



Bid Number/बोली क्रमांक (बिड संख्या):

GEM/2024/B/4961306

Dated/दिनांक : 21-05-2024

**Bid Document/ बिड दस्तावेज़**

Bid Details/बिड विवरण	
Bid End Date/Time/बिड बंद होने की तारीख/समय	31-05-2024 16:00:00
Bid Opening Date/Time/बिड खुलने की तारीख/समय	31-05-2024 16:30:00
Bid Offer Validity (From End Date)/बिड पेशकश वैधता (बंद होने की तारीख से)	30 (Days)
Ministry/State Name/मंत्रालय/राज्य का नाम	Ministry Of Railways
Department Name/विभाग का नाम	Railways Public Sector Undertakings
Organisation Name/संगठन का नाम	Rites Limited
Office Name/कार्यालय का नाम	Rites Ltd
Total Quantity/कुल मात्रा	327
Item Category/मद केटेगरी	Mobilization , Shifting , Drilling , Extra Drilling , Drilling NX , Vane Shear Test , CBR , Undisturbed , Disturbed , SPT , Water Samples , Moisture Content , Atterberg Limits , Specific Gravity , Grain size analysis , Direct Shear , Natural Density , Consolidation Test , Unconfined Compression Test , Tri Axial Test , Density Test , Water Absorption , Hardness , Point Load Test , Modulus of Elasticity , Abrasion Testing , pH value , Soil pH value , Report submission , Unforeseen
BOQ Title/बीओक्यू शीर्षक	Geo Technical Investigation
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	Experience Criteria,Certificate (Requested in ATC) *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	Single Packet Bid
Primary product category	Drilling
Time allowed for Technical Clarifications during technical evaluation/तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय	2 Days

Bid Details/बिड विवरण	
Inspection Required (By Empanelled Inspection Authority / Agencies pre-registered with GeM)	No
Estimated Bid Value/अनुमानित बिड मूल्य	841567
Evaluation Method/मूल्यांकन पद्धति	Total value wise evaluation

#### EMD Detail/ईएमडी विवरण

Advisory Bank/एडवाइजरी बैंक	AXIS BANK LTD
EMD Amount/ईएमडी राशि	16831

#### ePBG Detail/ईपीबीजी विवरण

Advisory Bank/एडवाइजरी बैंक	AXIS BANK LTD
ePBG Percentage(%) / ईपीबीजी प्रतिशत (%)	5.00
Duration of ePBG required (Months) / ईपीबीजी की अपेक्षित अवधि (महीने).	3

(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). 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 :

GGM(C) & PU Head  
Rites Ltd, Railways Public Sector Undertakings, RITES Limited, Ministry of Railways  
(Rajiv Kumar Sinha)

#### Splitting/विभाजन

Bid splitting not applied/बोली विभाजन लागू नहीं किया गया.

#### Reserved for Make In India products

Reserved for Make In India products	Yes
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#### Reserved for MSE

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Reserved for MSE	Yes
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1. Bid reserved for Make In India products: : Procurement under this bid is reserved for purchase from 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. However, eligible micro and small enterprises will be allowed to participate. The minimum local content to qualify as a class 1 local supplier is denoted in the bid document. All bidders 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 the bid is liable to be rejected. 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 . In case Buyer has selected Purchase preference to Micro and Small Enterprises clause in the bid, the same will get precedence over this clause.

2. Procurement under this bid is reserved for purchase from Micro and Small Enterprises whose credentials are validated online through Udyog Aadhaar for that product category. If the bidder wants to avail the reservation benefit, 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 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.

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.

## Mobilization

**(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)**

### Technical Specifications/तकनीकी विशिष्टियाँ

Specification Document	<a href="#">View File</a>
BOQ Detail Document	<a href="#">View File</a>

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

### 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
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S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	2	30

## Shifting

(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)

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	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	12	30

## Drilling

(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)

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	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	90	30

**Extra Drilling****(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)****Technical Specifications/तकनीकी विशिष्टियाँ**

Specification Document	<a href="#">View File</a>
BOQ Detail Document	<a href="#">View File</a>

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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	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	5	30

**Drilling NX****(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)****Technical Specifications/तकनीकी विशिष्टियाँ**

<b>Specification Document</b>	<a href="#">View File</a>
<b>BOQ Detail Document</b>	<a href="#">View File</a>

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

**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	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	10	30

**Vane Shear Test**

**(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)**

**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

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	5	30

## CBR

(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)

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	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	2	30

## Undisturbed

(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)

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	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	25	30

**Disturbed****(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)****Technical Specifications/तकनीकी विशिष्टियाँ**

Specification Document	<a href="#">View File</a>
BOQ Detail Document	<a href="#">View File</a>

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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	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	25	30

**SPT****(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)****Technical Specifications/तकनीकी विशिष्टियाँ**



<b>Specification Document</b>	<a href="#">View File</a>
<b>BOQ Detail Document</b>	<a href="#">View File</a>

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

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

<b>S.No./क्र. सं.</b>	<b>Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी</b>	<b>Address/पता</b>	<b>Quantity/मात्रा</b>	<b>Delivery Days/डिलीवरी के दिन</b>
1	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	50	30

## Water Samples

**(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)**

**Technical Specifications/तकनीकी विशिष्टियाँ**

<b>Specification Document</b>	<a href="#">View File</a>
<b>BOQ Detail Document</b>	<a href="#">View File</a>

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

<b>S.No./क्र. सं.</b>	<b>Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी</b>	<b>Address/पता</b>	<b>Quantity/मात्रा</b>	<b>Delivery Days/डिलीवरी के दिन</b>

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	2	30

## Moisture Content

(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)

## Technical Specifications/तकनीकी विशिष्टियाँ

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BOQ Detail Document	<a href="#">View File</a>

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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	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	4	30

## Atterberg Limits

(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)

## 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	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	4	30

**Specific Gravity****(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)****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	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	4	30

**Grain Size Analysis****(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)****Technical Specifications/तकनीकी विशिष्टियाँ**

<b>Specification Document</b>	<a href="#">View File</a>
<b>BOQ Detail Document</b>	<a href="#">View File</a>

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

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

<b>S.No./क्र. सं.</b>	<b>Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी</b>	<b>Address/पता</b>	<b>Quantity/मात्रा</b>	<b>Delivery Days/डिलीवरी के दिन</b>
1	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	30	30

**Direct Shear**

**(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)**

**Technical Specifications/तकनीकी विशिष्टियाँ**

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

<b>S.No./क्र. सं.</b>	<b>Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी</b>	<b>Address/पता</b>	<b>Quantity/मात्रा</b>	<b>Delivery Days/डिलीवरी के दिन</b>

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	4	30

## Natural Density

(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)

### Technical Specifications/तकनीकी विशिष्टियाँ

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BOQ Detail Document	<a href="#">View File</a>

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

### 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	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	4	30

## Consolidation Test

(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)

### 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	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	4	30

**Unconfined Compression Test****(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)****Technical Specifications/तकनीकी विशिष्टियाँ**

Specification Document	<a href="#">View File</a>
BOQ Detail Document	<a href="#">View File</a>

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

**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	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	10	30

**Tri Axial Test****(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)****Technical Specifications/तकनीकी विशिष्टियाँ**

<b>Specification Document</b>	<a href="#">View File</a>
<b>BOQ Detail Document</b>	<a href="#">View File</a>

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

**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	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	10	30

**Density Test**

**(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)**

**Technical Specifications/तकनीकी विशिष्टियाँ**

<b>Specification Document</b>	<a href="#">View File</a>
<b>BOQ Detail Document</b>	<a href="#">View File</a>

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

**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

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	2	30

## Water Absorption

(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)

Technical Specifications/तकनीकी विशिष्टियाँ

Specification Document	<a href="#">View File</a>
BOQ Detail Document	<a href="#">View File</a>

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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	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	2	30

## Hardness

(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)

Technical Specifications/तकनीकी विशिष्टियाँ

Specification Document	<a href="#">View File</a>
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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	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	2	30

**Unconfined Compression Test****(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)****Technical Specifications/तकनीकी विशिष्टियाँ**

Specification Document	<a href="#">View File</a>
BOQ Detail Document	<a href="#">View File</a>

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

**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	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	4	30

**Point Load Test****(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)****Technical Specifications/तकनीकी विशिष्टियाँ**

<b>Specification Document</b>	<a href="#">View File</a>
<b>BOQ Detail Document</b>	<a href="#">View File</a>

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

**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	Rajiv Ranjan	700012, RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	4	30

## Modulus Of Elasticity

**(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)**

**Technical Specifications/तकनीकी विशिष्टियाँ**

<b>Specification Document</b>	<a href="#">View File</a>
<b>BOQ Detail Document</b>	<a href="#">View File</a>

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

**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

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	2	30

## Abrasion Testing

(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)

Technical Specifications/तकनीकी विशिष्टियाँ

Specification Document	<a href="#">View File</a>
BOQ Detail Document	<a href="#">View File</a>

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

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	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	2	30

## PH Value

(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)

Technical Specifications/तकनीकी विशिष्टियाँ

Specification Document	<a href="#">View File</a>
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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	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	2	30

**Soil PH Value****(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)****Technical Specifications/तकनीकी विशिष्टियाँ**

Specification Document	<a href="#">View File</a>
BOQ Detail Document	<a href="#">View File</a>

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

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1	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	2	30

**Report Submission****(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)****Technical Specifications/तकनीकी विशिष्टियाँ**

<b>Specification Document</b>	<a href="#">View File</a>
<b>BOQ Detail Document</b>	<a href="#">View File</a>

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

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

<b>S.No./क्र. सं.</b>	<b>Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी</b>	<b>Address/पता</b>	<b>Quantity/मात्रा</b>	<b>Delivery Days/डिलीवरी के दिन</b>
1	Rajiv Ranjan	700012,RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	2	30

## Unforeseen

**(Minimum 50% Local Content required for qualifying as Class 1 Local Supplier)**

**Technical Specifications/तकनीकी विशिष्टियाँ**

<b>Specification Document</b>	<a href="#">View File</a>
<b>BOQ Detail Document</b>	<a href="#">View File</a>

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

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

<b>S.No./क्र. सं.</b>	<b>Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी</b>	<b>Address/पता</b>	<b>Quantity/मात्रा</b>	<b>Delivery Days/डिलीवरी के दिन</b>

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Rajiv Ranjan	700012, RITES LTD Metro Railway Building (4th Floor) 56, C R AVENUE	1	30

## 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. Buyer Added Bid Specific ATC

Buyer Added text based ATC clauses

#### **RITES LTD.**

**(A Govt. of India Enterprise) ERPO, Kolkata**

**56, C. R. Avenue, 2nd floor, Kolkata - 700 012 e-mail: [pokolkata@rites.com](mailto:pokolkata@rites.com)**

#### **1.0 General:**

- i. **Name of Work:** Geo Technical investigation in connection with the Preparation of Detail Project Report for development of 3<sup>rd</sup> SILO loading arrangement at Lalmatia loading yard of NTPC Limited and construction of receiving yard at Barh side of Plant at Barh STPP.
- ii. **Estimated Cost of Work:** The work is estimated to cost Rs. 8,41,567/- (Rupees Eight Lakh Forty One Thousand Five Hundred Sixty seven only) including GST. This Estimate, however, is given merely as a rough guide.
- iii. **Time for Completion:** 01 (One) Month from the date of LoA/W.O. or date of handing over of site, whichever is later.
- iv. **Earnest Money Deposit (EMD)** - The bids shall be accompanied by total Earnest Money Deposit (EMD) of ₹16,831.00/- (Rupees Sixteen Thousand Eight Hundred Thirty one only) which is nonrefundable. It shall be in the form of a Banker's Cheque/ Pay Order/ Demand Draft favouring "RITES Ltd." issued by a scheduled commercial bank, payable at Kolkata. Exemption from submission of EMD for MSME vendors are applicable in this tender.

Bidders are required to upload scanned copy of acceptable instruments for EMD during online submission of bid. These documents shall be deposited in "ORIGINAL" in a sealed envelope within a week from the date of opening to:

RITES Ltd., **56, C. R. Avenue, 2nd floor, Kolkata - 700 012**

**Note:** In case of exemption from payment of cost of EMD as a matter of Govt. Policy, the scanned copy of document in support of exemption will have to be uploaded by the bidder during bid submission. In case the bidder is registered as a vendor under the category of Micro, Small and Medium Enterprises (MSME), he must state his Udyog Aadhar Memorandum (UAM) number as registered on CPPP. The onus of proving that the bidder is exempted from payment of cost of tender document and/or EMD lies on the bidder. In

this connection, it should be noted that mere opening of bid does not mean that the bid has to be considered by RITES as a valid bid. If later, it is discovered from the uploaded documents that bidder is not exempted from payment of cost of tender and/or EMD, his bid shall be treated as non-responsive.

- v. **Availability of Site** - The site for the subject work is available.

## **2.0 Pre-Qualification Criteria:**

**Similar Works Experience:** The Bidder should have satisfactorily completed in his own name or proportionate share as a member of a Joint Venture, at least one similar work of minimum value of not less than the amount equal to 80 (eighty) percent of the estimated cost i.e. Rs. 5,70,554.00 **OR** at least two similar works of minimum value of not less than the amount equal to 50 (fifty) percent of the estimated cost i.e. Rs. 3,56,596.00 **OR** Three similar completed works each costing not less than the amount equal to 40 (forty) percent of the estimated cost i.e. Rs. 2,85,277.00 during the last 7 (seven) years prior to the last stipulated date for submission of the Bid.

**Definition of similar work: "Similar Works shall mean the work of the any type of Geotechnical Investigation work including collection of disturbed and undisturbed samples for testing at laboratory for preparation of report (including additional work under the contract) carried out in India under a single contract."**

**Note :** Assignment experience certificate for completed and Substantial completed (non-consultancy) assignment issued by Govt. Organizations/Semi Govt. Organizations of Central or State Govt.; or by Public Sector Undertakings/Autonomous Bodies of Central/State Govt. or their subsidiaries/by Public Ltd. Companies listed in Stock exchange in India or Aboard or subsidiaries of such companies shall only be accepted.

Substantial Completed (Non-Consultancy) assignment shall mean whose at least 80% payment (excluding payment for adjustment of price variation (PVC), if any, and excluding GST) of the present value of assignment has been received.

For start ups the value of Completed or Substantially completed (Non- Consultancy) works in a) i), ii) & iii) can be reduced upto 20%

## **1.0 GENERAL**

**1.1** This specification covers the technical requirements for a detailed "Geotechnical Investigation at Field". The detailed geotechnical investigation shall be carried out at land / river bed to determine the nature, extent and engineering properties about the substrata profile and relevant soil / rock parameters and ground water table at site for development of a reliable and satisfactory

design of foundation as per provisions of latest IRS / IRC / BIS Code as applicable.

## **2.0 SCOPE**

2.1 The work shall include mobilization of all necessary equipments, providing necessary engineering supervision and technical personnel, skilled and unskilled labours, arranging water for drill and working platform for river drilling etc. as requirement to carry out the entire field investigation.

2.2 The contractor shall make his arrangements for locating the bore hold position, trial pits and other field tests as per the drawings/sketches supplied to him and for determining the reduced levels at these locations with respect to bench mark indicated by the Engineer-in-charge. Two established reference lines will be indicated by the Engineer-in-charges.

2.3 All the field data shall be recorded in the proforma recommended in Indian Standard Codes and the field records shall be countersigned by the Engineer-in-charge. The contractor shall submit two copies of the field bore logs to the Engineer-in-charge soon after the completion of each bore hole. All the investigations are to be carried out by the contractor as per the priority requirements of the Engineer-in-charge.

2.4 The contractor shall intimate the Engineer-in-charge giving reasons if any additional specific tests he considers necessary to be carried out duly considering local sub-soil conditions before starting of such tests.

2.5 Whenever the contractor is unable to extract undisturbed samples he should immediately inform the Engineer-in-charge.

## **3.0 BORE HOLD LOCATIONS AND DEPTH**

3.1 The location, extent and depth of bore holes and field tests/area(s) indicated in the drawing/list is subject to change that may be necessary during actual execution of the work. No claim whatsoever shall be entertained for differences between the location.

Extent and depth/area(s) etc. of bore holes/tests indicated on the drawing/list and those shown on the tender drawings. The work shall be carried out as per the instructions of the Engineer-in-charge.

## **4.0 GENERAL REQUIREMENTS**



4.1 In areas which have already been developed, the contractor shall take advantage of existing local knowledge, record of trial pits, bore holes etc. in the vicinity and the type of foundations adopted and behaviour of existing structures particularly those of similar nature to the ones proposed for this project.

4.2 The contractor shall make use of information gathered from quarries, unlined wells, cuttings from nearby area etc. The general topography of the nearby areas will often give some location about the variation of the soil conditions which are likely to exist.

4.3 The contractor shall gather data regarding the removal of overburden by excavation, erosion or landslides in the areas which may give an idea of the amount of reconsolidation that the soil strata has undergone. Similarly data regarding recent fill shall also be studied to determine the characteristics of the fill as well as the original strata.

4.4 The water level in streams and watercourses if any in the neighborhood shall be noted. Reliable information regarding ground water level shall also be gathered from water level in the nearby wells.

4.5 It is essential that the equipments/instruments are properly calibrated at the commencement of the work so that they represent true values and submit the test reports to the Engineer-in-charge. If the Engineer-in-charge so desires, the contractor shall arrange for having the instruments tested in presence of the engineer at an approved laboratory at the contractor's cost and the test reports shall be submitted to the Engineer-in-charge

## **5.0 CODES OF STANDARDS**

5.1 All standards, specification and codes of practice referred to herein shall be the latest editions including all applicable official amendments and revisions.

5.2 In case of conflicts between this specification and those (IS codes/RDSO's guidance and standards) referred to herein the former shall prevail.

5.3 All work shall be carried out as per the specification and the following standards and codes/RDSO's guidelines.

IS:1080 Code practice for design and construction of simple spread foundations.

IS:1498 Classification and identification of solid for general engineering purposes. IS:18  
892 Code of practice for subsurface investigation for foundation.  
IS:1904 Code of practice for design and construction of foundations in soils: General requirements.

IS: 2131 Method of standard penetration test for soils

IS: 2132 Code of practice for thin walled tube sampling of soils IS:

2720 Method of test for soils (Relevant parts)

IS: 2809 Glossary of terms and symbols relating to soil engineering IS:

2810 Glossary of terms relating to soil dynamics

IS: 2911 Part-I, Section-II – Code of Practice for design and construction of pile foundations.

IS: 2950 Code of practice for design and construction of raft foundation Part-I IS: 40

78 Code of practice for indexing and storage of drill cores

IS: 8009 Code of practice for calculation of settlement of foundation Part-I & II IS: 8

763 Guide for undisturbed sampling of sand

IS: 8764 Method for determination of point load strength index of rocks

IS: 9143 Method for determination of unconfined compressive strength of rock materials

IS: 9179 Method for preparation of rock specimen for laboratory testing IS: 96

40 Specifications for split spoon sampler

IS:4453 Code of practice for exploration by pits, trenches, drifts and shafts

IS:4464 Code of practice for presentation of drilling information and core description in foundation investigation

IS:5249 Method of test for determination of in-situ dynamic properties of soil IS:5313 Guide for core drilling observations

IS: 6403 Code of practice for determination of allowable bearing pressure on shallow foundation

IS: 6935 Method of determination of water level in a bore hole IS:

11229 Specifications for shear box testing of soils

IS: 12070 Code of practice for design and construction of shallow foundations on rocks

## **6.0 FIELD INVESTIGATION- SOIL**

### **6.1 Boring**

#### **6.1.1 General Requirements**

- a) Bore holes shall be drilled at specified locations to obtain information about the sub-soil profile, its nature, strength and to collect soil samples for strata identification and conducting laboratory tests. The minimum diameter of the boreholes shall be 150mm and boring shall be carried out in accordance with the provisions of IS: 1892 and as per this specification.
- b) All bore holes shall extend up to the depths shown on enclosure list or as directed by the Engineer-in-charge. If the strata with standard penetration test (SPT) 'N' value greater than 100 for 30cm penetration with characteristics of rock is met with earlier, the borehole shall be advanced further by chiselling. Chiselling shall be continued for a maximum depth of 20 cm or upto 2 hours whichever is earlier. During chiselling rock fragments/rock cores shall be collected. Identification of rock strata shall be on the basis of visual examination of SPT sample and rock fragments. After it is established that rock is met with, the borehole shall be advanced further by drilling in rock as specified in clause 7.0 and cores shall be collected. When the borehole is terminated in soil strata, an additional standard penetration test shall be carried out at the termination depth.
- c) Casing pipe shall be used in the borehole to support its sides when side fall is suspected to occur inside the borehole. When casing pipe is used, it shall be ensured that its bottom end is at all times 15 cm above the bottom of the borehole. In case of cohesion less soils the advancement of the casing pipe shall be such that it does not disturb the soil to be tested or sampled. The casing shall be advanced by slowly turning the casing pipe and not by driving.
- d) In-situ tests and collection of undisturbed samples (UDS) shall be carried out at regular intervals and at change of strata or as decided by the engineer-in-charge. Representative disturbed and undisturbed samples shall be preserved for conducting various tests in the laboratory. Water table in the borehole shall be carefully recorded and reported. No water/drilling mud shall be added while boring above ground water table. For cohesion less soil below water table, the water level in the borehole shall all times be maintained at slightly above the water table.

e) The borehole shall be cleaned using suitable tools up to the depth of testing or sampling ensuring that there is minimum disturbance of soil at the bottom of the borehole. The process of jetting through an open tube sampler shall not be permitted. In cohesive soils, the borehole may be cleaned using a bailer with a flap valve. Gentle circulation of drilling fluid shall be done when rotary mud circulation boring is adopted.

f) On completion of the borehole, the portion drilled in soil shall be backfilled with sand unless otherwise directed by the engineer-in-charge.

g) Wash boring shall not be adopted.

### **6.1.2 Auger Boring**

Auger boring can be adopted in soft to stiff cohesive soils above water table. Augers shall be of helical or post hole type, which may be manually or power operated. While boring care shall be taken to minimize the disturbance to the deposits below the bottom of the borehole. The cuttings brought up by the auger shall be carefully examined in the field and the description of all the strata shall be duly recorded in the field bore log as per IS: 1498. No water shall be used while auger boring.

### **6.1.3. Shell and Auger Boring**

Shell and Auger boring can be used in all types of soil free from boulders. For cohesionless soil below ground water table, the water level in the bore hole shall always be maintained at or above the ground water level. The use of chisel bit shall be permitted in hard strata with SPT-N value greater than 100. Chisel bits may also be used to extend the borehole through local obstruction such as old construction, boulders, rocky formations etc. All other requirements in clause 6.1.2 shall apply for this type of boring also.

### **6.1.4 Percussion Drilling**

This method can be adopted in soil with gravel and boulders when the boring has to be done at a faster rate. This method consists of breaking of the strata by repeated blows from a chisel or drilling bit and bailing out the debris at intervals by adding water into

the borehole. This method is not suitable for careful and very reliable sampling operation because of the disturbance caused during boring. This method shall not be adopted unless otherwise specified or permitted by the engineer-in-charge.

### **6.1.5 Rotary Mud Circulation Drilling**

This method can be used in all types of soil below water table. In this method boring shall be done by rotating the bit fixed at the bottom of the drill rod. Proper care shall be taken to keep a firm contact between the bit and the bottom of the borehole. Bentonite or mud laden fluids shall be used as the drilling fluid to serve as the protective surface inside the borehole.

## **6.2 Standard Penetration Test (SPT)**

This test shall be conducted in all types of soil strata met within the bore hole to find the variation in the soil stratification by correlating with the number of blows required for unit penetration of a standard penetrometer. This test shall be conducted at 3 m intervals, at every change of strata, at depths wherever undisturbed soil samples could not be collected and as per the directions of the engineer-in-charge. The starting depth of performing SPT shall be 1 m or 2.5m depth below ground level, as per feasibility at site. This depth shall be staggered in alternate boreholes. The depth interval between the top level of standard penetration test and to that of (next) undisturbed sampling shall not be less than 1 m. The specification for equipments and other accessories, procedure for conducting the test, presentation of test results and collection of disturbed soil samples etc. shall conform to IS: 2131.

This test shall be carried out by driving a standard split spoon sampler in the borehole by means of a 650 N hammer having a free fall of 0.75 m. The sampler shall be driven using the hammer for 450 mm penetration. While driving, the number of blows for every 150 mm penetration and the penetration for Page | 75 every 50 blows shall be recorded. The number of blows for the last 300 mm drive shall be reported as 'N' value. This test shall be discontinued when the blow count is equal to 100 and the penetration shall be recorded. Refusal shall be considered to be met with when the blow count is equal to 100. At the location where the test is discontinued, the penetration and the corresponding number of blows shall be reported. Sufficient quantity of disturbed soil samples shall be collected from the split spoon sampler for identification and laboratory testing. The samples shall be visually classified & recorded at the site and shall be properly preserved and labelled for future identification & testing.

## **6.3 Sampling**

### **6.3.1 General**

- a) Sufficient number of soil samples shall be collected for reliable estimation of soil properties. The samples collected shall be either disturbed or undisturbed. Disturbed soil samples shall be collected for field identification and conducting laboratory tests such as sieve analysis, index properties, specific gravity, chemical analysis etc. Undisturbed samples shall be collected to estimate physical, strength and settlement properties of the soil.
- b) All the accessories required for sampling and the method of sampling shall conform to IS: 2132. All disturbed and undisturbed samples collected in the field shall be classified at site as per IS: 1498.
- c) All the samples shall be identified with date, bore hole or trial pit number, depth of sampling etc. It is also essential to mark an arrow pointing towards the top surface of the undisturbed sample, as the soil was in-situ. Care shall be taken to keep the undisturbed soil samples and box samples vertically with the arrow directing upwards. The tube samples shall be properly trimmed at both ends and suitably sealed with molten paraffin wax at both ends immediately after extracting the samples from the bore hole/trial pit and suitably capped on both sides.

d) When the contractor fails to collect undisturbed soil sample at a specified depth, the borehole shall be advanced by 0.50 m and shall be performed with a standard penetration test. The reason for not obtaining the undisturbed soil sample shall be indicated in the bore log.

e) Precaution shall be taken to ensure that there shall not be any change in moisture content and disturbance of the soil samples and they shall be placed in a temporary store at the end of the day's work. All the samples shall be kept over a bed of sand, jute bags, saw dust etc. and covered over the top with similar material. The bed and top cover shall be kept moist till they are properly packed in wooden boxes. The contractor shall be responsible for packing and transporting of all the samples from site to the laboratory within seven days after sampling with proper protection against loss and damage.

f) All the samples shall be suitably packed in wooden boxes using sand, saw dust etc. all around the samples before transporting to the laboratory for testing.

### **6.3.3 Disturbed Samples**

a) Disturbed soil samples shall be collected from cuttings and from split spoon sampler in boreholes Page | 76 at regular intervals to provide complete description of soil profile and its variation. The samples shall be immediately stored in airtight jars or polythene bags and labelled with borehole/trial pit number and depth.

b) In elevated areas, if superficial material is available in plenty, then bulk samples from a depth of about 0.5m below ground level shall be collected to establish all required properties to use it as a fill material. Disturbed samples weighing about 250N shall be collected at shallow depths and immediately stored in polythene bags as per IS: 1892. The bags shall be sealed properly and shall be kept in wooden boxes.

### **6.3.4 Undisturbed Samples:**

In each borehole undisturbed sample (UDS) shall be collected at regular intervals of 3m and as directed by the engineer-in-charge. The starting depth of collecting UDS shall be either 2.5m (where starting depth of SPT is 1m) or 1m (where starting depth of SPT is 2.5m) depth below ground level and as directed by the engineer-in-charge. The starting depth shall be staggered in alternate boreholes. Undisturbed samples

shall be of 100mm diameter and overall length 600mm length. Samples shall be collected in such a manner that the structure of soil and its moisture content do not get altered. The specification for the accessories required for sampling and the sampling procedure shall conform to IS: 1892 and IS: 2132. Undisturbed sampling in sand shall be done using compressed air technique as mentioned in IS: 8763. Thin walled sampler shall be used to collect undisturbed samples by pushing the tube into the soil. The sampling tube shall have a smooth fin

ish on both surfaces and minimum effective length of 450mm. The area ratio of sampling tubes shall be less than 10%. However in case of very stiff soils, area ratio upto 20% shall be permitted.

### **a) Undisturbed Sampling in Cohesive Soil**

Undisturbed samples in soft to stiff cohesive soils shall be obtained using a thin walled sampler. In order to reduce wall friction, suitable precautions such as oiling the surfaces shall be taken. The borehole shall be cleaned and the depth of sampling below ground level shall be noted. The sampler shall then be attached to the bottom of boring rods and lowered into the borehole. The sampler shall be pushed into the clay layer by hand or by jacking and soil samples of specified length shall be collected without disturbing soil. The distance by which the sampler penetrates into the soil strata shall be checked. Care shall be taken to ensure that the sampler is not driven too far as this will compress the soil. The sampler shall be rotated to break the core at bottom of the sampler and then steadily drawn up.

### **b) Undisturbed Sampling in Cohesionless Soils**

Undisturbed samples in cohesionless soils shall be obtained as per the procedure given in IS : 8763. Compressed air sampler shall be used to take the samples of cohesion less soil below water table. Precautions shall be taken to clean the borehole before sampling. Thin walled tube samplers of standard size internal diameter shall be used. The height and other dimensions of the sampler shall be recorded before use. Proper care shall be taken to maintain the water level in the borehole slightly above the ground water table before and during sampling operations. Immediately after the sample is obtained, the ends of the sample shall be waxed and capped to avoid moisture content changes.

## **6.3.4 Relaxation During Sampling**

a) The sampler shall be pushed into the soil and driving of sampler shall be resorted to only when it cannot be pushed into the soil. This shall be done only with the permission of the engineer-in-charge and all the details about the same shall be recorded in the bore logs.

b) In clays when 'N' value is greater than 50, the undisturbed sampling may be replaced by standard penetration test.

## **6.4 Ground Water**

6.4.1 The ground water table shall be measured in boreholes as per IS: 6935 or as per the instructions of the engineer-in-charge.

Sub soil water samples shall be collected for carrying out chemical analysis. Representative samples of ground water shall be collected when it is first encountered in boreholes before the addition of water to aid boring or drilling.

## **Standard Penetration Test**

The relevant hardness of rocks shall be tested in boreholes after every drill of 0.75 m in rock if core recovery observed is less than 20% or as directed by the Engineer-in-charge. The testing equipment and arrangement shall be conforming to IS:2131. The number of blows for each 15 mm penetration to a total penetration of 450 mm shall be recorded Penetration.

### **7.0 Submission of Report**

#### **Soil investigation report shall include: -**

- a) Site plan showing position of Bore holes.
- b) Details Longitudinal Section of each bore hole showing the classification of soil in different strata mentioning R.L's w.r.t. fixed reference point and values of important parameters.
- c) The results of tests on various samples of each bore hole in proper tabular form (As per IRC - 78, Sh. 1 & 2 & Indian Railway Bridge substructure code). Soil parameters obtained from laboratory tests shall be submitted with graphs / charts as per relevant BIS codes.
- d) Level of ground water table.
- e) In case, rock is encountered, classification & characteristic of rock, core recovery, RQD, safe bearing capacity, founding level should be mentioned. Nature of cleavage plane to be mentioned.
- f) Calculation of bearing capacity of soil and settlement for shallow foundation.
- g) Calculation of theoretical capacity of pile foundation / deep foundation.
- h) Report shall include recommendation of type of foundation with details calculation of bearing capacity, settlement & embedment in incompressible layer / rock as per latest IRS / IRC / BIS code as applicable.
- i) Report along with recommendations to be signed by geotechnical experts with name, qualification and name of firm / Institution.

### **Salient Terms & Conditions**

1. **Rate:** The rate quoted by the bidders will remain firm till completion



n of the entire work. The rate should be inclusive of all tools and tackles, coffer dam, pontoon required for boring work, necessary statutory levies, transit insurance, duties, Local bodied etc and charges for labour, all lead, lift, ascent, descent, crossing of road/Rly. Line including to & fro cost of transportation of Soil boring instruments from any place to soil investigation site including GST.

2. **Contract Period:** 01 (One) Month from the date of LoA/W.O. or date of handing over of site, whichever is later.
3. **Termination of Contract:** RITES Ltd. reserves right to terminate the contract at any time without assigning any reason whatsoever.
4. **Protection against pilferage:** The successful bidder will have to arrange for guard at his own cost at Boring Place.
5. **Tools & Tackles:** Labour, tools & tackles etc. are to be arranged by the successful bidder to execute the work and no extra payment will be made for this purpose.
6. **Mode of Payment:** Payment will be made within seven days after submission of bill by the agency and also received the certificate from RITES Site Engineer that work has been done as specification mentioned in the tender documents.
7. **Security Deposit:** Security Deposit will be deducted @5% (five per cent) from the Contractor running bill/final bill as per RITES GCC. The said security deposits will be refunded to the Contractor after satisfactory completion of the entire work without any interest.
8. **GST:** The rate is inclusive of GST.
9. All other terms conditions of this tender will be governed as per RITES GCC for Works Feb' 2023.

### 3. 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---**