

HIMACHAL PRADESH
PUBLIC WORKS DEPARTMENT

No.SD-III-CB-Tender /2022-23-
To

137-139

Dated:-3-04-2023

The Director,
Information & Public Relation Department,
HP Shimla-2.

Subject:- Publishing of EXPRESSION OF INTEREST FOR hiring NABL,ISO 9001:2015 & BIS approved laboratory for establishing laboratory in PWD premises & testing of various materials involved in the construction of roads, bridges, residential and non-residential building (QCS Selection).

Enclosed please find herewith copies of notice for Interest (EOI) for Empanelment for hiring NABL,ISO 9001:2015 & BIS approved laboratory for establishing laboratory in PWD premises & testing of various materials involved in the construction of roads, bridges, residential and non-residential building (QCS Selection). It is requested that notice may be published in the following News Paper in or before 06-04-2023.

1. The Tribune. Edition (English)
2. The Hindu. Edition (English)
3. The Times of India (English)
4. Amar Ujala (Hindi)
5. Other National News Papers (Hindi/English)

Executive Engineer
Shimla Division No-III,
HPPWD Shimla-3.

Copy forwarded to the followings for information please:-

1. The Chief Engineer (SZ) Nirman Bhawan,HP.PWD., Shimla.
2. The Superintending Engineer 4th Circle HP.PWD., Shimla.
3. Nodal officer (IT) Himachal Pradesh, Public Works Department (IT) Nirman Bhawan Shimla32 for uploading the additional information for EOI along with documents for uploading on departmental website <http://hppwd.goc.in>.

Executive Engineer
Shimla Division No-III,
HPPWD Shimla-3

**HIMACHAL PRADESH
PUBLIC WORKS DEPARTMENT**

INVITATION FOR BIDS

(RFP)

1. The Executive Engineer , Shimla Division No-III, HPPWD , Shimla-3 on behalf of Governor of H.P invites the percentage rate bids, in electronic tendering system, from the eligible class of contractors registered with HP.PWD., for the work as detailed in the table.

Sr. No	Name of Work	Estimated Cost	Starting date of downloading Bid.	Pre BID meeting Date	EMD	Cost of Tender	Time Allowed	Deadline for submission of Bid.
1	EXPRESSION OF INTEREST FOR HIRING A NABL, ISO 9001:2015 & BIS APPROVED LABORATORY FOR ESTABLISHING LABORATORY IN PWD PREMISES & TESTING OF VARIOUS MATERIALS INVOLVED IN THE CONSTRUCTION OF ROADS,BRIDGES, RESIDENTIAL AND NON RESIDENTIAL BUILDINGS (QCS SELECTION)	NA	06-04-2023	17-04-2023 at 11:00 AM in the office of Engineer-in-Chief HP.PWD., Shimla	NA	Rs.5000/-	7 years	28-04-2023

The bidders are advised to note other details, of tenders from the department website /-,www.hptenders.gov.in.
The Executive Engineer reserves the right to accept/reject any tender/application without assigning any reason.

**Executive Engineer,
Shimla Division No-III,
HPPWD Shimla-3.**



EXPRESSION OF INTEREST FOR

**HIRING A NABL, ISO 9001:2015 & BIS APPROVED
LABORATORY FOR ESTABLISHING LABORATORY IN PWD
PREMISES & TESTING OF VARIOUS MATERIALS INVOLVED
IN THE CONSTRUCTION OF ROADS, BRIDGES, RESIDENTIAL
AND NONRESIDENTIAL BUILDINGS
(QCS SELECTION)**

**EOI NO.: NIT/
PWD/2023-**

Dated 2023

**Engineer in Chief (Himachal Pradesh)
Public Works Department
Nirman Bhawan, Nigam Vihar
Shimla-171002 (H.P) Phone
No. 0177-2621401**

SECTION-I NOTICE INVITING EOI

NOTICE INVITING EOI

EOI NO: WAP/INFS-IV/HP/JJM/LABS/2023

Date:-

2023

Himachal Pradesh Public work Department, invites Online Electronic Expression of Interest (EOI) from the interested Construction Material Testing Laboratories having valid National Accreditation Board for Testing and Calibration Laboratories (NABL), International Standards Organization (ISO 9001:2015) Accreditation & Bureau of Indian Standards (BIS) approved lab For Establishing Laboratory In PWD Premises & Testing Of Various Materials Involved In The Construction OF ROADS, BRIDGES, Residential And Nonresidential Buildings On Behalf Of Himachal Pradesh PWD.

The detailed credentials, information about infrastructure, work handling capacity, accreditations, empanelment in other Government & Semi Government Organizations, authorities, govt. bodies are to be furnished with documentary proof. The hiring lab shall be done strictly on merits amongst the applicant laboratories fulfilling the terms & conditions

1	Name of Work / Project	:	Hiring A NABL, ISO 9001:2015 & BIS Approved Laboratory For Establishing Laboratory In PWD Premises & Testing Of Various Materials Involved In The Construction Residential And Non-residential Buildings On Behalf Of Himachal Pradesh PWD
2	Location	:	Himachal Pradesh State
3	Website for viewing EOI	:	https://hptender.gov.in/eprocure/app
4	Website for viewing EOI/ uploading of EOI and also viewing of Corrigendum / Addendum, if any.	:	https://hptender.gov.in/eprocure/app
5	Estimated Cost of Work	:	NA
6	Cost of EOI Document	:	NA
7	Amount of Earnest Money Deposit	:	NA
8	Project Completion period	:	?
9	Validity of EOI	:	120 Days
10	Pre-EOI Meeting	:	17-04-2023 at 11.00 AM
11	Offline Submission of EOI	:	28-04-2023 up to 04:00 hours in the office of the Engineer-In- Chief(Projects), Nirman Bhawan H.P.P.W.D, Shimla

12	Last date & time for online Submission of EOI	:	28-04-2023 up to 04:00 hours
13	Online opening of EOI	:	29-04-2023 up to 11:30 hours
14	Power Point Presentation	:	XX-10-2023 up to 11:30 hours
15	PWD Communication address and execution of works	:	Engineer in Chief Public Works Department Nirman Bhawan, Nigam Vihar Shimla-171002 (H.P) Phone No. 0177-2621401
If the office of PWD happens to be closed on the last date and time mentioned for any of the event, the said event will take place on the next working day at the same time and venue.			

The EOI document has to be downloaded from above specified websites. Applicants are advised to visit above specified websites regularly for updates /Amendments/ Corrigendum, if any. The Updates/Corrigendum/Addendum shall be followed up to submission of EOI and it will be the part of EOI. The full details about the work, specifications, terms and conditions shall be available in the EOI.

The purpose of this EOI is to provide interested parties with information to assist the preparation of their EOI. While PWD has taken due care in the preparation of the information contained herein, and believe it to be complete and accurate, neither it nor any of its authorities or agencies nor any of its respective officers, employees, agents or advisors give any warranty or make any representations, expressed or implied as to the completeness or accuracy of the information contained in this document or any information which may be provided in association with it.

Further, PWD does not claim that the information is exhaustive. Respondents to this EOI are required to make their own inquiries/ surveys and may be required to confirm, in writing, that they have done so and they did not rely solely on the information in EOI. PWD is not responsible if no due diligence is performed by the Applicants.

S/d
Engineer in Chief
Public Works Department Nirman Bhawan,
Nigam Vihar Shimla-171002 (H.P)

Phone No. 0177-2621401

1. INTRODUCTION & BACKGROUND

- a. Himachal Pradesh has a road network of over 38,500 Km comprising of National Highways, State Highways, Major District Roads and Rural Roads. Himachal Pradesh Public Works Department (HPPWD) looks after the construction and maintenance of National Highways, State Highways, Major District Roads and Rural Roads.
- b. The responsibility for development and maintenance of National Highways in the state vests with MORT&H. The HPPWD acts on an agency basis to undertake construction and maintenance works on this national network as required by the MORT&H. However, the construction and maintenance of the State Highways, Major District Roads and Rural Roads are being looked after by the HPPWD. NHs, SHs and MDRs carry the bulk of the traffic and are the principal carrier of economic activities.
- c. The construction of quality roads is very essential for utilization of national resources and capital cost and also to provide safe and comfortable journey to the road users with minimum operating cost. Though, the Contractor is primarily responsible for construction of quality road yet the role of other stakeholders is also equally important to ensure quality control / assurance.
- d. The construction of National Highways, State Highways, Major District Roads and Rural Roads are carried out as per the standards and specifications laid down in various IRC standards and MoRT&H Specifications for Road and Bridge works and MoRD Specifications for Rural Roads. The quality of natural materials, factory manufactured materials, specialized items (such as steel, bitumen, bearings, expansion joints, road signage's, crash barriers etc.), mix items are important for construction of quality roads. The various quality control tests on various ingredients and mixes and their frequencies are stipulated in MoRT&H specifications for road and bridge works and MoRD Specifications for Rural Roads. As such it is important for all the stakeholders to ensure that all the quality test at the specified frequencies is conducted.
- e. Various deficiencies to the finished product may occur if quality control/assurance is not ensured as per provision of MoRTH/ MoRd/ IRC codes. Some of these deficiencies and areas of concern where attention of all the stakeholders is required may be as under:-
 - I. Inadequacy in thickness of granular/bituminous/concrete layers.
 - II. Quantity of bitumen as per design mix.
 - III. Not using specified grade of bitumen.
 - IV. Depression/cracks in concrete slabs.
 - V. Bituminous mix not conforming to acceptance criteria.
 - VI. All the tests specified in the IRC code/ MoRTH/ MoRD specifications for the materials i.e. Bitumen, Cement, Steel, Aggregate etc. and propriety items i.e. expansion joints, bearings etc. must be carried out at site laboratory or by third party, which are most often left out.
 - VII. All the tests required for soil and aggregates.
 - VIII. Test on various ingredients and mixes at the specified frequency.

- IX. Bitumen is to be purchased from oil refineries rather than private agencies.
 - X. Providing proper slope and compaction of earthen shoulder and embankments.
 - XI. Shifting of utilities are to be done at the extreme boundary of ROW.
 - XII. Deployment of adequate personnel by the contractor and Engineer to ensure quality control/assurance.
 - XIII. The quality checks and tests, as specified in contract agreement, are to be witnessed by the Authority's/ Engineer.
- f. The various aspects of quality control/assurance have been specified in IRC: SP: 112-2017 "Manual for Quality Control in Road and Bridge works" which has to be referred in conjunction with MoRT&H specification for road and bridge works and MoRD Specifications for Rural Roads.

In order to ensure quality, HPPWD has established an in-house laboratory. Now, HPPWD wants to strengthen the existing laboratory with additional laboratory equipments including consumables and manned by qualified engineers/technician.

2. Need for Well Equipped Laboratory

The quality of natural materials, factory manufactured materials, specialized items, mix items are important for construction of quality roads. The various quality control tests on various ingredients and mixes and their frequencies are stipulated in MoRT&H specifications for road and bridge works and MoRD Specifications for Rural Roads. As such it is important for all the stakeholders to ensure that all the quality test at the specified frequencies are conducted.

In this era of globalization, HPPWD needs a well-equipped laboratory, trained professionals and effective management system which assures good quality and best services so that high level of quality on the outgoing projects will be maintained. HPPWD is having an in-house laboratory. To ensure quality control/assurance of the construction of National Highways, State Highways, Major District Roads and Rural Roads, this laboratory needs to be strengthened with additional equipments with consumables and manned by qualified engineers/technician. Further, it has been envisaged to outsource the Operation and Maintenance of this laboratory for testing & analysis of material through constant pursuit of excellence and commitment to quality.

SECTION-II INSTRUCTIONS TO APPLICANTS

SECTION II

I. SCOPE OF WORK

✚ The in-house laboratory of HPPWD shall be provided with electricity supply, electrical wiring and points, all necessary electrical fittings and fixtures; potable water supply including pipes, pumps, storage tanks, plumbing, all necessary fittings and fixtures; security services etc. The floor space requirement for the field laboratory shall be as indicated in the drawings. It shall include office space for the Materials Engineers, one from the service provider side and another from the Client's side, space for the installation of equipment, and space for other facilities. The laboratory shall be fitted complete with laboratory equipment, laboratory tables and cupboards, wash basins, toilet facilities, curing tank around 4m x 2m x 1m in size for the curing of samples, a fume chamber, working platform area of about 1m x 10m against the walls, cupboards above and below the working platform, space for storage of accessories such as sample moulds, space for storage of samples etc. At least 4 racks of slotted angles and M.S. sheets shall also be provided. The furnishing in each of two offices of the Materials Engineers shall include working tables and chairs.

- ✚ Investment for establishing a laboratory Will be done in selected laboratory in the premises of PWD, Nirman Bhawan
- ✚ Technical and Administrative staff will be provided by/ hire of laboratory for running the lab smoothly.
- ✚ Quality of working will be carried out as per ISO 9001:2015 & NABL 17025: 2017 and important certification if any.
- ✚ Complete Confidentiality will be maintained by laboratory service provider.
- ✚ Periodic Training will be given to the staff of PWD regarding testing.
- ✚ **Revenue will be shared between both the parties i.e. PWD & hired laboratory**

There would be no financial investment for establishing the lab on the part of PWD .This Lab will be open to many other departments for the other projects going(in H.P.) i.e. CPWD, NHAI, NPCC, NBCC, BSNL etc. which in turn will generate more revenue as per instruction of PWD.

Apart from above PWD will have facility of chemical testing Laboratory also.

Laboratory will be function on the name of PWD and hired laboratory name will not be displayed anywhere.



Land and electricity **bill** to be provided by PWD.

Contract will be signed for minimum of 7 years



Profit will be shared as follows. Hired Laboratory = 50 % and PWD = 50 %



The parameters to be monitored for various projects shall be decided by PWD in discussion considering the nature of the project.



Sample testing of each and every component of works will be done as per standard codal formalities and as per instruction of PWD in the Lab.



The service provider firm shall arrange to maintain the laboratory in satisfactory manner and will carry stocks of spare equipment and laboratory consumables until the completion of the contract period. Maintenance includes the day-to-day upkeep of the laboratory building and the surroundings, attending to repairs to various parts of the building, furniture, fittings, office/laboratory equipments and the concerned services as and when necessary, including the periodic white/ color washing of building and painting of wood, steel work, replacing the broken window/door/ventilator, glasses, furniture and other hardware and maintaining necessary watch and ward during the day and night.



The service provider have to test the field samples at no extra cost.



At later stage, if it comes to knowledge that any false information has been submitted, agency will be blacklisted immediately and legal action would be taken against them.



The tests shall be carried out as per BIS and other relevant codes and reports shall be as per NABL.



Payment will be done to PWD every month on 10th of the total billing i.e 50% of the total billing.

4. Facilities and services to be provided by the Client:

- a) Land/ Space for Laboratory shall be provided by HPPWD.
- b) Existing equipments (given in **Annexure-B**) available with the HPPWD shall be utilized for setting up of the laboratory.
- c) The HPPWD shall arrange to provide uninterrupted supply of electricity and water for the laboratory building. In case of failure of main power/water supply, alternate source shall be available for providing uninterrupted supply.

II. PREQUALIFICATION DOCUMENTS

The EOI should contain the following documents as per the listed sequence. In case if an Applicant fails to submit any of the following documents, it may be considered non-responsive and may be rejected.

- i. The Applicant must be a Laboratory registered in India not less than 5 years old.
- ii. Applicant must have NABL accreditation .Applicant must have BIS accredited laboratory.
- iii. Must have Average Turnover of more than 1 Cr in **each** of the last 3 years
- iv. Must have good presence in Himachal Pradesh projects
- v. Validity period of the NABL accreditation must not be less than from the date of the submission of proposal.
- vi. The laboratory must have witness facility (physically or digitally) for testing of any construction material anytime. An undertaking in this regard will be submitted by applicant.
- vii. The laboratory must have undertaken testing and analysis of construction materials of at least three Government Departments during last two years from the last date of submission of EOI. Documentary evidence from Clients for the works to be considered for evaluation. Works claimed without documentary evidence will not be considered for evaluation.

III. NO. OF EOI PER APPLICANTS

Each Applicant shall submit only 1 (one) Eoi. An Applicant who submits or participates in more than one Eoi will cause all the proposals with the Applicant's participation to be disqualified.

IV. JOINT VENTURE

Joint venture is not allowed

V. SITE LOCATION AND SITE VISIT

Intending Applicant(s) are advised to inspect and examine the existing Lab premises of Himachal Pradesh public works Department at Nirman Bhawan in Shimla at his own cost and satisfy themselves before submitting their Eols as to the form and nature of the building, the means of access to the site, the accommodation they

may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their Eol. An applicant(s) shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. Submission of an Eol by an applicant(s) implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions.

VI. PRE-EOI MEETING

The pre-Eol meeting will be held as mentioned in the NIT in the office of

**Engineer in Chief
Public Works Department
Nirman Bhawan, Nigam Vihar
Shimla-171002 (H.P)
Phone No. 0177-2621401**

VII. COST OF EOI

The Applicant shall bear all the costs associated with the preparation and submission of Eol and PWD in no case will be responsible or liable for those costs, regardless of the conduct or outcome of the Eol process.

VIII. CLARIFICATION OF EOI DOCUMENTS

A prospective Applicant requiring any clarification of the Eol Documents may notify, Engineer in Chief, HPPWD, Himachal Pradesh who will respond to any request for clarification, if necessary. The queries may be sent to:

The pre-Eol meeting shall be held, as per the schedule mentioned in the NIT. The Applicants who are interested in attending the pre-Eol meeting may send their contact details viz. organization name, Name of the official, email address, mobile number etc. to at least one working day prior to the pre-Eol meeting.

IX. AMENDMENT OF EOI DOCUMENTS

At any time prior to the deadline for submission of Eols, PWD may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Applicant, modify the EOI Documents by the issuance of a Corrigendum/Addendum. No modification of Eol shall be permissible after last date of submission, whatever may be the reason. PWD may at its discretion extend as necessary the deadline for submission of Eol/ Eol, if considered necessary.

X. LANGUAGE OF EOI

The Eol prepared by the Applicant and all correspondence and documents relating to the Eol exchanged between the Applicant and PWD shall be written in the **English language** only.

XI. DOCUMENTS COMPRISING THE EOI

The Eol to be prepared and submitted by the Applicant for consideration shall comprises of the following:

- i. All the prequalification documents as per clause V**
- ii. Notarized Power of Attorney on Rs. 100 non-judicial stamp paper from the Applicant in respect of Authorized Signatory for the Eol.**
- iii. Certificate of registration/ Incorporation Certificate.**
- iv. Documents for GST Certificate, PAN.**
- v. Information to be provided by the Applicant as per Annexure-I along with company profile**
- vi. Eol Acceptance Letter as per Annexure-II.**
- vii. Applicants' Organization Details as per Annexure-III**
- viii. Details of Similar Works Completed as per Annexure-V.**

- ix. Details of persons to be engaged in the designated project as per **Annexure-VII** & their CV's.
- x. Letter of Undertaking of No Conviction Certificate as per **Annexure-VIII**.
- xi. Approach and Methodology consisting of Methodology, Work Plan & Team composition in A-4 Format.
- xii. Integrity Pact as per **Annexure -XV**.
- xiii. Details of the Laboratory along with the full list of equipment(s) and personnel available with the Laboratory,
- xiv. Documents in Support of Registration, Ownership as well as Constitution and legal status of the Applicant
- xv. Undertaking mentioning that firm has not been blacklisted/ De-registered/ debarred by any Government department/ Public Sector Undertaking/ or any other agency for which they have Executed/ Undertaken the works/ Services in the past.

Note: The authorized signatory of the Consultant shall initial all pages of the hard copy of the Technical Proposal.

1. MODIFICATION AND WITHDRAWAL OF EOIS

The Applicant may modify or withdraw his Eol prior to deadline for submission of Eol by giving modification or withdrawal notice in writing to PWD.

The Applicant's modifications or notice of withdrawal shall be prepared, sealed and clearly marked as "Modification" or "Withdrawal" as appropriate and delivered prior to deadline for submission of Eol in accordance with ITB Clause 23.

No Eol will be modified after the deadline for submission of the Eol. Withdrawal of Eol between deadline for submission and expiry of Eol validity will result in suspension of from being eligible for EOI in any contract with employer for the period of 3 years or any other period at the discretion of competent authority, starting on Eol submission closing date.

2. EOI DOCUMENTS

Entire set of Eol Document shall be submitted after filling it wherever required & signing each page as a token of acceptance of all terms & conditions of the Eol.

3. PWD'S RIGHT TO ACCEPT ANY EOI AND TO REJECT ANY OR ALL EOIS

PWD reserves the right to accept or reject any Eol, and to annul the EOI process and reject all Eols, at any time prior to award of Contract, without thereby incurring any liability to the affected Applicant or Applicants or any obligation to inform the affected Applicant or Applicants of the grounds for PWD's action.

XII. EOI OPENING

PWD shall open the Eols as per the schedule. The Applicant will be at liberty to be present either in person or through an authorized representative at the time of opening of the Eol. PWD will open the Eols in the presence of Applicants'

representative who wish to attend on the time, date and venue as mentioned in Eol. The physical Eol shall also be opened on the day of Eol opening.

The Evaluation will be done by the Quality Control Wings headed by Engineer-In-Chief HPPWD.

The Tender will be upload by Store & purchase Department.

XIII. EVALUATION OF EOI

PWD reserves the right to reject the Eol under any of the following circumstances:

- i. Eol is incomplete and/ or not accompanied by all required documents.
- ii. Eol is not in conformity with the terms and conditions.

Any other reasons due to which PWD finds that the Applicant in not eligible.

- I. PWD will examine the Eols to determine their completeness in all respect as per the requirements of this Eol document. PWD may waive off any minor non-conformity or irregularity in Eol, which does not constitute a material deviation, provided such waiver does not prejudice to affect the relative ranking of any Applicant.
- II. PWD shall evaluate the Eol based on the documents submitted by the Applicant.
- III. PWD shall evaluate only the Eols of the Applicants which meets the minimum eligibility criteria and are determined to be responsive.
- IV. Evaluation of the Eols shall be based on the overall experience of the Applicants, their understanding of scope of work and approach and methodology of the works to be undertaken.
- V. Distribution of Marks

S. No	Attribute s	Maximum Marks	Breakup of Scoring	
			Sub- criteria	
1.	The applicant shall have the average turnover for last 3 years:- 10 crore or above 10 crore - 25 marks 5 crore to 10 crore - 15 marks upto 5 crore - 10 marks			
2.	Empanelled With HPPWD after year 2017:-20 marks Empanelled With HPPWD for 5 years or above -20marks Empanelled with HPPWD for 3 to 5 Years- 12 marks Empanelled with HPPWD for 3 Years- 8 marks Empanelled with HPPWD for 1 Year- 4 Marks			
3	NABL ACCREDITED/BIS RECOGNIZED/ ISO 9001:2015 CERTIFIED-30Marks BIS RECOGNIZED-18 MARKS NABL ACCREDITED/ISO CERTIFIED -7 MARKS NABL in Chemical testing experience of lab For 5 Years or more-5 Marks			
4	Key Personnel (CVs/ Resumes of following personnel shall be considered for evaluation): 25 Marks			
A.	Team Leader cum Quality Control Expert - 1 Nos - 10 Marks			
	Minimum Qualification- Phd/Graduate/Post Graduate in or equivalent			
B.	Minimum Experience in Quality Control of Building Materials, Pipes,etc. - 15 Years			
	Civil cum Quality Engineer - 1 Nos - 5 Marks			
	Graduate in Civil Engineering or equivalent			
	Minimum Experience in Quality Control of Building Materials, Pipes, etc. - 10 Years			
C	Technical Manager - 1 Nos - 5 Marks			
	Graduate in Civil Engineering or equivalent			
	Minimum experience in the field of Third Party Testing in similar assignment and role - 5 Years			
D	Senior Analyst - 1 Nos - 2.5 Marks			
	B.Sc. (Chemistry)/ B. Tech/Diploma			
	Minimum experience in the field of Third Party Testing in similar assignment and role - 5 Years			
E	Lab Technician - 2 Nos - 2.5 Marks Each (Toral 5 Marks)			
	Graduation/Diploma			
	Minimum experience in the field of Third Party Testing in similar assignment and role - 5 Years			

XIV. AWARD & WORK DISTRIBUTION CRITERIA

- * After evaluation on the basis of technical competency, PWD will hire the successful laboratory who have got maximum marks out of 100.
- * PWD reserve the right to cancel the empanelment of any laboratory who will be found involved in any type of wrong practice.
- * Charges towards testing will be decided by PWD time to time. Same will be informed to labs and they are bound to accept the same and conduct the inspection.

XV. SIGNING OF THE CONTRACT

Within **15 (Fifteen)** days of receipt of the Letter of Award, on a date and time mutually agreed upon, or as specified in the Letter of Award, the successful Applicant or his authorized representative shall attend the office of the **Engineer in Chief (Himachal Pradesh), Public Works Department, Nirman Bhawan, Nigam Vihar, Shimla-171002 (H.P)**, for signing of the Contract Agreement. Failure on the part of the successful Applicant to comply with the above requirements will constitute sufficient grounds for the annulment of the Award and forfeiting of Eol Security. The initial term of contract will be for a period of Seven years which may be further extended as per consent of both the parties. In case the term of contract is not extended valuation of machinery installed will be done by HPPWD and amount decided as per valuation will be reimbursed to the party.

XVI. SHORTFALL DOCUMENT

PWD may ask the Applicant for submission of additional documents, if required, in case of shortfall documents during the evaluation of the Eols. These documents shall not be relating to submission of EMD or Eoling fees. Request for documents and the response shall be in writing and no changes in the prices of the Eol shall be sought, offered or permitted. No modification of the Eol and any form of communication with PWD or submission of any additional documents, not specifically asked for by PWD, will be allowed and even when submitted, they will not be considered by PWD.

XVII. CONFIDENTIALITY OF EOIS

After the public opening of Eols, information relating to the examination, clarification, evaluation and comparison of Eols and recommendations concerning

the Award of Contract shall not be disclosed to Applicants or other persons not officially concerned with such process. Any effort by an Applicant to influence PWD in the process of examination, clarification, evaluation and comparison of Eols, and in decisions concerning Award of Contract, may result in the rejection of his Eol.

XVIII. CLARIFICATION OF EOIS

To assist in the examination, comparison and evaluation of Eol, PWD may ask Applicants for clarification of the Eols, if any. But no change in price or substances of Eol will be sought, agreed or permitted. The request for clarification and its response shall invariably be in writing.

XIX. DELIVERABLES

- ❖ Test reports having details of Calculations, calibration and the specified limits as per IS code are to be submitted within 15 days of conducting the test.
- ❖ Test reports are to be provided in the format prescribed by QCI as a part of NABL accreditation
- ❖ Reports are to be signed by authorized signatory
- ❖ Laboratory will submit monthly reports to PWD in soft as well as in 2 set of hard copies without fail. Laboratory team will accompany the PWD team on regular basis.

i. Payment Terms

- ❖ 100 % payment will be given after acceptance of final report and once payment is received from client.
- ❖ Rate of test conducted will be decided by principle client time to time and Laboratory will be bind to accept the testing charges decided by principle department i.e. Himachal Pradesh Public Works Department.
- ❖ Sample will be collected in field during site visits in presence of PWD Engineer, Client representative and a Performa will be signed by all three i.e. Lab Representative, PWD Engineer.
- ❖ LAB will submit their report to PWD and subsequently their GST bills to PWD in line with approved rate by client.
- ❖ Full Payment of laboratory will be done i.e 50% of the total billing of the month on every 10th of the month.

XX. ARBITRATION

All disputes arising between the parties as to the operation, interpretation or effect of any clause in this document or any other difference arising between the parties which cannot be mutually resolved , shall be referred to arbitrator as mutually agreed by the parties . The decision of such arbitrator shall be binding on the parties.

SECTION-III

ANNEXURES

ANNEXURE - I

INFORMATION TO BE FURNISHED BY THE APPLICANTS

Sr. No	Particulars	Details
	Name of the organization	
	Address for Correspondence	
	Contact Person Details: Name: Telephone Nos. Mobile No. Fax: Email:	
	Format of Bid Acceptance Letter	Annex-II
	Organization Details	To be filled as per Annex-III
	List of Similar Works Completed	To be filled as per Annex-V
	Name(s) of the persons along with their qualification and designation, who is authorized to deal with PWD (Attach Power of Attorney)	
	List of persons to be engaged for the designated projects	To be filled as per Annex-VII
	Organization Chart of Key Personnel	
	List of permanent professional Employees and Key Personnel mentioning their specialization, qualifications, experience and association with the firm	Self-Certified Copies to be enclosed
	No Conviction Certificate	To be filled as per Annex-VIII
	Integrity Pact	To be filled as per Annex-XV

ANNEXURE - II
FORMAT FOR EOI ACCEPTANCE LETTER
(To be given on Company Letter Head)

Date: _____

To,
Engineer in Chief (Himachal Pradesh)
Public Works Department
Nirman Bhawan, Nigam Vihar
Shimla-171002 (H.P)

Subject: Acceptance of Terms & Conditions of the Eol Document.

Work Name: _____

Eol No.: _____

Dear Sir,

1. I/ We have downloaded/ obtained the Eol document for the above mentioned "Eol" from the web site namely: _____ as per your advertisement, given in the above-mentioned website.
2. I/ We hereby certify that I/ we have read the entire terms and conditions of the Eol documents from page no. _____ to _____ (including all documents like annexures, Drawings etc., which shall form part of the contract agreement and I / we shall abide by the terms / conditions / clauses contained therein.
3. The corrigendum/Addendum issued from time to time by your department/ organization too has been taken into consideration, while submitting this acceptance letter.
4. I/We hereby unconditionally accept the conditions of above-mentioned Eol document(s)/corrigendum/Addendum in its totality/entirety.
5. I/We do hereby declare that our Company has not been blacklisted/ debarred by any Govt. Department/Public Sector Undertaking.
6. I/We certify that all information furnished by the our Firm/Company is true & correct and in the event that any information is found to be incorrect/untrue or found violated, then your department/ organization shall without giving any notice or reason therefore summarily reject our bid or terminate the contract (if awarded), without prejudice to any other rights or remedy including the suspension from being eligible for bidding in any contract with employer for the period of 3 years or any other period at the discretion of competent authority, starting on bid submission closing date.

Yours Faithfully,
(Signature & Seal of the Bidder)

**ANNEXURE - III
ORGANIZATIONAL DETAILS**

Sr. No.	Particulars	Details
	Organizational Set-up: <ul style="list-style-type: none"> - Year of Establishment - Status of Firm (Proprietorship/ Partnership/Any other) - Place and Year of Incorporation - Name of Directors/Partners/Proprietors - Empanelment with Govt. Organizations - (Mention names along with copies ofCertificates) 	
	Proof Checking arrangement	Details of tie-up if any to be given
	ISO Certification	
	Outsourcing jobs <ul style="list-style-type: none"> - Structural Design - Plumbing, Sanitary & water supply - Electric Schemes & Design - Fire Fighting and fire detection - Environmental - Air-conditioning - Mechanical - Geo-technical Investigation - Topographical Survey - Any other 	Details of sub-consultants(if any) to be given
	Bank Details Name of the Bank:Account Number: IFS Code: Name & Address of the Branch: MICR Code:	
	IT Pan Number GST Number NSIC Registration Number and Validity	

Yours Faithfully,

(Signature & Seal of the Bidder)

ANNEXURE - V
DETAILS OF SIMILAR WORKS EXECUTED DURING LAST 3 YEARS

Assignment No	
Name of Work	
Name of the Client	
Contact Details of Client Name: Postal Address: Official email ID:	
Cost of project in Rs.	
Fee of the Project in Rs.	
Commencement of Date	
Scheduled date of Completion	
Actual Completion Date	
Reason for Delay, if any	
Details of Services provided by the firm	
Key Professionals involved in the Study and their proposed position	

We hereby certify the information as given in below in table is correct and we have attached Client Completion Certificates in support of list of works given as above.

Signature of the Bidder with Seal

ANNEXURE -VII
PERFORMA FOR MANPOWER

Sr. No.	Manpower	Name	Designation	No. of Years with Company	Total Experience

Note:

- Attach Signed CVs as per the below given format only. CV in any other format will not be considered in evaluation.
- Attach Copies of Self Attested Qualification

The bidders must give an undertaking that they will provide the staff as and when required. The signed CVs and qualification proofs of the team shall be provided in the technical bid.

Signature of the Bidder with Seal

CV FORMAT

1. PROPOSED POSITION				
2. NAME OF FIRM				
3. NAME OF STAFF				
4. DATE OF BIRTH				
5. NATIONALITY				
6. EDUCATION				
7. MEMBERSHIP IN PROFESSIONAL ASSOCIATIONS				
8. SPECIFIC TRAINING				
9. WORK EXPERIENCE				
10. LANGUAGES SKILLS	LANGUAGES	SPEAKING	READING	WRITING
11. EMPLOYMENT RECORD:				
MONTH & YEAR (FROM - TO)	EMPLOYEE		POSITION HELD	
	R			
12. DETAILED TASKS ASSIGNED:				
13. WORK UNDERTAKEN THAT BEST ILLUSTRATES CAPABILITY TO HANDLE THE TASK ASSIGNED:				
Name of assignment:Year: Location: n: Client: Main Project Features:Positions Held: Activities Performed:				
<p>I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.</p> <p>Date: Place: Name of authorized representative of the Consultant:</p>				

ANNEXURE - VIII
FORMAT FOR NO CONVICTION CERTIFICATE
(To Be Submitted on Bidder's Original Letter Head)

Subject: No-Conviction Certificate for --- (Name of the work / project)

This is to certify that _____ (Name of the organization), having registered office at (Address of the registered office) has never been blacklisted or restricted to apply for any such activities by any Central / State Government Department/Client/ Owner or Court of law anywhere in the country

This is also to certify that M/s _____ (Name of the organization), is not involved in any form of Corrupt and Fraudulent Practices in past and will never be involved in future.

Yours faithfully,
(Signature, name and designation of the Authorized signatory)

Date:

Place:

Name and seal of Bidder

FORMAT FOR AGREEMENT

[Note: This Proforma is included in the Bidding Documents only for the information of Bidders. Only the successful Bidder shall, in due course, be required to fill this Proforma]

THIS AGREEMENT MADE the _____ day of _____ BETWEEN PWD
_____ of (Mailing address of PWD) _____ (hereinafter called
“Employer”) of the one part and (Name of Lab) _____
(hereinafter called “the Lab”) of the other part.

WHEREAS the PWD is desirous that “_____”. (hereinafter referred to as
“the Work”) should be executed by the Lab AND WHEREAS by a Letter of Award No.
_____ dated _____ PWD has accepted a Bid by the Lab for the
execution and completion of such Works AND WHEREAS the Lab has agreed to
undertake such work and furnish a performance security pursuant to the Clause 2.38 of
the section-II ‘Instructions to Bidders’

NOW THIS AGREEMENT WITNESSETH as follows;

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz;
 - a) The Agreement
 - b) The Letter of Award
 - c) Corrigendum/Amendments if any
 - d) Documents furnished by bidder
 - e) Notice Inviting EoI(NIT)
 - f) Instructions to Bidders
 - g) General Conditions of the Contract
 - h) Annexures
 - i) Any other documents as forming part of the contract
3. The aforesaid documents shall be taken as complementary and mutually explanatory of one another.
4. In consideration of the payment to be made by the PWD to the Lab as hereinafter mentioned, the Lab hereby covenants with the ‘PWD ’ to execute and complete the Works in conformity, in all respects, with the provisions of the Contract.
5. The ‘PWD ’ hereby covenants to pay the Lab in consideration of the execution and completion of the Works and the remedying of defects therein the Contract Price or such other sum as may become payable under the provisions of the contract at the time and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused their respective common Seals

to be hereunto affixed (or have hereunto set their respective hands and Seals) the day and year first above written.

SIGNED, SEALED AND DELIVERED

By the said

By the said

NAME _____

NAME _____

On behalf of the Labin the
presence of:

On behalf of the PWD
in the presence of:

NAME _____

NAME _____

Address _____

Address _____

Form 6 and Form 8 will be part of this agreement

**ANNEXURE - XV
FORM FOR INTEGRITY PACT**

To,
Engineer in Chief (Himachal Pradesh)
Public Works Department
Nirman Bhawan, Nigam Vihar
Shimla-171002 (H.P)

Sub : Submission of Eol for the work (Name of Work)

Dear Sir,

I/We acknowledge that PWD is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the Eol/bid document. I/We agree that the Notice Inviting Eol (NIT) is an invitation to offer made on the condition that I/We will sign the enclosed integrity Agreement, which is an integral part of Eol documents, failing which I/We will stand disqualified from the Eoling process. I/We acknowledge that THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE of this condition of the NIT.

I/We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when Eol/bid is finally accepted by PWD. I/We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 6 of the enclosed Integrity Agreement.

I/We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the Eol/bid, PWD shall have unqualified, absolute and unfettered right to disqualify the Eoler/ bidder and reject the Eol/bid in accordance with terms and conditions of the Eol/bid.

Yours faithfully
(Duly authorized signatory of the Bidder)

**To be signed by the bidder and same signatory competent/ authorized to sign
the relevant contract on behalf of PWD
INTEGRITY AGREEMENT**

This Integrity Agreement is made at on this..... day of.....
2023

BETWEEN

PWD (Hereinafter referred as the Employer which expression shall unless
repugnant to the meaning or context here of include its successors and permitted
assigns)

AND

(Name and Address of the Lab)

Hereinafter referred to as the “Bidder/ Lab” (which expression shall unless
repugnant to the meaning or context hereof include its successors and permitted
assigns)

(Details of duly authorized signatory)

Preamble

WHEREAS the Employer has floated the EoI (NIT No. _____)
(hereinafter referred to as “EoI/ Bid”) and
intends to award, under laid down organizational procedure, contract for
_____ (Name of work) hereinafter referred to as the
“Contract”.

AND WHEREAS the Employer values full compliance with all relevant laws of the
land rules, regulations, economic use of resources and of fairness/ transparency in
its relation with its Bidders.

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter
into this Integrity Agreement (hereinafter referred to as “Integrity Pact” or
“Pact”), the terms and conditions of which shall also be read as integral part and
parcel of the EoI/ Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the
parties hereby agree as follows and this Pact witnesses as under:

Article 1: Commitment of the Employer

1. The Employer commits itself to take all measures necessary to prevent
corruption and to observe the following principles:
 - a. No employee of the Employer, personally or through any of his/ her
family members, will in connection with the EoI, or the execution of the
Contract, demand, take a promise for or accept, for self for third person,
any material or immaterial benefit which the person is not legally
entitled to.
 - b. The Employer will, during the EoI process, treat all Bidder(s) with equity
and reason. The Employer will, in particular, before and during the EoI
process, provide to all Bidder(s) the same information and will not
provide to any Bidder(s) confidential / additional information through
which the Bidder(s) could obtain an advantage in relation to the EoI
process or the Contract execution.

- c. The Employer shall endeavour to exclude from the Eol process any person, whose conduct in the past has been of biased nature.
2. If the Employer obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Employer will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Bidder(s)/ Lab (s)

1. It is required that each Bidder/ Lab (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the PWD all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the Eoling process and throughout the negotiation or award of a contract.
2. The Bidder(s)/Lab(s) commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Eol process and during the Contract execution:
 - a. The Bidder(s)/Lab(s) will not, directly or through any other person or firm, offer, promise or give to any of the Employer's employees involved in the Eol process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Eol process or during the execution of the Contract.
 - b. The Bidder(s)/Lab(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non- submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.
 - c. The Bidder(s)/Lab(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/ Contract(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Employer as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - d. The Bidder(s)/ Lab(s) of foreign origin shall disclose the names and addresses of agents/ representatives in India, if any. Similarly Bidder(s)/ Lab(s) of Indian Nationality shall disclose names and addresses of foreign agents/ representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a Eol but not both. Further, in cases where an agent participate in a Eol on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/ parallel Eol for the same item.
 - e. The Bidder(s)/ Lab(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.

3. The Bidder(s)/ Lab(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
4. The Bidder(s)/ Lab(s) will not, directly or through any other person or firm indulge in fraudulent practice means a willful misrepresentation or omission of facts or submission of fake/ forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/ or to influence the procurement process to the detriment of the PWD interests.
5. The Bidder(s)/ Lab(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the Eoing process)

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Lab under law or the Contract or its established policies and laid down procedures, the Employer shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/ Lab(s) and the Bidder/Lab accepts and undertakes to respect and uphold the Employer's absolute right:

1. If the Bidder(s)/ Lab(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Employer after giving 14 days' notice to the Lab shall have powers to disqualify the Bidder(s)/ Lab(s) from the Eoing process or terminate/ determine the Contract, if already executed or exclude the Bidder/ Lab from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Employer. Such exclusion may be forever or for a period as decided by the Employer.
2. Forfeiture of EMD/Performance Guarantee/Security Deposit: If the Employer has disqualified the Bidder(s) from the Eoing process prior to the award of the Contract terminated/ determined the Contractor has accrued the right to terminate/ determine the Contract according to Article 3(1), the Employer apart from exercising any legal rights that may have accrued to the Employer, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Lab.
3. Criminal Liability: If the Employer obtains knowledge of conduct of a Bidder/ Lab, or of an employee or a representative or an associate of a Bidder/ Lab which constitutes corruption within the meaning of IPC Act, or if the Employer has substantive suspicion in this regard, the Employer will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

1. The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/ State Public Sector Enterprises in India that could justify his exclusion from the Eol process.
2. If the Bidder/ Lab makes incorrect statement on this subject, he can be disqualified from the Eol process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Lab as deemed fit by the Employer.
3. If the Bidder/ Lab can prove that he has resorted/ recouped the damage caused by him and has installed a suitable corruption prevention system, the Employer may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/ Lab

1. The Bidder/ Lab shall be responsible for any violation(s) of the principles laid down in this agreement/ Pact by any of its Sub Contractors/ sub-vendors.
2. The Employer will enter into Pacts on identical terms as this one with all Bidders/ Lab.
3. The Employer will disqualify Bidders, who do not submit, the duly signed Pact between the Employer and the bidder, along with the Eol or violate its provisions at any stage of the Eol process, from the Eol process.

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Lab/Vendor 12 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.

If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, PWD .

Article 7- Other Provisions

1. This Pact is subject to Indian Law, place of performance and jurisdiction is the Headquarters of the Employer, who has floated the Eol. Changes and supplements need to be made in writing. Side agreements have not been made.
2. If the Lab is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.
3. Should one or several provisions of this Pact turnout to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
4. It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement/ Pact, any action taken by the Employer in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

Article 8- Legal and Prior Rights

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/ or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the EoI/ Contract documents with regard any of the provisions covered under this Integrity Pact.

INWITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

..... (For and on behalf of Bidder/
Lab)

WITNESSES:

1.(Signature, name and address)

2.(Signature, name and address)

Sr. No.	Product	Test Parameter	Instruments	Qty.
1	Cement	Fineness by Blaine air permeability	1. Blaine air permeability,	1 set each
2		Initial Setting Time	2. Le chatlier apparatus	
3		Final Setting Time	3. Vicat apparatus	
4		Soundness by Le chatlier method	4. Compressive testing machine	
5		Soundness by Autoclave method	5. Le chatlier flask	
6		Compressive strength	6. Flow table	
7		Specific gravity	7. Le chatlier water bath,	
8		Consistency	8. Humidity chamber,	
9			9. Weighing balance,	
10			10 Gauging trowel,	
11			11. Stopwatch,	
12			12. Length compactor,	
13			13 Filter paper	
14			14. Vernier calipers	
15	Bricks	Dimension	1. Measuring tape,	
16		Water absorption	2. Curing tank,	
17		Compressive strength	3. Compressing testing machine,	
18		Efflorescence	4. weighing balance,	
19			5. Hot air oven,	
20			6. Evaporation disc	
21		Sieve analysis	1. IS Sieves	
22		Impact value	2. Compressive testing machine	
23		Crushing value	3. Impact tester	

24	Coarse Aggregate	Abrasion value	4. Los angles abrasion machine
25		Specific gravity	5. Weighing Balance
26		10 % fine value	6. Buoyancy Balance
27		Water absorption	7. Measuring cylinders
28		Bulk density	8. Length & thickness gauge
29		Elongation & Flakiness	9. Hot air oven
30		Natural Moisture content	10. Tray
31		Material passing 75 micron sieve	11. Heavy solution for coal & lignite
32		Fineness modulus	
33		Clay lumps	
34	Coarse Aggregate	Coal & lignite	
35	Fine Aggregate	Sieve analysis	1. IS Sieves
36		Specific gravity	2. Weighing Balance
37		Water absorption	3. Hot air oven
38	Fine Aggregate	Bulk density	4. Pycnometer
39		Natural Moisture content	5. Measuring cylinder
40		Material passing 75 micron sieve	6. Sedimentation apparatus
41		Fineness modulus	7. Heavy solution for coal & lignite 8. Tray
42		Clay lumps	
43		Coal & lignite	
44		Silt content	
45	Soil	Grain size analysis	1. IS Sieves
46		Liquid limit	2. Hydrometer
47		Plastic limit	3. Casagrade apparatus
48		Proctor Test	4. Soil Proctorometer
49		Modified Proctor Test	5. Light rammer
50		free swell index	6. MDD mould
51		CBR Test (Soaked/ Unsoaked)	7. Heavy Hammer
52		UCS Test	8. Direct shear apparatus
53		Moisture content	9. CBR Apparatus
54		Specific gravity	10. UCS apparatus

55		Field density by soil core cutter method	11. Density bottle
56		Field density by soil sand replace method	12. Kerosine oil
57			13. CBR Mould & weights
58		C & Phi Value	14. Soil core cutter
59			15. Rapid moisture meter

60			16. Sand replacement apparatus	
61			17. weighing balance	
62			18. 1000ml Measuring Cylinder	
63			19. 100 ml measuring cylinder	
64			20. Tin cans	
65			21. Hot air oven	
66			22. China disc	
67			23. Glass plates	
68			24. Spetula	
69			25. filter paper	
70			26. Standard sand	
71			27. wash bottle	
72	Paver Blocks	Dimension	1 . Vernier Calipers	
73		Compressive strength	2. Compressive testing machine	
74		Water absorption	3. Flexural Testing Machine	
75		Flexural strength	4. Hot air oven	
76		Tensile splitting strength	5. Tensile splitting machine	
77	Paver Blocks	Squareness	6. Filler gauge	
78		Dry abrasion	7. Abrasion machine	
79		Wet abrasion	8. Weighing balance	
80		Breaking load	9. cardboard	
81		Failure Load per unit length	10. Paver cutting machine	
82		Wearing face area	11. Scale	
83	Paver Blocks	Freeze & thaw	12. Deep freezer	
84			13. Humidity chamber	

85	ACC Block	Dimenssion	1. Compressing testing machine
86		Compressive strength	2. Hot air oven
87		Transvers	3. weighing balance
88		Density	4. Vernier calipers
89			5. Steel Scale
90			6. Tranverse testing machine
91	Steel Bar, Wire, Plates	Tensile strength	1. UTM
92		Yield strength	2. TTM
93		Elongation	3. Rockwell harness machine
94	Tiles	Floor Tiles and oil wall tiles	All test of wall tiles and floor tiles.
95	Paints and furnishes	Oil paints and enamel paints	All test of paints and furnishes.

94		Weight per metre length	4. Brinell hardness machine	
95		Bend test	5. Vicklers hardness machine	
96		Rebend test	6 Weghing Balance	
97		Rockwell hardness	7. Vernier calipers	
98		Brinell hardness	8. marking tools	
99		Vicklers hardness	9. Water bath	
100		Total % Elongation	10. Extensnometer	
101		0.2 % proof stress	11. Mandrel	
102	Bitumen	Penetration	1. Bitumen penetrometer	
103		Specific gravity	2. Ring & Ball apparatus	
104		Softning point	3. Cleveland open cup apparatus	
105		Ductility	4. Ductility apparatus	
106		Flash & fire point	5. Viscosity bath	
107		Matter solubility in tricholeroetheyen	6. 12 & 6 no viscosity tubes	
108		Loss on heating	7. Loss on heating oven	
109		Absolute viscosity	8. Density bottle	
110		Kinematic viscosity	9. Conical flask	
111			10. Glycerine	
112			11. Dextrine powder	
113	Bitumen		12. Vaccum pump	
114	Flexible pavement	Binder Content	1. Centrifugal extraxctor	
115		Density of core	2. Benzene	
116		Grading	3. IS sieve	
117		Thickness of pavement	4. Buoyancy Balance	
118			5. Vernier calipers	
		Deflection of pavement	6. Benkleman Beam apparatus.	
119	Concrete Cubes, Beams & cores	Compressive strength	1. Compressing testing machine	
120		Water permeability test	2. Tensile spilting machine	
121		Tensile spilting strength	3. Water permeability apparatus	
122		Density	4. Vernier caliper	

123
124

Moisture content	5. hot air oven
Flexural strength	6. Flexural testing machine

125		Dimension	
126	NDT	Rebound hammer test	1. Rebound hammer
127		Ultra sonic pulse velocity	2. UPVT apparatus
128		Core cutting	3. Core cutting machine
129		Carbonation	4. Indicator Chemical
130	Design mix	Design Mix	1. Concrete mixture
131		Slump Test	2. Slump cone apparatus
132	GSB, WMM, WBM,	Grading	1. Is Sieves
133		Impact value	2. Impact tester
134		Crushing value	3. Compressive testing machine
135		Combined Elongation & flakiness	4. Length & thickness gauge
136		Water absorption	5. Hot air oven
137		Liquid limit	6. Casagrande apparatus
138		Plastic limit	7. CBR testing machine with moulds
139		CBR Test (Soaked/ Unsoaked)	8. Curing tank
140		Proctor Test	9. Soil core cutter
141		Modified Proctor Test	10. Rapid moisture meter
142		Field density by sand replacement method	11. Sand replacement apparatus
143		Job mix	
144	Bitumen Job mix	SDAC	1. Pavement compactor
145		BC	2. Hot plate
146		BM	3. Filter papers
147			4. Tray
148			5. Parafin wax
149			6. Buoyancy Balance
150			7. Marsell apparatus

151	Chemicals	Construction water, Drinking water, soil, steel, wire, alloy, concrete, fine aggregates, coarse aggregate, cement, flyash, bitumen, asphalts, concrete cores, Stainless steel, copper, aluminium, HDPE pipe,	In chemical labs	
			300kg balance	
			triple beam balance 25 kg capacity with 1 gm accuracy	2
			enamel trays	
			600x450x50	10
			450x300x40	10
			300x250x40	6
			circular plates of 250mm dia.	6
			water testing kit	1
			first aid box	1
			spatula set of 10mm and 200mm long	3
			pixels, shovel, fork	1
			sledge hammer lump hammer wooden pes	1
			maximum and minimum thermometer	1
			rain gauge	1
			timer 0-60 minutes with alarm & 1/5 sec accuracy	3
			sampling tins with lid 100mm dia x 75mm height 1/2 kg capacity	12
			cbr moulds	24
			tripod stand for holding dial gauge holder	24
			surcharge weight 147mm dia 2.5kg	48
			perforated plate	24

152

Miscellaneous
equipmentMiscellaneous
equipment

proving ring of 1000kg 2500kg 5000kg	1 of each
dial gauges 25mm travel 0.01mm/division	10
aluminium tins	
50x30	36
55x35	36
70x45	36
70x50	36
80x50	36
speedy moisture meter complete with chemicals	2
ucs apparatus	1
riffle box of slot size of 50mm astm c-136	1
hydrometer with high speed stirrer jar	2
post hole augur	3
bitumen laboratory mixer	1
automatic asphalt content gauge	1
vacuum viscometer	1
U tube viscometer	1
pensky martin closed cup tester for flash & fire point	1
float test apparatus	1
dean & stark apparatus	1
apparatus for storage stability test	1
Sand equivalent apparatus	1
mastic asphalt hardness testing equipment	1
automatic asphalt content meter	1
concrete core capping apparatus with capping materials	1
100mm cube mould	1
compaction factor test apparatus	1
needle vibration	1
vibrating hammer	1

153	Ceramic Tile/Cement Concrete tile /Vitrified Tile/ Vitrified Glazed tile	Abrasion	Abrasion testing Machine	1
		MOR Test	MOR TESTER MACHINE	1
		Water Absorption	1.Water Tank 2.Hot Air Oven 3. Weighing Balance	1
		Hardness	Mohr's Scale	1
		Chemical Resistance	Chemicals	1
		Crazing Resistance	Autoclave Oven	1
		Dimension	Vernier Calliper	1
		Flatness, Straightness, Perpendicularity	Thickness Gauge Right Angle Thread	1
154	Benkelman Beam deflection Test	Benkelman beam	Benkelman beam apparatus	1
155	SPT	Soil Bearing Test	1.Rig Machine 2.Calyx Machine 3.DCPT Apparatus 4.SPT apparatus	1
156	Paint	Viscosity Test	Fourd Cup	1
		Drying Time	Cement Plaster Sheet	1
		Gloss Test	Gloss meter	1
		Finish	Visual/Metal sheet	1
		Colour	Colour Meter	1
		Alkalily Resistance	Chemicals	1
		Volume solid	Balance	1
		Temperature stability	Oven & Metal Sheet	1
		Consistency	Glass beaker	1