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BRIDCUL (ब्रिडकुल)

ब्रिज, रोपवे, टनल एण्ड अदर इन्फ्रास्ट्रक्चर डेवलपमेंट कॉरपोरेशन ऑफ उत्तराखण्ड लिमिटेड
(उत्तराखण्ड सरकार का उपक्रम)

पूर्वभूत उत्तराखण्ड राज्य अवस्थापना विकास निगम लिमिटेड

प्रधान कार्यालय: अवस्थापना भवन, 583-ठ, राजकीय आई0टी0आई0 निरंजनपुर के सामने, माजरा, सहारनपुर रोड, देहरादून- 248001

पत्रांक: 461 / ब्रिडकुल- 589 / 20

दिनांक: 17 / 03 / 2020

APPOINTMENT OF NABL ACCREDITED TEST LABORATORY FIRM

Applications are invited from the NABL ACCREDITED TEST LABORATORY FIRM for appointment in BRIDCUL. Interested firms can apply/submit their proposal as per the prescribed application form, which can be downloaded from website www.bridcul.com under the title "tenders" and submit to Managing Director BRIDCUL till 09.04.2020 1700 hrs. The firms already registered/appointed by BRIDCUL are also required to submit their proposal along with document Fee & all necessary documents.

Managing Director
BRIDCUL.

BRIDGE, ROPEWAY, TUNNEL AND OTHER INFRASTRUCTURE DEVELOPMENT CORPORATION OF UTTARAKHAND LTD.



Request For Proposal
For
APPOINTMENT OF NABL ACCREDITED TEST LABORATORY
FIRMS

REQUEST FOR PROPOSAL

For

APPOINTMENT OF NABL ACCREDITED TEST LABORATORY FIRMS

1. General:

1.1. BRIDCUL is a premier organization of Government of Uttarakhand with a mandate for infrastructure development viz. construction of buildings, bridges, roads, ropeways, tunnels, flyovers and other infrastructure projects, within and outside the State.

BRIDCUL intends to invite Request for Proposals (RFP) from reputed, capable & NABL certified Labs. The firms should have the experience of working for NHAI, CPWD, Railways, MES, P&T Dept., State PWD's, Semi Govt. Organizations, Central or State Govt./PSUs, etc.

The RFP can be obtained from the office on payment of non-refundable document cost of Rs. 2000.00 + 18% GST through DD/Pay order issued from any Scheduled/Nationalized bank in favour of "Managing Director, BRIDCUL" payable at Dehradun. The RFP can also be downloaded from website www.bridcul.com (under the title tenders) and submitted on or before the due date along with the payment as above.

Date of issue of RFP document	--	17.03.2020
Date of uploading of RFP document	--	19.03.2020
Last date of receipt of Proposals in the office	--	09.04.2020 upto 1700 hrs

The proposals should be submitted in two separate sealed envelopes. First envelope should contain the RFP document cost (if downloaded from the website), eligibility documents and technical proposal. Second envelope should contain financial proposal. The financial proposals of only those bidders shall be opened where technical proposals qualify in the eligibility criteria. The date and time of opening of financial proposal shall be informed to eligible firms later on. **Separate LOA may be issued for individual test/items to individual firms on the lowest rate basis.**

2. Objectives:

2.1 BRIDCUL requires the services of suitably qualified firms having experience in testing of various material used in infrastructure works for various central/ state govt./ externally funded projects, to ensure that construction works are in accordance with the standards fixed by the national standards/ codes to the satisfaction of the BRIDCUL. The firm will be required to have team of suitably qualified & experienced technicians, engineers and other professionals with the latest equipments, software and other facilities.

3. SCOPE OF WORKS

3.1 The Role & Responsibility of the firm will be testing of samples from BRIDCUL Project Sites & there Suggested sites by the BRIDCUL, it may be any site any project working area all over India, for civil, mechanical, electrical, chemical testing etc.

3.2 The BRIDCUL & Selected firm should ensure that the project & testing activities are conducted in compliance with all applicable Technical Specifications, Federal laws, Rules & regulations including Civil Rights & regulations governing the law of this land. This includes adhering to the requirements/specifications as mentioned in any particular contract allotted under a project.

3.2 Collecting the sample request form duly filled in indicating the tests to be conducted along with the contact details of person who has raised the Test requisition and contact details where the report is to be sent.

3.3 Collection of requisite numbers/quantity of samples from designated office/site at Dehradun/Haldwani/Pithoragarh where the testing material/samples shall be sent by BRIDCUL. Collection of Sample from other than Dehradun/Haldwani/Pithoragarh are acceptable and collected by Collection executive with actual Travel Expenses and Miscellaneous expenses on request of BRIDCUL.

3.4 Testing of materials as per specification requirement.

3.5 Submission of Test results/report to concern office of BRIDCUL.

3.6 Submission of bill/invoice to BRIDCUL.

4. Responsibility for Accuracy of project Documents.

4.1 The firm shall be fully responsible for accuracy for the test conducted by him.

5. PAYMENT:

5.1 The BRIDCUL agrees to pay to the appointed firms the amount for the services to be rendered by them, for the stipulated test, based on the lowest bid rate which is accepted by the BRIDCUL.

6. PAYMENT SCHEDULE

6.1 Payments to the firms shall be "on account" and shall be adjusted against the bill submitted by him.

6.2 All payments shall be subject to Income Tax deduction at source and as per applicable law.

6.3 The firms shall be paid for each of the services in the schedule as far as possible by 21th working day after the day of submission of the bill, complete in all respect to the Project Manager:

7. PERFORMANCE GUARANTEE/SECURITY DEPOSITE

7.1 The firms shall submit performance security of Rs. 50000 (Fifty Thousand) before appointment and within 07 days of issue of Letter of Acceptance in the form of demand draft.

7.2 In case, the firms fails to deposit performance guarantee within 07 days of issue of letter of acceptance, the offer of firms shall stand cancelled.

7.3 Performance guarantee shall be released after 2 months from the end date of agreement .

8. FORFEITURE OF PERFORMANCE GUARANTEE:

8.1 When the Laboratory/Material testing firms has made himself liable for action under any of the clauses aforesaid, the Engineer-in-Charge on behalf of the BRIDCUL shall have powers:

(A) To determine or rescind the contract as aforesaid without issuing any notice and forfeit the performance guarantee.

8.2 In case the firms fails to carry the work within time the BRIDCUL, without prejudice to rights and remedies available under the agreement shall forfeit.

9. DETERMINATION AND RESCISSION OF AGREEMENT:

9.1 The BRIDCUL without any prejudice to its right against the firms in respect of any delay by him rescind the firms contract in any case.

9.2 The decision of the Managing Director regarding the grounds for determination of the agreement by the Engineer-in-charge shall be final and binding.

10. FORECLOSURE OF CONTRACT DUE TO ABANDONMENT OR REDUCTION IN SCOPE OF WORK.

If at any time after acceptance of the firm tender, the BRIDCUL decides to abandon or reduce the scope of the work for any reason. The firm shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the work.

11. Penalty:

Penalty shall be imposed on the firm for poor performance/deficiency in service as expected from the firm. The Firm is required to submit the report to the office of Project Manager/General Manager/Managing Director as per schedule and within 5 days after conducting of test. If the Firm fail to adhere to the schedule, a penalty of Rs. 1,000.00 (Rupees One Thousand Only) per day delay (for maximum 10 days) of submission of reports/documents, may be imposed and deducted from his bills/security deposited by him. If the firm will not submit the report upto 10 days, the action may be taken as per clause 8 and 9.

12. Application Form:

Application for appointment of NABL Accredited Test Laboratory firms duly filled with relevant details is required to be submitted as per **Annexure- B**.

13. Eligibility:

13.1 The firms must be certified by NABL, ISO 9001, and should have experience of working for Govt./ Semi-Govt./PSUs organizations. The Firm must submit their valid NABL & ISO certificate. The firm must comply with the clauses of ISO/IEC 17025: 15189, 17043, 17034, ISO 14001 whichever is applicable.

14. Technical Staff Strength:

Authorized signatory should fulfill either of the following requirements:

Minimum Years of Experience/Minimum Qualifications	Two	Five	Ten
Degree (Engg.)/Post Graduate in Science	Same field of testing	Similar field of testing	-
Diploma (Engg.)/Graduate in Science	-	-	Similar field
ITI/Equivalent	-	-	-

Note:-

- (a) Similar field may be considered when that particular subject/field of testing of covered in atleast one year of the course;
- (b) Qualification with specialized field like civil, Electrical, Mechanical, Camical etc. shall beconsidered eligible for groups falling under multi-disciplines;
- (c) In each case, merely requisite qualifications and experience is not sufficient to become theAuthorized signatory; the technical competence will be verified by NABL assessment teambefore recommending as authorized signatory.

Details of qualification and experience of key staff must be submitted in the format given at**Annexure- C**.

15. Financial Information:

The applicant should have minimum average annual turnover of Rs. 8 Lac in the requisite fieldduring the last 03 years and provide bank solvency certificate for the same amount.

15.1 Details of Gross Annual Turnover during the last 5 years and bank solvency certificate must befurnished in the format as given at **Annexure-D**.

16. Work Experience:

The applicant should have received of Rs. 10 Lac during the last 3 yrs from any Govt.Department only for building/road construction material (cement, steel, brick etc. &electrical items) testing work only. Certificate from Govt./semi govt./PSUs Department shall be submitted as proof for the same. Details shall be furnished as **Annexure-E**.

16.1 Software and List of equipment shall be submitted by the firm as per **Annexure-F**.

17. Details to be submitted by the consultants

The proposal is required to be submitted in a large sealed envelope, super scribed "Proposalfor appointment of NABL Accredited Test Laboratory firms containingfollowing two envelopes:-

17.1 Technical Proposal (To be super scribed as Technical Proposal) containing following:

- i. Non refundable document fee, if RFP downloaded from website.
- ii. Complete RFP duly signed and stamped by the authorized signatory of the firm at each page.
- iii. Detailed profile of the firm with PAN No., GST No, ITR of last 5 years etc.
- iv. Letter of Transmittal as per **Annexure-A**.
- v. Duly filled application form for appointment of NABL Accredited Test Laboratory firms(As per **Annexure-B**).
- vi. The list of in-house technical staff with details of their qualifications, experience andfield of expertise (As per **Annexure-C**).

vii. Details of average annual turnover certified by CA (As per **Annexure-D**).

viii. Details of experience of work during the last 5 years (As per **Annexure-E**).

ix. List of relevant software and equipment available with the Firm (As per **Annexure-F**).

x. Information regarding any litigation, current or during the last five years, in which the Applicant is involved, the parties concerned and disputed amount. (As per **Annexure-G**).

xi. List of NABL approved lists of the firm. Which will be subsequently considered in the financial quote. Any other tests apart from the mentioned list will not be considered.

17.2 Financial Proposal: (To be super scribed as Financial Proposal) shall contain the duly filled inschedule of the quote at **Annexure –H**.

17.2.1 The fee is to be quoted in Rs. as per the stated scope given at clause 3 of this RFP.

18. Technical Evaluation:

A committee shall check the application form (Annexure-A) of all the firms and those found responsive shall be eligible for further technical evaluation of their technical proposals by the committee as per Eligibility criteria.

19. Financial Evaluation: Financial Bids of only those firms qualifying in the technical evaluation shall be opened by the committee in their presence; if they so desire. **The applicant shall give item wise rates for individual tests in the enclosed Annexure-H the rates of the lowest bidder for a particular test shall be considered for awarding test of that item to the lowest bidder. In case the rates are same for any item, the Quantity of tests shall be divided equally/Unit wise for that item.**

20. BRIDCUL reserves the right to accept or reject any or all proposals without assigning any reasons thereof.

21. The work shall be assigned by BRIDCUL to appointed firms.

22. Period of Empanelment: The selected firms shall be empanelled for a period of 3 years.

Letter of Transmittal
(ON LETTER HEAD OF THE COMPANY)

To,

Managing Director,
Bridge, Ropeway, Tunnel and Other Infrastructure
Development Corporation of Uttarakhand Ltd. (BRIDCUL)
Opposite Govt. ITI, Saharanpur Road,
Niranjanpur, Dehradun-248001

Sub: Proposal for Appointment of NABL Accredited Test Laboratory Firms.

Sir,

Having examined the details given on your website for the appointment of **NABL Accredited Test Laboratory Firms** in BRIDCUL, we submit our proposal with relevant information and documents for your kind consideration.

1. I/We hereby certify that all the statements made and information supplied in the enclosed **Annexure A to H** and accompanying statements are true and correct.
2. I/We have furnished all information and necessary details required for the appointment Firms.
3. I/We submit the requisite certified solvency certificate and authorize the Managing Director, BRIDCUL to approach the bank issuing the solvency certificate to confirm the same. I/We also authorize Managing Director to approach individuals, employers, firms and corporations to verify our competence and general reputation.
4. I/We fully understand and agree that I/we may be terminated from the panel and debarred from future works in BRIDCUL in case any information provided by us is found to be false or incorrect.

Enclosures: Technical and Financial Proposals in separate envelopes.

Seal of applicant:

Date of submission:

Signature of Authorized

Signatory of Applicant (s)

APPLICATION FORM

(The applicant should study carefully the RFP for Appointment of NABL Accredited TestLaboratory firms and the list of documents to be annexed with the proposal before filling theform. Proposal found deficient in any respect is liable to be rejected without any furthercorrespondence)

1. Name of firm.....

2. Address of the firm:

(a) Regd. office.....

(b) Head office.....

(Attach separate paper for addresses of other offices)

3. Telephone Number FaxNo.....

E-mail address:.....

4. Constitution:

Sole Proprietorship Concern Partnership Firm

Public Ltd. Company Private Ltd. Company

5. If partnership firm, names of the partners/ If Company, name of directors

(a)..... (b)

(c) (d)

(e) (f)

7. Furnish the following details and enclose copies of each document:

(a) PAN

(b) GST No.

(c) Corporate Identity No. as given by relevant ROC (if applicable)

(d) ITR of Last five years.

8. Is the sole proprietor/any partner/director of company:

(a) Dismissed Government Servant Yes No

(b) Removed from approved list of contractors/Consultant Yes No

(d) Having business banned/suspended by

any government in the past

Yes

No

(e) Convicted by a court of law

Yes

No

If answer to any of the above is 'Yes', furnish details on a separate sheet

9. Name of person holding power of attorney:-

.....

10. Name of Bankers with full address :-

.....

11. Place of business

.....

12. Certificates:

I/We (including all partners) certify that I/We have read "RFP for **Appointment of NABL Accredited Test Laboratory** in BRIDCUL as amended upto-date and shall abide by them.

Signature(s) of applicant(s):

Name

Signature

Address

1

2

3

4

5

Date :

No. of Documents attached

Annexure-C**Details of Technical & Administrative personnel employed with the Firm.**

S.No.	Designation	Total No.	Name	Qualification	Professional Experience and Details of work carried out	Field of Expertise	Date since employed with the firm	Remarks
1	2	3	4	5	6	7	8	9
1	QC/QA in charge							
2	Material Engineer							
3	Lab Technician							
4	Others							
5								

Note: (ii) CVs of each personnel/expert shall be attached with their signatures and counter signed by the authorized representative of the firm.

Signature of Authorized

Signatory of Applicant (s)

Annexure-D

FINANCIAL INFORMATION

1. Financial Analysis-Details to be furnished duly supported by figures in balance sheet/profit & loss account for the last five years duly certified by the Chartered Accountant, as submitted by the applicant to the income Tax Department (Copies to be attached).

I. Gross Annual turn over

Years

2017-2018	2018-2019	2019-2020

Note: In case the firm is unable to submit the turn over for the year 2019-2020 due to any reason, they should submit unaudited turn over for the year 2019-2020.

II. Solvency Certificate from
Bankers of Applicant. (To be attached on bank's letter head)

Signature of Authorized
Signatory of Applicant (s)

Signature of Chartered Accountant with seal

Annexure-E

Details of Technical & Administrative personnel employed with the Firm.

S.No.	Name of Dept.	2015-16	2016-17	2017-18	2018-19	2019-20	Total	Remarks
1.								
2.								
3.								
4.								
5.								
	Total							

Note:- Certificate form the Department must be attached.

Signature of Authorized
Signatory of Applicant (s)

Annexure-F

LIST OF RELEVANT SOFTWARE AND EQUIPMENT AVAILABLE WITH THE FIRM

S.No.	Name of Equipment/Software	Type	Nos.	Year of purchase	Remarks
1.					
2.					
3.					
4.					
5.					

Signature of Authorized

Signatory of Applicant (s)

Annexure-G

PARTICULARS OF LITIGATION/ARBITRATION CASES

S.No	Name of the project under litigation	Name of Client	Amount of Litigation	Period of Litigation	Outcome of Arbitration/ Court	Remarks

Signature of Authorized
Signature of Applicant (s)

Financial Proposal (A)

S.No	Material	Specific tests performes	Quantity Required	Charges
1.	Mix Design (Single)	IS:10262	Aggregate: 8 bags	
			Sand : 4 bags	
			Cement: 2 bags	
2.	Compressive Strength of cubes	IS: 456	3 No.	
3.	Precast Concrete Blocks	IS:2185,3590,4996		
		Dimension	20 No.	
		Block Density	3 No.	
		Compressive Strenth	8 No.	
		Water Absorption	3 No.	
		Moisture movement	3 No.	
	Drying shrinkage	3 No.		
4.	Precast Concrete Blocks (complete test)	IS:2185,3590,4996	20 No.	
5.	TOR/TMT Steel (Complete physical Test)	IS:1786	3x1 meter	
6.	TOR/TMT Steel (physical Test)	IS:1786		
		Ultimate Tensile Strength	1x1 meter	
		Strength	1x1 meter	
		Elongation	1x1 meter	
		Re-bend Test	1x1 meter	
		Bend Test	1x1 meter	
		Norminal mass/meter	1x1 meter	
		Yield stress	1x1 meter	
		Tensile Strength, Bend Test	3x1 meter each	
	Total Elongation	1x1 meter		
7.	TOR TMT Steel (Pull out test)			
	i) Prepared sample for testing	3 plain+3 Tot/TMT set		
	ii) Prepared & testing	3 plain+3 Tot/TMT set		
8.	Steel channel, angle, beam etc. (Except impact test)	IS:2770		
			Tensile Strenrth	1x1 meter
		Yield stress	1x1 meter	

		Elongation	1x1 meter	
		Dimension	1x1 meter	
9.	Steel channel, angle, beam etc. (Except impact test) Complete Physical Test)	IS:2062	3x1 meter	
10.	Aluminium Sections, Sheet, Pipe etc.	IS:5523 & Relevant IS	2 meter	
11.	G I Pipe (Except rebend test) up to 150 mm	IS:5523 (Part 1)	2 meter	
12.	Mild Steel Pipe (except rebend test)	IS: 1161	2 meter	
13.	Cement OPC/PPC (Complete test)	IS: 269 & 1489	15 Kg.	
14.	Cement OpC/PPC (Physical test only)	IS: 269 & 1489		
		Consistency	2 kg.	
		Initial Setting Time, Final Setting time	2 kg.	
		Compressive Strenth	4 kg.	
		Soundness by Autoclave method	2 kg.	
		Fineness by dry sieving (% retained)	100 gm.	
		Fineness by blain air permeability	500 gm.	
		Specific gravity	500 gm.	
		Dry Shrinkage of PPC	4 Kg.	
15.	Cement OPC/PPC (Chemical test only)	Silica as SiO ₂ Combine Alumina oxide and iron oxide Ferric oxide (Fe ₂ O ₃) Calcium oxide (CaO) Sulpuric Anhydride Magnesia (MgO) chloride	100 gm.	
16.	Cement OPC/PPC (Chemical test only)	IS: 269 & 1489	200 gm.	
17.	Coarse Aggregate & Fine Aggregate	IS 2386		
		Sieve analysis	5 kg.	
		Finness Modules	5 kg.	
		Specific gravity	5 kg.	
		Bulk density	2 kg.	
		Water Absorption	5 kg.	
		Soundness	2 kg.	
		Impact Value	10 kg.	

		Crushing Value	5 kg.	
		Surface Moisture	5 kg.	
		Los Angeles Abrasion value	20 kg.	
		10% Fine value	5 kg.	
		Flakiness index & Elongation Index	10 kg.	
		Total deleterious material	3 kg.	
		Alkali aggregate reactivity	2 kg.	
		Chloride	500 gm.	
		Sulphate	500 gm.	
		Bulk density & Voids	20 kg.	
		Silt Content	1 kg.	
		Clay Content	3 kg.	
		Organics Impurities	2 kg.	
		Bulking of sand	1 kg.	
		Petrography	20 kg.	
	Complete Test (Except Alkali aggregate reactivity, petrography & Soundness)	IS 2386	-	
18	Sand for Plaster	IS:1542	25 kg.	
		IS:2720		
19	Soil Testing	CBR Value	20 kg.	
		Dry density/Moisture content/Compaction	20 kg.	
		Grain Size & Hydrometer Analysis	10 kg.	
		Specific Gravity	5 kg.	
		Shrinkage Limit	5 kg.	
		Dry Bulk Density (excluding Transportation)	Field Test	
		Liquid Limit & Plastic Limit	5 kg.	
		Organics Matter in Soil	5 kg.	
		Permeability	5 kg.	
		Sand Content	5 kg.	
		Direct Shear	5 kg.	
		Triaxial (Consolidated & Drained)	5 kg.	
		Unconfined Shear Strength	5 kg.	
Consolidation Test	10 kg.			
20	Building bricks (Common Burnt Clay)	IS: 1077		
		Compressive Strength	5 nos.	
		Efflorescence	5 nos.	

		Water Absorption	5 nos.	
		Dimension/Tolerance	20 nos.	
21	Building bricks (Complete Common Burnt Clay)	IS: 1077	20 nos.	
22	Building bricks (Heavy Duty Burnt Clay)	IS: 2180		
		Dimension/Tolerance		
		Compressive Strength	5 nos.	
		Water Absorption	5 nos.	
		Efflorescence	5 nos.	
		Bulk density	5 nos.	
23	Building bricks (Heavy Duty Burnt) (Complete Physical Test)	IS:2180	20 nos.	
24	Building bricks (Perforated)	IS:2222	20 bricks	
	Acid Resistant Bricks	Water Absorption	5 nos.	
		Flaxunal Strength	5 nos.	
		Compressive Strength	5 nos.	
		Resistance to Acid	5 nos.	
		Resistance to Wear	20 nos.	
26	Marble & Granite	IS:1130	2 nos.	
27	Ceramic & Vitrified Tiles	IS:13630		
		Compressive Strength Bulk density	20 nos.	
		Hardness by Moh's scale	10 nos.	
		Breaking Strength	5 nos.	
		Mosulus of Rupture	5 nos.	
		Moisture Expansion	5 nos.	
		Thermal Shock Resistance	5 nos.	
		Crazing Resistance	5 nos.	
		IS:1237		
28	Cement Concrete flooring (Terrazo) Tiles	Flatness of the Surface	3 nos.	
		Perpendicularity	3 nos.	
		Straightness	3 nos.	
		Water Absorption	3 nos.	
		Wet Transverse Strength	3 nos.	
		Resistance to wear	3 nos.	
29	Cement Concrete	IS: 1237	20 nos.	

	flooring (Terrazo) Tiles (Complete)			
30	Bitumen	IS:1322		
		Softening Point	1 kg.	
		Penetration	1 kg.	
		Ductility & Elastic Recovery	1 kg.	
		Specific gravity	1 kg.	
		Solubility	1 kg.	
		Flash Point	1 kg.	
31	Bitumen (Complete Physical Test)	IS:1322	2.5 kg.	
32	Bitumen Material	ASTM D 2172 Binder Content	2 kg.	
		Marshall Stability & Flow Value	10 kg.	
		Stripping Value Test	Agg. 20 kg. & Bitumen 1 kg.	
		Field Density by core cutter (Excluding Transportation)	Field Test/3 Cr.	
		Roughness Test at site (Excluding Transportation)	Field Test/Km.	
33	Bituminous Material (BM)	Morth Spec.	25 kg.	
34	Dense Bitumen Concrete (DBM)	Morth Spec.	25 kg.	
34 a	Dense Bitumen Macadam (DBM)	Morth Spec.	25 kg.	
34b	WBM	Morth Spec.	25 kg.	
34c	WMM Plasticity Index (Liquid Limit + Plastic Limit)	Morth Spec.	25 kg.	
34d	GSB	Morth Spec.	25 kg.	
34e	BM (job Mix)	Morth Spec.	As per Requirement	
34f	DBM (Job Mix)	Morth Spec.	As per Requirement	
34g	DBC (Job Mix)	Morth Spec.	As per Requirement	
34h	GSB (Job Mix)	Morth Spec.	As per Requirement	
35	Water Proofing compound (Physical Test)	IS:2645		
		Setting Time	500 gm.	
		Compressive Strength	2 kg.	
36	Water Proofing compound (Chemical Test)	pH Value	200 gm	
		Specific Gravity	200 gm	
		Chloride Content	200 gm	
37	Water Proofing	IS:2645	3 kg.	

	compound (Complete Test)			
38	Wood Moisture	IS:287	12 Length	
39	Flush Door shutter	IS:2202 (Part-1)	Full Shutter	
40	Timber/Wood	IS:287,IS:1708		
		Moisture	15x15 cm	
		Density/Specific Gravity	15x15 cm	
41	Ply Wood	IS:287,IS:1708		
		Glue Shear strength	6x6	
		Tensile test Water resistance	6x6	
		Adhesion of ply	6x6	
42	Core Cutting & Testing	IS:516	Per nos	
43	Rebound Hammer Test Up to Ten Points (Minimum Charges)	ISS:13311(pt-2)	Up to 10 Points	
	Upto 10 points at one site) Each Extra Point after 10 location			
44	Ultrasonic Pulse Velocity	IS:13311-(Pt-1)-1972	Per Points	
45	Pile Integrity Test	ASTM	Per Points	
46	Soil Core Cutting Plus Testing	IS:2720-(Pt-29)-1975	Per Core	

Financial Proposal (B)

S.No	Description of Sample	Specific tests performed	Sample Qty.	Rate
1.	PVC Insulated (Heavy Duty) Electric Cable for working Voltage up to and including 1100 Volts:	<p>IS: 1554 (P-1) 1988</p> <p>Test on conductor Annealing test (Copper Conductor only) Tensile Test for Aluminium Conductor Wrapping test for Aluminium Conductor Resistance</p> <p>Test on Armouring Material Dimension for Armouring Material Tensile Strength of Armouring Elongation test armoring Torsion test (galvanized Round steel Wire) Winding test (galvanized steel) Uniformity of zinc coating Mass of zinc coating Resistivity test of armouring (wire/strips)</p> <p>Test on insulation & sheath Overall diameter of cable. Thickness of insulation Tensile strength on sheath at break Elongation of sheath at break Loss of mass test a) Tensile strength after ageing in air oven b) Elongation after ageing in air oven flammability test Cold bend test Cold impact test High voltage test at room test High voltage test at (water immersion) Hot deformation test Insulation resistance constant Volume resistivity test Thermal stability test Shrinkage test Heat shock test</p> <p>Fire Retardance properties Flame retardance test on single cable Temperature index test Oxygen index test Halogen acid gas evolution Smoke density test Flame retardation test on bunched cable.</p>	25 Mtr.	

2.	Cross linked (XLPE) polyethylene insulated PVC Sheathed Cables For working Voltages up to & including 1100V	<p>IS: 7098 (P-1) 1988</p> <p>Test on conductor</p> <p>Annealing test (Copper Conductor only)</p> <p>Tensile Test for Aluminium Conductor</p> <p>Wrapping test for Aluminium Conductor Resistance</p> <p>Test on Armouring Material</p> <p>Dimension for Armouring Material</p> <p>Tensile Strength of Armouring</p> <p>Elongation test armoring Torsion test (galvanized Round steel Wire)</p> <p>Winding test (galvanized steel)</p> <p>Uniformity of zinc coating</p> <p>Mass of zinc coating</p> <p>Resistivity test of armouring (wire/strips)</p> <p>Test on insulation & sheath</p> <p>Thickness of insulation</p> <p>Tensile strength on sheath</p> <p>Elongation of sheath</p> <p>Loss of mass test</p> <p>Ageing in air oven(Elongation)</p> <p>flammability test</p> <p>Cold bend test</p> <p>Cold impact test</p> <p>High voltage test at room Temp</p> <p>Water absorption</p> <p>Hot set test</p> <p>Hot deformation test</p> <p>Volume resistivity test at 90°C</p> <p>Thermal stability test</p> <p>Shrinkage test</p> <p>Heat shock test</p> <p>Fire Retardance properties</p> <p>Flame retardance test on single cable</p> <p>Temperature index test</p> <p>Oxygen index test</p> <p>Halogen acid gas evolution</p> <p>Smoke density test</p> <p>Flame retardation test on bunched cable.</p>	25 Mtr.	
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3.	Aerial Bunched cable for working voltage up to and including 1100 Volts.	IS: 14255-1955 Test on Conductor Tensile test on aluminium conductor Wrapping test on aluminium Conductor Conductor resistance test. Test on messenger Conductor Breaking load tests Elongation test Conductor Resistance Test Physical Test on XLPE insulation Test for thickness Tensile strength at break Elongation test at break a) Tensile Strength after ageing in air oven b) Elongation after ageing in air oven High Vlogate test Water absorption Hot set test Shrinkage test Volume resistivity Test on complete cable Bending test	25 Mtr.	
4.	PVC insulated Unsheathed & Sheathed cables/Cord with rigid & Flexible conductor for rated voltage for working voltage up to and including 1100 Volts	IS: IS-694 - 2010 Test on conductor Annealing test (Copper Conductor only) Tensile Test for Aluminium Conductor Wrapping test for Aluminium Conductor Conductor Resistance Persulphate Test for tinned copper Test on insulation & sheath Overall Dimension Thickness of insulation Tensile Strength on insulation Tensile strength on sheath Elongation on insulation Elongation of sheath Loss of mass test Ageing in air oven (Elongation) Flammability Test Cold Bend Test Cold impact test Additional ageing test High voltage test at room temp High voltage test at (water immersion) Hot deformation test Insulation resistance constant Volume resistivity test Thermal stability test		

		Shrinkage test Heat shock test Fire Retardance properties Flame retardance test on single cable Temperature index test Oxygen index test Halogen acid gas evolution Smoke density test Flame retardation test on bunched		
5.	Telecom Pair Cable & Lan Cable	Tec Spc	25 Mtr.	
6.	PVC Conduit pipe	IS: 9537-III-1983 Marking Durability of marking Dimensions Uniformity of wall thickness Bending test (at room temperature) Compression test Collapse test ix. Resistance to heat Resistance to burning. Electrical Charactertics a) electrical strength b) insulation resistance Bending test (at low temperature) xiii impact test.	6 length each dia	