (NATRAX)**

NH-52, Old Agra- Mumbai Highway, Near to Pithampur Flyover, Post Khandwa  
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Dhar District, Madhya Pradesh-454774

Phone: +919893892310, Fax – 07292-256101

Email: [a.prabhakar@natrip.in](mailto:a.prabhakar@natrip.in), [anuj.kumar@natrip.in](mailto:anuj.kumar@natrip.in)

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## SENSORS & INSTRUMENTS FOR ROAD LOAD DATA ACQUITION

### 1. SEAT PAD ACCELEROMETER

Require seat pad accelerometer which can measures acceleration in all 3 axes i.e x,y, and z , gives data from its cables/connectors which can further be recorded in data logger.

#### Technical Requirements-

- Ranges:  $\pm 10g$
- Linearity:  $\leq 1\%$
- Frequency range : upto 1000Hz
- Resonant Frequency:  $\geq 25$  hHz
- Transverse Sensitivity:  $\leq 5\%$
- Overload limit :  $\pm 2000g$
- Excitation Voltage : 9-36V DC
- Accessories: Standard
- Vehicle Type: This sensor/instrument should be suitable for vehicle handling testing of two wheeler, three wheeler, car, SUV, LCV, trucks buses, etc.
- Environmental requirement:
- Temperature Range: (-) 20 deg C to (+) 80 deg C.
- Humidity: greater than 90% (suitable for typical Indian condition)
- Vibration: minimum
- Dust: Typical Indian testing conditions.
- List of DAQ to be supported/ synchronized with seat pad accelerometer
- Universal logger

### 2. WIRE ROPE POTENTIOMETER

The wire rope potentiometer requires linear position transducer with analog output ,compact alternative for use in light to moderate duty applications.

#### Technical Requirements-

- Resolution: Infinite
- Linearity : 0.5 % FSO

- Repeatability : 0.03% full Scale
- Range : 0-1000mm
- Operating Temperature : -25°C to 75°C
- Should work under Vibration upto: 15g
- Shock: 50 g
- IP protection: Atleast IP-40
- Wire Rope: dia must not be more than 0.45mm.
- Signal Cable: Of length 5m open ended
- Mounting Adaptor: With a capability of 360° rotation about the vertical axis and 245° rotation about the horizontal axis or better.
- Standard Delivery & Accessories.

### **3. Tri-axial Accelerometer**

The sensor should be compact and must have the capability to measure high g forces with very good sampling rate. Must be compatible with all DAS systems.

#### **Technical Requirements-**

- 100g DC Response, with titanium body and hermitically sealed. Shall be gas-damped, silicon MEMS sensing elements for uniform, repeatable performance and offer high frequency overload protection.
- Supply Input Range :5-28 VDC
- Measurement frequency range 0 to 1200 Hz minimum
- Shall withstand Overload Limit (Shock) not less than 2000 g.
- Accelerometer shall be single ended with the removable connector from the accelerometer body. Shall have multi-pin, threaded, electrical connector for easy installation and setup.
- Accelerometer shall have feature for supply voltage regulation and a temperature compensation circuit for stable performance over the entire operational temperature range.
- Shall be delivered with suitable mounting base having mechanical screw arrangement to connect with Accelerometer. The base shall be light weighted and rigid which not damps any acceleration excited from the mounting surface and shall pass all the vibrations to the accelerometer for transducing from vibration to electrical signal.

- Signal Cable Length: 7 meters 7 nos (06cable + 01 extra cable for spare)
- Signal Cable Length: 10 meters 5 nos (04cable + 01 extra cable for spares)
- Interface should be Compatible with all DAS.

#### **4. LVDT 200mm**

The sensor should be compact and must have the capability to measure displacement with very good sampling rate. Must be compatible with all DAS systems.

##### **Technical Requirements-**

- Stroke Length 200mm
- Type: Inductive Type
- With 5 cables of 5 meters shall be supplied
- Mounting: With mounting base or arrangement to hold cover to rigid plan and the other end with Him Joint or similar easy to install and connect with test plan.
- Interface should be Compatible with all DAS

#### **5. LVDT 300mm**

The sensor should be compact and must have the capability to measure displacement with very good sampling rate. Must be compatible with all DAS systems.

##### **Technical Requirements-**

- Stroke Length 300mm
- Type: Inductive Type
- With 2 cables 5 meters and 3 cables shall be of 7meters
- Mounting: With mounting base or arrangement to hold cover to rigid plan and the other end with Him Joint or similar easy to install and connect with test plan.
- Interface should be Compatible with all DAS

#### **6. Linear Strain Gauge to measure strain in know direction:**



The sensor should be compact and must have the capability to strain with very good sampling rate. Must be compatible with all DAS systems.

#### **Technical Requirements-**

- Application: Strain measurement in known direction.
- Geometry :Linear
- Connection Type : Leads
- Nominal resistance (ohm):350
- Temperature response matching:Molybdenum
- Temperature range(°C):-200 to 200
- Temperature range(self- compensation):-10 to 120
- Grid length a(mm):6
- Grid length a(mm):2,8
- Grid length c(mm):13

### **7. Rosett Strain Gauges**

The sensor should be compact and must have the capability to measure strain with very good accuracy.

#### **Technical Requirements-**

- Application:Strain measure
- Geometry : Linear
- Connection type:Leads
- Nominal Resistance(ohm) 350
- Temperature response matching:Molybdenum
- Temperature range(°C):-200 to 200
- Temperature range(self-compensation):-10 to 120
- Measuring grid material : Contantan
- Measuring grid carrier material:Polymide.

### **8. Cleaning Agent**

Ketone and iso propyle Alcohol Based cleaning solution

## 9. Soldering Pads

### Technical requirements:

- Soldering base Gold plated solder pads on polyimide support
- Temperature resistance : up to 180°C (up to 250°C for a short time)
- Solder tag height: 6.5 mm
- Width solder tag: 2.5mm
- Height carrier :13mm
- Width carrier:50.1mm
- Package content: 125 pair

## 10. Protection Coating:

### Technical requirements:

1. Strain gauge protection agent 0.05 mm thick aluminium foil coated with 3mm thick kneading compound (plastic)

Temperature range of resistance: -169°C to 75°C

Package contents: 11 sheets (205 mm x 100 mm)

Application method : Pressing on by hand

2. Silicon tube to make coating on strain gauge. Shall be suitable and professional grade.

## 11. INDUSTRIAL LAPTOPS

Laptops with latest configuration are required for the department. They must include all the cards and ports to allow plug & play connections. An adequate system for on-board installation shall be provided for each laptop.

### Technical Requirements:

Laptop should have.

- Window 11 as OS
- 32Gb DDR4 RAM
- GPU: NVIDIA Geforce GTX 1650 or better
- 2 TB Hard disk

- Intel Core Processor: Intel core & processor 165U or better
- 4 USB ports
- 14.0" diagonal High-Definition HP Bright View LED Display (1366 x 768)
- I/O Ports- RS-232 port, 3 USB 3.0, 1 USB 2.0, VGA, HDMI, RJ-45, Headphone-out/Microphone in combo jack
- Wi-Fi 5 (802.11ac); Dual-Band (2.4 & 5 GHz), Bluetooth 5.0
- Touch screen capability.
- 9-cell Lithium-ion (100Whr, 3.0Ah) battery

### 1.2 Installation & Commissioning

The supplier shall install/ commission the instrument at NATRAX, Dhar. The supplier shall also demonstrate the working of each instrument with trials in order to complete the Commissioning Process.

### 1.3 Critical Spare Parts

Supplier to provide a list of critical spare parts & basic tools, if any.

### 1.4 Training

**The supplier shall provide the training to NATRAX, Dhar, regarding the equipment operation and basic troubleshooting/Maintenance.**

### 1.5 List of Documents/Calibration Certificates Required

The supplier shall submit the following documents:

- Operation Manual of instruments (02 Hard Copies)
- Technical Manual with all Mechanical, Electrical Connectivity drawings (02 Hard Copies)
- Calibration Certificates (NABL Accredited Lab or similar International Calibration certificates) of all the instruments supplied.

### 1.6 Warranty

**The supplier shall provide the warranty for two years (minimum)**

### 1.7 Technical Support/After Sales Services

The supplier shall provide the technical support in case of any fault/breakdown of any component of the instrument. After the expiration of the warranty period the supplier must be capable to handle Comprehensive AMC for complete/offered equipment for 3 years.



# **NATIONAL AUTOMOTIVE TEST TRACKS**

## **TENDER DOCUMENTS**

**TENDER NO. NATRAX/PROC/T&D/24-25/60**

**SUPPLY, INSTALLATION, TESTING & COMMISSIONING  
OF**

**Sensors & Instruments for Road Load Data Acquisition**

**AT NATRAX PITHAMPUR**

### **Annexure V Evaluation Parameters**

**NATRAX-Pithampur**

#### **National Automotive Test Tracks (NATRAX)**

NH-52, Old Agra- Mumbai Highway, Near to Pithampur Flyover, Post Khandwa  
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Dhar District, Madhya Pradesh-454774

Phone: +919893892310, Fax – 07292-256101

Email: [anuj.kumar@natrip.in](mailto:anuj.kumar@natrip.in);

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## 1. EVALUATION PARAMETERS

### 2.3. Disqualifying Criteria

Any Bid failing in demonstrating the following shall be directly rejected:

1. Bidder not meeting the Minimum Eligibility Criteria (MEC) shall be considered as disqualified.
2. Ability to fulfil the basic scope, meaning "Design, manufacturing, assembling, supply, installation, testing, commissioning and training of 'Data Acquisition Systems and Sensors' (AS PER TCC)". NATRAX can ask vendor to produce sufficient proof of trained & certified resources for deploying the same.
3. Capability of the Bidder Company for undertaking the assignment, by commissioning "Design, manufacturing, assembling, supply, installation, testing, commissioning and training of 'Data Acquisition Systems and Sensors' (AS PER TCC)".
  - a) Not demonstrating relevant experience in the supply and installation of the required equipment (can refer to a particular reference).
  - b) Not demonstrating relevant experience in the integration of commissioning Design, Supply, Installation, Commissioning, and Training & Acceptance of "Data Acquisition Systems and Sensors".
4. **Not having the necessary financial Turnover/strength in order to cope with the order with sufficient guarantees as per requirement.**

Additionally, NATRAX could reject any Bidder not fulfilling the essential parameters listed in the Checklist and the bidder failing in justifying that the proposed solution equivalent or better than the proposed tender requirements.

### 2.4. Evaluation Parameters

- 1.2.1 **NATRAX shall follow the Segregated bid evaluation system** (No bearing of technical score in the financial bid evaluation and L-1 in the financial bid shall be deemed as successful bidder) to determine the successful bidder.

**The bidder can quote for complete list of instruments or anyone; the financial bid evaluation shall be done item wise and PO/Order to be issued to the successful bidder item wise.**

- 1.2.2 The minimum pass marks shall be 80 points (80%) out of 100 points (100%) subject to qualifying all three MECs.

- 1.2.3 The point for Technical Bids evaluation shall be as under:

S. No.	Evaluation Parameter	Max. Marks	Min. Pass Marks	Reference documents/clause
MEC 1.	<b>Legally Valid Entity:</b> The Bidder's shall be a legal valid entity.	10	10	Refer Para 1.3 of Annexure V
MEC 2.	<b>Financial Capacity:</b> The Bidder shall have at least annual average turnover during last 3 Financial Years (2021-22, 2022-23 & 2023-24) as per the Annexure A of NIT and given in this section at 1.3.2 below.	10	10	Refer Annexure III, Form d5, Refer Para 1.3 of Annexure V

MEC 3.	<b>Technical Capability:</b> Bidder's Past Experience in last 5 years: <i>i. Min. 3 similar* completed works: 10 Marks</i> <i>ii. 5 similar* completed works: 12 marks</i> <i>iii. more than 5 similar* completed works: 15 marks</i>	15	10	Refer Annexure III, Refer Form d3, Refer Para 1.3 of Annexure V
	<b>STATUS (Qualified/Disqualified)</b>			
4.	Customer Feedback of last 5 years from the date of publication of this tender. <i>i. Less than 3 satisfactory feedbacks: 0 marks</i> <i>ii. 3 satisfactory feedbacks: 5 Marks</i> <i>iii. More than 3 satisfactory feedbacks: 8 marks</i>	08	05	Refer Annexure III, Refer Form d3
5.	Technical Specifications offered against the requirements spelt out in Technical Conditions of Contract	35	35	Refer Annexure I and Form d0 and d2
6.	The Work Plan, Implementation Layouts, Training Plan and Project Implementation Team /training scope/ Project Management (PM) skills	12	04	Refer Annexure IV and Form d6
	6.1. The Work Plan	4		
	6.2. Training Scope / Training Plan 6.2.1- minimum 1 week- 2 marks 6.2.2 – minimum 2 weeks or more- 4 marks	4	02	
	6.3. Project Implementation Team Technical write-up/ PM skills 6.3.1- deployment of PI team with 3 persons with CVs – 2 marks 6.3.2- more than 3 persons PI Team with CVs	4	02	
7.	Service and Operation Support, Warranty & Annual Maintenance Contract <i>i. Support &amp; Warranty for 2 years: 6 marks</i> <i>ii. Support &amp; Warranty for more than 2 years: 10 Marks</i>	10	06	Refer Annexure I and Form d4
	<b>TOTAL TECHNICAL BID SCORE</b>	<b>100</b>	<b>80</b>	

\* **Similar work:** should have successfully completed Supply Installation Testing & Commissioning of 'Data Acquisition Systems and Sensors' for any auto industry/Educational Institution/Research Institution within India or outside India also.

- 1.2.4 The valid Bids shall be evaluated in detail, with NATRAX's sub-evaluation parameters, under each main evaluation parameters as given above, to arrive at the technical score for each of the Bidder and the technically qualified bids shall be determined based on the minimum pass marks obtained. Only the technically qualified bids shall be entertained for financial bid evaluation.
- 1.2.5 The Evaluation process is performed in 2 steps. In the first step, "The minimum requirements fulfillment OR MEC", wherein bidder has to qualify the above all three MEC mentioned in above table and thereafter satisfying /fulfilling all three MEC parameters (essential parameters) subsequently the second step (technical parameter) of evaluation shall be performed. The requirements corresponding to technical parameters, if not fulfilled by the bidder after thorough analysis then thereafter a written explanation in the attached "**Form d1) Proposed Deviations (mandatory in case of non-compliance with Minimum Requirements)**", shall be sought from bidder and in case the Bidder's fails to demonstrate/ fulfills technical essential Parameters, then the offer could be rejected. In the technical parameters, the positive deviations proposed by the bidder with regard to the minimum requirements are evaluated and then the final result is obtained.
- 1.2.6 Both steps are evaluated not only on the specifications stated by the bidder in the forms, but on the information attached to his offer that demonstrates his capability for achieving them. Test results (Acceptance Test Reports and Calibration reports) obtained in similar projects with the same equipment, detailed technical explanation, etc. are taken into account in order to evaluate the technical quality of the proposed equipment, and **the supplier shall include as much information as possible in order to get the higher possible marks.**
- 1.2.7 For the evaluation of the Financial Bids, the eventual Bid prices shall be ascertained after considering all the terms and conditions associated with the Bid price specified in the Financial Bid document. NATRAX reserves the right to include or exclude any component of the price quoted by the Bidder and / or load the bid price as per its discretion to work out the Bid Price for evaluation.
- 1.2.8 If there is an error in a total, corresponding to the addition or subtraction of sub totals, the subtotals shall prevail and the total shall be corrected; and
- 1.2.9 If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error.
- 1.2.10 The amount stated in the Financial Proposal Submission Forms will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, shall be considered as binding upon the bidder. If the bidder does not accept the corrected amount of bid, its bid will be rejected, and the EMD shall be forfeited as per clause of Main tender documents.
- 1.2.11 In addition the revised bid amount after arithmetic correction as arrived above for the bidder / bidders would be informed to all the technically qualified bidders within reasonable time.
- 1.2.12 If a discount is offered in a financial proposal, such discount will be applied pro-rata basis against each item of the financial form except the price part/s not considered for the " Total price".
- 1.2.13 The bidder with lowest price bid shall be deemed as the successful bidder.
- 1.2.14 However NATRAX does not undertake to accept the lowest or indeed any bid, in all the above cases as mentioned in the disclaimer.



1.2.15 Similar work description and successful completion requirement is tabulated below:

Sr. No.	Name of Work	similar work successfully completed in Last 5 years
		Description of Similar Work
1	Design, manufacturing, assembling, supply, installation, testing, commissioning and training of Data Acquisition Systems and Sensors (AS PER TCC)	Design, manufacturing, assembling, supply, installation, testing, commissioning and training of Automotive Equipments/Instruments/ Machines etc for any automotive manufacturer/ research Institution /academic Institution in India or outside India also.

**2.5. List of Acceptable Documents with respect to Minimum Eligibility Criteria**

1.3.1. **MEC-1** : Copy of any one of the following : The company registration / Incorporation certificate issued by Registrar of Companies / Registrar of Firms, Pan card / Certificate issued by the Income Tax Authority / GST Registration Certificate.

1.3.2. **MEC-2** : Copy of the Audited Balance Sheet / Annual report / Certificate of the Chartered accountant (with UDIN Number in all cases), clearly showing the Annual Turnover of the relevant F.Ys.

Sr. No.	Name of instruments/equipments	Required (item wise) minimum average turnover (MEC-2)
1	Seat Pad Accelerometer	Rs. 10 Lakh
2	Wire Rope Pots	Rs. 10 Lakh
3	Triaxial accelerometer	Rs. 10 Lakh
4	LVDT 200mm	Rs. 10 Lakh
5	LVDT 300mm	Rs. 10 Lakh
6	Linear Strain Gauge to measure strain in know direction	Rs. 10 Lakh
7	Rosett Strain Gauges	Rs. 10 Lakh
8	Cleaning Agent	Rs. 10 Lakh
9	Protection Coating	Rs. 10 Lakh
10	Toughbook	Rs. 10 Lakh

	In case bidder is offering the items more than one the minimum required turnover of the respective items shall be added as per the above.	
	<b>In case bidder is offering for complete package the minimum average turnover</b>	<b>Rs. 1.0 Cr</b>

**1.3.3. MEC-3:**

- (i) As the proof of having fully adhered to the minimum eligibility criteria, NATRAX shall accept the **completion/acceptance certificates alongwith purchase order, clearly showing the date of commencement and completion, of \*similar works**, issued by Govt. Depts / Autonomous bodies / PSUs / reputed private firms etc.
- (ii) Bidder also need to submit at least 2 contact person's at senior level. The details shall be from previous clients whose work orders are submitted as proof of qualification criteria (contact detail shall contain contact Number & email ID's) preferably from operation level and other from senior level.
- (iii) In case of submission of **completion certificates / Purchase Order pertaining to similar works**, issued by the private firms, than any of the following supporting documents shall be submitted, to establish the genuineness of the completion certificate/PO. Any document other than the following will not be accepted by NATRAX.
  - (a) A self attested copies of TDS certificates issued by the private firm/ client for any respective F.Y quarter, against the payment released on account of the works mentioned in the completion certificate.
  - (b) A Certificate issued by the Chartered Accountant, in support of the payment received from the private firm on account of the works mentioned in the completion certificate.
  - (c) A Copy of the document, in proof of having remitted the Excise duty towards the relevant components covered in the work order, issued by the private firm (client).
  - (d) Copy of the 26AS of relevent period, indicating the payment received towards the relevant components covered in the work order, issued by the private firm (client).



# **NATIONAL AUTOMOTIVE TEST TRACKS**

## **TENDER DOCUMENTS**

**TENDER NO. NATRAX/PROC/T&D/24-25/60**

**SUPPLY, INSTALLATION, TESTING & COMMISSIONING  
OF**

**Sensors & Instruments for Road Load Data Acquisition**

**AT NATRAX PITHAMPUR**

### **Annexure VI, Acceptance Criteria**

**NATRAX-Pithampur**

#### **National Automotive Test Tracks (NATRAX)**

NH-52, Old Agra- Mumbai Highway, Near to Pithampur Flyover, Post Khandwa  
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Phone: +919893892310, Fax – 07292-256101

Email: [anuj.kumar@natrip.in](mailto:anuj.kumar@natrip.in);

## I N D E X

1.1 ACCEPTANCE OF PROJECT

1.2 PRE-ACCEPTANCE

1.3 COMMISSIONING

1.4 FINAL ACCEPTANCE

## 1. ACCEPTANCE TEST

### 1.1. Approval of project

All requirements of equipment's and list of elements to be supplied including main specifications, shall be verified and accepted by NATRAX. Modifications shall be implemented on those documents by the supplier, should NATRAX require to.

### 1.2. Pre-acceptance

Prior to delivery, NATRAX representatives shall perform an extensive inspection and testing on complete assembly of the equipment to be supplied in order for the supplier to demonstrate compliance with the requirements of the tender. Any faults or items of non-compliance with the requirements of the tender will be rectified free of charge by the bidder and its contractors to the full satisfaction of NATRAX. Pre-acceptance tests shall last for one week. Completion of the offsite checks does not constitute an agreement that the equipment complies in all respects to the specification. The pre-acceptance visit will imply:

- Visual inspection of the actual equipment including the embedded software.
- Inspection of the testing equipment when running a real test (except for cases where the assembly is not feasible).
- Inspection of the calibration procedure.
- Inspection of the data analysis and processing procedures when running a Sample.
- Cross check of BOQ and physical items.
- All internal inspection reports for each sub-item.

All calibration certificates and methods should be available to NATRAX by the time of Pre-acceptance. All the previous information is also required for the calibrating equipment itself. The supplier should also provide the procedure that will be used to qualify the equipment (in its entirety) during the commissioning. The supplier shall provide all the consumables required to perform the tests. No shipment of equipment shall be done unless NATRAX has expressly accepted the test results sent by the Supplier. At least the following systems may be inspected:

- Pre-acceptance of data acquisition system and signal processing, and related software.
- Pre-acceptance of the vehicle speed measurement system.
- Pre-acceptance of the sensors, signal conditioners.
- Pre-acceptance of the additional equipment.

### 1.3. Commissioning

- Calibration certificate will be checked with the serial numbers of the equipment (including sensors) delivered on site.

- A full in situ calibration is required.
- Validation of the control system, data acquisition, sensors and processing software.
- Connections to all power supplies and validation.
- Validation of the integrated system.
- Validation of calibration plan during warranty.
- Validation of the provided documentation including the user's manuals and recommended testing procedures.

#### **1.4. Final acceptance**

After complete positive commissioning checklist, the following tests will be performed:

- Values obtained during the calibration process will be checked to be admissible.
- The correct running of the software and data storage and its post processing will also be checked.
- The sensors should be compatible with NATRAX existing DAS provided and must have universal connectivity with other DAS. Suitable connector/cabling shall be included. The interconnectivity will also be checked. If there is any connection/connector issue is there between existing logger of NATRAX and supplied sensors then suitable intermediate good quality connector should be provided by confirmation from NATRAX concerned team.
- Any of the tests included in the standards (or specified) listed in this tender or may be performed with the supplied equipment. Or sensors shall be installed, commissioned and configured with NATRAX data logger and trails run shall be taken and data shall be shown and validated with NATRAX engineers. It is suppliers responsibility to undertake all queries from engineers from NATRAX and assure them for the equipment and instrument supplied.
- At least 10 trials on various (at least 3 categories/ types) vehicles be recorded and the test results to be compared with the standard such vehicles or tested in other places. Results to be comparable within reasonable accuracy and range.
- Data/ test runs and results thereof shall be reproducible within the range/ accuracy as defined by the user.
- Inspections will be undertaken with different samples to prove that operation and results of the equipment fulfil the requirements demanded in this tender document. Any faults of non-compliance with the specification not found in the pre-delivery inspection will be rectified, free of charge, by the supplier. Once the equipment has been successfully installed in the Centres, complete test procedures shall be executed with the presence of the Supplier and NATRAX representatives, in order

to demonstrate the full functionality of the testing equipment, as well as the integration of the different elements included.

The Supplier shall provide the same test specimens as used in the pre-acceptances. Additionally, NATRAX shall provide real specimens in order to perform final acceptance tests in real conditions. Any requirement from the Bidder with regards to the specimens to be provided by NATRAX should be clearly expressed in "Form d6)". Acceptance shall be issued by NATRAX only when full compliancy with the requirements is demonstrated.

- 1.4.1 Seat pad Accelerometer: Linearity should be less than equal to 1%
- 1.4.2 Wire rope pots: Shall be linear position and Wire rope diameter not to be mor than 0.45mm
- 1.4.3 Triaxial accelerometer: Shall be DC responsive
- 1.4.4 LVDT 200mm: Stroke length Shall be 200mm and inductive type
- 1.4.5 LVDT 300mm: Stroke length Shall be 300mm and inductive type.
- 1.4.6 Linear strain gauge : Shall measure strain, Geometry Shall be linear
- 1.4.7 Rosett strain Gauges: To measure strain/forces, torsional torque. Etc.
- 1.4.8 Cleaning agent: shall be alcohol based. The cleaning solution shall be suitable and shall not affect user health. There shall not be any health hazards to the user. If applicable Material Safety Data Sheet(MSDS) shall be supply with the solution and proper safety instructions shall be taught to the NATRAX users.
- 1.4.9 Protection coating: Coated with thick kneading compound and available with silicon tube
- 1.4.10 Toughbook should be octa-core with latest specifications. Please refer detailed specifications in TCC and d0.



# **NATIONAL AUTOMOTIVE TEST TRACKS**

## **TENDER DOCUMENTS**

**TENDER NO. NATRAX/PROC/T&D/24-25/-----**

**SUPPLY, INSTALLATION, TESTING & COMMISSIONING**

**OF**

**SENSORS & INSTRUMENTS FOR ROAD LOAD DATA  
ACQUISITION**

### **Annexure VII Terms of Payment**

**NATRAX-Pithampur**

#### **National Automotive Test Tracks (NATRAX)**

NH-52, Old Agra- Mumbai Highway, Near to Pithampur Flyover, Post Khandwa (Near  
Pithampur)

Dhar District, Madhya Pradesh-454774

Phone: +919893892310, Fax – 07292-256101

Email: [a.prabhakar@natrip.in](mailto:a.prabhakar@natrip.in); & [anuj.kumar@natrip.in](mailto:anuj.kumar@natrip.in)

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## 1. Terms of Payment

**1.1. Payment against supply:** Maximum 80% of the contract value (including advance payment, if any) shall be paid either direct transfer through RTGS **OR** through 'Letter of Credit' "LC" (Maximum 80% value of contract amount), however the LC charges shall be borne by supplier, the LC Shall be opened after issuance of Purchase Order (PO) and payment shall be released, after following in either case:

- After the receipt of Equipment/Material (in complete) at site, in good condition.
- Adjustment of statutory deductions if any.
- A certificate issued by NATRAX to this effect.
- Submission of original tax invoices and other supporting documents.

**1.2. Balance Payment:** Balance 20% shall be paid after:

- Successful completion of Installation, commissioning and acceptance at site.
- The payment shall be paid only after issuance of completion certificate/acceptance report by NATRAX.
- The final payment shall be paid after the adjustment of any kind of LD, Penalty, or any other adjustment if any.
- On receipt of no dues certificate under this contract.

**1.3. Advance Payment**

An advance payment, if requested by contractor and agreed by NATRAX, shall be paid in accordance with the Clause 27.5 of the GCC [Annexure-IX] and as per the Special Conditions of Contract SCC- [Annexure-VIII]. The advance payment shall be released on submission of Bank Guarantee of 110% of the advance amount and will be charged with an interest by NATRAX at the rate of 10% per annum from the date of issue of advance payment and interest will be calculated on unadjusted amount from time to time. The contractor must submit the utilization certificate of the said advance payment. The said advance payment can be released in minimum two Instalments. A recovery schedule, not exceeding 4 months or project period whichever is less, from the date of release of such payment shall be submitted to NATRAX by the contractor. In case the recovery does not happened within above

stipulated time from the date of release of advance payment, NATRAX shall have full rights to recover the full/ balance amount by invoking the bank guarantee.

**1.4. Spares & Consumables**

100% within 30 days, against despatch/shipping documents.

**1.5. Taxes & Duties**

The Taxes and Duties shall be applicable as per the provisions of Clause 28 of “Annexure IX - General Conditions of Contract”.

**1.6. Deviations in Terms of Payment**

The Bidder's offer must be as per the Terms of Payment given above. Any deviation from the above Terms of Payment shall not be entertained. Any offer with deviation from the above Terms of Payment shall be liable to Disqualification on the discretion of NATRAX.



# **NATIONAL AUTOMOTIVE TEST TRACKS**

## **TENDER DOCUMENTS**

**TENDER NO. NATRAX/PROC/T&D/24/----**

**SUPPLY, INSTALLATION, TESTING & COMMISSIONING  
OF  
SENSORS & INSTRUMENTS FOR ROAD LOAD DATA ACQUISITION**

### **Annexure VIII Special Conditions of Contract**

**NATRAX-Pithampur**

#### **National Automotive Test Tracks (NATRAX)**

NH-52, Old Agra- Mumbai Highway, Near to Pithampur Flyover, Post Khandwa (Near  
Pithampur)

Dhar District, Madhya Pradesh-454774

Phone: +919893892310, Fax – 07292-256101

Email: [a.prabhakar@natrip.in](mailto:a.prabhakar@natrip.in); & [anuj.kumar@natrip.in](mailto:anuj.kumar@natrip.in)

## Special Conditions of Contract

The table below provides Special Conditions of Contract for this Tender Document.

S. No.	Item	Clause of General Conditions of Contract (Annexure IX)	Data
1.	Amount of Advance Payment	Clause 27.5	Ten [10] % of the total accepted contract Price, as specified in Annexure VII Terms of Payment.
2.	Terms of Payment	Clause 27.2	As per Annexure VII
3.	Payment Schedule	Clause 1.1	As per Annexure VII
4.	The Default Interest Rate	Clause 1.1	10% per annum from the date of release of advance payment.
5.	Warranty Period, counted from Acceptance	Clause 1.1	<b>24 months from the date of acceptance</b> as per the terms and conditions set out in Annexure I
6.	Time For Completion	Clause 1.1	As per Annexure I
7.	Liquidated Damages	Clause 1.1 & Clause 21.1.1	An amount of 0.1% of the Contract Sum per day up to a maximum value of 10% of the Contract Sum, payable by the Contractor for every day elapsed from the Time for Completion till the Date for Completion of the Works (FOR THE DELAY ATTRIBUTABLE TO THE CONTRACTOR).
8.	Project Site	Clause 1.1	As per Annexure II
9.	Project Facility	Clause 1.1	As per Annexure II
10.	Address For Recipient's Communications	Clause 1.3.1 (ii)	Head Procurement & Stores  National Automotive Test Tracks (NATRAX)  NH-52, Old Agra-Mumbai Highway, Near to Pithampur Flyover, Post Khandwa (Near Pithampur, Dist. Dhar (M.P.)).
11.	Amount of Performance Guarantee	Clause 1.7.1	<b>5% of the Contract Sum</b>
12.	Date of Expiry of the Performance guarantee	Clause 1.7.1	Date of expiry of Warranty period, as may be extended from time to time as per provisions of the Contract
13.	Date of returning of Performance Guarantee		Within 2 months from the date of completion of warranty period OR Contractual obligations whichever is later.
14.	Limit on Percentage of each Subcontractor's part	Clause 7.1	Deleted
15.	Natrax Representative	Clause 2.1	Engineer Incharge (EIC) shall be notified to successful bidder.
16.	Key Personnel	Clause 16.5	Supplier's Authorized Representative.
17.	Method of Bid Evaluation	Clause 1.2.1 of Annexure V (Evaluation Parameter) and 11.5.4 of Main Tender Document.	Segregated Bid Evaluation



# **NATIONAL AUTOMOTIVE TEST TRACKS**

## **TENDER DOCUMENTS**

**TENDER NO. NATRAX/PROC/T&D/24-25/-----**

**SUPPLY, INSTALLATION, TESTING & COMMISSIONING**

**OF**

**SENSORS & INSTRUMENTS FOR ROAD LOAD DATA ACQUISITION**

**Annexure IX General conditions of conditions**

**NATRAX-Pithampur**

### **National Automotive Test Tracks (NATRAX)**

NH-52, Old Agra- Mumbai Highway, Near to Pithampur Flyover, Post Khandwa (Near Pithampur)

Dhar District, Madhya Pradesh-454774

Phone: +919893892310, Fax – 07292-256101

Email: [a.prabhakar@natrip.in](mailto:a.prabhakar@natrip.in); & [anuj.kumar@natrip.in](mailto:anuj.kumar@natrip.in)

## General Conditions of Contract

### 1. DEFINITIONS AND INTERPRETATIONS

#### 1.1 Definitions

In these General Conditions of Contract (“Conditions”) the following words and expressions shall, unless repugnant to the context or meaning thereof, have the meaning hereinafter respectively ascribed to them:

“Acceptance Tests” means the tests described as such in the Testing Plans.

“Advance Payment” means a sum equal to the amount named in Special Conditions of Contract and paid to the Contractor by NATRAX by way of a mobilisation/advance payment in accordance with **Clause 27.5** [Advance Payment].

“Advance Payment Guarantee” means any or all of the guarantees to be procured in accordance with **Clause 27.3**.

“Affected Party” means a Party whose performance of its obligations under the Contract is prevented, hindered or delayed in whole or in part by reason of Force Majeure.

“Applicable Clearances” means any clearance, permit, authorisation, consent, licence (including without limitation, any import or export licences), lease, ruling, exemption, filing, agreements, or approval, required to be obtained and maintained by the Contractor from time to time, in order to complete the Works.

“Applicable Laws” means all laws in force and effect as of the date hereof and which may be promulgated or brought into force and effect hereinafter in India including any revisions, amendments or re-enactments including without limitation rules, regulations and notifications made there under and judgments, decrees, injunctions, writs, orders and notifications issued by any court of record or any appropriate authorities, as may be in force and effect during the subsistence of the Contract.

“Change” means any change to Conditions of Contract, which is instructed or approved as a Change under **Clause 24**.

“Change Order” shall have the meaning ascribed to it in **Clause 24.2.4**.

“Commencement Date” shall mean the date of execution of the Contract by the Parties.

“Commissioning Spare Parts” means those commissioning spare parts required during the commissioning of the Works.

“Completion Certificate” has the meaning ascribed to it in **Clause 22.3.2**.

“Completion of the Works” means the achievement of the criteria set out in **Clause 22.1** and “Complete” “Completed” “Completion” and “Completing” shall be construed accordingly and as certified by the Completion Certificate.

“Confidential Information” means the Contract and everything contained therein, all documentation, data, particulars of the Works and/or the Project Facility and/or the Project and technical or commercial information made by (or on behalf of) NATRAX or obtained directly or indirectly from NATRAX or NATRAX Representative by the Contractor or which is generated by the Contractor or any subcontractor or any information or data that the Contractor receives or has access to as a result of the Contract, other than information:

- (a) which is generally available in the public domain other than by any unauthorised actions or fault of the Contractor; or
- (b) which is in the possession of the Contractor with a right to disclose;

“Contract” means the Contract Agreement, these Conditions, Special Conditions of Contract, Technical Conditions of Contract, and the further documents (if any) which are listed in the Contract Agreement and initialled by NATRAX and the Contractor and includes any amendment thereto made in accordance with the provisions hereof.

“Contractor” includes (without limitation to) any person, company, firm, organisation, consortium with whom NATRAX has entered into a Contract for execution of the Works and the permitted legal successors in title to the Contractor, but not any assignee of the Contractor.

“Contract Agreement” means the agreement entered into or to be entered into by the Parties and forming part of the Contract.

“Contractor's Documents” means in addition to the documents mentioned in **Clause 1.5.1**, those documents to be prepared by the Contractor under the Contract including without limitation, such technical documents specified in Technical Conditions of Contract and such data, drawings, designs, design information, calculations, schedules, specifications, plans, inspection and test plans, manuals, programmes, erection and test data and all other information and documents including all eye readable or computer or other machine readable data relating to the Execution of the Works or otherwise to performance of the Contract.

“Contractor's Equipment” means all or any apparatus, machinery, equipment, vehicles, materials, plant, tools and all other things required for the Execution of the Works and the remedying of any defects to be provided by the Contractor but Contractor's Equipment excludes Equipment..

“Contractor's Insurances” means the insurance policies to be purchased and maintained in full by the Contractor.

“Contract Price” means the Contract Sum subject to such additions thereto or deductions there from as made in accordance with the Contract.

“Contract Sum” means the sum mutually agreed between NATRAX and Contractor as the sum payable to the Contractor for the Execution of the Works in accordance with the provisions of the Contract.

“Date of Completion of the Works” means the date certified as such in the Completion Certificate in accordance with **Clause 22.1**.

“Default Interest Rate” shall be the interest rate per annum set out in Special Conditions of Contract.

“Delay Event” means any event set out at **Clause 19.3**.

“Encumbrance” means any encumbrance such as mortgage, charge, pledge, lien, hypothecation, security interest, assignment, privilege or priority of any kind having the effect of security or other such obligations and shall include without limitation any designation of loss payees or beneficiaries or any similar arrangement under any insurance policy pertaining to the Project Facility and/or the Works, physical encumbrances and encroachments on the Project Site

“Equipment” means any apparatus intended to be procured for the implementation of the Works which may either be manufactured indigenously or may be procured from abroad.

“Execution of the Works” means the design, procurement, supply, assembly, erection, installation, testing, commissioning, trial runs and completion of the Works and the correction of defects in the Works and all works and things required to be undertaken pursuant to the Contract and “Executed”, “Execute” and “Execution” shall be construed accordingly.

“Execution Period” means the period beginning from the Commencement Date and ending on the Date of Completion of the Works.

“Force Majeure Period” means, the period commencing from the date of occurrence of a Force Majeure and ending on the date on which the Affected Party, acting in accordance with the Good Industry Practice, resumes or should have resumed such of its obligations the performance of which was excused in accordance with the Contract.

“Good Industry Practice” means the exercise of the highest degree of skill, diligence, prudence, safety and foresight in compliance with the undertakings and obligations under the Contract which would be expected from a skilled and experienced person engaged in the planning, design, execution, testing, implementation, operation and maintenance or supervision or monitoring thereof or any of them of works of the type, nature and scope similar to that of the Works.

“Intellectual Property” means copyright, all rights conferred under statute, common law or equity in relation to inventions (including patents), registered and unregistered trademarks and service marks, registered and unregistered designs, circuit layouts, confidential information, proprietary information and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields.

“Liquidated Damages” means those damages provided in Special Conditions of Contract to be paid or allowed by the Contractor to NATRAX as compensation pursuant to **Clause 21**.

“Maintenance Spare Parts” means the maintenance spare parts for the Equipment and includes the critical, replacement and breakdown spare parts.

“Milestone Event” means the completion of a specific activity to be achieved, which reflects progress in the Execution of the Works or the occurrence of an event in each case as identified as such in the Payment Schedule.

“NATRAX” means the National Automotive Test Tracks.

“NAB” shall mean the National Automotive Board.

“NATRAX Representative” means the person, company or firm appointed by NATRAX to act as its representative for the purposes of the Contract so appointed from time to time by NATRAX.

**“NATRAX” (Employer) National Automotive Test Tracks.**



“Parties” means NATRAX and the Contractor and “Party” means any one of those Parties.

“Payment Schedule” means the payment schedule described as such and set out in Special Conditions of Contract.

“Performance Guarantee” means the guarantee to be procured in accordance with **Clause 1.7.1**.

“Performance Standards” means such performance standards for the operation and maintenance of the Project Facility as may be applicable pursuant to the Contract.

“Pre- Acceptance Test” means tests described as such in the Testing Plans.

“Project” means the National Automotive Testing and R&D Infrastructure Project.

“Project Facility” shall mean facility being one or more of the following facilities as specified in the Special Conditions of Contract, being developed in accordance with the Project and includes all its buildings, equipment, facilities, software and systems and includes without limitation, where the circumstances so require, any expansion thereof from time to time and may include any new location to be separately mentioned in the Special Conditions of Contract.

- (i) A full-fledged testing and homologation center within the northern hub of automotive industry at Manesar, Haryana;
- (ii) A full-fledged testing and homologation center within the southern hub of automotive industry at a location at Oragadam, near Chennai, Tamil Nadu;
- (iii) Upgradation of existing testing and homologation facilities at Automotive Research Association of India (ARAI), Pune, Maharashtra;
- (iv) Upgradation of existing testing and homologation facilities at Vehicle Research and Development Establishment (VRDE), Ahmednagar, Maharashtra;
- (v) World-class proving grounds or testing tracks on around 3,000 acres of land, at National Automotive Test Tracks (NATRAX) Pithampur, near Indore, Madhya Pradesh;
- (vi) National Center for Testing of Tractors and Off-Road Vehicles together with national facility for accident data analysis and specialized driving training in northern part of the country at Rae Bareilly, Uttar Pradesh;
- (vii) National Specialized Hill Area Driving Training Center as also Regional In-Use Vehicle Management Center and Mechanics Training Institute at Silchar, Assam.

“Project Facility Insurance” means the insurance policies to be purchased and maintained in force by NATRAX, in respect of risks set out in Part A, Schedule A [Insurances].

“Project Site” means that part of the site as indicated in the Special Conditions of Contract, on, under and over which the Works are to be Executed and any site to which any Contractor's Equipment- and Equipment are to be delivered and any other places as may be specified in the Contract as forming part of the Project Site.

“Punch List Items” means items of works of a minor or snagging nature which do not affect the performance of the Equipment, where agreed with NATRAX, which remain incomplete at the Date of Completion of the Works.

“Quality Assurance Plan” means that plan referred to in **Clause 9.1**.

“Related Works” means works other than the Works, performed or undertaken by NATRAX or other contractors or suppliers of NATRAX or any contractor employed in connection with the Project Facility and/or services related thereto or by public or private utilities or by other authorities or by any Relevant Authority, either prior to, concurrently or sequentially with the Works at, on, over or adjacent to the Project Site in connection with or related to the Project Facility and which may be connected to, associated with, ancillary to or otherwise related to or relevant to the Works.

“Related Works Contractor” means any person or persons undertaking Related Works.

“Relevant Authority” includes the Department of Customs and Excise, the Ministry of Finance, the Department of Heavy Industry, Ministry of Heavy Industries and Public Enterprises or any other subdivision or instrumentality thereof, any local authority, or any authority empowered by the Applicable Laws.

“Required Insurances” means collectively the Project Facility Insurances and the Contractor Insurances.

“Required Manufacturers Warranties” means those warranties identified as such in Technical Conditions of Contract.

“Spare Parts” means the Commissioning Spare Parts and shall include such Maintenance Spare Parts as are instructed to be provided by NATRAX.

“Special Conditions of Contract” means the document entitled Special Conditions of Contract as included in the Contract, and any additions and modifications to such document in accordance with the Contract. Such document specifies any special terms and conditions forming part of this Contract.

“Subcontractor” means a Subcontractor to whom a part of the Works has been subcontracted by Contractor or to whom the supply of any goods or materials or labour and services for the Works has been subcontracted as permitted under **Clause 7** and the permitted legal successors in title to such person, but not any assignee of such person.

“Tax” means all forms of taxation, duties, fees, imposts and levies including (but without limitation) GST, income tax including withholding tax, value added tax, sales tax, service tax, octroi, entry tax, corporation profits tax, advance corporation tax, capital gains tax, residential and property tax, customs and other import and export duties, excise duties, stamp duty, capital duty, social insurance, social welfare or other similar contributions and other amounts corresponding thereto and any interest, surcharge, penalty or fine in connection therewith which may be payable by the Contractor, its Subcontractors and any of their employees or NATRAX (as the case may be and as set out hereunder), and the words “Taxation” and “Taxes” shall be construed accordingly.

“Technical Conditions of Contract” means the document entitled Technical Conditions of Contract, as included in the Contract, and any additions and modifications to such document in accordance with the Contract. Such document includes the design and /or other technical specifications for the Works.

“Termination Date” means the date specified in the notice of Termination given by either Party to the other Party, from which the Contract shall stand terminated.

“Testing Plans” means those plans referred to in **Clause 17.1.2** which set out the tests and inspections required to be performed by the Contractor in accordance with the Technical Conditions of Contract and the means by which the Contractor intends to conduct and satisfy such tests and inspections.

“Time for Completion” means the time for Completion of the Works as stated in Special Conditions of Contract or such time as may be varied from time to time in accordance with the Contract, calculated from the Commencement Date.

“Training Plan” shall have the meaning assigned to it in Clause 29.2.

“Warranty” means an assurance from the Contractor for uninterrupted performance of the Equipment after the acceptance of the Equipment, as per the performance parameters specified under the Contract and includes any alteration, repair or replacement of any defective or damaged part/ design or material used for the Equipment at the cost of the Contractor over the Warranty Period for ensuring such uninterrupted performance.

“Warranty Period” means the period starting from the date of acceptance of the Equipment up to duration as stated in Special Conditions of Contract.

“Works” includes (without limitation to) the designing, manufacturing, assembling and functional testing prior to shipment, delivery, installation, integration of systems and system checking, testing and commissioning of the Equipment and supply of special tools, requisite software, supply of Spare Parts and training to the personnel, operators and mechanics of NATRAX including Project Facility operations personnel and Project Facility operation trainers and necessary after sales service and maintenance support, as agreed with NATRAX.

## **1.2 Interpretation**

In the Contract, unless the context otherwise requires or as otherwise expressly stated:

- 1.2.1 The words importing singular shall include plural and vice versa, and words denoting natural persons shall include partnerships, firms, companies, corporations, joint ventures, trusts, associations, organisations or other entities (whether or not having a separate legal entity);
- 1.2.2 The Special Conditions of Contract and the Technical Conditions of Contract form an integral part of the Contract and will be in full force and effect as though they were expressly set out in the body of these Conditions. Terms defined in the Special Conditions of Contract, and Technical Conditions of Contract shall have the same meaning throughout the Contract;
- 1.2.3 Definitions within Clauses have the meaning ascribed thereto;
- 1.2.4 Metric system of measurement shall be used exclusively in the Contract.

## **1.3 Communications**

Wherever these Conditions provide for any agreement, or the giving or issuing of any consent, approval, authorisation, notice, certificate, request, determination, information or report (“communication”) from or by any Party such communication shall be valid and effectual only if:

- (i) In writing under the hands of a duly authorised representative of such Party and delivered by hand (against receipt), sent by recognised courier, registered mail, or transmitted by facsimile transmission; and

- (ii) Delivered, sent or transmitted to the address for the recipient's communications as stated in Special Conditions of Contract.

#### **1.4 Confidentiality**

1.4.1 The Contractor shall disclose to NATRAX any Confidential Information and other information as NATRAX may reasonably require for verifying the Contractor's compliance with the Contract. Further, the Contractor shall not, without the previous written consent of NATRAX, use, copy, publish, disclose or otherwise deal with, nor cause nor permit its Subcontractors or any persons for whom it is contractually or otherwise responsible for, to use, copy, publish, disclose or otherwise deal with any Confidential Information, otherwise than for the performance of its obligations under the Contract.

1.4.2 The Contractor shall not without the prior written permission of the NATRAX Representative:

- (i) Disclose the Contract or any provision thereof or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of NATRAX in connection therewith, to any person other than a person employed by the Contractor in the performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purpose of such performance;
- (ii) Make use of any document or Confidential Information enumerated in the Contract, except for the purpose of the Contract; and
- (iii) Communicate or use in advertising, publicity, sales, releases or in any other medium, photographs or other reproduction of the Works under this Contract or description of the Project Site, dimensions, quantity, quality or other information, concerning the Works.

1.4.3 Any document, other than the Contract and enumerated in the Contract shall remain the property of NATRAX and shall be returned (in all copies) to NATRAX on completion of the Contractor's performance under the Contract, if so required by the NATRAX Representative.

#### **1.5 Contractor's Documents**

1.5.1 The Contractor's Documents shall mean and include the following which shall be deemed to form a part of the Contract:

- (i) Tender Document including letter forwarding the tender documents, instructions to bidders, these Conditions, and all other documents including the Special Conditions of Contract;
- (ii) Specifications of the Equipment to be furnished under the Contract in the Technical Conditions of Contract;
- (iii) Contractor's bid proposal and the documents attached thereto including the letters of clarifications thereto between the Contractor and NATRAX prior to the award of the Contract except to the extent of repugnancy;
- (iv) All the materials, literature, data and information of any sort given by the Contractor along with its bid, subject to the approval of NATRAX;
- (v) Letter of award and any agreed variations of the conditions of the documents and special terms and conditions of the Contract, if any; and

- (vi) Such additional documents within such times and in such numbers and format as NATRAX Representative may reasonably require.

1.5.2 The Contractor shall prepare all Contractor's Documents and shall submit the Contractor's Documents to NATRAX Representative as may be required/ directed by NATRAX Representative and /or as called for in the Contract and in numbers and format required by the Contract and/ or by NATRAX Representative.

#### **1.5A Conflict of Documents**

1.5A.1 In case of any inconsistency between any of the constituent documents of the Contract, the following shall be the supervening/prevaling order of priority for such documents:

- (i) Contract Agreement;
- (ii) The Special Conditions of Contract;
- (iii) Technical Conditions of Contract;
- (iv) Other Contractor's Documents;
- (v) General Conditions of Contract.

It is specifically clarified that in case of conflict between any timelines set out in these Conditions with those in the Special Conditions of Contract, those in the Special Conditions of Contract shall prevail and apply.

1.5A.2 In the event of any conflict between the above mentioned documents, the decision of the NATRAX Representative shall be final and binding upon the Parties.

#### **1.6 NATRAX Representative's Instructions**

1.6.1 All instructions given by NATRAX Representative or by any person executing delegated functions will be issued in writing and in such form as will be advised to the Contractor after the Effective Date.

1.6.2 Where the Contractor fails to comply with an instruction, NATRAX may engage others to give effect to the instruction. All costs and charges incurred by NATRAX in engaging others shall be paid by the Contractor to NATRAX or may, without prejudice to any other method of recovery, be deducted by NATRAX from any monies due to the Contractor or may be recovered as a debt due and payable to NATRAX on demand.

#### **1.7 Guarantees**

1.7.1 The Contractor shall, within 15 (fifteen) days from the date of receipt of the 'Letter of Acceptance', provide to NATRAX the Performance Guarantee from a scheduled bank in India with a branch at New Delhi, in a sum equal to the amount specified in Special Conditions of Contract and in the form appearing in the Tender Documents for the due observance and performance by the Contractor of the Contract and which shall be maintained by the Contractor at its own expense in full force and effect until the date set out in Special Conditions of Contract and until the completion of Warranty Period.

### **2. THE NATRAX REPRESENTATIVE**

#### **2.1 The NATRAX Representative's duties and authorities**

The NATRAX Representative shall be appointed by and shall be responsible to, NATRAX and shall carry out the duties specified in, or necessarily implied from the Contract and shall exercise the

authority delegated to it by NATRAX. The Contractor shall take instructions, notices, communications, decisions and approvals only from NATRAX Representative.

The NATRAX Representative shall have no authority to amend the Contract, to release the Contractor of any of his duties, liabilities or obligations under the Contract, nor, create estoppel against it or NATRAX in respect thereof, nor except as expressly provided hereunder or elsewhere in the Contract, to order any Work involving delay or any extra payment by NATRAX, nor to make any variation of or in the Works nor to waive any right of NATRAX under the Contract.

## **2.2 NATRAX Representative's authority to delegate**

2.2.1 NATRAX Representative may from time to time delegate any of its functions to assistants and may at any time revoke any such delegation. It shall notify the Contractor of the names, duties and scope of authority of such assistants. NATRAX Representative may not delegate any duty or authority, and such assistants shall have no authority, to initiate any Change or to issue any certificates, notices, instructions or decisions which may lead to any increase in the Contract Sum or any extension of time.

2.2.2 Any written communication between the Contractor and any assistant of NATRAX Representative shall immediately and contemporaneously be copied by the Contractor to NATRAX Representative.

2.2.3 Any examination, testing or similar act by any assistant of NATRAX Representative, in accordance with its delegation, shall have effect as though it had been an act of NATRAX Representative.

However, if the Contractor questions any communication of an assistant of NATRAX Representative, the Contractor shall, not later than [7 (seven)] days after receipt of such communication, refer the matter to NATRAX Representative, who shall confirm, reverse or vary such communication.

## **2.3 Duration of powers and authorities**

The powers and authorities vested in the NATRAX Representative and the functions of any assistant of NATRAX Representative under the Contract shall continue and be in force until the duties of NATRAX Representative set out in the Contract have been fully discharged or until NATRAX Representative revokes or removes the assistant's powers and authorities or until the period specified in the delegation to it expires.

## **2.4 NATRAX protection**

The Parties acknowledge and agree that provisions in the Contract to the effect that work to be done under the Contract shall be carried out with the consent, non-objection or to the satisfaction of or be certified, determined, accepted, confirmed or inspected by the NATRAX Representative are inserted as protection to NATRAX and it is the sole responsibility of the Contractor to ensure that the Works are Executed in all respects in accordance with the Contractor's obligations under the Contract. The Contractor further acknowledges and agrees that no payment by NATRAX nor any expression or implication of satisfaction or acceptance nor any action, examination, comment, rejection, confirmation, certification, determination, consent, non-objection, approval or notice by the NATRAX Representative or failure to do the same shall restrict, debar, exclude or waive any claims, rights or actions whatsoever by NATRAX for any breach of any such obligation by the Contractor.

### **3. COMMENCEMENT**

#### **3.1 Condition Precedent**

The Contract shall become legally binding and in force only upon:

- 3.1.1 The submission of the Performance Guarantee; and
- 3.1.2 Satisfaction of any other condition(s) required by NATRAX.

### **4. THE PROJECT SITE**

#### **4.1 Access to and possession of the Project Site**

4.1.1 Save insofar as the Contract may prescribe:

- (i) The extent of portions of the Project Site of which the Contractor is to be given access from time to time; and
- (ii) Order in which portions shall be made available to the Contractor;

NATRAX will, simultaneously from the Commencement Date, give to the Contractor uninterrupted access to and possession of only so much of the Project Site as may be reasonably required by the Contractor to commence and proceed with the Execution of the Works. The Contractor represents that it shall not part with or create any Encumbrance on the whole or any part of the Project Site and shall not, without the prior written consent of NATRAX, use the Project Site for any purpose other than for the purpose of the Execution of the Works and shall bear all costs and charges for any access required by it additional to those provided by NATRAX.

4.1.2 The Contractor shall not be entitled to uninterrupted access to or exclusive possession of any part of the Project Site during Execution of the Works at the Project Site and the Contractor's rights of access to and possession of any part of the Project Site shall in addition be subject to:

- (i) Any rights of public passage or access existing over any part of the Project Site from time to time;
- (ii) The right of NATRAX, the NATRAX Representative, the Related Works Contractors, and representatives of any statutory authority, to have access to:
  - (a) View the Works or any operations at the Project Site on reasonable notice; and
  - (b) Visit any site or workshop where goods, materials or equipment are being manufactured, prepared or stored, on reasonable notice and during normal working hours, for the purposes of general inspection and of attending any test or investigation being carried out in respect of the same; and
  - (c) Visit and use, and their staff and visitors may visit and use, any facilities provided on the Project Site for their use; and
  - (d) The Project Site at any time in an emergency situation as any of them (acting reasonably) considers necessary in the circumstances;

provided always that such persons shall comply with all relevant safety procedures.

- 4.1.3 The Contractor shall liaise with each of the Related Works Contractor(s) in relation to when the various portions of the Project Site will be made available to the Contractor. The Contractor shall keep the NATRAX Representative fully informed as to all communications with such Related Works Contractors.

#### **4.2 Unauthorised persons**

The Contractor shall be fully responsible for the presence on or around or for the entry to the Project Site or for any other act, omission, default or interference affecting the Project Site or the Execution of the Works, by or caused by any person not authorised to be on the Project Site and any such act, omission, default or interference shall not be a breach of the obligations of NATRAX to provide access to the Project Site.

### **5. CONDITION OF THE PROJECT SITE**

#### **5.1 Information from NATRAX**

The Contractor acknowledges and agrees that any information and data on climatic, hydrological, topographical and general conditions relating to the Project Site made available to it by NATRAX has been done so for the convenience of the Contractor and that the Contractor enters into the Contract based upon its own investigations and determinations.

#### **5.2 Contractor to inspect**

The Contractor warrants that it has, to its complete satisfaction, examined and inspected the Project Site and its surroundings and where applicable, any existing structures or works on, over and under the Project Site and is familiar with and has satisfied itself with the Project Site conditions including the climate, topography, access to and form the Project Site, safety, availability of labour, water and electricity. No claim by the Contractor regarding misunderstanding or misapprehension in respect of matters related to this Clause shall be maintainable.

### **6. THE CONTRACTOR**

#### **6.1 The Contractor's general responsibilities**

- 6.1.1 Subject to and in accordance with the terms and conditions of the Contract, the Contractor shall to the satisfaction of NATRAX and NATRAX Representative, Execute the Works and carry out its other obligations under and/or in relation to the Contract and provide all personnel and labour, including the supervision thereof, materials, offices, workshops, tools, machinery, equipment and all other resources and things, whether of a temporary or permanent nature, required herein, and shall assume full responsibility for the same so as to meet the Time for Completion.

- 6.1.2 The Contractor shall at its own expense:

- (i) Take full responsibility for the adequacy, stability and safety of the Works, labour, equipment and of all on-site and off-site operations and methods of manufacture, construction, and installation, commissioning, testing and reliability and acceptance procedures;
- (ii) Do everything necessary (including the payment of all relevant fees) to acquire and maintain all Applicable Clearances.;



- (iii) At all times ensure that it has sufficient, suitable and qualified personnel at the Project Site and in sufficient number to undertake the responsibilities imposed upon the Contractor under the Contract and to provide full attention to the Execution of the Works.

## **6.2 The Contractor's representations and warranties**

The Parties agree that the principal objective of the Contract is the timely completion of the Project Facility of which the Works form an integral part and that time is the essence of the Contract. The Contractor warrants that it is fully experienced in the planning, programming, design (to the extent required by the Contract), procurement and supply, erection, installation, testing, commissioning of equipments for the scope, complexity, size and technical sophistication of the Works and that it possesses the level of skill and expertise commensurate with such experience, upon which skill and expertise NATRAX is entirely reliant and the Contractor hereby represents and warrants to NATRAX that:

### **Design (to the extent required by the Contract)**

- 6.2.1 It has satisfied itself as to, and adopts and accepts full responsibility for any design of the Works contained in and reflected by Technical Conditions of Contract;
- 6.2.2 It shall exercise in the design and specifications for the Works all the skill, care and diligence to be expected of professionals experienced in and possessing all the expertise necessary for similar projects of the size, scope, complexity and technical sophistication of the Works;
- 6.2.3 The Works have been and will continue to be designed and specified utilising state of the art systems, procedures and technology, high quality goods, materials and equipment and the high standards of workmanship and fabrication in compliance with Technical Conditions of Contract;
- 6.2.4 The Contractor further warrants that upon the Date of Completion of the Works, the Works will be in a condition which will enable NATRAX to meet those Performance Standards which relate to the Works;
- 6.2.5 That it recognises that the process of producing, optimising, developing and finalising the design of the Works will require the closest consultation, co-operation and co-ordination between itself, NATRAX, the NATRAX Representative, any Relevant Authority and the Related Works Contractors and that it has taken account of the same in the Contract Sum.
- 6.2.6 That it is fully responsible for the integration of and for the full and complete co-ordination of the Works with the Related Works and that:
  - (i) The Contract Sum is inclusive of the cost of the Contractor's compliance under this **Clause 6.2** and **Clause 13**; and
  - (ii) The Contractor has programmed and will continue to programme the Execution of the Works in such a way as to ensure its compliance with its obligations in respect of Related Works as set out in **Clause 13**.

### **Workmanship**

- 6.2.7 the Works will be Executed and defects, remedied in accordance with Good Industry Practice, using state of the art systems and technology and accepted professional standards, codes of practice and regulations, and shall meet the intents and objectives of

the Contract and comply with all Applicable Laws and be in accordance with Technical Conditions of Contract and other requirements of the Contract;

6.2.8 the personnel to be employed by the Contractor shall be properly skilled, competent and experienced having regard to the nature and extent of the Works;

6.2.9 the Works and every part thereof will be complete in all parts, will be free from defects in materials and workmanship and will be in conformity with Technical Conditions of Contract;

### **Equipment**

6.2.10 it will ensure that the Works will comprise only Equipment which is of sound and merchantable quality and which is manufactured and prepared in accordance with the Applicable Laws and with Good Industry Practice applicable at the time of construction and/or installation;

6.2.11 that the Equipment, notwithstanding any acceptance by NATRAX, shall where appropriate be manufactured specifically for the Contract and be new and unused, will be complete in all its parts, free from defects and will meet the requirements of the Contract and in particular, but without limiting the generality of the foregoing will be such that the Works as a whole and each and every part thereof shall meet Technical Conditions of Contract;

### **6.3 Indemnity**

6.3.1 The Contractor shall at all times save harmless and indemnify NATRAX from and against all claims, liabilities, expenses, costs, damages and losses suffered or incurred by NATRAX including consequential losses and damages which may arise out of or in connection with any defect, damage during transportation, inadequacy or unsuitability of the design, manufacture, workmanship or materials or failure to meet in any or all respects the requirements of the Contract or the remedying thereof either by the Contractor, NATRAX, or by others employed by NATRAX.

6.3.2 NATRAX rights under this **Clause 6.3.2** are without prejudice to any other right which it may have whether at law or otherwise.

### **7. JV / CONSORTIUM / SUBCONTRACTOR**

#### **7.1 JV / Consortium / Sub contractor**

The Contractor shall not subcontract any part of the Works without the prior consent of the NATRAX Representative. Any such consent shall not relieve the Contractor from any liability or obligation under the Contract and the Contractor shall be responsible for the acts, defaults, omissions and neglects of any Sub-Contractor, his agents, servants or workmen.

The Contractor may subcontract any part of the Works but not subcontract the whole of the Works under any circumstance. Each Subcontractor's part shall not be worth more than the percentage of the Contract Sum as specified in Special Conditions of Contract. Any company responsible for Works more than this percentage of the Contract Sum shall be a Joint Venture or Consortium Partner.

#### **7.2 Subcontractor's Warranty and Assignment of Sub-Contractor's' Obligations**

The Contractor shall procure the assignment of warranties by the Subcontractor in favour of NATRAX without any costs to the account of NATRAX.

In respect of the work Executed, or Equipment supplied by a Subcontractor, any continuing obligation of a Subcontractor extending for a period exceeding that of the Warranty Period, shall be disclosed to NATRAX Representative by the Contractor and be assignable to NATRAX or its nominee. The Contractor shall ensure that the Subcontractor shall at any time, assign to NATRAX, at NATRAX Representative's request, such continuing obligation of a Subcontract exceeding the Warranty Period and the benefit of such obligation for the un-expired duration thereof.

### **7.3 Responsibility**

7.3.1 Subcontracting does not relieve the Contractor from any of its liabilities or obligations under the Contract.

7.3.2 The Contractor shall be fully responsible for the acts, defaults, omissions and neglects of any Subcontractor and their agents, employees, servants and workmen, as fully as if they were the acts, defaults, omissions and neglects of the Contractor.

### **7.4 Subcontract Terms**

The Contractor shall procure that:

7.4.1 every Subcontractor has knowledge of the relevant terms of the Contract and provisions in the Contract relating to confidentiality and each Subcontract entered into by the Contractor shall be let on such terms and conditions as are reasonably necessary for the Contractor to ensure compliance with its obligations under the Contract;

7.4.2 the Subcontractor provides like warranties and indemnities as given by the Contractor to NATRAX.

## **8. SUFFICIENCY OF THE CONTRACT SUM**

The Contractor shall be deemed to have satisfied itself before entering into the Contract as to the correctness and sufficiency of the Contract Sum and of the rates and prices. The Contract Sum is a lump sum fixed price and will not be adjusted save as expressly provided in the Contract.

## **9. QUALITY ASSURANCE PLAN**

9.1 The Contractor shall within 30 days (thirty days) from the Commencement Date submit a Quality Assurance Plan. The Contractor shall also submit to the NATRAX Representative all inspection / test reports and processes and quality standards which are adhered to while manufacturing of Equipment as per Quality Assurance Plan at least 15 (fifteen ) days before the pre-acceptance Date.. . NATRAX Representative or its nominee or any other person designated by NATRAX may inspect / witness the manufacturing processes and other information provided by the Contractor as mentioned in the Quality Assurance Plan. The Contractor agrees that neither the submission of Quality Assurance Plan nor the submission of quality / test certificate releases the Contractor from any of its responsibilities, obligations, or liabilities (including repair or replacement of any Equipment or part of the Works damaged during the carrying out of any Tests) under the Contract.

9.2 The Contractor shall at its own cost provide all access, assistance and facilities to enable NATRAX Representative to verify the implementation of the Quality Assurance Plan.

## **10. SPARE PARTS**

- 10.1 The Contractor shall be responsible, at its own cost, for the provision of the Spare Parts. Such cost shall include all costs such as customs duty for imported Spare Parts, left behind items, replacement or breakdown spare parts as well as costs for storage and insurance costs in relation to the maintenance of the Spare Parts in storage.
- 10.2 The Contractor shall ensure that:
- (i) as at the Completion of the Works, there is a full complement of Spare Parts safely stored and packed in accordance with the Contract.
  - (ii) if a Maintenance Spare Part is used by the Contractor during the commissioning/ Acceptance Tests due to shortage of Commissioning Spare Parts, the Contractor shall immediately replace, at his own cost, the Maintenance Spare Parts to ensure a full complement of Maintenance Spare Parts at the end of commissioning/ Acceptance Tests.
- 10.3 The Contractor warrants the performance of all Maintenance Spare Parts for period that expires on the later of:
- (i) the manufacturer's warranty period for the applicable Maintenance Spare Parts.; and
  - (ii) the Warranty Period.

The Contractor shall revise and update any list of Spare Parts in accordance with the instructions of the NATRAX Representative, and a list of Spare Parts shall be submitted to the NATRAX Representative before the Pre-commissioning of any part of the Works to which such Spare Parts relate.

- 10.4 Where the Contractor is to supply the Spare Parts in accordance with this Clause 10.4 without prejudice to the foregoing, the Spare Parts shall be delivered to NATRAX in accordance with the Contract and without prejudice to **Clause 14** the packing and storage of the Spare Parts shall be in accordance with the Contract.

## **11 ENVIRONMENTAL COMPLIANCE**

The Contractor shall comply with all environmental requirements stipulated in the Contract and with all Applicable Laws and regulations having application to the Project Facility, including but not limited to standards for noise and vibration levels and airborne and waterborne pollutants.

## **12. ELECTRICITY, WATER**

### **12.1 General arrangements**

- 12.1.1 The Contractor shall be responsible for making all its arrangements, for and paying all charges in connection with the supply and consumption of electricity and water and the disposal of sewage and other waste as may be necessary for the Execution of the Works up to the date of issue of the Completion Certificate for the Works.
- 12.1.2 Without absolving in any manner, the responsibility of the Contractor to make arrangements for supply of water and electricity necessary for the Execution of the Works, electricity and water for the purpose of construction, erection, testing and commission may be provided by NATRAX at a convenient point within the Project Site to enable the Contractor to carry on its obligations under this Contract without any hindrance, on chargeable basis.

### **13. RELATED WORKS**

#### **13.1 Acknowledgement**

The Contractor acknowledges that Related Works shall be performed and that it is of paramount importance that the Execution of the Works are fully and completely co-ordinated with the Related Works in view of their concurrent and sequential nature and that such coordination is of the utmost importance to the successful integration of the Works with the Related Works and to the timely completion of the Project Facility and the avoidance of unnecessary duplication of efforts. The Contractor agrees that it shall take all necessary steps to coordinate with the Related Works Contractors for the integration of the Works and the Related Works.

#### **13.2 Failure to co-ordinate**

In the event that the Execution of the Works and execution of the related works are not being co-ordinated and integrated to the reasonable satisfaction of NATRAX, NATRAX may issue such instructions as are necessary including, but not limited to:

13.2.1 suspending the progress of the Execution of the Works or any part thereof; and/or

13.2.2 changing the Works including the omission of work from the Contract and its execution by others.

For the avoidance of doubt, where NATRAX acting reasonably, determines that an instruction under this Clause 13.2.2 is required as a result of a breach by the Contractor of its obligations under this Clause 13.2.2, the Contractor shall not be entitled to any payment whatsoever in respect of any such instruction or to any extension of time in respect thereof and the costs to NATRAX of such instruction including the cost of any such suspension, or removal and execution by others shall, without prejudice to NATRAX's other rights under the Contract, be deducted from the Contract Sum.

#### **13.3 Contractor to bear costs**

The Contractor shall bear all costs and expenses associated with any Change or remedied work rendered necessary for the Execution of the Works or the work of any Related Works Contractor as a result of any failure on the Contractor's part to comply with the provisions of this Clause. Subject always to this Clause 13.3, if in the opinion of NATRAX Representative any cost is or is likely to be incurred as a result partially of a failure by the Contractor and partially as a result of a failure by a Related Works Contractor, then in the event that the Contractor and the Related Works Contractor are unable to agree on the apportionment of such costs between them, the NATRAX Representative may instruct the Contractor to make a Change or carry out any repair it deems necessary and, notwithstanding the provisions of **Clause 24** in valuing such Change or repair, it shall be entitled to make what it, in its absolute discretion considers a fair reduction, in any payment to the Contractor to reflect its assessment of the Contractor's responsibility for the necessity to make such Change or repair as a result of the Contractor's failure to comply with the requirements of this **Clause 13**.

#### **13.4 Contractor's indemnities**

The Contractor shall indemnify and keep indemnified NATRAX against all claims, proceedings, damages, costs, losses, charges and expenses of any nature whatsoever including any consequential losses or damages arising from the Contractor's failure to comply with its obligations under this **Clause 13**.

**14. DELIVERY TO THE PROJECT SITE**

**14.1 Delivery to the Project Site**

14.1.1 The Contractor supplying indigenously manufactured Equipment shall at its own risk and expense, be fully responsible for the proper packing, marking, loading, delivery up to Project Site, insurance, freight costs, , interface management, detailed design, detailing, coordination, value engineering, specialist system procurement, provision, erection and/or installation, testing, commissioning, documentation, training, defects rectification and its related works.

14.1.2 When marking any Equipment, , the Contractor shall be responsible for ensuring that such Equipment and any part thereof and their transportation containers are properly marked and consigned.

**14.2 Packing List**

A packing list itemising the contents of each case shall be enclosed in each package. A copy of the packing list, together with despatch details shall be provided forthwith by the Contractor upon despatch to the NATRAX Representative. The Contractor supplying indigenously manufactured Equipment shall provide all attendance, handling and transport up to and including off-loading into the appropriate Project Site storage area.

**14.3 Importation**

The Contractor shall be responsible at its own cost for obtaining any Applicable Clearances necessary for the export of Equipment, from the country of origin.

**14.5 Documents**

Upon despatch of each shipment of significant items of Equipment, the Contractor shall notify the NATRAX Representative by facsimile or email of the description of the Equipment and the point and means of the despatch and the estimated time and point of delivery and the Contractor shall furnish NATRAX with all relevant documentation in respect of such Equipment, including without limitation:

14.5.1 oceanbills of lading / Airway bill (these must be a full set of “clean on-board” bill of lading.);

14.5.2 commercial invoices;

14.5.3 packing lists;

14.5.4 certificate of origin;

14.5.5 inspection and pre-acceptance test certificate;

14.5.6 ~~customs declaration details.~~

**15. OWNERSHIP OF EQUIPMENT AND OTHER PROVISIONS**

**15.1 Passing of property**

15.1.1 Equipment supplied or to be supplied pursuant to and in compliance with the terms of the Contract shall become the property of NATRAX at whichever is the earliest of the following times:

- (i) when any sum is included in a Certificate of Payment in respect thereof; or
- (ii) for Equipment manufactured indigenously when such Equipment is delivered to the Project Site pursuant to the Contract and for imported Equipment, when such Equipment is loaded on to the aircraft or when the Equipment passes over the ship's rail.

15.1.2 Equipment in which property has passed to NATRAX shall be in the care and possession of the Contractor solely for the purposes of the Works and shall not be within the ownership or disposition of the Contractor. Notwithstanding the ownership of the Equipment in accordance with Clause 15.1.1 the responsibility for care and custody together with the risk of loss or damage of such Equipment remains with the Contractor pursuant to Clause 31.5.1.

## **15.2 Marking of Equipment**

Where the property in Equipment passes to NATRAX, the Contractor shall so far as is practicable and it has not done so previously, set the same aside and mark the same as the property of NATRAX. The Contractor shall procure that the NATRAX Representative at any time upon reasonable notice may inspect any Equipment which have become the property of NATRAX and shall grant to the NATRAX Representative or procure the grant of access to the Contractor's premises for such purposes or any other premises where such Equipment may be located.

## **15.3 Exclusion of Lien**

Neither the Contractor or a Subcontractor nor any other person shall have a lien on or other property interest in any Equipment which have vested in NATRAX under this Clause 15 for any sum due or accepted due to the Contractor, Subcontractor or other person and the Contractor shall take such steps as may be necessary to ensure that the title of NATRAX and the exclusion of such lien and other property interest are brought to the express notice of Subcontractors and other persons dealing with or transporting any such Equipment.

## **15.4 Delivery of Equipment upon Termination**

Upon Termination or upon termination of the performance of the whole or any part of the Works before Completion of the whole of the Works, the Contractor shall deliver Equipment to NATRAX, the property in which has vested in NATRAX by virtue of this Clause 15. If it shall fail to do so NATRAX may enter any premises of the Contractor, any Subcontractor or other person or any off site place of manufacture or source of Equipment (and the Contractor hereby grants NATRAX the necessary licence to do so and undertakes to procure the same right for NATRAX from all Subcontractors and other persons as the case may be) and seize such Equipment and recover the expense involved in so doing from the Contractor.

## **15.5 Manufacturer's warranties**

Without prejudice to the Contractor's obligations and liabilities under the Contract, the Contractor must obtain for NATRAX, from the respective manufacturers, legally enforceable warranties for the Equipment which shall ensure to the benefit of NATRAX for the entire term of the warranties.

## **15.5 Contractor's Equipment**

15.5.1 All Contractor's Equipment provided by the Contractor or its Subcontractors shall, when brought on to the Project Site, be deemed to become the property of NATRAX in the event of Termination of Works on account of default of the Contractor and to be exclusively intended for the Execution of the Works and the Contractor shall not remove the same or any part thereof, except for the purpose of moving it from one part of the Project Site to another, without the consent of the NATRAX Representative. Provided that such consent shall not be required for vehicles engaged in transporting any staff, labour, Contractor's Equipment to or from the Project Site.

15.5.2 The Contractor shall upon written request by the NATRAX Representative produce to the NATRAX Representative all documents evidencing title to or the contractual basis of the Contractor's right to use any item of Contractor's Equipment. In the event of failure to comply with such a request within 7 (seven) days, without prejudice to any other rights or remedies available to NATRAX, NATRAX may withhold any payments otherwise due to the Contractor in accordance with the Contract.

**15.6 NATRAX not liable for damage**

NATRAX shall not at any time be liable for the loss of or damage to any of the Contractor's Equipment.

**15.7 Conditions of hire of Contractor's Equipment**

15.7.1 With a view to securing, in the event of Termination, the continued availability, for the purpose of Executing the Works, of any hired Contractor's Equipment, the Contractor shall not bring on to the Project Site any hired Contractor's Equipment unless there is an agreement for the hire thereof (which agreement shall be deemed not to include an agreement for hire purchase) which contains a provision that the owner will, on request in writing made by NATRAX within [7 (seven)] days after the Termination Date and on NATRAX undertaking to pay all hire charges in respect thereof from such date, hire such Contractor's Equipment to NATRAX on the same terms in all respects as the same was hired to the Contractor, save that NATRAX shall be entitled to permit the use thereof by any other contractor employed by it on occasion of the Contractor's termination.

15.7.2 The Contractor shall upon request made by the NATRAX Representative at any time in relation to any item of hired Contractor's Equipment immediately notify to the NATRAX Representative in writing the name and address of the owner thereof and shall certify that the contract for the hire thereof contains a provision in accordance with the requirements of Clause 15.7.1. The Contractor shall also upon request as aforesaid give a like notification (but without certification) in regard to any Contractor's Equipment held under a contract of hire purchase thereof.

15.7.3 In the event of NATRAX entering into any agreement for the hire of Contractor's Equipment pursuant to Clause 15.7.1 all sums properly paid by NATRAX under the provisions of any such agreement and all costs incurred by it (including stamp duties) in entering into such agreement shall be deemed to be part of the costs of Executing the Works.

**15.8 Hire purchase payments by NATRAX**

NATRAX, shall in order to avoid seizure by the owner of any Contractor's Equipment held under a contract of hire purchase thereof, be entitled to pay to such owner the amount of any overdue instalment or other sum payable under any contract for hire purchase and in the event of its doing so any amount so paid by NATRAX shall be a debt due from the Contractor to NATRAX and may be deducted by NATRAX from any monies due or that may become due to the Contractor under the Contract or may otherwise be recovered by NATRAX from the Contractor.



**15.9 Re-export of Contractor's Equipment**

In respect of any Contractor's Equipment which the Contractor imports for the purpose of the Execution of the Works, the NATRAX Representative may use its reasonable endeavours to assist the Contractor if so requested and to the extent it is able to do so in procuring any Applicable Clearances for the re-export of such Contractor's Equipment by the Contractor upon the removal thereof as aforesaid.

**15.10 Approval not implied**

The operation of this Clause 15 shall not be deemed to imply any approval by the NATRAX Representative of the Contractor's Equipment or any part thereof, or other matters referred to therein nor shall it prevent the NATRAX Representative's right to order the removal of any such Contractor's Equipment or part thereof, at any time.

**15.11 Incorporation of Clause into Subcontracts**

The Contractor shall, where entering into any key or major subcontract for the Execution of any part of the Works, incorporate in such subcontract (by reference or otherwise) the provisions of this Clause 15 in relation to plant, equipment and tools and temporary works brought on to the Project Site by the Subcontractor.

**15.12 Revesting and removal of Contractor's Equipment**

Upon removal of any Contractor's Equipment which have been deemed to become the property of NATRAX under Clause 15.5 with the NATRAX Representative's consent, as aforesaid, the property therein shall be deemed to re-vest in the Contractor and upon Completion of the Works the property in the remainder of such Contractor's Equipment as aforesaid shall, subject to the termination provisions of the Contract, re-vest in the Contractor who shall remove the same. If the Contractor shall fail to remove any Contractor's Equipment as aforesaid within such reasonable time after Completion of the Works as may be allowed by the NATRAX Representative or should fail to comply with its obligations under Clause 34.3, NATRAX may:

15.12.1 sell any such Contractor's Equipment ; or

15.12.2 return any hired Contractor's Equipment at the Contractor's expense to the person, firm or company from whom such Contractor's Equipment was hired by the Contractor

and after deducting from any proceeds of sale the cost, charges and expenses of and in connection with such sale and in connection with such return as aforesaid, NATRAX shall, subject to any right of set-off, pay the balance (if any) to the Contractor but to the extent that the proceeds of any sale or return are insufficient to meet all such costs, charges and expenses the excess shall be a debt due from the Contractor to NATRAX and shall be deductible or recoverable by NATRAX accordingly as aforesaid.

**16. LABOUR AND CONTRACTOR'S PERSONNEL**

**16.1 Labour Compliances**

16.1.1 In the employment of labour for the Execution of the Works the Contractor shall comply and shall require its Subcontractors to comply without limitation, with all requirements of any Applicable Law

relating to the employment of workmen or any subsequent modification or re-enactment thereof including but not limited to, matters relating to timely payment of wages and allowances, payment of minimum wages, payment of overtime, grant of leave, payment of workmen's compensation, working hours, safety, maternity benefits, holidays, framing of standing orders, disciplinary action against employees, payment of provident fund contributions, payment of gratuities and payment of bonuses.

**16.1.2 Medical Facilities at Project Site:**

The Contractor shall, at its own cost, provide first aid and medical facilities, at the Project Site as may be prescribed by the NATRAX Representative, on advice of medical authority in relation to the strength of the Contractor's staff and workmen employed on the Works, directly or through petty contractors or Sub-Contractors.

**16.2 Contractor to indemnify**

The Contractor shall indemnify NATRAX against any claim for legal action arising out of the Applicable Laws due to the failure of non-compliance of the provisions of the Applicable Laws which arise out of or in connection with the employment of any labour for the Execution of the Works and penalty or any other amount levied by the authorities from NATRAX, shall be recoverable from the payments due to the Contractors or from the security deposit or both, as debt due and payable on demand.

**16.3 Engagement of Labour**

The Contractor shall make its own arrangements for the engagement of all labour, local and otherwise, skilled, semi-skilled and unskilled, as may be required for the proper and timely Execution of the Works and shall use all diligence in arranging for a sufficient and suitable supply of such labour but all such arrangements in India shall be in accordance with the general local usage and subject to the Applicable Laws.

**16.4 Project Site records and returns**

The Contractor shall maintain and keep at the Project Site, wage books and time sheets showing the wages paid to and time worked by all labour employed by the Contractor and its Subcontractors in and about the Execution of the Works or any part thereof and all records, forms, declarations, registers, notices, and copies of filings made with labour authorities as are required to be maintained by the Contractor pursuant to the Applicable Laws and the Contractor shall produce such wages books, time sheets and records for inspection by NATRAX Representative.

**16.5. Contractor's Personnel**

**16.5.1 General**

The Contractor shall at all times ensure that it has sufficient, suitable and qualified personnel at the Project Site and in sufficient number to undertake the responsibilities imposed upon the Contractor under the Contract and to provide full attention to the Execution of the Works.

**16.5.2 The Contractor's Project Organisation Chart**

16.5.2.1 The Contractor's Project Organisation Chart to be submitted by the Contractor to the NATRAX Representative shall show the proposed organisation to be established by

the Contractor for carrying out the Works and shall be consistent with the Contractor's project organisation chart submitted with the Tender submission. The chart shall evidence that the Contractor has the requisite organisation in place and that it has designated and proposed suitable persons as Key Personnel, whose identities and bio-data it shall include with the Contractor's Project Organisation Chart, to supervise the Execution of the Works and to deal with NATRAX or the NATRAX Representative as appropriate.

16.5.2.2 The Contractor shall promptly notify the NATRAX Representative of any proposed revision or alteration of the Contractor's Project Organisation Chart.

### **16.5.3 Key Personnel**

16.5.3.1 The NATRAX Representative shall be entitled to interview any or all of the persons designated and proposed as Key Personnel before deciding whether or not to consent to their appointment. If NATRAX interviews any of the proposed Key Personnel, NATRAX shall be deemed to consent to such Key Personnel if it makes no objection within [3 (three)] days of the interview of the last proposed person to be interviewed. If NATRAX objects to any of the proposed Key Personnel within such 3 (three) day period, then the Contractor must nominate a replacement or replacements, as applicable within [7 (seven)] days and this Clause 16.5.3.1 applies to such nomination.

16.5.3.2 The Key Personnel are to be engaged throughout the period of the Contract and shall include suitably qualified and experienced personnel for one or more of the positions as set out in the Special Conditions of Contract.

### **16.5.4 Technical Assistants**

16.5.4.1 The Contractor and, where appropriate any Subcontractor shall provide and employ in connection with the Execution of the Works only such engineers and technical assistants as are skilled and experienced in their respective callings and such engineers, managers, sub-representatives, foremen and leading hands as are competent to give proper supervision to the work they are required to supervise.

### **16.5.5 Removal of Contractor's employees**

The NATRAX Representative may object to and require the Contractor to immediately remove from the Works at the Contractor's expense any person employed by the Contractor or its Subcontractors in relation to the Works and such person shall not be employed again upon the Works without the written permission of the NATRAX Representative. Any person so removed from the Works shall, unless the NATRAX Representative specifies otherwise, be replaced, at the Contractor's expense as soon as possible by a competent substitute approved by the NATRAX Representative.

## **17. TESTING**

### **17.1 General**

17.1.1 All materials and workmanship shall be of the respective kinds and standards described in the Contract and in accordance with NATRAX Representative's instructions and shall be subjected from time to time to such tests as provided for in the Contract. The Contractor shall provide such assistance, instruments, machines, consumables and artificial loads and labour and materials as are normally required for examining, measuring and testing any work and the quality, weight or quantity

of any material used and shall supply samples of materials before incorporation in the Works for testing as set out in the Testing Plans.

17.1.2 The Testing Plans shall be submitted to NATRAX Representative in the manner stated in the Contract or as otherwise directed by NATRAX Representative.

17.1.3 NATRAX Representative or its nominee and any other person designated by NATRAX may attend and witness the Equipment at any manufacturing stage.

17.1.4 The Contractor agrees that neither the execution of any test nor the issue of any test certificate releases the Contractor from any of its responsibilities, obligations, or liabilities (including repair or replacement of any Equipment or part of the Works damaged during the carrying out of any Tests) under the Contract.

## 17.2 Testing Costs

The cost of making any test or inspection under the Contract shall be borne by the Contractor if such test or inspection is intended by or provided for in the Contract or should have reasonably been anticipated by the Contractor as likely to be required including any costs relating to accommodation and travel incurred by the NATRAX personnel for such test/ inspection..

Save, as aforesaid, where any test is ordered by the NATRAX Representative which is neither intended nor provided for by the Contract nor could reasonably have been anticipated by the Contractor, then the cost of such test shall be borne by the Contractor if the test shows any workmanship or Equipment not to be in accordance with the Contract or the NATRAX Representative's instructions, or if the test was required as a result of any failure of the Contractor to comply with its obligations under the Contract.

## 17.3 Pre- Acceptance Tests and Project Site Tests

17.3.1 The Contractor must:

- (i) procure the carrying out of the Pre-acceptance Tests and the Project Site Tests; and
- (ii) not allow an item of Equipment to be transported to the Project Site unless it has successfully completed the Pre- Acceptance Tests .

17.3.2 Within [7 (seven)] days of completion of any Pre- Acceptance Tests or the Project Site Tests, the Contractor must give the NATRAX Representative a report of the test results in a form approved by the NATRAX Representative.

17.3.3 The NATRAX Representative may, within [7 (seven)] days of receipt of a report produced in accordance with **Clause 17.3.2**, give the Contractor a notice that it considers:

- (i) such report is deficient in any way, and that it directs the Contractor to correct and re-submit the report and the Contractor must re-submit the report;
- (ii) in its reasonable opinion, that the Contractor has failed the test; or
- (iii) that the relevant test has been successfully performed.

17.3.4 If, in the reasonable opinion of the NATRAX Representative, the Equipment/ Works fail any Pre-Acceptance Test or Project Site Test (as applicable), the Contractor must:

- (i) give the NATRAX Representative notice of the cause of the failure and the remedial action to be taken;
- (ii) remedy the cause of the failure; and
- (iii) reschedule, re-perform and report on results of the test in accordance with this **Clause 17.3**.

**17.4 Pre-Acceptance Tests**

The Contractor shall carry out the Pre-Acceptance Tests of each Equipment in the presence of NATRAX representative as per the agreed plan prior to the shipment of the Equipment, at the Contractor's site.

**17.5 Acceptance Tests**

The Contractor shall carry out the Acceptance test of each Equipment in presence of NATRAX Representative as per the agreed plan with the NATRAX Representative after the completion of commissioning of the Equipment, at the Project Site.

**18. TIME FOR COMPLETION**

The Contractor shall Complete the Works within the Time for Completion or such other time as may be determined in accordance with **Clause 19**.

**19. EXTENSION OF TIME FOR COMPLETION**

**19.1 Contractor's notice of event likely to cause delay**

The Contractor shall closely monitor the progress of the Works and shall give written notice to NATRAX Representative, with a copy to NATRAX:

- 19.1.1 as soon as it can foresee any incident, circumstance and/or event of any nature affecting or likely to affect the progress of the Works such that the Completion of the Works will be or is likely to be delayed; or
- 19.1.2 should it have been unable to foresee such a incident, circumstance and/or event, then as soon as it becomes aware of the commencement of the incident, circumstance and/or event which has affected or is likely to affect the progress of the Works such that Completion of the Works will be or is likely to be delayed.

**19.2 Reasons for delay and extension of time**

It shall be a condition precedent to any extension of time by NATRAX under any provision of the Contract, that in respect of each and every incident, circumstance or event identified in the notice given in accordance with **Clause 19.1**, the Contractor shall, as soon as possible after such notice but in any event not later than [30 (thirty)] days after such notice or such longer period as NATRAX Representative may in its absolute discretion determine, notify NATRAX Representative in writing of any factors and the relevant Contract provision which it considers may entitle it to claim an extension of time together with a statement, providing details, reasons, explanation and any further substantiation for the delay.

**19.3 Delay Events**

Subject to the other provisions of this **Clause 19**, the Contractor will only be entitled to an extension of the Time for Completion where a delay to the achievement of Completion is caused by:

- 19.3.1 the Contractor not being given access to the Project Site or any part thereof ; or
- 19.3.2 a Change instructed other than where such Change is instructed as a consequence of any default or breach of the Contract by the Contractor; or
- 19.3.3 any act, omission, default or breach by NATRAX; or
- 19.3.4 a Force Majeure Event.

#### **19.4 NATRAX Representative to determine extension**

Subject always to proper compliance by the Contractor with the provisions of this **Clause 19**, NATRAX Representative shall determine any extension of the Time for Completion and shall notify NATRAX and the Contractor accordingly.

#### **19.5 Compliance**

##### **19.5.1**

- (i) the Contractor shall constantly use its reasonable endeavours to prevent and/or minimise delay in the progress of the Works, howsoever caused, and to prevent Completion of the Works being delayed or further delayed beyond the Time for Completion and the Contractor shall not be entitled to an extension of time in respect of any cause of delay nor for any period of delay which by the exercise of reasonable endeavours could be avoided or reduced (to the extent that such could have been reduced). The onus of proving that the Contractor has exercised all reasonable endeavours, and that despite such endeavours, the delay could not be avoided or reduced, shall in all cases rest with the Contractor;
- (ii) the Contractor shall not under any circumstances be entitled to an extension of time where the delay or likely delay is, or would be, attributable to the default, breach, negligence, improper conduct or lack of endeavour of the Contractor or any persons for whom it is contractually or otherwise responsible;
- (iii) the Contractor shall have kept and maintained such records (including those referred to in the notices under this **Clause 17** [Extension of Time for Completion] as may be reasonably necessary to support any claim for an extension of time it may subsequently wish to make;

19.5.2 The NATRAX Representative shall not be obliged to take into account any circumstances which are not notified to it in accordance with the periods referred to in this **Clause 19** but may upon the written request of the Contractor extend the said periods if it considers the request for such extension reasonable.

#### **20. PROCEDURE FOR CLAIMS**

##### **20.1 Notice of claims**

If the Contractor considers that it may have grounds to claim any additional payment or any extension of time pursuant to any Clause of the Conditions or otherwise, it shall in addition to compliance with any other procedure or obligation in relation thereto, give notice to the NATRAX Representative, with a copy to NATRAX, within fourteen [14 (fourteen)] days after the event giving rise to the claim has first arisen. The notification shall include details of the clause under which the claim is made, the circumstances in which the claim arises and details of the records that the Contractor will maintain to substantiate the amount of its claim.

##### **20.2 Substantiation of claims**

Within [28 (twenty eight)] days, or such lesser time as may be reasonably required by the NATRAX Representative, of giving notice under Clause 20.1, the Contractor shall send to the NATRAX Representative an account giving detailed particulars of the amount claimed and the grounds upon which the claim is based. Where the event giving rise to the claim has a continuing effect, such account shall be considered to be an interim account and the Contractor shall, at such intervals as the NATRAX Representative may reasonably require, send further interim accounts detailing the aggregate amount of the claim and any further grounds upon which it is based. In cases where interim accounts are sent to the NATRAX Representative, the Contractor shall send a final account within [28 (twenty-eight)] days of the end of the effects resulting from the event. The Contractor shall, if required by the NATRAX Representative so to do, copy to NATRAX all accounts sent to the NATRAX Representative pursuant to this Clause 20.2.

## **21. LIQUIDATED DAMAGES**

### **21.1 Liquidated Damages**

21.1.1 If the Contractor fails to Complete the Works in accordance with the Contract so that the Date of Completion of the Works has not occurred within the Time for Completion or in the event the Contractor defaults or is in breach of any of its obligations under the Contract or the Contractor is non-compliant with or negligent in relation to any condition specified under the Contract, then the Contractor shall pay or allow to NATRAX Liquidated Damages for such default/ breach/ delay/ non-compliance which is a genuine pre-estimation of and reasonable compensation for the loss and damage that will be suffered by NATRAX, for every day which shall elapse between the Time for Completion and the date stated in the Completion Certificate as being the Date of Completion of the Works or for every day for which such breach or default (if capable of remedy as determined by the NATRAX Representative) continues till the date of remedy. Provided always that the aggregate liability of the Contractor for Liquidated Damages under this **Clause** 21.1 shall not exceed the percentage of the Contract Sum as specified in Special Conditions of Contract.

21.1.2 The payment of Liquidated Damages does not in any way relieve the Contractor from any of its obligations to complete the Works or from any other obligations and liabilities of the Contractor under the Contract.

21.1.3 For the avoidance of doubt and without prejudice to any continuing obligations of the Contractor under the Contract or otherwise, the issue of any Completion Certificate does not relieve the Contractor in respect of Liquidated Damages which have accrued up to the date of such Completion Certificate, but which have not yet been paid by the Contractor.

### **21.2 Genuine Pre-estimate of Damages**

The Parties recognise the expense and inconvenience likely to be incurred from any need to prove the loss and damage that will be suffered by NATRAX in the event of a failure by the Contractor to achieve Completion of the Works by the relevant Time for Completion or for breach or omission or non-performance of any obligation/ condition by the Contractor under the Contract. The Parties acknowledge that the Liquidated Damages is a genuine pre-estimation of and reasonable compensation for the loss and damage that will be suffered by NATRAX in the event of any such failure on the part of the Contractor.

## **22. Completion of Works**

22.1 The Date of Completion of the Works shall be the date upon which the following criteria have been satisfied or waived in writing by NATRAX at its sole discretion:

- (i) the Execution of the Works, other than the performance of obligations to be performed during the Warranty Period, has been completed in accordance with the Contract, save in respect of the Punch List Items;
- (ii) all outstanding work which NATRAX Representative requires to be completed before issue of the Completion Certificate, has been satisfactorily completed;
- (iii) the Contractor has been issued the acceptance certificate post the completion of the Acceptance Tests; and
- (iv) all the training obligations of the Contractor to be performed during the Execution Period have been satisfactorily completed in accordance with the Contract;
- (v) the Contractor has provided to the NATRAX Representative any amendment or update of any information and documentation , which is required by the NATRAX Representative;
- (vi) any Spare Parts and other items which the Contractor is required to supply and deliver to NATRAX in accordance with the Contract and which were used or consumed during the any of the tests mentioned in the Contract have been replaced by the Contractor at its own cost.

22.2 The Contractor acknowledges that until the Works are Complete, NATRAX shall not be able to commence the Project Facility operations.

### **22.3 Application for and issue of the Completion Certificate**

22.3.1 The Contractor shall make a written application to NATRAX Representative with a copy to NATRAX for a Completion Certificate no later than [2 (two)] days of from the conclusion of the Acceptance Tests. Such application shall be accompanied by an undertaking to finish any outstanding work in accordance with **Clause 22.3.2**.

22.3.2 NATRAX Representative shall, within [7 (seven)] days after receiving the Contractor's application in accordance with **Clause 22.3.1** issue the Completion Certificate to the Contractor with a copy to NATRAX and NATRAX stating the date upon which the Works achieved Completion and specifying any outstanding work, if any, which the Contractor is required to complete and the period or periods within which such work is required to be completed, such work to include:

- (a) the Punch List Items; or
- (b) any other outstanding work notified to the Contractor by NATRAX Representative.

### **22.4 Completing Punch List Items and any other outstanding works**

22.4.1 During the Acceptance Tests, the Contractor shall provide in writing to NATRAX Representative reasonable notice of its reasonable requirements with respect of access to and use of the Works for the carrying out of:



- (i) the outstanding Works including any Punch List Items specified in the Completion Certificate;
  - (ii) any rectification, repair or replacement of any items in accordance **Clause 23.1**.
- 22.4.2 NATRAX shall use reasonable endeavours to secure such access for the Contractor. When carrying out such work the Contractor shall comply with all reasonable instructions of NATRAX with regard to the safety of the Works and the ongoing performance by NATRAX of its obligations and shall complete the work in such manner that, so far as reasonably practicable, does not prevent, hinder or otherwise interfere with the performance of NATRAX of its obligations and the exercise of its rights during the Project Facility operations period.
- 22.4.3 The Contractor shall complete any Punch List Items specified in the Completion Certificate within the time instructed reasonably by NATRAX Representative.

### **23. WARRANTY PERIOD**

- 23.1 The NATRAX Representative shall have the right, but not the obligation, to instruct the Contractor in writing to Execute all such work of repair, amendment, replacement of any parts of the Equipment, rectification of defects, imperfections or other faults in the Works and any part thereof, as the case may be, at any time during the Warranty Period.
- 23.2 All such work instructed under **Clause 23.1** shall be carried out by the Contractor at its own expense.
- 23.1.3 At all times during the Warranty Period NATRAX shall be fully entitled to Execute all work of repair, amendment, replacement of any parts of the Equipment, rectification of defects, imperfections or other faults in the Works and any part thereof, as the case may be, by its own workmen or by other contractors and if the necessity thereof shall in the opinion of the NATRAX Representative be due to the use of materials or workmanship not in accordance with the Contract or the neglect or failure on the part of the Contractor, NATRAX shall be entitled to recover from the Contractor the cost thereof or may deduct the same from any monies due or that become due to the Contractor.

### **23.2 Continuing Obligations**

- 23.2.1 Notwithstanding the expiry of the Warranty Period the Contractor shall remain liable for the fulfilment of any obligation incurred under the provisions of the Contract prior to the expiry of the Warranty Period which remains unperformed upon the expiry of the Warranty Period and, for the purposes of determining the nature and extent of any such obligation, the Contract shall be deemed to remain in force between the Parties.
- 23.2.2 Notwithstanding the expiry of the Warranty Period and / or maintenance contract if any, the Contractor shall provide necessary Spare Parts, sales, services and support for the performance of the Equipment on payment basis to be mutually agreed to between the Contractor and NATRAX Representative.

### **23.3 Maintenance Obligations**

- 23.3.1 The Contractor shall take full responsibility for the maintenance and upholding of the permanent structures at the Project Site and the site offices (if any) used by the Contractor during the Warranty Period.

23.3.2 The Contractor shall ensure that its maintenance obligations are performed in such a manner as will permit the proper performance by NATRAX in its operation of the Project Facility and so as not to affect the activities of the Project Facility users.

## **24. CHANGES**

### **24.1 General**

24.1.1 The Contractor shall not carry out any Change except as directed by NATRAX Representative. The NATRAX Representative shall have the power to, from time to time, for the Execution of the Works, to instruct the Contractor, by notice in writing to carry out Changes without prejudice to the Contract.

24.1.2 The Contractor acknowledges and accepts that no Change shall in any way vitiate or invalidate the Contract.

24.1.3 Subject to the terms of this **Clause 24**, the Contractor will be required to perform any Change howsoever initiated and be bound by the same conditions as far as applicable, as though the said Changes occurred in the Contract.

24.1.4 NATRAX Representative reserves the right to increase or decrease the quantities of items under the Contract but without any change in the unit price for such item. Such a Change in the quantity shall not be subjected to any limitations for the individual items but the total Change for all such items shall be limited to the estimate (if any) provided.

### **24.2 Procedure for Changes**

24.2.1 NATRAX Representative has the right to initiate a Change at any time by either:

- (i) instructing in writing a Change Order in which case the Contractor shall comply with **Clause 24.2**;or
- (ii) issuing a written notice proposing a Change (a "Change Notice").

24.2.2 Within [14 (fourteen)] days of receipt of a Change Notice, the Contractor shall provide to NATRAX Representative a written statement setting out detailed particulars of any effect the proposed Change would have on the Works and Related Works and/or on any other provisions of this Contract if the proposed Change is effected (a "Change Notice Response").

24.2.3 Following receipt of a Change Order, the Contractor must immediately implement the Change subject to the following terms:

- (i) the Contract Sum will, be amended in accordance with the principles to be mutually agreed between NATRAX and the Contractor;
- (ii) any extension of time will be determined and NATRAX Representative is entitled to take account of the Contractor's estimate (if any) when determining such extension of time;
- (iii) these Conditions (as amended from time to time) will apply to the Change as though it formed part of the Works.

24.2.4 Following receipt of a Contractor's Change Notice Response, NATRAX Representative may either:

- (i) issue a written Change Order to the Contractor, on such terms and conditions as NATRAX Representative may deem appropriate; or
- (ii) withdraw the Change Notice.

The Contractor shall not be entitled to any costs or extension of time as a result of preparing a Change Notice Response.

24.2.5 If:

- (i) the Contractor fails to comply with its obligation under **Clause 24.2**; or
- (ii) if the NATRAX Representative rejects the information provided by the Contractor pursuant to **Clause 24.2** ;

NATRAX shall be entitled, following notification to the Contractor, to engage a third party to perform the Change, in which case the Contractor shall cooperate fully with any such third party.

### **24.3 Contractor's Changes**

24.3.1 The Contractor may, from time to time during its performance of the Contract, propose to NATRAX Representative any Change which the Contractor considers:

- (i) necessary for the proper Execution of the Works; or
- (ii) which adopted will:
  - (a) substantially reduce the cost of Executing, maintaining and operating the Works or the Project; or
  - (b) improve the efficiency or value to NATRAX of the Completed Works (including a reduction in the life cycle costs associated with the Project); or
  - (c) otherwise be of benefit financial or otherwise, to NATRAX

and such proposal must be in writing and shall be in the form of and contain such information as required of a Change Notice Response referred to in **Clause 24.2.2**.

24.3.2 Where **Clause 24.3.1(i)** applies NATRAX Representative may either:

- (i) issue a written Change Order to the Contractor and the Contractor shall implement the Change in accordance with **Clause 24.2.2**; or
- (ii) reject the Change proposed by the Contractor.

The Contractor shall not be entitled to any costs or extension of time as a result of preparing a proposal in accordance with **Clause 24.3.1**.

24.3.3 NATRAX Representative may, at its sole discretion, accept or reject the Contractor's proposed Change and failure by NATRAX Representative to respond within [14 (fourteen)] days shall be deemed to be a rejection.

24.3.4 If in the opinion of the Contractor, any Change proposed by NATRAX Representative prevents or is likely to prevent the Contractor from fulfilling his obligations under the Contract, the Contractor shall notify the NATRAX Representative thereof in writing and the NATRAX Representative shall decide forthwith whether or not the same shall be carried out by the Contractor. In case the NATRAX Representative confirms that the Change shall be carried out, the Contractor's obligations under the Contract shall be modified to an extent as may be mutually agreed to between the Parties.

#### 24.4 Omissions

24.4.1 The Contractor acknowledges that a Change may involve the omission of any part or parts of the Works up to 10% (ten percent) of the total Contract Price and the Contractor acknowledges and agrees that NATRAX may engage others to carry out that part or parts so omitted.

24.4.2 On the omitted Works, the Contractor shall be entitled to payment, 10% (ten percent) of the value of omission which shall include Contractor's profits and overheads.

#### 24.5 Valuation of Changes

24.5.1 The valuation of a Change to be paid by NATRAX to the Contractor, or by the Contractor to NATRAX, as the case may be, shall be calculated as follows:

- (i) the Parties will endeavour to agree to the valuation; and
- (ii) failing agreement under **Clause** 24.5.1(i) within a reasonable time (but no more than [28 (twenty-eight)] days after the NATRAX Representative's direction in accordance with **Clause** 24.2.4 (i), NATRAX will determine the valuation, subject to the following:
  - (a) in the event that the Change involves additional works, the increase to the Contract Price will be no more than the estimate (if any) provided; and
  - (b) in the event that the Change involves the omission of part of the Works or results in a saving to the Contractor, the reduction in the Contract Price will be no less than the estimate (if any);

the following valuation principles shall apply:

1. where the varied work is similar in character to and Executed under similar conditions to work priced as per the Payment Schedule , such work shall be valued at the applicable rates and prices in the Contract;
2. where the varied work is not of a similar character to or not Executed under similar conditions to work priced in the price breakdown then the NATRAX Representative shall establish a new rate for such work based upon the rates or prices contained in the Contract insofar as may be reasonable making such allowances thereto by way of additional or deductions as may be necessary to take account of any dissimilarity in the character of the work or the conditions under which the work was Executed;
3. where work is omitted, the rates and prices in the Contract shall be used to value the work omitted provided that if part only of an item of work is omitted their NATRAX Representative shall establish a new rate or price by which to value the omitted work which shall be fair and reasonable.

4. where the varied work cannot be properly valued in accordance with the provisions of **Clauses** 24.5.1(ii) (1), (2) or 3 above, the NATRAX Representative shall establish a new rate or price for such work which shall be fair and reasonable.

24.5.2 Without prejudice to **Clause** 24.2, the NATRAX Representative may, in its absolute discretion, instruct a Change Order in circumstances where, in its absolute discretion, the Contractor will fail to meet any of its obligations under the Contract or where it is necessary on account of some default or breach of the Contract by the Contractor or those for whom it is responsible for, in which case the Contractor shall not be entitled to any extension of time or any increase in the Contract Sum, and any adjustment to the Time for Completion.

## **25. INTELLECTUAL PROPERTY**

### **25.1 Intellectual Property**

25.1.1 All Intellectual Property which is proprietary to NATRAX or the Contractor shall be the exclusive property of NATRAX or the Contractor respectively, as the case maybe.

25.1.2 All Intellectual Property jointly developed by NATRAX and the Contractor or developed by the Contractor for the purposes of the performance, execution and implementation of the Works shall be the exclusive property of NATRAX. The Contractor shall however be entitled to use such Intellectual Property for a period of 5 (five) years without payment of any charges to NATRAX provided that such Intellectual Property is used by the Contractor itself for development of facilities owned by the Contractor. The use of any Intellectual Property for any facility other than facility owned by the Contractor shall be permitted subject to the execution of a non-exclusive and revocable licence agreement with NATRAX on such terms and conditions as maybe agreed to between NATRAX and the Contractor.

### **25.2 Infringing Matter**

25.2.1 The Contractor warrants and represents that:

- (i) it has all rights and licences necessary to grant, assign and transfer to NATRAX licences and assignments in accordance with this **Clause** 25.1.2; and
- (ii) there is and will be no infringement of any Intellectual Property, in respect of the rights licensed and transferred to NATRAX pursuant to **Clause** 25.1.2 or assigned otherwise used in connection with the Works.

25.2.2 The Contractor shall indemnify and hold harmless NATRAX against all issues, claims, damages, liabilities, costs and expenses (including legal costs) incurred by it in respect of any breach of the warranty in **Clause** 25.2.1.

25.2.3 If either NATRAX or the Contractor is prevented from operating or using the Works or any Intellectual Property or any part thereof ("Infringing Matter"), the Contractor must at its own expense, in addition to its other obligations under the Contract, take all steps necessary to procure for NATRAX the right to operate or use the Infringing Matter for its intended purpose.

### **25.3 Patent Rights and Royalties**

25.3.1 Royalties and fees for patents covering equipments, materials, articles, apparatus, devices or processes used in the Works shall be deemed to have been included in the Contract Sum. The Contractor shall satisfy all demands that may be made at any time for such royalties or fees and the

Contractor shall be liable for any damages or claims for patent infringements and shall keep NATRAX indemnified in this regard. The Contractor shall, at his own cost and expense, defend all suits or proceedings that may be instituted for alleged infringement of any patents involved in the Works and in case of any award of damages, shall pay for such damages. In the event any apparatus or equipment or any part thereof furnished by the Contractor, is in a suit or proceeding is held to constitute infringement and its use is enjoined, the Contractor shall at his option and his own expense, either procure for NATRAX, the right to continue the use of such apparatus, equipment or part thereof, replace it with non-infringing apparatus or equipment or modify it so it becomes non-infringing.

## **26. INSURANCES**

### **26.1 Project Facility Insurances**

NATRAX shall at its cost and expense, purchase and maintain in force (or procure that they are taken out and maintained in force) with reputable insurers, the Project Facility Insurances.

### **26.2 Contractor Insurances**

The Contractor shall at its cost and expense, purchase and maintain in force (or procure that they are taken out and maintained in force) with reputable insurers, the Contractor's Insurance.

### **26.3 Required Insurances**

The terms of the Required Insurances shall entitle NATRAX to maintain the policies in force after termination of the Contractor's employment under the Contract.

### **26.4 Evidence**

Either Party, at the request of the other shall, from time to time, provide to the other Party copies of all insurance policies (or appropriate endorsements, certifications or other satisfactory evidence of insurance) obtained in accordance with the Contract (including the provision of copies of renewal confirmations as soon as possible).

### **26.5 Premiums**

26.5.1 NATRAX will bear the cost of all insurance premiums in relation the Project Facility Insurances, and the Contractor will bear the cost of all insurance premiums in relation to the Contractor's Insurances.

## **27. PAYMENT**

### **27.1 Payment Schedule**

The Payment Schedule shall be as per the Special Conditions of Contract.

### **27.2 Terms of Payment**

The Terms of Payment shall be as provided in the Special Conditions of Contract.

### **27.3 Currency of Payment**

The Contract Price and all payments to be made to the Contractor in respect thereof shall be Indian Rupees

**27.4 NATRAX right to set off**

NATRAX shall, notwithstanding any provision to the contrary included in the Contract, be entitled to deduct from and set off against any amount due to the Contractor under the Contract, any amount or amounts which the Contractor is liable to pay to NATRAX under the Contract.

**27.5 Advance Payment**

The Contractor shall, together with Request for Payment containing an application for the Advance Payment, provide to NATRAX an Advance Payment Guarantee, valid for atleast 12 months from a Scheduled bank in India to which NATRAX has given its prior approval in writing and in a sum equal to the Advance Payment. NATRAX shall pay the Advance Payment within [7(seven)] days of the receipt of the Advance Payment Guarantee. The advance payment shall be charged with an interest 6%annum from the date of issue of advance payment and the interest will be calculated on unadjusted amount from time to time.

**28. TAXES AND DUTIES**

**28.1 Contractor to pay Taxes**

Unless specifically stated elsewhere in the Contract, the Contractor is solely liable for payment of, and warrants that it will pay, or ensure the payment of:

- 28.1.1 all Taxes imposed and assessments made in relation to the Contractor's Equipment;
- 28.1.2 all contributions payable by any Applicable Law, award and pursuant to any contract with all industrial or trade union or other association of employees or otherwise with respect to or ascertained by reference to the wages, salaries or other compensation paid to employees of the Contractor or its Subcontractors in respect of the Works, including Taxes or contributions for workers' compensation, unemployment or sickness benefit, old age benefit, welfare funds, pensions and disability insurance;
- 28.1.3 the cost of all import or export licences if required in respect of the Contractor's Equipments and Spare Parts;
- 28.1.4 the cost of any port dues including (but not by way of limitation) wharfage dues, storage, charges, quay rent, craneage, shipping dues, pilotage fees, anchorage, berthage and mooring fees, quarantine dues, loading, portorage and overtime fees for any goods, materials and Contractor's Equipments and Spare Parts to be used in connection with the Execution of the Works;
- 28.1.5 all charges and other expenses in connection with the landing and shipment of all goods and equipment and any part thereof, materials and other things of whatsoever nature brought into or despatched from India for the purposes of the Contract; and
- 28.1.6 the Contractor indemnifies and keeps indemnified NATRAX against all liability for payment of all of the above Taxes, assessments and contributions, duties, costs and fees and all liability arising in respect of any non-payment;

28.1.7 The Contractor supplying indigenously manufactured Equipment shall be responsible for payment of all Taxes up to the delivery of such Equipment to the Project Site.

## **28.2 Withholding Tax/Income Tax deducted at source**

The Contractor shall be responsible for payment of all Taxes on the income, surcharge on income tax and corporate tax in respect of the Contract, irrespective of the mode of contracting. NATRAX or NATRAX Representative shall not in any way be liable for payment of such taxes. NATRAX shall be entitled to deduct in accordance with Applicable Law, Income Tax or withholding tax or other deductions (as the case may be), from any payments made to the Contractor, and the amount so deducted shall be deemed to be a payment made to the Contractor. NATRAX shall provide a certificate certifying the deduction so made.

## **28.3 Exemptions and Concessions**

28.3.1 The benefit of any Tax exemption or concessional rate available when the Contractor purchases Equipment will be passed on to NATRAX through a reduction in the Contract Sum.

28.3.2 Where NATRAX and its contractors (including the Contractor) are entitled to an exemption or concession concerning any Tax to be levied in India in respect of the Equipment and/ or goods supplied under the Contract, NATRAX must use reasonable endeavours to enable the Contractor to claim such concession or exemption.

## **28.4 General**

28.4.1 The Contractor must provide sufficient information regarding the nature and cost of the Works to enable all the relevant statutory obligations of NATRAX that are dependent upon that information to be satisfied.

28.4.2 The Contractor shall fully indemnify, save harmless and defend NATRAX including its officers, servants, agents and subsidiaries as well as the NATRAX Representative from and against any and all loss and damages arising out of or with respect to failure of the Contractor (a) to comply with Applicable Laws and Applicable Clearances and/or (b) to make payments of Taxes relating to the Contractor's Subcontractors and representatives income or other Taxes required to be paid by the Contractor without reimbursement hereunder and/or (c) to pay amounts due as a result of materials or services furnished to the Contractor or any of its Subcontractors which are payable by the Contractor or any of its Subcontractors or any other person employed or engaged by the Contractor in connection with the Works.

## **29. OPERATIONS AND MAINTENANCE MANUALS AND TRAINING**

### **29.1 Operation & Maintenance Manual**

29.1.1 The Contractor must obtain for NATRAX all relevant instruction manuals in respect of the design, installation, erection, supply, extension, repair, operation and maintenance of the Works, any parts thereof and any special directions or recommendations from the relevant manufacturers of any Equipment and must itself provide written instructions where such are not available from such manufacturers.

29.1.2 The Operation & Maintenance Manual must be prepared:



- (i) based on all relevant instruction manuals and special directions or recommendations from the relevant manufacturers of any Equipment or parts thereof obtained in accordance with **Clause 29.1.1.**
  - (ii) so as to provide NATRAX with such detail and information as may be necessary for use by NATRAX in order to operate, maintain, dismantle, reassemble, adjust, upkeep and uphold all parts of the Works and the Works as a whole;
  - (iii) based on a maintenance plan for each part of the Works that is consistent with and intended to ensure that, each part achieves any design life specified in respect thereof in the Contract;
  - (iv) based on Good Industry Practice;
  - (v) in full consideration of the experience, level and technical background of NATRAX personnel and the Contractor's training-related obligations under the Contract.
- 29.1.3 During the period of the Acceptance Tests, the Contractor must update and revise the Operation & Maintenance Manual as necessary and as may be required by NATRAX Representative, to reflect the completion of all of the Contractor's obligations under the Contract including all defects and warranty obligations.
- 29.1.4 The Contractor warrants that adherence to the Operation & Maintenance Manual will facilitate and ensure the operation and maintenance of the Project Facility at the levels of capacity, safety, efficiency, reliability and maintainability required by the Contract.
- 29.1.5 Within 1 (one) month prior to the Warranty Period, the Contractor shall update and revise the Operation & Maintenance Manual as necessary and as may be required by NATRAX Representative.
- 29.2 Training**
- 29.2.1 The Contractor shall provide comprehensive training in the operation and maintenance of the Works to Project Facility operation trainers and Project Facility operations personnel in accordance with the Training Plan mutually formalised or to be formalised between the Contractor and the NATRAX Representative ("Training Plan") in order to procure NATRAX objective of the timely, efficient, economic and safe operation and maintenance of the Works and the Project Facility.
- 29.2.2 Without limiting its obligations under the Contract, the Contractor shall adhere to the principles and procedures contained in the approved Training Plan, and any approved amendments or supplements thereto. The Contractor shall revise the Training Plan from time to time as directed by NATRAX Representative and as and when further Project Facility operation trainers and Project Facility operations personnel are required by NATRAX to be trained, which training shall be undertaken by the Contractor without the right to any additional payment or an extension of time.
- 29.2.3 During such period as they may be being so trained or retrained by, or otherwise under the control of the Contractor pursuant to the provisions of the Contract, the Project Facility operation trainers and Project Facility operation personnel shall for the purposes of control and responsibility (but for the avoidance of doubt without any obligation to provide remuneration to such personnel or any responsibility in respect of Taxation and insurance of such personnel) to the extent permitted by the Applicable Laws, be deemed to be the servants of the Contractor.
- 29.2.4 For the purposes of providing the training pursuant to this **Clause 29.2** and so as to enable the Project Facility operation trainers and Project Facility operations personnel to familiarise themselves

with the Works, the Contractor shall allow and procure access as necessary to the Project Site, places off the Project Site where Equipment is being manufactured and tested and the Works.

29.2.5 The Contractor represents and warrants that:

- (i) the numbers, qualifications and levels of experience specified by the Contractor in its Training Plan shall be such as is required to provide NATRAX with Project Facility operation trainers and Project Facility operations personnel in sufficient numbers and of sufficient qualifications and experience properly to operate and maintain the Project Facility in accordance with the Contract and the Operation & Maintenance Manual; and
- (ii) the training of adequate numbers of suitably qualified Project Facility operation trainers and Project Facility operations personnel has been or will be fully and properly undertaken under the provisions and in accordance with the terms and conditions of the Contract in order to secure the availability of a sufficient number of skilled and experienced personnel properly to undertake at all times during the Project Facility operations period in a timely, efficient, economic and safe manner, under the supervision of NATRAX or otherwise, the day to day operations of the Project Facility and the performance of routine and preventative maintenance thereof.
- (iii) The cost and expense of complying with its obligations under this **Clause 29.2** shall be deemed to have been included in the Contract Sum by the Contractor provided that the accommodation and travel costs of the Project Facility operation trainers and Project Facility operations personnel incurred in training pursuant to this **Clause 29.2** shall be borne by NATRAX.

### **29.3 Manufacturer's Warranties**

29.3.1 Without prejudice to the Contractor's warranties in the Contract, the Contractor shall obtain for NATRAX, the Required Manufacturers Warranties for the Equipment in accordance with Technical Conditions of Contract and must obligate the respective manufacturers at their sole expense to rebuild, remove and replace Equipment which has defects and deficiencies in substantially the same manner and on terms and conditions to those contained in the Contract and, where required by NATRAX, must travel to and from and perform such activities at the Project Site.

29.3.2 At the request of NATRAX Representative, the Contractor must seek to obtain from the manufacturers of the Equipment referred to in **Clause 29.3.1** extended warranty coverage.

29.3.4 The warranty period for any Equipment or any part must be extended for a period equal to the period that such item cannot be operated as a result of a defect and deficiency or as a result of any deficiency or damage caused by another item of Equipment, and in respect of extended warranties, the Contractor must use its best endeavours when requested by NATRAX to assist in enforcing such warranties and guarantees.

29.3.5 The installation of any and all Equipment in the Works must be in strict accordance with the manufacturers' requirements and the Contract, and without prejudice to the Contractor's warranties contained in the Contract, in the event that NATRAX seeks to enforce a claim based upon a manufacturer's warranty, and if such manufacturer fails to honour its warranty based in whole or in part, on a claim of defective installation, NATRAX is entitled to enforce the manufacturer's warranty against the Contractor in accordance with the terms of the warranty, or, at NATRAX option, the Contractor must defend and indemnify NATRAX from and against any liability in respect of such

defect and deficiency, provided however, that a claim of defective installation is not a defence to any warranty claim by NATRAX.

**30. NATRAX**

**30.1 NATRAX obligations**

Notwithstanding anything contained in the Contract and in addition to and not in derogation or substitution of any of its other obligations under the Contract, NATRAX shall:

- (i) use reasonable endeavours to assist the Contractor to obtain from Statutory Authorities all Applicable Clearances other than those which are NATRAX responsibility.
- (ii) use reasonable endeavours to assist the Contractor in the procurement of the peaceful use of the Project Site by the Contractor under and in accordance with the provisions of the Contract and without any let or hindrance from any Relevant Authority or persons claiming through or under it/them; and
- (iii) upon written request from the Contractor, use reasonable endeavours to assist the Contractor with procuring assistance in obtaining access to all necessary infrastructure facilities and utilities, including water, electricity and telecommunication facilities at rates and on terms no less favourable to the Contractor than those generally available to commercial customers receiving substantially equivalent facilities/utilities.

**31. CONTRACTOR'S COVENANTS**

**31.1 Urgent repairs**

If, by reason of any accident or failure or an emergency or other event occurring to, in or in connection with the Works or any part thereof during the period of the Contract, any repair shall, in the opinion of NATRAX Representative, be urgently necessary and the Contractor is unable or unwilling or not available at once to do such repair, NATRAX may by its own or other workmen do such repair as NATRAX Representative may consider necessary. If the repair so done by NATRAX is work which, in the opinion of the NATRAX Representative, the Contractor was liable to do at its own expense under the Contract, all costs and charges properly incurred by NATRAX in so doing shall within [14 (fourteen)] days from the date of receipt of the claim be paid by the Contractor to NATRAX or may without prejudice to any other method of recovery, be deducted by NATRAX from any monies due or which may become due to the Contractor or may be recovered as a debt.

**31.2 Improper Equipment**

The NATRAX Representative, without prejudice to the generality of its powers, shall have the authority to issue instructions (which shall be effected by the Contractor with all reasonable speed and at its sole expense without any right to an extension of time) from time to time for:

- 31.2.1 the removal from the Project Site, within such time or times as may be specified in the instruction, of any Equipment or any other part of the Works which, in the opinion of the NATRAX Representative, are not in accordance with the Contract;
- 31.2.2 the substitution of proper and suitable Equipment or any other part of the Works;
- 31.2.3 the removal and proper re-Execution, notwithstanding any previous test thereof or interim payment therefor, of any work which, in respect of any workmanship by the Contractor is

not, in the reasonable opinion of the NATRAX Representative, in accordance with the Contract; and

31.2.4 such testing, as it may consider necessary or desirable following any instruction issued pursuant to this Clause.

### **31.3 Illegal gratification**

31.3.1 Bribe, commission, gift or advantage: Any bribe, commission, gift or advantage given or offered by the Contractor directly or through its partner, agent, officer or employee of NATRAX, or to any person / institution connected with NATRAX, in relation to obtaining or the execution of this or any other Contract with the NATRAX Representative or NATRAX, shall in addition to any criminal liability which the Contractor may incur, subject the Contractor to termination of the Contract and all other Contracts with NATRAX, and liability for payment of any loss or damage to NATRAX, resulting from such termination. NATRAX shall be entitled to deduct the amounts so payable from any money / moneys due to the Contractor alone, or jointly under the Contract or any other contract with NATRAX. The Contractor shall not be due, nor shall be paid any compensation whatsoever for any loss, alleged or actual, suffered by the Contractor when the Contract is so terminated.

31.3.2 Monetary dealing of Contractor with employee of NATRAX or NATRAX Representative: The Contractor shall not lend or borrow money from, or enter into any monetary dealings or transactions directly or indirectly, with any employee of NATRAX Representative or NATRAX, and if the Contractor does so, NATRAX shall be entitled forth-with to terminate the Contract and all other Contracts with NATRAX. The Contractor shall be liable to pay compensation for any loss or damage to NATRAX resulting from such termination and NATRAX shall be entitled to deduct the amounts so payable from the money(s) due to the Contractor.

31.3.3 Settlement of dispute as to commission of such offence: If any question or dispute as to the commission of any such offence arises under Sub-clauses (bribe, commission, gift or advantage) and (monetary dealer of Contractor with employee of NATRAX or NATRAX Representative), the same shall be settled by NATRAX Representative, in such manner as the NATRAX Representative shall consider fit and proper, and such decision shall be final and binding.

### **31.4 Avoidance of Damage to Roads and Bridges**

31.4.1 Contractor to prevent damage to roads and bridges

31.4.1.1 The Contractor shall use every reasonable means to prevent any of the highways, railway or bridges communicating with or on the routes to the Project Site (including access and link roads) from being damaged or injured by any traffic of the Contractor or any of its Subcontractors. In particular the Contractor shall select routes, choose and use vehicles and restrict and distribute loads so that any such extraordinary traffic as will inevitably arise from the moving of plant and materials to and from the Project Site shall be limited as far as reasonably possible and so that no unnecessary damage or injury may be occasioned to such highways, railways and bridges. In case of any damage or injury to the same, the Contractor warrants indemnifying and holding harmless NATRAX from and against claims, proceedings, damages, costs, charges or expenses in respect of the said damage.

31.4.1.2 Should it be found necessary for the Contractor to move one or more loads of Contractor's Equipment, machinery or pre-constructed units or part of units of works over part of a highway railway or bridge, the moving whereof is likely to damage any highway, railway or bridge unless special protection or strengthening is carried out,

then the Contractor shall before moving the load on to such highway, railway or bridge give notice to the appropriate authority of the load to be moved and obtain the required approval of the said authorities for its proposals for protecting or strengthening the said highway, railway or bridge. The Contractor shall be responsible for the cost and expenses of any necessary work for the protection or strengthening the said highway, railway or bridge.

#### 31.4.2 Access routes

The Contractor shall be deemed to have been satisfied as to the safety, suitability and availability of access routes up to the Project Site. Without prejudice to the generality of the foregoing:

31.4.2.1 NATRAX shall not be responsible for any claims which may arise from the use or otherwise of any access route to, from and over the Project Site;

31.4.2.2 NATRAX does not guarantee the suitability or availability of particular access routes and all costs due to non-suitability or non-availability, for the use required by the Contractor, of access routes shall (as between the Parties) be borne by the Contractor;

31.4.2.3 the Contractor shall provide such signs or directions along access routes to, from and over the Project Site as required by the Contract and shall obtain any permission which may be required for the provision of such signs and directions.

#### 31.4.3 Contractor not to interfere

All operations necessary for the Execution of the Works or any part thereof shall, so far as compliance with the requirements of the Contract permits, be carried on so as not to interfere unnecessarily or improperly with any or with the convenience of the public, or the access to, use and occupation of public or private roads or footpaths or any properties (adjoining the Project Site or otherwise) whether in the possession of NATRAX or of any other person.

#### 31.4.4 Waterborne traffic

Where the nature of the Works is such as to require the use by the Contractor of waterborne transport the forgoing provisions of this Clause 31.4 shall be construed as though "road" included a lock, dock, sea wall or other structure related to a waterway and "vehicle" included craft, and shall have effect accordingly.

### 31.5 Care of the Works, Liability for Accidents and Damage

#### 31.5.1 Contractor to take full responsibility for care of the Works

31.5.1.1 The Contractor shall bear full risk in and take full responsibility for the care of the Works and Equipment (and, without limitation for the care of any works carried out on the Project Site by other contractors) from the Commencement Date until [14 (fourteen)] days after the date of issue of the Completion Certificate, when such responsibility for the care of the Works and Equipment shall pass to NATRAX as instructed to the Contractor by the NATRAX Representative.

Provided that the Contractor shall take full responsibility for (i) the care of any outstanding Works and Equipment for incorporation therein which it undertakes to

finish during the Warranty Period until such outstanding Works have been completed pursuant to the Contract and for (ii) the care of the Works or any part thereof which may require repair or remedy during the Warranty Period and for any part of the Works affected thereby, for the period that such Works are under repair or remedy by the Contractor.

#### 31.5.2 Responsibility to rectify loss or damage

31.5.2.1 If any loss or damage happens or occurs to the Works or any part thereof, or to any Equipment during the period for which the Contractor is responsible for their care the Contractor shall rectify the loss or damage at the Contractor's risk and cost, so that the Works and Equipment conform in every respect with the provisions of the Contract and are to the satisfaction of the NATRAX Representative.

#### 31.5.3 Damage to persons and property

The Contractor indemnifies and keeps indemnified NATRAX against all losses and claims for death, injuries or damage to any person or any property whatsoever which may arise out of or in consequence of the Execution of the Works and the remedying of any defects therein and against all claims demands, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

### 31.6 Clearance of the Project Site

On Completion of the Works, the Contractor shall clear away and remove from the Project Site all equipments, surplus materials, rubbish and temporary works of every kind and leave the whole of the Project Site and the Works clean and in a workmanship condition, tidy and in an aesthetically pleasing appearance to the satisfaction of NATRAX and the NATRAX Representative. The Contractor shall, unless otherwise instructed in writing by NATRAX Representative, remove all signs of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary works, stockpiles of excess or waste materials and other vestiges of construction prior to the issue of the Completion Certificate.

### 31A. SUSPENSION OF WORKS

NATRAX reserves the right to suspend and re-instate the Execution of the whole or any part of the Works or the delivery of any Equipment, without invalidating the provisions of the Contract. The order for suspension or re-instatement shall be issued by the NATRAX Representative to the Contractor in writing vide a suspension order and the same shall be binding on the Contractor. The Contractor shall during any suspension, properly protect and secure the Works and the goods and Equipments and shall not remove any goods or Equipments from the Project Site without the prior consent of the NATRAX Representative and the Contractor shall take all reasonable measures to minimise the costs and losses of the suspension to NATRAX. The Contractor shall undertake any necessary action instructed by the NATRAX Representative to remedy the circumstances that led to the suspension and the Contractor shall notify the NATRAX Representative immediately upon completing such action. Upon resumption of the Works, the Contractor shall immediately undertake an examination of the affected parts of the Works and shall make good any deterioration or defect in or loss of the Works, the Equipment or any part thereof that may have occurred during the suspension. The Time for Completion of the Works shall not be extended if the issue such a suspension order was due in any way to the act, default, omission or breach by the Contractor.

**32. FORCE MAJEURE**

**32.1 Force Majeure - Obligations of the Parties**

32.1.1 "Force Majeure" shall mean any event beyond the control of NATRAX or of the Contractor, as the case may be, and which is unavoidable notwithstanding the reasonable care of the party affected, and which could not have been prevented by exercise of reasonable skill and care and good industry practices and shall include, without limitation, the following:

- (i) War, hostilities, invasion, act of foreign enemy and civil war;
- (ii) Rebellion, revolution, insurrection, mutiny, conspiracy, riot, civil commotion and terrorist acts;
- (iii) Strike, sabotage, unlawful lockout, epidemics, quarantine and plague;
- (iv) Earthquake, fire, flood or cyclone, or other natural disaster.

As soon as reasonably practicable but no more than 48 (forty-eight) hours following the date of commencement of any event of Force Majeure, an Affected Party shall notify the other Party of the event of Force Majeure setting out the date, nature, extent, proof and the damage cause by the Force Majeure event.

**32.2 Meetings with NATRAX Representative**

As soon as reasonably practicable and in any case within [5 (five)] days of notification by the Affected Party in accordance with the preceding **Clause 32.1**, the Parties shall along with NATRAX Representative and others, meet and hold discussions and where necessary conduct physical inspection and/or survey of the Works to assess the impact and formulate mitigation measures for the Force Majeure Event.

**32.3 Performance obligations**

32.3.1 If the Affected Party is rendered wholly or partially unable to perform any of its obligations under the Contract because of an event of Force Majeure, it shall be excused from performance of such obligations to the extent it is unable to perform provided that in case the Affected Party is the Contractor, the Contractor shall be entitled to an extension of time.

32.3.2 When the Affected Party is able to resume performance of its obligations under the Contract, it shall give to the other Party written notice to that effect forthwith and shall promptly resume performance of its obligations hereunder.

32.3.3 The Affected Party shall continue to perform such of its obligations which are not affected by the event of Force Majeure and which are capable of being performed in accordance with the Contract.

**32.4 Liability for other losses, damages etc.**

Save and except as expressly provided in this **Clause 32** neither Party hereto shall be liable in any manner whatsoever to the other Party in respect of any loss, damage, cost, expense, claims, demands and proceedings relating to or arising out of occurrence or existence of any event of Force Majeure.

**32.5 Exceptions to Force Majeure**

None of the following events shall be construed to relieve any Party of its obligations hereunder by reason of **Clause 32**:

- (i) any changes in market conditions including without limitation changes that affect the supply prices of the Goods;
- (ii) commercial impracticability or hardship;
- (iii) a Party's lack of funds.

### **33. DISPUTE RESOLUTION PROCEDURE**

#### **33.1 Amicable Resolution and Mediation**

33.1.1 Save where expressly stated to the contrary in the Contract, any dispute, difference or controversy of whatever nature between the Parties, howsoever arising under, out of or in relation to the Contract including disputes, if any, with regard to any acts, decision or opinion of NATRAX Representative and so notified in writing by either Party to the other (the "Dispute") shall in the first instance be attempted to be resolved amicably in accordance with the procedure set out in **Clause 33.1.2** below.

33.1.2 Either Party may require such Dispute to be referred to a person nominated by each Party, for amicable settlement. Upon such reference, the two 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.

33.1.3 In the event that the Dispute in question is not resolved amicably within 15 (fifteen) days of such meeting between the Parties in accordance with **Clause 33.1.2** either Party may refer the Dispute to arbitration in accordance with **Clause 33.2**.

#### **33.2 Arbitration Procedure**

Save where expressly stated to the contrary in the Contract, any Dispute shall be finally settled by binding arbitration under the Arbitration and Conciliation Act 1996 Act and in accordance with the UNICTRAL rules (the "Arbitration Rules") by three arbitrators appointed in accordance with the Arbitration Rules.

#### **33.3 Place of Arbitration**

The place of arbitration shall be New Delhi.

#### **33.4 English Language**

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

#### **33.5 Enforcement of Award**

The Parties agree that the decision or award resulting from arbitration shall be final and binding upon the Parties and shall be enforceable in accordance with the provisions of the Arbitration and Conciliation Act.

#### **33.6 Performance during Arbitration**



Pending the submission of and/or decision on a Dispute and until the arbitral award is published, the Parties shall continue to perform their respective obligations under the Contract without prejudice to a final adjustment in accordance with such award.

#### **34. REPRESENTATIONS AND WARRANTIES, DISCLAIMER**

##### **34.1 Representations and Warranties of the Contractor**

The Contractor represents and warrants to NATRAX that:

- 34.1.1 it is duly organised, validly existing and in good standing under the laws of incorporation of companies in India or in the country of its incorporation;
- 34.1.2 it has full power and authority to execute, deliver and perform its obligations under the Contract and to carry out the transactions contemplated hereby;
- 34.1.3 it has taken all necessary corporate and other action under Applicable Laws and its constitutional documents to authorise the Execution, delivery and performance of the Contract;
- 34.1.4 it has the financial standing and capacity to Execute the Works;
- 34.1.5 the Contract constitutes its legal, valid and binding obligation enforceable against it in accordance with the terms hereof;
- 34.1.6 it is subject to the Applicable Laws with respect to the Contract and it hereby expressly and irrevocably waives any immunity in any jurisdiction in respect thereof;
- 33.1.7 it has complied with all Applicable Laws and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may have Material Adverse Effect upon the Works;
- 33.1.8 no representation or warranty by the Contractor contained herein or in any other document furnished by it to NATRAX in relation to Applicable Clearances contains or will contain any untrue statement of material fact or omits or will omit to state a material fact necessary to make such representation or warranty not misleading; and
- 33.1.9 no bribe or illegal gratification has been paid or will be paid in cash or kind by or on behalf of the Contractor to any person to procure the Contract or any other benefit under the Contract to procure other Contracts in relation to which the Contractor may be a party in relation to the Project.
- 33.1.10 without prejudice to any express provision contained in the Contract, the Contractor acknowledges that prior to the execution of the Contract, the Contractor has after a complete and careful examination made an independent evaluation of the Project Site, the Technical Conditions of Contract and any information provided by or on behalf of NATRAX and has made an inspection of the Project Site and has determined to its satisfaction the nature and extent of risks and hazards as are likely to arise or may be faced by the Contractor in the course of performance of its obligations hereunder.

#### **34. TERMINATION**

##### **34.1 Termination**

34.1.1 Subject to the other provisions of the Contract, NATRAX shall have the right to serve a notice of termination of the Contract on the Contractor and forthwith terminate the Contract without prejudice to any of its other rights and remedies against the Contractor and without being liable to pay any loss or compensation if:

- (i) if any distress or execution is levied upon any of the assets of the Contractor;
- (ii) at any time during the currency of the Contract there is a change in the effective control of the Contractor as at the date of the Contract;
- (iii) the Contractor fails to complete, test and commission the Contractor's Works/ Project Facility within the Time for Completion or commits any other violation/breach of the terms and conditions of the Contract which is not rectified within [14 (fourteen)] days of the date of receipt of notice from NATRAX in this regard.
- (iv) any of the following events occurs:
  - (a) the passing of a resolution by the shareholders of the Contractor for the winding up of the Contractor;
  - (b) the appointment of a liquidator in a proceeding for the winding up of the Contractor or the Contractor entering into a compromise with its creditors; or
  - (c) the making by the court of an order winding up the Contractor,
  - (d) The Contractor either:
    - (i) Appoints a subcontractor without the prior approval of NATRAX, or terminates any of the Subcontractor; or
    - (ii) having terminated any of the Subcontracts with the consent of NATRAX, appoints a replacement Sub-Contractor without the prior approval of NATRAX.
  - (e) the Contractor without the consent of NATRAX assigns or transfers all or any of its rights or obligations under the Contract;
  - (f) the Contractor repudiates the Contract or otherwise evidences an intention not to be bound by the Contract; or
  - (g) the expropriation, confiscation, compulsory acquisition of the Project Facility;
  - (h) as a result of Force Majeure, the Contractor is unable to proceed with the Works for a period of [90(ninety)] consecutive days or [180(One Hundred and Eighty)] days in a year (whichever is less);
  - (i) if the Contractor or any of its servants or agents commit or suffer to be committed or omit or suffer to be omitted any act, deed, matter or thing which in the opinion of NATRAX Representative whose decision (without an obligation to give reasons therefor) in this regard will be final, is prejudicial to the interests or reputation of NATRAX.

- (j) the Contractor offers, gives or promises any payment directly or indirectly to any government, political party, or official thereof, or any candidate for political office, or to NATRAX in order to influence any substantive decision of, or induce any party or person to use its influence to offset any substantive decision of any Relevant Authority or Statutory Authority or NATRAX in regard to any aspect of the Contract;
- (j) the Contractor makes any warranty or representation in or in accordance with the Contract which was materially incorrect when made so as to materially affect NATRAX's interests; or
- (k) in the event that the Contractor's liability for Liquidated Damages reaches the cap on such damages as set out in Special Conditions of Contract and the Completion Certificate for the whole of the Works has not been issued; or
- (l) fails to provide, maintain or renew and/or comply with its obligations in relation to the Performance Security; or
- (v) the Contractor has, without valid reason and NATRAX's consent, failed to commence the Works promptly, or fails to progress the Works regularly and/or diligently or
- (vi) the Contractor has failed to adhere to the Technical Conditions of Contract and in the reasonable estimation of the NATRAX Representative, such failure is likely to mean that Completion of the Works is likely to be delayed beyond the relevant Time for Completion; or
- (vi) the Contractor's personnel is/are incompetent, have acted in a manner prejudicial to NATRAX's best interest or have failed to comply with NATRAX's health, safety, environment or other rules or regulations and procedures; or
- (viii) the Contractor has failed to achieve two Milestones consecutively.

#### **34.2 Termination Procedure**

34.2.1 A notice of termination given pursuant to this **Clause 34** (each a "Preliminary Termination Notice") shall specify in reasonable detail the circumstances giving rise to the Preliminary Termination Notice. If, within [21 (twenty one)] days following the service by NATRAX of a Preliminary Termination Notice, the Contractor pays all sums which are due and payable to NATRAX or remedies the breach to the satisfaction of NATRAX existing as at the date of the Preliminary Termination Notice then such Preliminary Termination Notice shall be revoked and all existing rights of termination in favour of NATRAX under the Contract shall terminate and the Contractor shall continue to perform its obligations under the Contract in a diligent and proper manner.

34.2.2 Within the period of [21 (twenty one)] days following the receipt of the Preliminary Termination Notice by the Contractor and unless the Parties shall have otherwise agreed or the circumstances giving rise to the Preliminary Termination Notice shall have ceased to exist or shall have not been remedied, NATRAX may terminate the Contract by giving written notice (a "Termination Notice") to the Contractor and the Contract shall terminate on the date mentioned in the Termination Notice ("Termination Date").

34.2.3 The termination of the Contract by NATRAX for reasons other than breach can be made by a written notice to the Contractor and nothing herein will obligate NATRAX to terminate the Contract or be

liable for any exercising its right of termination and NATRAX may pursue all remedies available in law instead of termination.

### **34.3 Upon Termination**

34.3.1 Upon Termination for any reason whatsoever, the Contractor shall to the extent instructed by the NATRAX's Representative:

- (i) cease all further work as instructed by the NATRAX's Representative in the Termination Notice and the Contractor shall carry out works for the sole purpose of securing, preserving and protecting that part of the Works already Executed and any work required to leave the Project Site and the Works in a clean and safe condition;
- (ii) remove all the Contractor's Equipment and temporary works;
- (iii) repatriate the Contractor's and Subcontractor's personnel from any part of the Project Site and the Works;
- (iv) deliver to NATRAX the Works Executed by the Contractor as at the Termination Date;
- (v) ensure that it and those it is contractually or otherwise responsible for, vacate the Project Site;
- (vi) promptly and in an orderly manner deliver to NATRAX all documents relating to the Works which are for the time being under the control of the Contractor;

34.3.2 Without prejudice to **Clause 34.3.1** upon Termination:

- (i) NATRAX may enter the Project Site and the Works thereof and expel the Contractor therefrom and NATRAX may complete the Works itself or by employing any third party;
- (ii) NATRAX may, to the exclusion of any right of the Contractor over the same, take over and have free use, without payment to the Contractor, of any Contractor's Equipment and temporary works of which have been delivered to the Project Site for such period as the NATRAX's Representative considers necessary for the Execution of the Works, without being responsible to the Contractor for fair wear and tear thereof and to the exclusion of any right of the Contractor over the same.
- (iii) NATRAX may at any time sell any of the said Contractor's Equipment, temporary works and any unused materials and apply the proceeds of sale in or towards for satisfaction of any sums due or which may become due to it from the Contractor under the Contract; and
- (iv) NATRAX shall have the power and authority to prohibit the Contractor and any person claiming through or under the Contractor from entering the Project Site.

## **35. MISCELLANEOUS**

### **35.1 Assignment and Charges**

35.1.1 Subject to **Clauses 35.1**, neither Party shall assign the Contract or the rights, benefits and obligations hereunder save and except with prior consent of the other Party.

35.1.2 The Contractor shall not create nor permit to subsist any Encumbrance over or otherwise transfer or dispose of all or any of its rights and benefits under the Contract except with prior consent in writing of NATRAX, which consent shall not be unreasonably withheld.

**35.2 Interest**

Any sum which becomes payable under any of the provisions of the Contract by one Party to the other Party shall, if the same be not paid within the time allowed for payment thereof, shall be deemed to be a debt owed by the Party responsible for payment thereof to the Party entitled to receive the same. Such sum shall until payment thereof carry the Default Interest Rate from the due date for payment thereof until the same is paid to or otherwise realised by the Party entitled to the same.

**35.3 Governing Law and Jurisdiction**

The Contract shall be governed by the laws of India. In respect of all matters arising out of or relating to the Contract, the Courts at New Delhi, India shall have the jurisdiction to decide the matter.

**35.4 Waiver**

35.4.1 Waiver by either Party of any default by the other Party in the observance and performance of any provision of or obligations under the Contract:

- (i) shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions or obligations under the Contract;
- (ii) shall not be effective unless it is in writing and executed by a duly authorised representative of such Party; and
- (iii) shall not affect the validity or enforceability of the Contract in any manner.

35.4.2 Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of the Contract or any obligation hereunder nor time or other indulgence granted by a Party to the other Party shall be treated or deemed as waiver/breach of any terms, conditions or provisions of the Contract.

**35.5 Survival**

Termination or expiry of the Contract (i) shall not relieve NATRAX or the Contractor of any obligations already incurred hereunder which expressly or by implication survives termination hereof, and (ii) except as otherwise provided in any provision of the Contract expressly limiting the liability of either Party, shall not relieve either Party of any obligations or liabilities for loss or damage to the other Party arising out of or caused by acts or omissions of such Party prior to the effectiveness of such termination or arising out of such termination.

**35.6 Amendments**

The Contract constitutes a complete and exclusive understanding of the terms of the Contract between the Parties on the subject hereof and no amendment or modification hereto shall be valid and effective unless agreed to by all the Parties hereto and evidenced in writing.

**35.7 Severability**

If for any reason whatsoever any provision of the Contract is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties shall negotiate in good faith with a view to agreeing upon one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable. Provided failure to agree upon any such provisions shall not be subject to dispute resolution under this Contract or otherwise.

### **35.8 No Partnership**

Nothing contained in the Contract shall be construed or interpreted as constituting a partnership between the Parties. Neither Party shall have any authority to bind the other in any manner whatsoever. The Contract shall be construed to have been entered on a principal to principal basis.

### **35.9 Entire Agreement**

The Contract constitutes the entire agreement between the Parties and supersedes all prior negotiations, commitments, representations, communications and agreements relating to the Contract either oral or in writing except to the extent they are expressly incorporated herein. The Contractor confirms that it has not relied upon any representation inducing it to enter into the Contract (whether or not such representation has been incorporated as a term of the Contract) and agrees to waive any right which it might otherwise have to bring any action in respect of such representation. The Contractor further confirms that there is not in existence at the date of the Contract any collateral contract or warranty of which the Contractor is the beneficiary which might impose upon NATRAX obligations which are in addition to or vary the obligations expressly contained in the Contract and which relate in any way to the subject matter of the Contract. The Contractor's only rights arising out of, or in connection with, any act, matter or thing said, written or done, or omitted to be said, written or done, by or on behalf of NATRAX (or any agent, employee or subcontractor of NATRAX) in negotiations leading up to the Contract or in the performance or purported performance of the Contract or otherwise in relation to the Contract are the rights to enforce the express obligations of NATRAX contained in the Contract and to bring an action for breach thereof. Nothing in this **Clause 35.9** is intended to exclude liability of the Contractor for fraud or fraudulent misrepresentation.

### **35.10 Liability and Indemnity**

35.10.1 The Contractor shall indemnify, defend and hold NATRAX harmless against any and all proceedings, actions and third party claims arising out of a breach or omission or non-performance by the Contractor of any of its obligations under the Contract except to the extent that any such claim has arisen due to breach by NATRAX of any of its obligations under the Contract.

35.10.2 In the event that either Party receives a claim from a third party in respect of which it is entitled to the benefit of an indemnity under the Contract (the "Indemnified Party") it shall notify the other Party ("Indemnifying Party") within [7 (seven)] days of receipt of the claim and shall not settle or pay the claim without the prior approval of the Indemnifying Party, provided that, such approval shall not be unreasonably withheld or delayed. In the event that the Indemnifying Party wishes to contest or dispute the claim it may conduct the proceedings in the name of the Indemnified Party subject to the Indemnified Party being secured against any costs involved to its reasonable satisfaction.

35.10.3 The Indemnified Party shall have the right, but not the obligation, to contest, defend and litigate any claim, action, suit or proceeding by any third party alleged or asserted against such party in respect of, resulting from, related to or arising out of any matter for which it is entitled to be indemnified hereunder and their reasonable costs and expenses shall be indemnified by the Indemnifying Party.

If the Indemnifying Party acknowledges in writing its obligation to indemnify the person indemnified in respect of loss to the full extent provided by this **Clause 35.10**, the Indemnifying Party shall be entitled, at its option, to assume and control the defence of such claim, action, suit or other proceedings, liabilities, payments and obligations at its expense and through counsel of its choice provided it gives prompt notice of its intention to do so to the Indemnified Party and reimburses the Indemnified Party for the reasonable cost and expenses incurred by the Indemnified Party prior to the assumption by the Indemnifying Party of such defence. The Indemnifying Party shall not be entitled to settle or compromise any claim, action, suit or proceeding without the prior written consent of the Indemnified Party unless the Indemnifying Party provides such security to the Indemnified Party as shall be reasonably required by the Indemnified Party to secure, the loss to be indemnified hereunder to the extent so compromised or settled.

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# **NATIONAL AUTOMOTIVE TEST TRACKS**

## **TENDER DOCUMENTS**

**TENDER NO. NATRAX/PROC/T&D/24-25/-----**

**SUPPLY, INSTALLATION, TESTING & COMMISSIONING**

**OF**

**SENSORS & INSTRUMENTS FOR ROAD LOAD DATA  
ACQUISITION**

**Annexure X Format for Contract Agreement**

**NATRAX-Pithampur**

**National Automotive Test Tracks (NATRAX)**

NH-52, Old Agra- Mumbai Highway, Near to Pithampur Flyover, Post Khandwa (Near  
Pithampur)

---

Dhar District, Madhya Pradesh-454774

Phone: +919893892310, Fax – 07292-256101

Email: [a.prabhakar@natrip.in](mailto:a.prabhakar@natrip.in); & [anuj.kumar@natrip.in](mailto:anuj.kumar@natrip.in)



## ARTICLES OF AGREEMENT

THIS CONTRACT AGREEMENT on ..... between NATIONAL AUTOMOTIVE TEST TRACKS a unit of National Automotive Board (NAB) under Ministry of Heavy Industry, Govt of India having its registered office ----- (hereinafter referred to as "the Employer" or "NATRAX" as the case may be, which expression shall include its successors and assigns), and whose principal place of business is at National Automotive Test Tracks (NATRAX), NH-52, Old Agra-Mumbai Highway, Near to Pithampur Flyover, Post Khandwa (Near Pithampur, Dist. Dhar (M.P.) of the One Part,

and

M/s..... **having** its registered office at ..... a company incorporated under the laws of ..... of the other part (hereinafter referred to as the "**Contractor**" which expression shall include its successors).

NATRAX and the Contractor are hereinafter collectively referred to as the "**Parties**" and individually as the "**Party**".

### WHEREAS:

- (A) NATRAX has been set up for ~~the implementation of the National Automotive Testing R&D Infrastructure Project (NATRIP) (hereinafter referred to as the "Project")~~ under the Auto Policy of the Government of India.
- (B) NATRAX wishes to appoint a contractor to execute the Works including without limitation to the designing, manufacturing, assembling and functional testing prior to shipment, delivery, installation, integration of systems and system checking, testing and commissioning of the Equipment and supply of special tools, requisite software, supply of Spare Parts and training to the personnel, operators and mechanics of NATRAX including Project Facility operations personnel and Project Facility operation trainers and necessary after-sales

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service and maintenance support, as agreed with NATRAX and in accordance with the terms of this Contract (“Works”) ..

- (C) The Employer invited open bids on international basis vide Invitation for Bids dated- ----- for the Works vide its Tender No. ----- (“Tender Documents”).
- (D) Pursuant to the bidding process, the Employer selected M/s. ...., vide their letter of bid, dated ....., as the successful bidder and awarded the Letter of Acceptance (LoA) No. .... to the contractor on ..... for a negotiated sum of ..... (“Contract Sum”) for the Works (“Letter of Acceptance”).
- (E) The Contractor has represented to the Employer that it has the experience, expertise, capability and know-how to ensure that the Works are executed and completed in accordance with the terms of the Contract (hereinafter defined) in a safe and environmentally responsible manner and that the Works will be capable of seamless integration with Related Works and be carried out on, under and over the Project Sites.
- (F) The Contractor also acknowledges that the Employer has entered into or will enter into other contracts with other contractors and/or parties for elements of the Project (and not comprised in the Works) and that the Employer will have Related Works performed and that it is of paramount importance that the Works are fully and completely co-ordinated with the Related Works in view of their concurrent and sequential nature.
- (G) Relying upon the said representations and acknowledgments of the Contractor, NATRAX wishes to appoint the Contractor to implement, perform, execute and complete the Works including the remedying of any defects therein and the Contractor agrees to carry out and complete the Works, on the terms and conditions of the Contract.

---

**THEREFORE IN CONSIDERATION OF THE FOREGOING IT IS AGREED BETWEEN THE PARTIES** as follows:

1. In this Contract (and the Recitals to it) words and expressions shall have the meanings assigned to them herein and in the Conditions of Contract (Special Conditions of Contract, the General Conditions of Contract and Technical Conditions of Contract) referred to below.
2. In consideration of the payments to be made by the NATRAX to the Contractor under the Contract, the Contractor shall carry out and complete the Works and discharge all the other obligations on its part specified in, and in all respects in accordance with, the Contract and to the satisfaction of the Employer.
3. In consideration of the full and complete discharge of the Contractor's obligations under the Contract, the NATRAX shall pay to the Contractor the Contract Sum (as added to or subtracted from in accordance with the Contract) at the times and in the manner prescribed in the Contract.
4. The following documents shall be deemed to comprise the Contract in the following order of priority:
  - 5.1.1 The Articles of Agreement
  - 5.1.2 The Letter of Acceptance; (LoA)
  - 5.1.3 The Bids along with all the attachments submitted by the contractor;
  - 5.1.4 The tender documents, addendums/modifications by NATRAX, if any;

- 
- 5.1.5 Special Conditions of Contract, as given in the bid document;
  - 5.1.6 Technical Conditions of Contract, as given in the bid document;
  - 5.1.7 General Conditions of Contract, as given in the bid document;
  - 5.1.8 The specifications, as given in the bid document; including the missing information / clarification / confirmation submitted by the contractor during the evaluation process (if any).
  - 5.1.9 The drawings, if any, as given in the bid document;
  - 5.1.10 The financial bid submitted by contractor on ----- . The detailed Bill of Quantity (BOQ) including the breakup of other costs associated with Pre-acceptance and Training etc.
  - 5.1.11 Other Contractor's Documents; such as PBG etc.;
  - 5.1.12 The Purchase order No.----- to be issued in this regard.
  - 5.1.13 The Schedules, the Contract Forms, the Technical Proposal and any other documents forming part of the Contract.
  - 5.1.13 Future correspondence regarding technical or commercial and Minutes of Meeting (MoM) etc., subsequent to signing of this contract agreement, agreed and signed by the respective Site-In-charges of M/s. .... and NATRAX, and further approved by the Director (Technical)/NATRAX or his authorised representative will be binding on both the parties and will form as the part of the contract agreement.
6. The key personnel earmarked for this Project from NATRAX and the Contractor are as under:



---

<b>NATRAX</b>	
<b>Contractor</b>	

7. This Contract will be governed by and construed in accordance with the laws of India. Each Party hereby submits to the jurisdiction (Indore, Madhya Pradesh, India) as set out in the Dispute Resolution Procedure in the Conditions of Contract.
8. The terms and conditions of this Contract have been fully negotiated between the NATRAX and the Contractor as parties of competent capacity and equal standing.

**IN WITNESS** whereof this Contract has been executed and delivered as an agreement by the Parties, the day and year first before written and in accordance with laws of India.

For and in the name of the NATRAX For and in the name of the M/s.

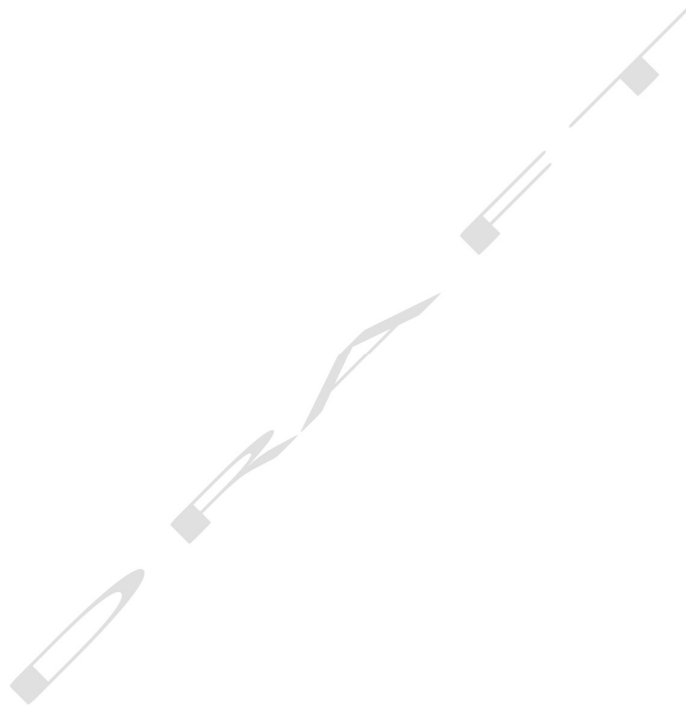
acting through and represented by	..... represented by
(Signature)	(Signature)



Witnessed by :

Name:	
-------	--

Name :





## **NATIONAL AUTOMOTIVE TEST TRACKS**

### **TENDER DOCUMENTS**

**TENDER NO. NATRAX/PROC/T&D/24/46R**

**SUPPLY, INSTALLATION, TESTING & COMMISSIONING**

**OF**

**Tyre Rolling Resistance Machine**

**Annexure XI - Format for Purchase Order**

**NATRAX-Pithampur**

**National Automotive Test Tracks (NATRAX)**

NH-52, Old Agra- Mumbai Highway, Near to Pithampur Flyover, Post Khandwa (Near Pithampur)

Dhar District, Madhya Pradesh-454774

Phone: +919893892310, Fax – 07292-256101

Email: [a.prabhakar@natrip.in](mailto:a.prabhakar@natrip.in); & [anuj.kumar@natrip.in](mailto:anuj.kumar@natrip.in)



**PURCHASE ORDER [ON ..... BASIS]**

To M/s. .... Phone No. ....				
<b>PURCHASE ORDER NO.</b>		NAT/TEQ/..... Dated .....		
<b>Tender No.</b>		NAT/TEQ/ ..... Dated .....		
<b>LOA No.</b>		NAT/TEQ/ ..... Dated .....		
<b>Contract Agreement No.</b>		NAT/TEQ/ ..... Dated .....		
<b>PURCHASE ORDER DETAILS</b>				
Sl. No	Description of Work	Qty	Unit	Amount In .....
1	.....[To insert the scope of works]  [Refer TCC for detailed specifications/Requirements].			
<b>Amount in Words: .....</b>				

**TERMS & CONDITIONS**

Bill to : National Automotive Test Tracks (NATRAX)





NH-52, Old Agra- Mumbai Highway,  
Near to Pithampur Flyover,  
Post Khandwa (Near Pithampur)  
Dhar District, Madhya Pradesh-454774  
GST Number: -----

Completion ..... : As per Tender Documents

Dates : ..... : As per Tender Documents

Ship to :

India -..... Phone No. ...., Fax No. ....

Payment:

As per Clause ..... of the contract agreement dt. ....

Liquidated damages:

As per SCC of the contract agreement.

Remarks:

Authorised Indian Agent of M/s. ....:

.....

Phone No. .... / Mob: .....

E-mail: .....

**Contact Details of the Engineer In-Charge for further correspondence, if any.**

NATRIP Implementation Society(NATIS)



.....

Tele Fax: .....

E-mail : .....

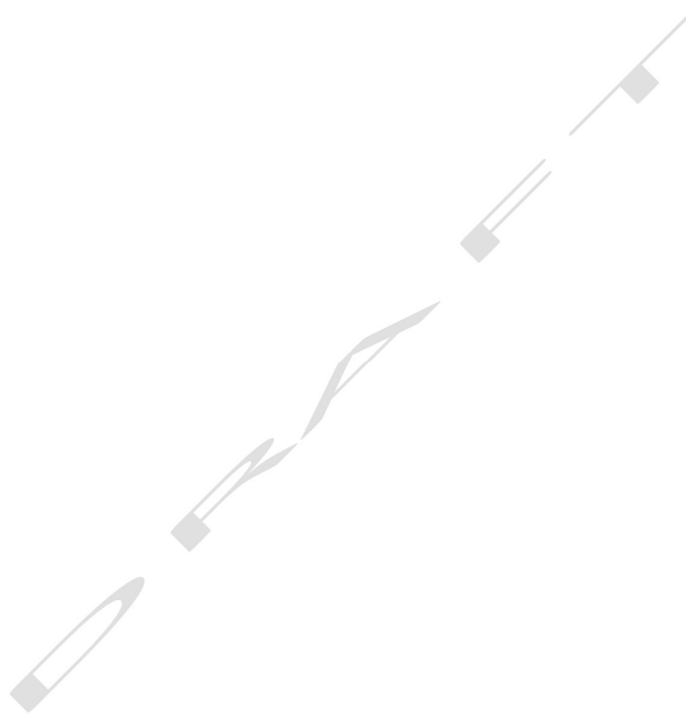
Warranty:  
.....years from the date of acceptance.

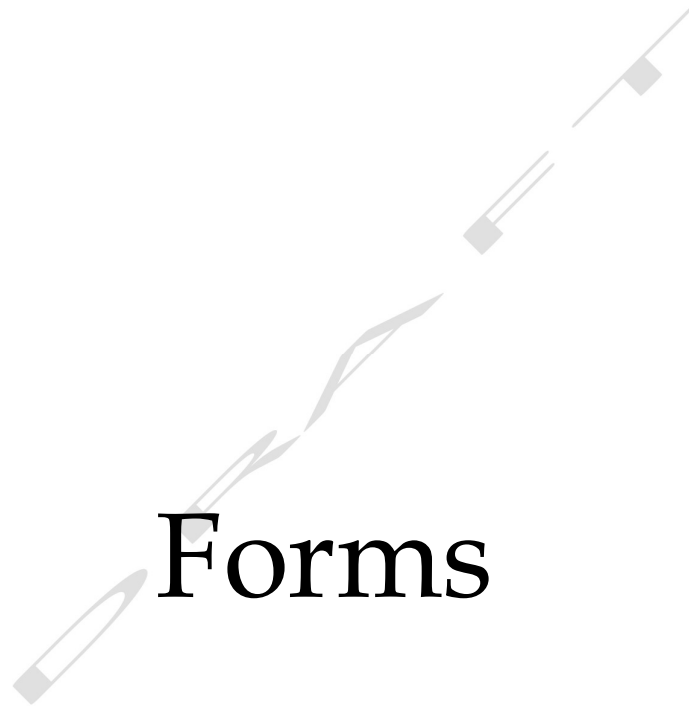
Please acknowledge receipt of this purchase order and issue the acceptance letter within 7 days to NATIS, with complete dispatch plan, to enable NATIS to open the L/C.

Thanking You,

Yours faithfully,

**Procurement Officer**





# Forms



## **Form a) Letter for Submission of Technical Proposal**

[To be Executed on the Letter Head of the Bidder]

[Location, Date]

To:  
Head Procurement  
National Automotive Test Tracks (NATRAX)  
NH-52, Old Agra- Mumbai Highway,  
Near to Pithampur Flyover,  
Post Khandwa (Near Pithampur)  
Dhar District, Madhya Pradesh-454774

We, the undersigned, offer our bid in response to your Tender No. \_\_\_\_\_ dated \_\_\_\_\_. We are hereby submitting our Bid, which includes this Technical Bid and a Financial Bid sealed under a separate envelope. Our Bid is valid for a period of 120 days from the last date of Submission of Bids.

We hereby declare that all the information and statements made in this Bid is true and complete in all respects and is as per the guidelines laid down in the tender document. We further understand that any information which is found false or is not as per the guidelines and terms & conditions of the tender document may lead to our disqualification.

We hereby declare that our Technical Bid contains Earnest Money Deposit in form of Demand Draft No. \_\_\_\_\_, dated \_\_\_\_\_, for Indian Rupees - \_\_\_\_\_ Only (to be filled in figures and words both), drawn on \_\_\_\_\_, in favour of "National Automotive Test Tracks", payable at Pithampur, Dist. Dhar, Madhya Pradesh, India.

The following information is submitted along with the Technical Bid:

	<b>Hard Copy</b>	<b>Soft Copy</b>
<b>Tender Document floated by NATRAX</b>	Fully printed and duly signed and stamped at each page	Not Required
<b>Form a) Letter for Submission of Technical Bid</b>	Duly filled, stamped and signed	PDF file
<b>Form b) Letter of Undertaking</b>	Duly filled, stamped and signed	PDF file
<b>Form c) Earnest Money Deposit</b>	Duly filled, stamped and signed	PDF file
<b>Form d) Proforma for Performance Bank Guarantee</b>	Duly stamped and signed	PDF file
<b>Form d0) Checklist</b>	Duly filled, stamped and signed	Excel file (unblocked)
<b>Form d1) Deviations</b>	Duly filled, stamped and signed	PDF or Word file



<b>Form d2) Detailed Technical Specs</b>	Duly filled, stamped and signed	PDF or Word file (indexed with hyperlinks)
<b>Form d3) References</b>	Duly filled, stamped and signed	PDF or Word file
<b>Form d4) Service Support</b>	Duly filled, stamped and signed	PDF or Word file
<b>Form d5) Bidder's Organisation, Company Profile and Sub-contractors</b>	Duly filled, stamped and signed	PDF or Word file
<b>Form d6) Description of Approach, Methodology, Work and Training Plan</b>	Duly filled, stamped and signed	PDF or Word file
<b>Form e) Financial Bid</b>	Not showing any price, including list of spare parts with duly stamped and signed	PDF or Word file

We undertake that if our Bid is accepted, we will be committed to supply the software as per the scope of work as per the terms and conditions agreed mutually.

If negotiations are held during the period of validity of the Bid, we undertake that our Bid will be binding upon us and will be subject to the modifications resulting from Contract negotiations.

We understand NATRAX is not bound to accept any Proposal that it receives from us.

Yours sincerely,

Authorized Signature [*In full*]: \_\_\_\_\_

Authorized Signature [*In initials*]: \_\_\_\_\_

Name and Title of Signatory: \_\_\_\_\_

Name of Firm: \_\_\_\_\_

Address: \_\_\_\_\_

*[Note1: Authorized person signing shall attach to this document a proof of authorisation for signing on behalf of the Bidder Company*

*Note2: To be signed in blue ink]*



## **FORM b) LETTER OF UNDERTAKING**

[On the letterhead of the Bidder]

### **LETTER OF UNDERTAKING**

**Date:** \_\_\_\_\_

Head Procurement & Stores  
National Automotive Test Tracks (NATRAX)  
NH-52, Old Agra-Mumbai Highway,  
Near to Pithampur Flyover,  
Post Khandwa (Near Pithampur, Dist. Dhar (M.P.)).

**Re: Tender No. NATRAX/PROC/T&D/24-25/-----**

We acknowledge that the documents for Tender No. \_\_\_\_\_ issued to us are confidential and we hereby undertake and agree as follows:

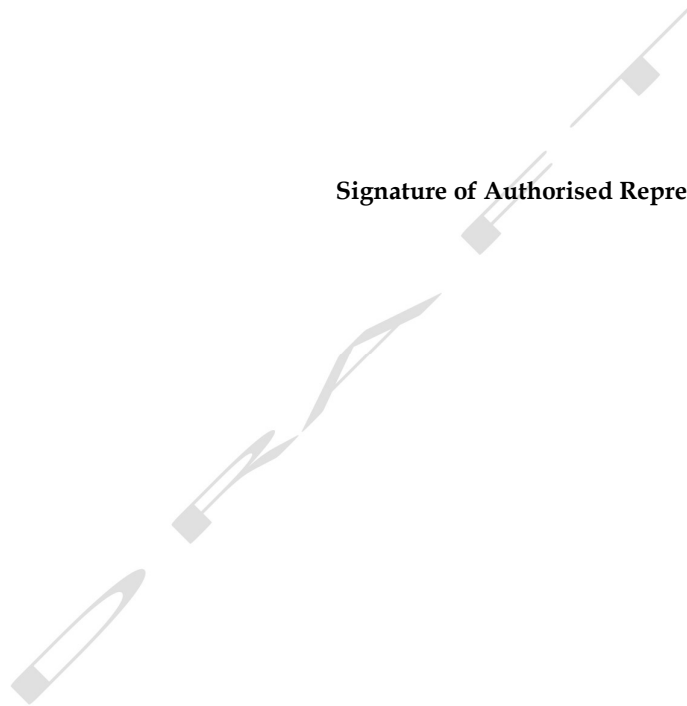
1. **“Confidential Information”** means the Tender documents and everything contained therein, all documentation, data, particulars of the works and technical or commercial information made by (or on behalf of) NATRAX or obtained directly or indirectly from NATRAX or its representatives by us or which is generated by us or any information or data that we receive or have access to, as a result of the Tender, as being confidential information of NATRAX, provided that such term does not include information that (a) was publicly known or otherwise known to us prior to the time of such disclosure, (b) subsequently becomes publicly known through no act or omission by us or any person acting on our behalf.
2. We shall maintain the confidentiality of Confidential Information in accordance with procedures adopted by us in good faith to protect confidential information of third parties delivered to us, provided that we may deliver or disclose Confidential Information to our authorized representatives who agree to hold confidential the Confidential Information substantially in accordance with the terms of this Undertaking.
3. We shall not at any time whatsoever:
  - (i) Disclose, in whole or in part, any Confidential Information received directly or indirectly from the NATRAX to any third party.
  - (ii) Reproduce, publish, transmit, translate, modify, compile or otherwise transfer the Confidential Information.



4. In case our bid is not accepted and immediately upon the acceptance of the bid of any of the other Bidder, we shall:
  - (i) Return all Confidential Information including without limitation, all originals, copies, reproductions and summaries of Confidential Information; and
  - (ii) Destroy all copies of Confidential Information in our possession, power or control, which are present on magnetic media, optical disk or other storage device, in a manner that ensures that the Confidential Information is rendered unrecoverable.
5. We shall certify to NATRAX that we have returned or destroyed such Confidential Information to NATRAX within two (2) days of such a request being made by NATRAX.

**Name of Bidder**

**Signature of Authorised Representative**





## Form c) Earnest Money Deposit

Date: \_\_\_\_\_

NATRiP Implementation Society.  
National Automotive Test Tracks (NATRAX)  
NH-52, Old Agra-Mumbai Highway,  
Near to Pithampur Flyover,  
Post Khandwa (Near Pithampur, Dist. Dhar (M.P.)).

Re: Tender No. **NATRAX/PROC/T&D/24-25/-----**

We hereby enclose Demand Draft No. \_\_\_\_\_, dated \_\_\_\_\_, for Indian Rupees \_\_\_\_\_ Only (to be filled in figures and words both), drawn on \_\_\_\_\_, in favour of "National Automotive Test Tracks", payable at Pithampur, Dist. Dhar, Madhya Pradesh, India.

OR

We hereby enclose Earnest Deposit Money Bank Guarantee for Rs. \_\_\_\_\_ [amount to be filled in figures and words both] issued by \_\_\_\_\_ [Name of the Bank], on \_\_\_\_\_ [Insert date of issue] valid up to \_\_\_\_\_.

Name of Bidder

Signature of Authorised Representative

[Note: The Demand Draft to be attached with this Form]





## Form d) Performance Bank Guarantee

(To be executed on non Judicial stamped paper of an appropriate value)

**WHEREAS** National Automotive Test Tracks (“**NATRAX**”) having its office at National Automotive Test Tracks (NATRAX), NH-52, Old Agra-Mumbai Highway, Near to Pithampur Flyover, Post Khandwa (Near Pithampur, Dist. Dhar Madhya Pradesh, 454 774 India. (hereinafter referred to as “**The Owner**” which expression shall unless repugnant to the context includes their legal representatives, successors and assigns) and having their registered office at 124, Udyog Bhawan, New Delhi - 110011, has executed a contract on [Please insert date of execution of Contract] (“**Contract**”) with [insert name of the Successful Bidder] .....(hereinafter referred to as the “**Contractor**” which expression shall unless repugnant to the context include its legal representatives, successors and permitted assigns) for the performance, execution and implementation of the Works (“**Works**” shall have the meaning ascribed to it in the Contract] based on the terms & conditions set out in the Tender Documents number [insert reference number of the Tender Documents] dated [insert date of issue of Tender Documents].....and various other documents forming part thereof.

**AND WHEREAS** one of the conditions of the Contract is that the Contractor shall furnish to the Owner a Bank Guarantee from a scheduled bank in India having a branch at New Delhi for an amount equal to 10% (ten percent) of the total Contract Sum (the amount guaranteed under this bank guarantee shall hereinafter be referred to as the “**Guaranteed Amount**”) against due and faithful performance of the Contract from the post-commissioning stage of the Works under the Contract, including the performance bank guarantee obligation and other obligations of the Contractor for the supplies made and the Works being performed and executed by under the Contract. This bank guarantee shall be valid from the date hereof up to the expiry of the Warranty Period including any extension thereof.

**AND WHEREAS** the Contractor has approached [insert the name of the scheduled bank] (here in after referred to as the “**Bank**”) having its registered office at [insert the address].....and at the request of the Contractor and in consideration of the promises made by the Contractor, the Bank has agreed to give such guarantee as hereunder:-

- (i) The Bank hereby undertakes to pay under this guarantee, the Guaranteed Amount claimed by the Owner without any further proof or conditions and without demur, reservation, contest, recourse or protest and without any enquiry or notification to the Contractor merely on a demand in the form set out in Appendix I (“**Demand**”) from the Owner stating that the amount claimed is due to the Owner under the Contract. Any such demand made on the Bank by the Owner shall be conclusive as regards the amount due and payable by the Bank under this bank guarantee and the Bank shall pay without any deductions or set-offs or counterclaims whatsoever, the total sum claimed by the Owner in such Demand. The Owner shall have the right to make an unlimited number of Demands under this bank guarantee provided that the aggregate of all sums paid to the Owner by the Bank under this bank guarantee shall not exceed the Guaranteed Amount.
- (ii) However, the Bank’s liability under this bank guarantee shall be restricted to an amount not exceeding [figure of Guaranteed Amount to be inserted here] .....only).
- (iii) The Owner will have the full liberty without reference to the Bank and without affecting the bank



guarantee to postpone for any time or from time to time the exercise of any powers and rights conferred on the Owner under the Contract and to enforce or to forbear endorsing any powers or rights or by reasons of time being given to the Contractor which under law relating the Surety would but for the provisions have the effect of releasing the surety.

- (iv) The rights of the Owner to recover the Guaranteed Amount from the Bank in the manner aforesaid will not be affected or suspended by reasons of the fact that any dispute or disputes have been raised by the Contractor and / or that any dispute(s) are pending before any office, tribunal or court in respect of such Guaranteed Amount and/ or the Contract.
- (v) The guarantee herein contained shall not be affected by the liquidation or winding up, dissolution, change of constitution or insolvency of the Contractor but shall in all respects and for all purposes be binding and operative until payment of all money due to the Owner in respect of such liability or liabilities is effected.
- (vi) This bank guarantee shall be governed by and construed in accordance with the laws of the Republic of India and the parties to this bank guarantee hereby submit to the jurisdiction of the Courts of New Delhi for the purposes of settling any disputes or differences which may arise out of or in connection with this bank guarantee and for the purposes of enforcement under this bank guarantee.
- (vii) All capitalized words used but not defined herein shall have the meanings assigned to them under the Contract.

NOTWITHSTANDING anything stated above, the liability of the Bank under this bank guarantee is restricted to the Guaranteed Amount and this bank guarantee shall expire on the expiry of the Warranty Period under the Contract. Unless a Demand under this bank guarantee is filed against the Bank within six (6) months from the date of expiry of this bank guarantee all the rights of the Owner under this bank guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities hereunder. However, if the Contractor's obligations against which this bank guarantee is given, are not completed or fully performed by the Contractor within the period prescribed under the Contract, the Bank hereby agrees to further extend the bank guarantee for further periods of six months each till the Contractor fulfills its obligations under the Contract.

We have the power to issue this bank guarantee in your favour under Memorandum and Article of Association and the Undersigned has full power to do so under the Power of Attorney dated [*date of power of attorney to be inserted*].....granted to him by the Bank.

Date:

Bank

Corporate Seal of the Bank

By its constituted Attorney Signature of a person duly authorized to sign on behalf of the Bank.



**APPENDIX 1**

Form of Demand

[To the issuing Bank]

Dear Sirs

The Contract between NATRAX and [Please insert the name of the Successful Bidder]

Bank Guarantee No. \*\*\*\*\* (“the Bank Guarantee”)

We refer to the above Contract and Bank Guarantee. Terms defined in the Bank Guarantee shall have the same meaning when used herein.

In accordance with the terms of the Bank Guarantee, we require payment by you of the sum of Rs. [\*\*\*\*\*] (\*\* Rupees) to the following account:

Account Number: [ ] with [ ] Bank, [ ] Branch, Sort Code [ ].

Yours sincerely,

[Signed by
[ ]
for and on behalf of
NATRAX/ NATRIP



Form d) Checklist

Form d0) Checklist								
Element	Requirement ID	General Functionality (Functional Requirements)	Specific Functionality	Quantity	Requested Info for each requirement to be filled in column "Proposed Specification"	Essential parameter	Minimum Requirement	Proposed Specifications · Bidder to fill with Proposed Specification included in its Offer for each individual requirement. · Detailed description of all Items to be included in "Form d2: Detailed Technical Specifications". · For each Proposed Specification that deviates from Minimum Requirement, one entry shall be done in document "Form d1: Deviations"
<b>1) Seat Pad Accelerometer</b>	1.01	Require Seat Pad Accelerometer which can measure acceleration in all 3 axes i.e. x, y and z, gives data from is cable/connectors which can further be recorded in data logger.	Necessary accessories to work with sensor and for installation, commissioning and configuring sensor.	2	Describe	Yes	Required	
	1.02	Ranges : $\pm 10g$			Specify Yes/No	Yes	Required	
	1.03	Linearity: $\leq 1\%$			Specify Yes/No	Yes	Required	
	1.04	Frequency Range: upto 1000Hz			Specify Yes/No	Yes	Required	
	1.05	resonant frequency: $\geq 25$ hHz			Specify Yes/No	Yes	Required	
	1.06	Transverse Sensitivity: $\leq 5\%$			Specify Yes/No	Yes	Required	
	1.07	Overload Limit: $\pm 2000g$			Specify Yes/No	Yes	Required	
	1.08	Excitation Voltage: 9-36V DC			Specify Yes/No	Yes	Required	
	1.09	Accessories: Standard			Specify Yes/No	Yes	Required	

	1.10	Type:IEPE						
<b>2) Wire Rope Pots</b>	2.01	require s linear position transducer with analog output. , compact alternative for use in light to moderate duty applications.		6	Specify Yes/No	Yes	Required	
	2.02	Resolution: infinite			Specify Yes/No	Yes	Required	
	2.03	Linearity: 0.5% FSO			Specify Yes/No	Yes	Required	
	2.04	Repeatability: 0.03% Full Scale			Specify Yes/No	Yes	Required	
	2.05	Range: 0-1000mm			Specify Yes/No	Yes	Required	
	2.06	Operating Temperature: -25° C to 75° C			Specify Yes/No	Yes	Required	
	2.07	Should work under Vibration Upto: 15g	The rope must be of stainless steel with nylon jacketed.		Specify Yes/No	Yes	Required	
	2.08	Shock : Upto 50g	Mounting adaptors must be supplied with the wire rope potentiometer for easy installation along with necessary screws.		Specify Yes/No	Yes	Required	
	2.09	IP Protection: Atleast IP-40	Apart from mentioned items and specification additional accessories which ease the installation comissioning and working of sensor must be supplied with wire rope potentiometer.		Specify Yes/No	Yes	Required	
	2.1	Wire Rope: dia must not be more than 0.45mm		Specify Yes/No	Yes	Required		
	2.11	Signal Cable: Of length 5m open ended		Specify Yes/No	Yes	Required		



	2.12	Mounting Adaptor: With a capability of 360° rotation about the vertical axis and 245° rotation about the horizontal axis or better			Specify Yes/No	Yes	Required	
	2.13	Standard Delivery & Accessories			Specify Yes/No	Yes	Required	
<b>3) Triaxial accelerometer</b>	3.01	100 g DC Response. The accelerometer should handle up to 100g forces		10	Specify Yes/No	Yes	Required	
	3.02	Supply Input Range: 5-28 VDC			Specify Yes/No	Yes	Required	
	3.03	Signal Cable Length: 7 meters 7 nos(06cable + 01 extra cable for spare)			Specify Yes/No	Yes	Required	
	3.04	Signal Cable Length: 10 meters 5 nos(04cable + 01 extra cable for spares)			<b>Specify Yes/No</b>	<b>Yes</b>	<b>Required</b>	
	3.05	Output should be analog voltage	The output shall be analogue voltage output. The output voltage shall not be less than +/-5V for its full range to get suitable data recording resolution.		<b>Specify Yes/No</b>	<b>Yes</b>	<b>Required</b>	
	3.06	Construction: It should have a titanium body and be hermetically sealed						
	3.07	Sensing Elements: Utilize gas-damped, silicon MEMS sensing elements for uniform and repeatable performance.						
	3.08	Overload Protection: Provide high-frequency overload protection.						
	3.09	Measurement Frequency Range: Cover a minimum frequency range of 0 to 1200 Hz.						
	3.10	Shock						



		Resistance: Withstand shock loads of at least 2000g.						
	3.11	The accelerometer should be single-ended, with a removable connector from the sensor body.						
	3.12	Use a multi-pin, threaded electrical connector for easy installation and setup.						
	3.13	Include supply voltage regulation and temperature compensation circuitry for stable performance across varying temperatures.						
	3.14	Mounting and Base: Deliver the accelerometer with a suitable mounting base. The base should be lightweight, rigid, and mechanically designed to transmit vibrations effectively. It should not dampen acceleration from the mounting surface but instead allow efficient transduction from vibration to electrical signal.						
<b>4) LVDT 200mm</b>	4.01	Stroke Length 200mm	With mounting base	4	Describe	Yes	Required	
	4.02	Type:Inductive Type			Specify Yes/No	Yes	Required	
	4.03	Mounting : With mounting base or arrangement to hold Cover to rigid plan and the other end with Him Joint or similar easy to install and connect with test plan.			Specify Yes/No	Yes	Required	
	4.04	With 5 cables of 5 meters shall be supplied		5	Specify Yes/No	Yes	Required	
<b>5) LVDT 300mm</b>	5.01	Stroke Length 300mm	With mounting base	4	Describe	Yes	Required	
	5.02	Type:Inductive Type			Specify Yes/No	Yes	Required	
	5.03	Mounting : With mounting base or			Specify Yes/No	Yes	Required	

		arrangement to hold Cover to rigid plan and the other end with Him Joint or similar easy to install and connect with test plan.						
	5.04	With 2 cables 5 meters and 3 cables shall be of 7meters		5	Specify Yes/No	Yes	Required	
<b>6) Linear Strain Gauge to measure strain in know direction</b>	6.01	Application :Strain measure (Known direction)		5	Specify Yes/No	Yes	Required	
	6.02	Geometry : Linear			Specify Yes/No	Yes	Required	
	6.03	Connection Type: Leads			Specify Yes/No	Yes	Required	
	6.04	Nominal resistance [ohm]: 350			Specify Yes/No	Yes	Required	
	6.05	Temp. response matching : Molybdenum			Specify Yes/No	Yes	Required	
	6.06	Temperature range [C°]: -200 to 200			Specify Yes/No	Yes	Required	
	6.07	Temperature range (self-compensation): -10 to 120			Specify Yes/No	Yes	Required	
	6.08	Grid length a[mm]:6			Specify Yes/No	Yes	Required	
	6.09	Grid width b[mm]:2,8			Specify Yes/No	Yes	Required	
	6.1	Carrier length c[mm]: 13			Specify Yes/No	Yes	Required	
	6.11	Carrier width d[mm]: 6			Specify Yes/No	Yes	Required	
	6.12	Measuring Grid material: constantan			Specify Yes/No	Yes	Required	
	6.13	Measuring grid carrier material: Polyimide			Specify Yes/No	Yes	Required	
<b>7) Rosett Strain Gauges</b>	7.01	Application: Strain Measurement		4	Specify Yes/No	Yes	Required	
	7.02	Geometry : Linear			Specify Yes/No	Yes	Required	
	7.03	Connection Type: Leads			Specify Yes/No	Yes	Required	
	7.04	Nominal resistance [ohm]: 350			Specify Yes/No	Yes	Required	
	7.05	Temp. response matching : Molybdenum			Specify Yes/No	Yes	Required	
	7.06	Temperature range [C°]: -200 to 200			Specify Yes/No	Yes	Required	
	7.07	Temperature range (self-compensation):			Specify Yes/No	Yes	Required	





		-10 to 120						
	7.08	Measuring grid material: Constantan			Specify Yes/No	Yes	Required	
	7.09	Measuring grid carrier material: Polyimide			Specify Yes/No	Yes	Required	
<b>8) Cleaning Agent</b>	8.01	Ketone and iso propyle Alcohol based cleaning solution		1 litre	Specify Yes/No	Yes	Required	
<b>9) Protection Coating</b>	9.01	Strain gauge protection agent 0.05 mm thick aluminium foil coated with 3mm thick kneading compound(plastic). Temperature range oif resistance :-169°C to +75°C Package contents: 11 sheets (205mm x 100mm) Application method: pressing on by hand		5 each	Specify Yes/No	Yes	Required	
	9.02	Silicon tube to make coating on strain gauge. Shall be suitable and professional grade.			Specify Yes/No	Yes	Required	
<b>10) Toughbook</b>	10.01	The latest configuration toughbook having octacore processor intel core ultra 7 processor 165U or better. 1 TB hard disk or better Windows 11 pro or latest GPU: NVIDIA Geforce GTX 1650 or better Display: Readable in sunlight Must have LAN port Battery must be operational after charge for more than 10 hours. IP rating: 53 or better RAM:32GB DDR5 or better		1	Specify Yes/No	Yes	Required	
<b>The following requirements are common for the complete scope of supply</b>								



11) Warranty, Technical service and Maintenance	11.01	Location	General		Describe	yes	The Bidder is required to have a service support set up preferably in India with sufficient trained manpower.	
	11.02	Response Time			Specify	yes	The Bidder shall commit a maximum response time of 24hours, which means that in case of any breakdown within 24 hours or provide the online service support, the Bidder's personnel should reach the site, assess the cause of the breakdown, take necessary action to resolve the issue and submit	
	11.03	Warranty	Duration		Specify	yes	Min 2 years	
	11.04		Downtime		Specify	yes	Max 300 natural hours a year	
	11.05		Preventive Maintenance		Specify (yes/no)	yes	Labour and Spare Parts included	
	11.06		Breakdowns		Specify (yes/no)	yes	Labour and Spare Parts included	



	11.07		Inspection		Specify (yes/no)	yes	Every six months, with report submission on status of equipment	
	11.08	Annual Maintenance Contract	Duration		Specify (yes/no)	yes	three years after Warranty expires	
	11.09		Supplier responsibilities		Specify (yes/no)	yes	Same as for Warranty, except spare parts to be at CIRT cost	
	11.10	Spare Parts	Spare parts list		Specify (yes/no)	yes	critical/essential spare parts list with prices to be included in Financial Offer	
<b>12) Training and operations support</b>	12.01	Pre-acceptance training	Duration		Specify	Yes	1 week total	
	12.02		Number of Courses		Specify	Yes	2 (operational/maintenance)	
	12.03		Number of people		Specify	Yes	at least 2	
	12.04	Installation and commissioning training	Duration		Specify	Yes	Atleast 1 week	
	12.05		Number of Courses		Specify	Yes	2 (operational/maintenance)	
<b>13) Bidder's Company Requirements</b>	13.01	Bidder definition			Specify (yes/no)	yes	The bidder is the company which is designing, sourcing, supplying and executing the project under this tender.	
	13.02	Bidder's Experience	Calibration.		Specify	yes	Minimum 3 years of experience worldwide in equipment range	

	13.03		Similar reference		Specify	yes	Bidder is requested to provide a full list of similar projects with different specifications than required in Annexure IV-TCC of this tender documents	
	13.04		Specific (as a Certification equipment company)		Specify	yes	Bidder is required to provide details of at least three projects on calibration equipment setup as per the indian standards included in this tender, handled by it during last five years	
	13.05	Bidder Organisation	Turnover		Specify	yes	Annual turnover shall be higher than INR 0.50 Crore	



### Form d1) Deviations Suggested

*[The Bidder must present and justify here any modification or improvement to the Conditions of Contract proposed to in the interest of NATRAX. Such suggestions should be concise and to the point. In case, the Bidder does not want to suggest any deviation, this section must contain a statement indicating "No Deviation Suggested"]*

*[The Bidder shall use the following template in order to explain the deviations, and fill and include in the current document as many templates as deviations appear in his offer with regards to Requirements expressed in "Form d0) Checklist". The Bidder shall be required to furnish a separate sheet as per the following template for each deviation suggested.]*

<b>Requirement ID (as specified in the Form d0 -Checklist):</b>	<i>[Requirement ID (or range of IDs) this deviation is referring to on the checklist]</i>
<b>Subject</b>	<b>Minimum Requirement appearing on the Checklist and TCC</b>
	<i>[Please copy the requirement on the TCC or Checklist]</i>
<b>Proposed Specification</b>	
<i>[Explain in detail what alternative solution are you proposing]</i>	
<b>Reasons for the proposed solution to be superior than initial requirement</b>	
<i>[Give clear reasons why you think the proposed solution is better than the Requirement expressed in TCC and Checklist]</i>	



**NATIONAL AUTOMOTIVE TEST TRACKS**

**TENDER DOCUMENTS**

**TENDER NO. NATRAX/PROC/T&D/24-25/-----**

**SUPPLY, INSTALLATION, TESTING & COMMISSIONING**

**OF**

**SENSORS & INSTRUMENTS FOR ROAD LOAD DATA  
ACQUISITION**

**AT NATRAX, PITHAMPUR**

**Form D2) -Detailed Technical Specifications**

**NATRAX-Pithampur**

**National Automotive Test Tracks (NATRAX)**

NH-52, Old Agra- Mumbai Highway, Near to Pithampur Flyover, Post Khandwa (Near  
Pithampur)

Dhar District, Madhya Pradesh-454774

Phone: +919893892310, Fax – 07292-256101

Email: [a.prabhakar@natrip.in](mailto:a.prabhakar@natrip.in); [anuj.kumar@natrip.in](mailto:anuj.kumar@natrip.in)



## Detailed Technical Specifications of Proposed Instruments

The details should be filled by bidder for each of the quoted/offered Instrument/Sensor

Sr. No	Details	Please fill whether quoted or not for each instruments below
1	SEAT PAD ACCELEROMETER.	
2	WIRE ROPE POTENTIOMETER	
3	TRIAXIAL ACCELEROMETER.	
4	LVDT 200mm	
5	LVDT 300mm	
6	LINEAR STRAIN GAUGE TO MEASURE STRAIN IN KNOWN DIRECTION.	
7	ROSETT STRAIN GAUGES.	
8	CLEANING AGENT.	
9	PROTECTION COATING.	
10	TOUGHBOOK.	

### A. Technical Specifications- of offered Sensors & Instruments for Road Load Data Actuation.

#### 1. SEAT PAD ACCELEROMETER

Require seat pad accelerometer which can measures acceleration in all 3 axes i.e x,y, and z , gives data from its cables/connectors which can further be recorded in data logger.

##### Technical details-

- Ranges: -----
- Linearity: -----
- Frequency range : -----
- Resonant Frequency: -----



- Transverse Sensitivity: -----
- Overload limit : -----
- Excitation Voltage : -----
- Accessories: -----
- Vehicle Type: -----.
- Environmental requirement:
- Temperature Range: -----.
- Humidity: -----
- Vibration: -----
- Dust: -----
- List of DAQ to be supported/ synchronized with seat pad accelerometer: please provide the details.
- Universal logger: please provide the details.

## 2. WIRE ROPE POTENTIOMETER

The wire rope potentiometer requires linear position transducer with analog output ,compact alternative for use in light to moderate duty applications.

### Technical Requirements-

- Resolution: -----
- Linearity : -----
- Repeatability : -----
- Range : -----
- Operating Temperature : -----
- Should work under Vibration upto: -----
- Shock: -----
- IP protection: -----
- Wire Rope: -----
- Signal Cable: -----
- Mounting Adaptor: -----.
- Standard Delivery & Accessories: provide the details

## 3. Tri-axial Accelerometer

The sensor should be compact and must have the capability to measure high g forces with very good sampling rate. Must be compatible with all DAS systems.





**Technical Requirements-**

- DC Response: -----
- Supply Input Range : -----
- Signal Cable Length:-----
- Signal Cable Length:-----
- Interface should be Compatible with all DAS: please confirm

**4. LVDT 200mm**

The sensor should be compact and must have the capability to measure displacement with very good sampling rate. Must be compatible with all DAS systems.

**Technical Requirements-**

- Stroke Length : -----
- Type: -----
- With 5 cables of 5 meters shall be supplied: please confirm
- Mounting: With mounting base or arrangement to hold cover to rigid plan and the other end with Him Joint or similar easy to install and connect with test plan: Please confirm.
- Interface should be Compatible with all DAS: please confirm

**5. LVDT 300mm**

The sensor should be compact and must have the capability to measure displacement with very good sampling rate. Must be compatible with all DAS systems.

**Technical Requirements-**

- Stroke Length : -----
- Type: -----
- With 2 cables 5 meters and 3 cables shall be of 7meters: please confirm
- Mounting: With mounting base or arrangement to hold cover to rigid plan and the other end with Him Joint or similar easy to install and connect with test plan: please confirm.
- Interface should be Compatible with all DAS : please confirm.

**6. Linear Strain Gauge to measure strain in know direction:**

The sensor should be compact and must have the capability to strain with very good sampling rate. Must be compatible with all DAS systems.

**Technical Requirements-**

- Application: Strain measurement in known direction.
- Geometry : -----



- Connection Type : -----
- Nominal resistance (ohm): -----
- Temperature response matching: -----
- Temperature range(°C):- -----
- Temperature range(self- compensation):- -----
- Grid length a(mm): -----
- Grid length a(mm): -----
- Grid length c(mm): -----

**7. Rosett Strain Gauges**

The sensor should be compact and must have the capability to measure strain with very good accuracy.

**Technical Requirements-**

- Application: Strain measure
- Geometry : -----
- Connection type: -----
- Nominal Resistance(ohm): -----
- Temperature response matching: -----
- Temperature range(°C):- -----
- Temperature range(self-compensation):- -----
- Measuring grid material : -----
- Measuring grid carrier material: -----

**8. Cleaning Agent**

Ketone and ISO propyle Alcohol Based cleaning solution: please confirm.

**9. Protection Coating:**

**Technical requirements:**

- Strain gauge protection agent 0.05 mm thick aluminum foil coated with 3mm thick kneading compound (plastic): please confirm  
Temperature range of resistance: - -----  
Package contents: -----  
Application method: -----
- Silicon tube to make coating on strain gauge. Shall be suitable and professional grade: please confirm.

**10. INDUSTRIAL LAPTOPS**

Laptops with latest configuration are required for the department. They must include all the cards and ports to allow plug & play connections. An adequate system for on-board installation shall be provided for each laptop.

**Technical Requirements:**



Laptop should have.

- Window 11 as OS or higher please confirm.
- 32Gb DDR4 RAM or higher please confirm.
- GPU: NVIDIA Geforce GTX 1650 or better please confirm
- 2 TB Hard disk or higher please confirm.
- Intel Core Processor: Intel core & processor 165U or better please confirm
- 4 USB ports or higher please confirm.
- 14.0" diagonal High-Definition HP Bright View LED Display (1366 x 768), or higher please confirm.
- I/O Ports- RS-232 port, 3 USB 3.0, 1 USB 2.0, VGA, HDMI, RJ-45, Headphone-out/Microphone in combo jack, or higher please confirm.
- Wi-Fi 5 (802.11ac); Dual-Band (2.4 & 5 GHz), Bluetooth 5.0, or higher please confirm.
- Touch screen capability or higher please confirm
- 9-cell Lithium-ion (100Whr, 3.0Ah) battery, or higher please confirm

**B. Installation & Commissioning**

The supplier shall install/ commission the instrument at NATRAX, Dhar. The supplier shall also demonstrate the working of each instrument with trials in order to complete the Commissioning Process.

**Please confirm**

**C. Critical Spare Parts:** Supplier to provide a list of critical spare parts & basic tools, if any.  
**Please confirm**

**D. Training:** The supplier shall provide the training to NATRAX, Dhar, regarding the equipment operation and basic troubleshooting/Maintenance.  
**Please confirm**

**E. List of Documents/Calibration Certificates Required**

The supplier shall submit the following documents:

- Operation Manual of instruments (02 Hard Copies): **Please confirm**
- Technical Manual with all Mechanical, Electrical Connectivity drawings (02 Hard Copies) : **Please confirm**
- Calibration Certificates (NABL Accredited Lab or similar International Calibration certificates) of all the instruments supplied: **Please confirm**

**F. Warranty:** The supplier shall provide the warranty for two years (minimum): **Please confirm**

**G. Technical Support/After Sales Services**

The supplier shall provide the technical support in case of any fault/breakdown of any component of the instrument. After the expiration of the warranty period the supplier must be capable to handle Comprehensive AMC for complete: Please confirm



## **Form d3) References**

### **1.1 Automotive / Industry References**

*[In response to requirement appearing in point 1.2 of “Annexure III Bidder’s Company Requirements”, Bidder shall provide the details of all projects handled by it during last five years, where the Bidder has met specifications similar to the requirements appearing in Annexure IV Technical Conditions of Contract, as per the table below.]*

<b>S. No.</b>	<b>Description of Equipment/ Work</b>	<b>Year of Completion</b>	<b>Country</b>	<b>Role</b>	<b>Value of Work</b>	<b>References</b>
1						
2						
3						
4....						

### **1.2 Similar References**

*[In response to requirement appearing in point 1.2 of “Annexure III Bidder’s Company Requirements” Bidder shall provide detailed description of at least three projects similar to the current Scope of Supply, meaning total or partial relevance with Universal Charging Station, where Bidder had full responsibility on the design, supply and installation of the required work. The Bidder is requested to fill and include in this chapter one proforma (see below) per each given reference.]*

### **1.3 Specific References**

*[The Bidder is requested to fill and include in the current chapter all Specific References requested in “Annexure III Bidder’s Company Requirements”. Please use as many proformas for References (see below) as necessary. In the case one reference given by the Bidder covers more than one required Specific Reference, Bidder can merge the Specific References requirements]*

### **1.4 Sub-contractor experience**

*[The Bidder is requested to fill and include in the current chapter some reference on similar project achieved by each sub-contractor]*



## Proforma for References

<b>Reference number:</b>	<p><i>[For "Similar References" please name each reference as "Similar Reference #..." with consecutive numbers.</i></p> <p><i>For "Specific References" please name each reference as "Specific Reference #..." with number referring to the corresponding table in "Annexure III Bidder's Company Requirements"</i></p> <p><i>For "Sub-contractor Experience", please name each reference as "Sub-contractor Reference #..." with consecutive numbers.]</i></p>							
<b>Project and Location</b>	<b>Client Point of Contact</b>							
	<p><i>[Contact Person and Contact Details including address, telephone number, mobile number, fax number, e-mail address, etc]</i></p>							
<b>Participation:</b> <input type="checkbox"/> Prime <input type="checkbox"/> JV / Consortium Partner <input type="checkbox"/> Subcontractor								
<b>Purpose of the Equipment Installed :</b> <input type="checkbox"/> Training <input type="checkbox"/> Entertainment <input type="checkbox"/> R&D								
<b>Description of scope of work</b>								
<p><i>[(i) Information on the role of the Bidder and its scope of work in the Project.</i></p> <p><i>(ii) Brief description of the equipment capabilities and accuracies.]</i></p>								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;"><b>Project Duration</b></td> <td rowspan="3" style="vertical-align: top; padding: 5px;"><b>Reasons for delay (if any)</b></td> </tr> <tr> <td style="width: 50%;"><b>Start Date</b></td> <td style="width: 50%;"><b>Completion Date</b></td> </tr> <tr> <td style="height: 20px;"></td> <td style="height: 20px;"></td> </tr> </table>		<b>Project Duration</b>		<b>Reasons for delay (if any)</b>	<b>Start Date</b>	<b>Completion Date</b>		
<b>Project Duration</b>		<b>Reasons for delay (if any)</b>						
<b>Start Date</b>	<b>Completion Date</b>							
<b>Other Information</b>								
<p><i>[Any other information regarding accomplishments, project complexities, etc that Bidder desires to provide]</i></p>								



## **Form d4) Service Support**

The Bidder is requested to include in each chapter of the current document, the following information in order to demonstrate the compliance with requirements appearing in Annexure I Scope of Supply.

### **1.5 Service Support Organisation**

*[The Bidder shall provide the details of service support establishments in India with the strength of service personnel at each of the service centres. The location and capacity (role and workforce) of the Service Support in India shall be clearly specified, and resumes for the key service personnel shall be provided in the current chapter, using "Proforma for Curriculum Vitae". The details of all service personnel in India shall be provided as per table below.*

<b>Name</b>	<b>Location</b>	<b>Role</b>	<b>Years of Experience</b>

*[The supplier shall also describe the Structure of the Service Support which will be put at NATRAX disposal for Operation Support and Technical Support, describing how the local Service Support will interface with the parent Company and its Central Technical Service, in terms of work force and spare parts. Further, the Bidder shall provide the details of location and mechanism of service support from parent company situated outside India. The Bidder shall provide the resumes of key personnel from its world-wide service support organization who will be responsible for providing the service support to NATRAX.*

*Extent of breakdowns which would be solved by the local Service Support, the process required to solve them and the associated duration and down times shall be described.*

*Further, the extent of breakdowns which would require Worldwide Support, the process required to solve them and the associated duration and down times shall also be described.]*

### **1.6 Warranty Conditions**

*[The Bidder is required to explicitly commit to the following terms and conditions appearing in Annexure I, by filling the blank space with the corresponding information on the Bidder]*

\_\_\_\_\_ offer includes a comprehensive warranty of two years from date of installation for software/instruments/equipments/sencors supplied under this tender.

### **1.7 Annual Maintenance Contract**

The AMC for the three following years after Warranty expires is quoted year-wise separately. During this period we commit to all the terms and conditions as specified in Annexure-I.

The cost of Annual Maintenance Contract for one year would correspond to \_\_\_\_\_ percent of our "Total Price of the quoted item/items" appearing in Form e) of Financial Bid, including all the terms and conditions required in this chapter.



## PROFORMA FOR CURRICULUM VITAE

1. **Name of Staff** [*Insert full name*]: \_\_\_\_\_
  
2. **Date of Birth:** \_\_\_\_\_ **Nationality:** \_\_\_\_\_
  
3. **Education** [*Indicate college/university and other specialized education of staff member, giving names of institutions, degrees obtained, and dates of obtainment*]: \_\_\_\_\_
  
4. **Training** [*Indicate significant training obtained*]: \_\_\_\_\_
  
6. **Countries of Work Experience:** [*List countries where staff has worked in the last ten years*]: \_\_\_\_\_
  
7. **Languages** [*For each language indicate proficiency: good, fair, or poor in speaking, reading, and writing*]: \_
  
8. **Details of Tasks Assigned for this Assignment** [*List all tasks to be performed under this assignment*]:  
\_\_\_\_\_
  
9. **Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned**  
[*Among the assignments in which the staff has been involved, indicate the assignments that best illustrate staff capability to handle the tasks listed under point 8.*]
  
10. **Employment Record** [*Starting with present position, list in reverse order every employment held by staff member since graduation, giving for each employment : dates of employment, name of employing organization, positions held.*]:



## Form d5) Bidder's Organisation, Company Profile and Sub-Contractors

The Bidder is requested to provide the information required in the current document in order to demonstrate its structure has enough capacity for successfully achieving this Project, as requested in "Annexure III Bidder's Company Requirements".

### 1.8 Company Information

[Bidder is requested to fill the following information as "General Company Information"]

<b>Applicant Identification</b>	
a) Name of Company	
b) Registered address (in full)	
c) Details of registration (in full)	
d) Principal place of business	
e) Telephone number	
f) Facsimile number	
g) Website	
h) Person to contact in connection with this Bid	
i) Name and Address of Bankers	
<b>Business Organization</b>	
a) Date incorporated	
b) Where incorporated	
c) Parent company (if any) and its involvement in the project	
d) Subsidiary of	
e) Major subsidiaries and locations of other offices	
f) Brief description of company's principal activities with emphasis on scope of work (Use separate sheets as required)	
g) Has your company ever been black listed or terminated for default by any Indian government entity	<i>[If yes, provide detail in an attachment to this form]</i>





## 1.9 Company Description & Capability Statement

[Provide here a brief (a maximum of three pages) description of the organization and an explicit statement of capability of the organization.

In response to requirement 1.2 in document "Annexure III Bidder's Company Requirements", Bidder is requested to fill the following table indicating the type, number and financial amount of facilities installed in the last 3 years. Each S.No. shall correspond to one kind of projects related to Universal Charging Station

S.No.	Description of Equipment/Projects	Place of Installation		2022	2023	2024	Total
1		India	No.				
			Amount				

## 1.10 Organisation Structure

[Please provide in the current chapter, the Organization Chart showing company structure, including positions of directors and managers and location of all other offices in the world.

Please provide in the current chapter, a statement about the total number of employees of the Bidder, their skill sets with specific information on the employees based in India.]

## 1.11 Financial Information

[Bidder is requested to fill the following for "Financial Company Information".]

Year	2021-22	2022-23	2023-2024
Annual Turnover			
Annual Turnover pertaining to the equipment (in tender) range			
Annual Turnover in India			
Total R&D expenses (% of Annual Turnover)			
Net Profit (% of Annual Turnover)			

As a proof to the above information, the bidder shall submit acceptable documents as mentioned in Para 1.3 of Annexure-V.

## 1.12 Sub-Contractors

[Under this chapter the Bidder shall provide information about each of the sub-contractors, specifying the role and responsibility of each sub-contractor. Additionally the bidder is required to furnish the information as required under 1.1, 1.2, 1.3, and 1.4 of the current document for each sub-contractor].



## **Form d6) Description of Approach, Methodology, Work and Training Plan**

The Bidder is requested to provide in each chapter of the current document, the following information.

### **1.13 Work Plan and Implementation Schedule**

*[In this document the Bidder shall explain the proposed approach to the assignment, methodology for carrying out the activities and obtaining the expected output. The Bidder shall propose the main activities of the assignment, their content and duration, phasing and interrelations, milestones (including interim approvals by NATRAX), and delivery dates, taking into account NATRAX's requirements, especially Project Milestones specified in "Annexure I Scope of Supply", by means of a detailed implementation schedule. The implementation schedule should at least include –*

- *The dates for shipment*
- *The dates for installation, training and acceptance*

### **1.14 Project Implementation Team**

*[In this chapter the Bidder should propose the structure and composition of the team which shall work on implementation of this project. The Bidder shall designate a Project leader who shall be overall responsible for execution of the project and shall act as a single point contact for NATRAX. The Project leader shall be a person from the Original Equipment Manufacturer with adequate experience in installation and application of these software(s). The resume of the Project Leader as well and members of the project implementation team shall be provided under this chapter along with details of their experience, skill set, training received, etc, as per the Proforma for Curriculum Vitae (see below). The Bidder shall also provide information on the proposed roles of each of the team members, including when the Bidder proposes to deploy them during the assignment.]*

### **1.15 Training Plan**

*[In this chapter the Bidder shall give a detailed explanation on the Training Plan with respect to (i), Installation Training, and (iii) On-Job Training, included in the Offer, specifying what specific skills the representatives from NATRAX will develop, duration of each part of the training and program. This program shall be according to the requirements appearing in "Annexure I Scope of Supply"]*

### **1.16 Acceptance Plans**

*[In this chapter the Bidder shall give a detailed explanation on the proposed acceptance program, according to its shipment plans. This program shall be according to the requirements appearing in "Annexure I Scope of Supply" and "Annexure VI Acceptance Criteria". The Bidder is requested to reproduce these requirements in this chapter and accept them, and to explain the acceptance programs, what checks and tests will be performed and in what conditions, as well as the expected results.]*

## **PROFORMA FOR CURRICULUM VITAE**



1. **Name of Staff** [*Insert full name*]: \_\_\_\_\_
  
2. **Date of Birth:** \_\_\_\_\_ **Nationality:** \_\_\_\_\_
  
3. **Education** [*Indicate college/university and other specialized education of staff member, giving names of institutions, degrees obtained, and dates of obtainment*]: \_\_\_\_\_
  
4. **Training** [*Indicate significant training obtained*]: \_\_\_\_\_
  
6. **Countries of Work Experience:** [*List countries where staff has worked in the last ten years*]: \_\_\_\_\_
  
7. **Languages** [*For each language indicate proficiency: good, fair, or poor in speaking, reading, and writing*]: \_
  
8. **Details of Tasks Assigned for this Assignment** [*List all tasks to be performed under this assignment*]:  
\_\_\_\_\_
  
9. **Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned**  
[*Among the assignments in which the staff has been involved, indicate the assignments that best illustrate staff capability to handle the tasks listed under point 8.*]
  
10. **Employment Record** [*Starting with present position, list in reverse order every employment held by staff member since graduation, giving for each employment : dates of employment, name of employing organization, positions held.*]:



# **NATIONAL AUTOMOTIVE TEST TRACKS**

## **TENDER DOCUMENTS**

**TENDER NO. NATRAX/PROC/T&D/24-25/-----**

**SUPPLY, INSTALLATION, TESTING & COMMISSIONING  
OF  
SENSORS & INSTRUMENTS FOR ROAD LOAD DATA  
ACQUISITION**

**Form dx) Instructions**

**NATRAX-Pithampur**

**National Automotive Test Tracks (NATRAX)**

NH-52, Old Agra- Mumbai Highway, Near to Pithampur Flyover, Post Khandwa (Near  
Pithampur)

Dhar District, Madhya Pradesh-454774

Phone: +919893892310, Fax – 07292-256101

Email: [a.prabhakar@natrip.in](mailto:a.prabhakar@natrip.in); & [anuj.kumar@natrip.in](mailto:anuj.kumar@natrip.in)



## FORMS dx) INSTRUCTIONS

### General

The following forms, called "Form dx)", with x=1..6, are aimed for the Bidder to explain his technical proposal and the suitability of his Company for undertaking the work.

The different Annexures of the tender document show all the requirements from NATRAX and give additional information to the Bidder. They also state the information required by NATRAX in order to perform the evaluation of the Bidder and his proposal, and specify in which Form this information shall be submitted.

Each Form is given in a template format, where the Bidder is requested to fill the blank space, following the instructions in cursive format.

The Bidder is allowed to submit additional information, as Annexures to his Offer, provided it is specifically stated that the information attached corresponds to the equipment offered. However, the technical evaluation is first based on the information appearing in the Forms. The Bidder is hence requested to fill them with as much information as retained necessary in order to deeply understand his proposal.

As stated in Annexure V Evaluation Parameters, the technical proposals "are evaluated not only on the specifications stated by the Bidder, but on the information attached to his offer that demonstrates his capability for achieving them".

### Specific Instructions for Forms d0, d1 and d2

The main Form is Form d0) Checklist. The Bidder is requested to fill each cell in the "Proposed Specifications" column with the specific value of his Offer corresponding to each Requirement.

The Bidder is requested to specify what particular product he is offering for each particular requirement, rather than just stating he is fulfilling the Minimum Requirement. Unless specifically required ("Specify yes/no"), cells filled with terms like "compliant" or "yes" will not be evaluated. Even when a "Specify yes/no" answer is required a small sentence explaining the requirement is required.

For each Proposed Specification that deviates from the Minimum Requirement, the Bidder shall fill one Form d1) Deviations template. In case of negative deviations (Proposed Specifications being inferior to the Minimum Requirement), filling the mentioned template is mandatory, in order for the Bidder to demonstrate that the Proposed Specification is equivalent to the requirement. In case of positive deviations (Proposed Specifications being superior to the Minimum Requirement), the template shall be filled in order for NATRAX to positively evaluate this deviation.



Form d2) Detailed Technical Specifications shall be filled by the Bidder with all the information required for demonstrating the values stated in Form d0) Checklist. He shall fill this form as per the given template, which corresponds to the index of the Annexure IV Technical Conditions of Contract. Any information referred to the technology used and how the claimed performances are reached shall appear in this Form d2), including Acceptance Test Reports and Calibration Reports for previous projects (with the same equipment as proposed, giving the contact details of the corresponding customer). Additional information can be attached as an Annexures to this Form by the Bidder.

The information submitted in Form d2 and its Annexures (if available) shall refer only to the proposed equipment. The Bidder is requested to submit a document stating that all the equipment described in Forms d0 and d2 is corresponding to the equipment proposed and quoted in the Financial Bid.

If other test results obtained in previous projects, or simulations, are included, they shall correspond to the same (or equivalent) equipment as the one proposed.

### **Specific Instructions for Form d3**

Form d3) is aimed in order for the Bidder to explain previous projects where he was involved that demonstrate his experience and capability for undertaking the assignment.

Four kinds of references are required:

- **Automotive References:** the Bidder is requested to fill this chapter in order to demonstrate his involvement in the Automotive Industry
- **Similar References:** the Bidder is requested to fill this chapter in order to demonstrate he has supplied and installed the type of equipment required in this project recently. At-least 5 installations above 30 nodes, 3 installations with 30TB+ PFS, 3 installations with scheduler, 2 setup where bidder is doing on-site or remote support has to be submitted.

### **Specific Instructions for Form d4**

The Bidder is requested to answer Form d4 explicitly stating that he commits to each and all the Warranty and AMC (Annual Maintenance Contract) conditions required in Annexure I Scope of Supply

### **Specific Instructions for other Forms**

Each Form includes the required instructions in order for the Bidder to fill them correctly.



## Form e) Form of Financial Bid

### (I) Financial Proposal Submission Form

(To be Executed on Letterhead of the Bidder)

#### FINANCIAL PROPOSAL SUBMISSION FORM

[Location, Date]

To:

Head Procurement & Stores  
National Automotive Test Tracks (NATRAX)  
NH-52, Old Agra-Mumbai Highway,  
Near to Pithampur Flyover,  
Post Khandwa (Near Pithampur, Dist. Dhar (M.P.)).

Dear Sir,

We, the undersigned, offer to provide the equipment & services in accordance with your Tender No. \_\_\_\_\_, dated \_\_\_\_\_ and our Technical Bid. Our attached Financial Bid includes the price in the format for financial bid provide as part of tender documents. The total price of our offer is \_\_\_\_\_ (in figures and words) and includes all the deliverables under this tender as per our Technical Bid.

We hereby declare that all the information and statements made in this Bid is true and complete in all respects and is as per the guidelines and terms & conditions laid down in the tender document. We further understand that any information which is found false or is not as per the guidelines and terms & conditions of the tender document may lead to our disqualification.

Our Financial Bid shall be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Bid.

We understand NATIS has right to accept or reject our Bid as per its discretion.

Yours sincerely,

Authorized Signature [*In full*]: \_\_\_\_\_

Authorized Signature [*In initials*]: \_\_\_\_\_

Name and Title of Signatory: \_\_\_\_\_

Name of Firm: \_\_\_\_\_

Address: \_\_\_\_\_

[Note : To be signed in blue ink]



## Form e) Financial Bid Format

### SCHEDULE-A: EQUIPEMENT PART:

1) Here the Bidder shall quote their lump sum price for the Design, manufacture, assembly and functional testing prior to shipment.

a) This Lump Sum price shall also include FOR/FOT up to site for indigenous supplier/goods as per GCC Clause No. 14.

2) Installation at sites, integration of systems and system checking, testing and commissioning of the following elements including supply of special tools, requisite software etc. all complete in one single package, considering all the deliverables and the terms & conditions of this tender.

3) Pre-acceptance needs to be carried out as per the clause no. 17 of GCC. The Expenditure for the Pre acceptance Test shall be borne by the supplier/contractor including the travelling, boarding & lodging of NATIS Representatives and details shall be given in **Schedule-I**.

*please Mentioned Not Quoted wherever not applicable.*

S.No.	Scope of Supply ( Refer TCC for details)	Quantity of Supply	Lum-Sump price (in INR)	
			IN Figure	IN words
1	Seat Pad Accelerometer	2		
2	Wire Rope Pots	6		
3	Triaxial accelerometer	10		
4	LVDT 200mm	4		
5	LVDT 300mm	4		
6	Linear Strain Gauge to measure strain in know direction	5		
7	Rosett Strain Gauges	4		
8	Cleaning Agent	1		
9	Protection Coating	1		
10	Toughbook	1		
Note: Please mark N/A whichever is not applicable.				





**SCHEDULE- C: Price for Trainings and Operation Support.**

Here the Bidder shall quote thier lump sum price in INR for the Trainings and Operation support for the elements covered under schedule- A, for the complete package, considering all the deliverables and terms & conditions of this tender.

*please Mentioned Not Quoted wherever not applicable.*

The Bidder Shall not change any content of the items as given below

Sl. No.	Price for Trainings and Operation Support.	Quoted Amount	
		INR (As applicable) in figure	INR (As applicable) in words
1	Seat Pad Accelerometer		
2	Wire Rope Pots		
3	Triaxial accelerometer		
4	LVDT 200mm		
5	LVDT 300mm		
6	Linear Strain Gauge to measure strain in know direction		
7	Rosett Strain Gauges		
8	Cleaning Agent		
9	Protection Coating		
10	Toughbook		
	<b>TOTAL OF SCHEDULE - C</b> (In figures & Words)		



**SCHEDULE- D: Total price for the SITC of Instruments and senceors**

Here the Bidder shall quote thier Total lump sum price in INR (only) for the entire package, which shall be the total of prices at Schedule A&C. This amount shall be considered as the contract sum for this package, considering all the deliverables and terms & conditions of this tender. Arithmetical errors if any, committed by the Bidder, in this financial form (e) shall be governed as per Annexure-V,'Evaluation Parameters'.

<b>The Bidder Shall not change any content of the items as given below</b>			<b>UNDER SCHEDULE - D ( [Schedule D= A+C] Lump sum price in INR (As applicable)</b>
<b>Sl. No.</b>	<b>Description of item</b>	<b>Total Amount [Schedule, D= A+C] INR (In Figures )</b>	<b>Total Amount INR (Words)</b>
1	Seat Pad Accelerometer		
2	Wire Rope Pots		
3	Triaxial accelerometer		
4	LVDT 200mm		
5	LVDT 300mm		
6	Linear Strain Gauge to measure strain in know direction		
7	Rosett Strain Gauges		
8	Cleaning Agent		
9	Protection Coating		
10	Toughbook		
	<b>TOTAL PRICE (FOR SCHEDULE D)</b>		



### SCHEDULE- E: Price for Annual Maintenance Contract (AMC)

Here the Bidder shall quote thier lump sum price in INR (only) for the post warranty period Annual Maintenance Contract (AMC), as covered under 'Schedules- A'. The Bidder shall note that the price of Annual Maintenance Contract shall not be included in the total price for the package .

**please Mentioned Not Quoted wherever not applicable.**

SL. No	Description of item	NATRAX-Pithampur		
		1st Year	2nd Year	3rd Year
1	Seat Pad Accelerometer			
2	Wire Rope Pots			
3	Triaxial accelerometer			
4	LVDT 200mm			
5	LVDT 300mm			
6	Linear Strain Gauge to measure strain in know direction			
7	Rosett Strain Gauges			
8	Cleaning Agent			
9	Protection Coating			
10	Toughbook			
<b>TOTAL OF SCHEDULE - E (In figures &amp; Words)</b>				

### SCHEDULE- F : Price list for suggested Spares and Consumables

Here the Bidder shall provide separate lists (in their own format) of spare parts and consumables for each type of elements for each centre as mentioned at 'Schedule A' and their prices being offered to NATRAX in INR (As Applicable) . The Bidder shall note that the price of suggested spares and consumables shall not be included in the total price for the package .



SCHEDULE G COST BREAKUP OF TRAINING & OPERATION SUPPORT											
Here the Bidder shall submit the cost break up for Trainings and Operation mentioned in schedule- C. This will be used in case NATRAX decides at later stage to increase/decrease the No. of training and/or No. of trainees.											
S. No.	Site	Travel Cost		Local Conveyance	DA Cost Per Head	Training Cost (Per	Pre-Acceptance	Meal Cost Per Head	Hotel Stay Per Head	Misc. Exp. (if any)	Total
		Destination	Cost								
1	NATRAX										

Here the Bidder shall submit the detailed list of items that will be delivered under this tender in INR ( for domestic goods on delivery at site basis) up to the breakup limited to 1% of the total package cost. For items with cost below 1%, they shall be included as a sub-part of the main item/ equipment. The total cost stated by the bidder, here, should match with the total price of the equipment (Schedule A). This is in line with clause 1.2 of Annexure VII Terms of Payment)											
S. No.	Location (Site)	Items /sub items (Scope of Supply)	Part Name (Detailed List)	Qty (Nos.)	Local (INR)		Shipment number / consignment (eg. First Shipment, Second Shipment, Third Sipment, etc.)	Shipment to be done by Bidder/Subcontractor/Technical Partner)			
					Unit Cost	Total Cost					



## Form F

Technical Queries pertaining to Tender No. NATRAX/PROC/T&D/24-25/-----				
S. No.	Reference in the Tender Document	Subject	Query	Answer (by NATRAX)

Commercial Queries pertaining to Tender No. NATRAX/PROC/T&D/24-25/-----				
S. No.	Reference in the Tender Document	Subject	Query	Answer (by NATRAX)