

ખાનગી લેબોરેટરીઓને માન્યતા  
આપવાની કાર્યપદ્ધતિ.

ગુજરાત સરકાર,  
માર્ગ અને મકાન વિભાગ  
પરિપત્ર ક્રમાંક:-૫૨૪/૧૦/૨૦૦૫/૩૩/પાર્ટ/૩/સી.  
સરદાર ભવન, સચિવાલય, ગાંધીનગર  
તા. ૭/૮/૨૦૧૫.

વંચાણે લીધા:-(૧) પરિપત્ર ક્ર:૫૨૪/૧૦૨૦૦૦/ગુ.નિ.જ.ન./૫૩/(૧૨)/સી., તા.૨૧/૦૨/૨૦૦૦  
(૨) પરિપત્ર ક્ર:૫૨૪/૧૦૨૦૦૦/ગુ.નિ.જ.ન./૫૩/(૧૨)/સી., તા.૨૪/૦૮/૨૦૦૧

**આમુખ:-**


સંદર્ભીત પરિપત્રોથી તથા ત્યારબાદના સમયાંતરે કરવામાં આવેલ વહીવટી નિર્ણય અનુસાર નિવિદ્યા થી ટેન્ડર મંગાવી ખાનગી લેબોરેટરીઓને માન્યતા આપવા અંગેની કાર્યપદ્ધતિ માર્ગ અને મકાન વિભાગમાં હાલ અમલી છે. આ કાર્યપદ્ધતિમાં વિવિધ વહીવટી તબક્કા પસાર કરવામાં વણો સમય વ્યતિત થાય છે. ભવિષ્યમાં કામગીરીના વ્યાપને ધ્યાને રાખતાં હવે નીચે દર્શાવ્યા મુજબ કાર્યપદ્ધતિ અપનાવવામાં આવે છે.

**પરિપત્ર:-**

જે તે કેલેન્ડર વર્ષમાં જાન્યુઆરીથી જુન માસમાં આવેલ અરજીઓ માટે જુલાઈ માસમાં તથા જુલાઈ થી ડીસેમ્બર માસમાં આવેલ અરજીઓ માટે જાન્યુઆરી માસમાં રજીસ્ટ્રેશન કરવાની પદ્ધતિ અપનાવવામાં આવશે.

આ પદ્ધતિ પ્રથમવાર અપનાવવામાં આવનાર હોય, ચાલુ વર્ષે તા.૦૧-૦૮-૨૦૧૫ થી તા.૩૧-૦૮-૨૦૧૫ સુધીમાં લેબોરેટરી માટે આવનાર અરજી ઉપર રજીસ્ટ્રેશનની કામગીરી હાથ ધરવામાં આવશે. વર્ષ ૨૦૧૬ થી બીજાણમાં જણાવેલ કાર્યપદ્ધતિ અનુસરવામાં આવશે.

બિડાણ:-અરજીનું નિયત ફોર્મ  
તથા કાર્યપદ્ધતિની વિગતો.

  
(એ. એન. મિસ્ત્રી)  
ઉપ સચિવ (રા. ર.)-૨  
માર્ગ અને મકાન વિભાગ

## **REGISTRATION**

The following procedure shall be followed for entertaining applications for registrations;

In order to enable the registering authorities to have sufficient time for scrutiny and calling for additional information, if necessary, the application for the registration as approved laboratory shall be received at any time during the year and shall be considered only once in six months i.e. at the end of June and at the end of December.

Application for registration of laboratory shall be made to Executive Engineer R&B State Division, Nadiad No application should be received direct in the Head office. Registration fees of Rs. 2000.00 is to be paid along with application. If any application is so received, it must be passed on, on the date of receipt, to the Executive Engineer R&B State Division, Nadiad for scrutiny and further disposal at his end. Registered laboratory can do testing of material at the rates approved/can submit tender when tender is invited. Registered lab can do testing work for tests which are approved for the laboratory.

The laboratory shall not be registered during the currency of the period of punishment of black listing etc.

## **RENEWAL**

The laboratory approval will be valid for three calendar years.

After initial registration, on payment of renewal fee as Rs. 2000.00 which will be non-refundable and subject to the production of the necessary documents every third year.

## **APPEAL**

The laboratory, whose request for the registration / renewal of registration made for, has not been accepted at the respective level shall have the right of appeal to the next higher authority for reconsideration of his case.

7(3)

Any laboratory black listed or removed from the approved list of laboratory with any other punishment by an officer, who is competent to do so, shall have the right of appeal to the authority at the level of Government against the orders of punishment awarded; and the decision of Government on the appeal shall be final.

### **DISQUALIFICATIONS**

On receiving the report of specific failure of or default by a laboratory and if the registering Authority considers that the Financial circumstances have or technical capacity of a laboratory has so deteriorated that he ought to be awarded with the punishment like removal from the register etc. he (i.e. Registering Authority) may proceed to do so after calling on the laboratory to state within a stated time as to why the action, as proposed, should not be taken against him. Action as taken should be intimated to all concerned. Whenever a laboratory is removed from the approved list or black listed etc. he will not be entitled to any refund or registration fees.

The name of laboratory, who have not tendered for a period of three years in Divisional office should be removed from the register of approved laboratory. The registering authority should review the registration effected by him every year for taking action for removal of laboratory.

It a laboratory whose name has been so removed desires to take up testing subsequently, he should apply for re-enrolment on payment of the prescribed fees. Such an application shall be considered on its merits.

## TERMS AND CONDITION

- 1.0 The validity period of registration for conducting the specified tests will be for three years initially. Laboratory registered during validity of earlier approval rates, earlier approved shall be binding to all approved/registered laboratories. Rates may be invited by Executive Engineer, R&B state division, Nadiad as per policy.
- \* The approved laboratory shall have to submit their I.S.O. Audit report every year.
- 2.0 For branch laboratory separate registration is required.
- 3.0 **Testing Personnel & Technical Staff**

Testing personnel must be well experienced and technically competent in the laboratory & field testing for which the laboratory has opted for the testing. Key personnel must be full time technical person in the laboratory. **It is mandatory to submit the CVs of all staff with color photograph as shown in annexure-III for minimum requirement of staff.**

  - The testing staff of the laboratory must be employed as full time job only in their laboratory. For this, purpose Laboratory owner has to submit Affidavit (**Affidavit proforma is attached**). They must submit the undertaking of the testing staff that they are working only with this laboratory submitted. Any fraud in the matter will leads to Ban on the registration of the laboratory for a period of Three years. (**during the physical verification all staff must be present in the laboratory**; if any shortage found in manpower & equipment, the approval for the testing of particular material will not be given)
- 5.0 Attach necessary documents related to formation i.e. date / month of the laboratory and registration in any govt. body, telephone bill, IT returns etc. or as per availability.
- 6.0 Provide the details about any fraud or black listing action taken by any of the department or Agency/Owner of the laboratory or applicant or his partners or share – holders been black-listed etc. in past by any Govt. Dept. or any other body. Any hiding of such information shall be considered for deregistration of the laboratory.
- 7.0 **At the time of application for registration the Laboratory must accredited with ISO : 9001-2008 with latest amendment & shall be accredited with the National Accreditation Board for Testing & Calibration Laboratories (NABL) accordance with the standards ISO-IEC-17025-2005.** The copy of the NABL or equivalent accreditation certificate shall be submitted to the Executive Engineer, Kheda (R&B) Division Nadiad.
- 8.0 **Equipment:**
  - 8.1 Equipments shall be updated, and in working condition.
  - 8.2 Equipments shall be as per I.S. Norms

8.3 Equipments shall be with Proper foundation.

8.4 Equipments shall be with valid calibration report from approved institute

8.5 Decision of GERI will be final in this regards.

- 9 The Executive Engineer Kheda (R&B), Nadiad will scrutinize documents produced and evaluate the proposal before inspection. After verifying the same the proposal will be sent to GERI, Vadodara for further technical inspection physically.
- 10 The laboratory will be technically and physically inspected by the committee approved by Government R&B Dept's Gujarati Circular No. : 10-2000-Gu-Ni-JN-53-(12)-S dated 28-1-2003 or the representative of Joint Director (Roads) GERI Vadodara, Superintending Engineer, Ahmedabad R&B Circle No-1, Superintending Engineer, Design Circle, Gandhinagar & R.O. RRD-1, GERI Vadodara. Accordingly a team of one representative from Office of the S.E. Design Circle, Gandhinagar, Superintending Engineer R&B Circle No-1, Ahmedabad and two representatives from office of the R.O. RRD-1, GERI, Vadodara, will visit the pre-qualified laboratory for technical & physical verification.
- 11 The testing staff of the laboratory must satisfy the inspection team about their technical competency in the testing / procedure. The decision of the committee on unsatisfactory report will be binding to the laboratory. The inspection team will submit their inspection report to the committee. On this report the committee will recommend the laboratory for approval / disapproval.
- 12 It is obligatory for private laboratories to comply if any remarks raised by inspection team within ten days of date of inspection, and then further procedure will be carried out for the approval.
- 13 After the approval given to the laboratory, any two or three committee member or their representative will make surprise visit and during visit of laboratories, if any non-conformity are found, the committee member or the representative will report the same to the committee. The Chairman & the committee have absolute power to terminate accreditation of that particular laboratory without assigning any reason thereof. The committee consists of the Joint Director (Roads) GERI at Vadodara, Superintending Engineer, Ahmedabad R&B Circle No-1, Superintending Engineer, Design Circle, Gandhinagar and R.O. RRD-1, GERI Vadodara.
- 14 The laboratory has to prepare & maintain their result sheet in a standard Performa as prepared by GERI. Also signed by authorized Key Personnel. Necessary details are available on website gerionline.org.

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- 15 The observation sheets or register shall be maintained physically in the laboratory, must be updated in chronologically with authorized signature of the laboratory.
  - 16 The required documentation & registers in the laboratory must be kept updated day to day in the laboratory.
  - 17 The laboratory has to check and verify that proper sampling of material has been done or not, and tentative date for result must be given at the time of receiving sample.
  - 18 Test samples must be preserved for one month after testing.
  - 19 Failed samples must be preserved for three months after testing.
  - 20 Results of the failed material must be intimated immediately to the concerned Executive Engineer of the work under intimation to the Chief Engineer, (Quality Control) and A.S. Block No. 14/4, Road & Building Department, New Sachivalaya, Gandhinagar by R.P.A.D.
  - 21 The laboratory has to co-operate with spot checking officials from govt. any time after approval, they should not deny any of that. Negative response in the matter will leads to disqualification of the laboratory.
  - 22 A quarterly progress report of the laboratory must be submitted to Research Officer, RRD-1, GERI, Racecourse, Vadodara, on date of 15<sup>th</sup> of next month of subsequent quarter.
  - 23 The laboratory will be disqualified, if any fraud or negligence in testing found in future.
  - 24 The documentation of test samples must be as per master register as prepared by GERI.
  - 25 They should submit any information regarding working of their laboratory required by Govt. at any time.
  - 26 Test result register of each material should be maintained properly in signed hard copy.
  - 27 Testing charges should be taken as per Govt. approved minimum rate.

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- 28 Latest prevailing I.S. Codes / MORT & H are to be followed for testing of materials.
  - 29 Test results must be dispatched under any postal service and in case it is supposed to be given to authorized person of the client, then in that circumstances, testing results should be given in duplicate and noted down in the outward register with name / designation / office name of the client / date etc. duly signed by the receiving person.
  - 30 In no case, out sourcing of material testing will be allowed to any of the private laboratory then the laboratory will be immediately disqualified.
  - 31 The jurisdiction of the proposed testing works will be Gujarat state, especially for works of R&B Department and the rates approved will be applicable for all the places of Gujarat State.
  - 32 "Govt. Approved Lab" works cannot be used in letter pad of the approved laboratory as lab may not have been approved for all tests and this approval is for Road and Building Department.
  - 33 The laboratory will be fully responsible for any kind of judiciary matters. The Hon'ble Nadiad District Court, Nadiad, Gujarat State will be the jurisdiction in case of any legal disputes or litigation.

**માલ - સામાનના પરિક્ષણોની કાર્યવાહી અર્થે નીચે પ્રમાણેની જરૂરીયાત / લાયકાત ધરાવવી જોઈએ**

- (૧) દરેક પ્રકારના માલ-સામાન માટે જે તે સ્પેશીફિકેશન પ્રમાણેની કાર્યવાહી માટે જરૂરી સાધનો, સગવડો તેમજ તાંત્રિક લાયકાત અને અનુભવ ધરાવતો સ્ટાફ ધરાવવાનો રહેશે, હાલમાં પરિક્ષણ માટેની સગવડોની યાદી આ સાથે પત્રકમાં રજુ કરવાની રહેશે, અને તે ધ્યાને લઈ જે તે પ્રકારના પરિક્ષણો કરવા માટે રજીસ્ટ્રેશન કરવામાં આવશે.
- (૨) દરેક પ્રકારના માલ-સામાનનો પરિક્ષણ ચાર્જ વિભાગ નક્કી કરે તે દર કરતાં વધારે રાખી શકાશે નહીં.
- (૩) દર વર્ષે લેબોરેટરીમાં ઉપલબ્ધ સગવડ અંગે ચકાસણી કરાવવાની રહેશે.
- (૪) મા. અને મ. વિભાગ ધ્વારા જરૂર જણાય ત્યારે કોઈપણ પ્રકારના પરિક્ષણો જે તે કામના ચાર્જમાં રહેલ અધિકારી, ગુણવત્તા નિયમન અધિકારી અને / અથવા સુચવ્યા મુજબના અન્ય અધિકારીની રૂબરૂમાં કરાવી પ્રમાણિત કરાવવાનું રહેશે.
- (૫) માર્ગ અને મકાન વિભાગ હેઠળની કચેરીઓના માલ-સામાનના પરિક્ષણો માટે અદ્યતન પરિક્ષણનું છાપેલુ રજીસ્ટર વિભાગે સુચવ્યા મુજબ અનિવાર્ય રીતે જાળવવાનું રહેશે, તેમજ તેનો વાર્ષિક અહેવાલ જે તે વર્તુળ કચેરીમાં જણાવ્યા મુજબ રજુ કરવાનો રહેશે.
- (૬) લેબોરેટરીમાં રાખવાના સાધનો અદ્યતન પ્રકારના હોવા જરૂરી છે, તેમજ સંબંધિત ઉત્પાદક, પ્રમાણિત સંસ્થા અને / અથવા વિભાગ સુચવે તે પ્રમાણે નિયમીત દર વર્ષે પ્રમાણિત કરાવવાના રહેશે.
- (૭) કામના સ્થળ ઉપર જઈ સ્પેશીફિકેશન મુજબની કામગીરી થયેલ છે કે કેમ તેની ચકાસણી અર્થે પરિક્ષણ કરવા માટેની સગવડ ધરાવતી લેબોરેટરી / વ્યક્તિ / સંસ્થાઓને અગ્રતાક્રમે રજીસ્ટ્રેશન આપવામાં આવશે.
- (૮) રસ્તા તથા મકાનોના બાંધકામમાં વપરાતા માલ-સામાનના IS તથા IRC અને MOST ધારા-ધોરણો મેજબ બધાંજ પ્રકારના ટેસ્ટ એકજ લેબોરેટરીમાં કરવાની સગવડતા ધરાવતી લેબોરેટરી / સંસ્થાઓને અગ્રતાક્રમે રજીસ્ટ્રેશન આપવામાં આવશે.
- (૯) સંસ્થા / લેબોરેટરીને અપાયેલ માન્યતા એ માત્ર સરકારશ્રીની સગવડતા ગણાશે, ટેસ્ટીંગ માન્યતા પામેલ કોઈપણ લેબોરેટરી કે ગેરી પાસે કરાવવા વિભાગ સ્વતંત્ર છે તેમાં કોઈજ હકક-દાવો ચાલશે નહીં.
- (૧૦) સંસ્થા / લેબોરેટરીએ ભરેલ ઓફર સાથે સેલ્સટેક્ / વેટ રજીસ્ટ્રેશન નંબર વિગેરે રજુ કરવાનું રહેશે.



- (૧૧) દરેક પ્રયોગશાળામાં ભારતીય માનાંક પ્રમાણે જણાવેલ પદ્ધતિ પ્રમાણે ટેસ્ટીંગ કરી ગેરીના નિયત પત્રકો અનુસાર પરિક્ષણોની નોંધણી તથા ટેસ્ટ રીપોર્ટ આપવાના રહેશે.
- (૧૨) વિભાગના સંબંધિત કાર્યપાલક ઈજનેર, માર્ગ અને મકાન વિભાગ, નડીઆદ સાથે આ સંસ્થા / લેબોરેટરીએ માન્યતા મળ્યા બાદ કરારનામું કરવાનું રહેશે.
- (૧૩) હયાત મશીનોને પ્રયોગશાળામાં ફાઉન્ડેશન આપીને ફિક્સ કરાવેલ હોવા જોઈએ તોજ તેને ગણતરીમાં લેવામાં આવશે.
- (૧૪) પ્રયોગશાળામાં ઉપયોગમાં લેવાતા ઉપકરણો જેવા કે, પ્રુવીગરીંગ, ડાયલગેજ, પ્રેસરગેર, બેલેન્સીસ વજનો, કોમ્પ્રેસન ટેસ્ટીંગ મશીન વગેરેને માન્ય સંસ્થા પાસેથી કેલીબ્રેશન કરાવવાનું રહેશે અને તે અંગેનું પ્રમાણપત્ર રજૂ કરવાનું રહેશે.
- (૧૫) સંસ્થા / લેબોરેટરીએ સરકારશ્રી ધ્વારા નિશ્ચીત તકેદારી આયોગના અધિકારી / ચકાસણી અધિકારી / અધિકારીઓને લેબોરેટરીની ચકાસણી દરમ્યાન પુરેપુરો સહકાર આપવાનો રહેશે.
- (૧૬) પરિક્ષણના પરિણામો દરેક સંસ્થા / લેબોરેટરીએ ઓછામાં ઓછા ૫ વર્ષ સુધી જાળવવાના રહેશે.
- (૧૭) આ સંસ્થા / લેબોરેટરીની આકસ્મિક ચકાસણી દરમ્યાન જો કોઈ અનિયમીતતા જણાશે તો તે સંસ્થા/લેબોરેટરીની માન્યતા આપોઆપ રદ થશે, તદઉપરાંત સંસ્થા / લેબોરેટરીની કામગીરી સંતોષકારક નહીં જણાય તો સરકારશ્રી ગમે તે તબક્કે તેની માન્યતા રદ કરી શકશે.
- (૨૫) સરકારશ્રીના વખતો- વખતના બહાર પડતા નિયમો બંધનકર્તા રહેશે.
- (૨૬) પ્રયોગશાળા ધારકોએ સ્ટાફના ફોટા, તેઓનું ક્વોલીફીકેશન, અનુભવની વિગતો સબમીશન કરવાનું રહેશે, જેની પૂર્વપાત્રતા બીડની ચકાસણી વેળા સમિતી ચકાસણી કરશે.
- (૨૭) ઓર્ગેનાઈઝેશન ચાર્ટ અચુક મુકવાનો રહેશે.
- (૨૮) ભુતકાળમાં ખોટા રીઝલ્ટ અપાયા હોય તેવું સાબિત થતાં હોય તો તેવી લેબોરેટરી લાયકાતને પાત્ર ઠરશે નહિં.
- (૨૯) કોમ્પ્યુટર પદ્ધતિ અનુસરતા પ્રયોગશાળા ધારકોને પસંદગીવેળા વિશેષ લાયકાત-પાત્ર ગણવામાં આવશે.
- (૩૦) સરકારશ્રીના પરિપત્ર ક્રમાંક : એસએસઆર-૧૦૯૨-આઈબી-૧૨૯-૧૦-સ તારીખ ૨૪-૧૦-૧૯૯૪ તથા વખતો-વખતના સુધારા મુજબ સેમ્પલીંગની ચકાસણી અને નિયમો મુજબ (ફીકવન્સી મુજબ) ટેસ્ટ કરવાના રહેશે, તેમજ આ અંગે ગેરી વડોદરાના ગુણવત્તા નિયમનના મેન્યુઅલ-૧ મુજબ ટેસ્ટીંગ કરવાનું રહેશે, વધુમાં ડામરકામની ગુણવત્તા ચકાસણી માટે કોર સેમ્પલનું ટેસ્ટીંગ સરકારશ્રીના માર્ગ અને મકાન વિભાગ ગાંધીનગરના પરિપત્ર ક્રમાંક : આરજીએન-૬૦૨૦૦૬-(૩૫)-સ તારીખ ૩૧-૫-૨૦૦૭ મુજબ કરવાનું રહેશે.

(૩૧) ભાવો તમામ ટેક્ષ સહિતના રહેશે.

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## Laboratory registration approval form

### Annexure - I

#### GENERAL INFORMATION

Name of Laboratory:

**Description of Laboratory**

- 1 Name of Laboratory or Firm: \_\_\_\_\_
- 2 Address: \_\_\_\_\_
- 3 Formation of Laboratory (Date, with document proof) \_\_\_\_\_
- 4 No. of Staff Employed : (a) Technical \_\_\_\_\_  
As per Annex. II of Tech Bid (b) Other \_\_\_\_\_  
Total \_\_\_\_\_
- 5 Name of Owner: \_\_\_\_\_
- 6 Whether the laboratory is a Pvt. Ltd Co., individual or a registered partnership firm
- 7 Whether enlisted in any other department, if so, provide details
- 8 ISO:9001-2008 certificate for testing purpose :  
( If not available, Rs.50,000/- is to be deposited, if ISO certificate will not be submitted within 6 months from registration date, deposit will be forfeited and registration will be terminated.)
- 10 NABL approval for specified tests:  
(If not available, it must be submitted within 15 months from registration, registration will be terminated.)
- 11 Area of Laboratory and other Mandatory Facilities:

Sr. No.	Item	Area shown in Tender by Laboratory	Actually available Physically	Scanned Schematic Plan at Page No.	Remarks
1	2	3	4		5
1	Open Plot				
2	Built-up area				
3	Direct Access to the laboratory is available or Not				
(1) Minimum plot area 2000 sq.ft. Exclusively for laboratory purpose in same premises. (2) Built-up area 1000 sq.ft. should be available, Exclusively for laboratory & Office. If minimum built-up area is 2000 sq.ft., condition-1 will be considered as fulfilled.					

10	<b>Others:</b>		
Sr.	Item	Available or not	Remarks
1	<b>Library</b> : About 500 books with IS, ASTM, Magazines and IRCs		
2	<b>Trolley</b> : Lab trolley for samples movement		
3	<b>Mobile</b> : Mobile van for field testing		
4	<b>Electricity</b> : Three phase power supply		
5	<b>Water</b> : Over head tank and drinking water facility		
6	<b>Basic Utility</b> : A clean & sufficient toilet block		
7	<b>Store</b> : Sufficient New incoming samples and tested samples storage		
8	<b>First Aid</b> : Up dated First aid Box		
9	<b>Internet connection</b> : Lab must have live internet connection with good speed.		

**Annexure - II**

**EQUIPMENT EVALUATION  
Statement showing List of Equipments Available in the Laboratory**

Sr. No.	Name of Laboratory	Name of Test	Required Equipment / Accessories	Mandatory Optional Test	Available yes/No
1	1.0 Soil	Grain size analysis	Coarse sieve (80mm, 63, 37.5, 25.0, 20.0, 10.0, 6.3, 4.75 mm) Fine sieves (4.75, 2mm, 2.36, 1.18mm, 600, 300, 425, 212, 75 micron), balances oven, stirrer, hydrometer with jars IS 2720 (Part 4) (2001 RA)	<b>Mandatory</b>	
2		Plasticity index	Uppal's Dial type cone penetrometer, sieves, oven, ground glass, spatula balance, containers, Pl Rod 3 mm IS 2720 (Part 5) 1985 (2001)	<b>Mandatory</b>	
3		Light and Heavy compaction	Standard compaction mould 1250cm <sup>3</sup> & 2250 cm <sup>3</sup> with base, collar and rammer of 2.6 kg & 4.8 kg, Universal soil extractor, balance 20 kg, oven, spatula, tray IS 2720 (Part 7) 1992 (2002 RA) IS : 2720 (Part-VIII)-1983	<b>Mandatory</b>	
4		C.B.R. Test	Minimum 6 no. CBR moulds, Loading frame, Dials 0.01X50mm, Oven, 20 Kg. balance (preferably digital), Water tank for Saturation. Tripod stand, perforated plates, filter paper etc. IS:2720(XVI)-1987 (2001 RA)	<b>Mandatory</b>	
5		Permeability	6 no. Brass, Permeability apparatus with mould, soil extractor, oven, Falling & Constant head facility with required glass tube, Water tank for Saturation. IS : 2720-XVII-1986 (2002 RA)	<b>Mandatory</b>	
6		Direct shear (for soil up to 4.75 mm size) Small Size	Direct shear apparatus, soil extractor, balance 5 kg. Shear moulds with grid plates, porous stone, loading pad, dial gauge, proving ring 250 kg with 0.002mm dial gauge, 6 no Mould IS : 2720-XII-1986 (2002 RA)	<b>Mandatory</b>	

Sr. No.	Material	Name of Test	Required Equipment / Accessories	Mandatory Optional Test	Available yes/No
7		Consolidation	Consolidation test apparatus. Stop watch, oven, and extractor. Balance, mould making assembly, cutter, Dial Gauge up to 0.002X12 mm IS : 2720-XV-1986 (2002 RA)	Mandatory	
8		Unconfined compression	5 ton loading frame, proving ring, with dial gauge 0.002x50, sample extractor, Dial gauge 0.01x25, Oven, Balance IS : 2720-X-1973 (2001 RA)	Mandatory	
9		Free swell index	Sieve, graduated glass cylinder 100cc capacity with 1 ml marking at bottom or at zero with stopper. IS : 2720-(Part XL-1977) (1997 RA)	Mandatory	
10		Swelling pressure	Swell pressure apparatus or consolido meter 50 kg and 0.002x50mm, dial gauge, proving ring etc. or portable swell pressure, mould making assembly & cutter for un disturbed samples.	Mandatory	
11		Specific Gravity	IS : 2720-(Part XLI-1977) (2002 RA) Vacuum deccicator, specific gravity bottle with stopper	Mandatory	
12		Shrinkage Limit	IS : 2720-(Part III-1980) (2002 RA) Shrinkage Brass, SS dish, Acrylic plate, porcelain dish 2 no. mercury	Mandatory	
13		Hydrometer Analysis	IS : 2720-(Part VI-1972) (2002 RA)	Optional	
14		Relative density	IS 2720 (Part 4) 1985 Relative density apparatus, vibrator, balance 50 kg, oven surcharge wts, Moulds with base plate, Dial gauges (0.01X50mm)	Optional	
15		Triaxial Shear Apparatus (uu)	IS : 2720-XIV-1983 (2001 RA) Triaxial shear apparatus, loading frame, Bishop pore pressure apparatus, Constant pressure system, Bunch type Soil extractor, Core cutter with hammer (earth master), sand replacement kit (small, medium & large)	Optional	
16	2.0 Soil Field Test	Field density and moisture	IS : 2720-XXVII-1977 (1997 RA) IS : 2720-XXIX-1975 (2001 RA) IS : 2720-XXXIII-1971 (2001 RA)	Mandatory	
17		Standard Penetration Test	Drilling equipment, Split spoon sampler, Drive weight assembly 65kg, screw jack, weights, tripod, rope, chain pulley, Shelby tubes, bore chart, A d' drill rods 0.5ml, 1 ml and 2ml 5 Nos. Jarink link etc.	Mandatory	

Sr. No.	Material	Name of Test	Required Equipment / Accessories	Mandatory / Optional Test	Available yes/No
18		Load Test	(SPT) IS : 2131-1981(1997 RA) SBC at IS : 2720-(Part VI-1972) (2002 RA) Plate of different sizes, loading device, dial gauge 0.01x50mm, hydraulic jack 100 ton, remote, datum bar, anchors etc. IS : 1988-1982 (1888 RA)	Optional	
19		Penetration test	DCPT apparatus	Optional	
20	3.0 Sand	Fineness modulus by Gradation	Fine sieve set of 4.75, 2.36, 1.18mm & 600, 300, 150, 75 micron, balance, lid & pan trays.	Mandatory	
21		Specific gravity & water absorption	IS: 2386-(Part-1)1970 2002 RA Pycnometer, oven, 5 kg two pan balance, tray	Mandatory	
22		Silt content	IS: 2386-(Part-3)1963 75 micron sieve, balance, oven, 1000 ml cylinder	Mandatory	
23		Alkali reactivity	IS: 2386-(Part-1)1977 Reactivity container, water bath, balance, furnace	Optional	
24	4.0 Aggregate	Grading of aggregates	IS: 2386-(Part-VI)1963 2002 RA Coarse sieve set 90 mm - 4.75 mm Fine sieve set 2.36 mm - 75 micron, balance, riffle boxes three types	Mandatory	
25		Sp. Gravity & water absorption	I.S. 2386 (Part 1) 1963 2002 RA Wire basket, two pan balance, oven	Mandatory	
26		Flakiness & elongation	I.S. 2386 (Part 3) 1963, 2002 RA Balance, length gauge, thickness gauge, coarse sieves	Mandatory	
27		Impact value	I.S. 2386 (Part 1) 1963 2002 RA Impact testing machine, digital balance 0.1 gm capacity, 10mm & 12.5mm sieves	Mandatory	
28		Abrasion value	I.S. 2388 (Part 4) 1963, 2002 RA Los angel's abrasion machine, balance, tray, sieves	Mandatory	
29		Soundness	IS:2386(Part-4)1963, 2002 RA Sieves, oven	Optional	
30		Crushing test	IS:2396(Part-5)1963, 2002 RA Crushing mould 75 & 150mm, CTM 1000KN	Optional	
31		Alkali reactivity	IS-2386, Part-III 1963, 2002 RA Reactivity container, water bath, balance, furnace	Optional	
32	5.0 Building Stone / Rubble	Specific gravity (apparent) & water absorption	IS: 2386-(Part-VII)1963 2002 RA Mortar & pestle, 150micron sieve, sp.gr. Bottle, balance, cylinder, glass vessel 1.5lit cap. dry cloth 2 Nos A= 0.5sq.m.	Mandatory	

Sr. No.	Material	Name of Test	Required Equipment / Accessories	Mandatory Optional Test	Available yes/No
33		Specific gravity (true)	IS:1124-1974 RA Mortar & pestle, 150 micron sieve, sp. gr. bottle, balance, cylinder	Mandatory	
34		Compressive strength	IS:1122-1974, 1998 RA Preparation of test specimen from rubble by cutting by Rock cutting machine 3000 KNT	Mandatory	
35			Compressive strength by compression testing machine IS:9143 (Part -I to IV)-1997	Mandatory	
36	6.0 Water	Complete Chemical Analysis (Sulphate, Conductivity, Total soluble salts, pH Value, Carbonate & Bi-carbonate, Chloride, Sodium & Potassium)	Muffle furnace, water bath Oven, pH meter & Platinum Crucible IS : 456 - 2000 IS-3025 (1983 RA) & IS-3025-Part -32, 17, 18, 23, 24, 22	Mandatory	
37	7.0 Cement	Consistency	Vicat apparatus with plunger 10 mm dia. (G type) with ISI marked only, Digital balance .01 - 2000gm IS:4031-(Part-4)-1988	Mandatory	
38		Setting time Initial & Final setting time	Vicat apparatus with needle 1 mm sq. (c-Type) and with annular attachment (F-type) IS:4031-(Part-5)-1988	Mandatory	
39		(a) Fineness by Blain air permeability	Blain air permeability apparatus with accessories with ISI marked only IS:4031-(Part-2)-1988	Mandatory	



Sr. No.	Material	Name of Test	Required Equipment / Accessories	Mandatory Optional Test	Available yes/No
40		Soundness	Le Chatlier apparatus with accessories, water bath	Mandatory	
41		Compressive strength	Cube mould 70.6 mm, face area, baby vibrator, gauging travel, MIS Plate, Humidity chamber, compression testing machine, curing tank etc. IS:4031-(Part-6)-1988.	Mandatory	
42		(b) Fineness by sieving	Grade 43 IS-8112- (1989) 2000 RA 90 micron IS sieve and balance	Optional	
43		Chemical Analysis	IS:4031-(Part-I)-1988 Muffle furnace, oven, platinum crucible, chemical balance etc. IS:4032-1986	Optional	
44	8.0 Steel	Tensile, Yield, Elongation	Universal testing machine, Vernier caliper, centre-Punch, Hammer, scale IS: 1608-1972, IS-1786, 1985 2000 RA	Mandatory	
45		Bend	Universal testing machine, capacity 1000 KN IS: 1599-1985	Mandatory	
46	9.0 Concrete Mix Design	With Cube	Mixture, mould, tank, balance. IS - 10262 (RA 1982) & IS-456 (RA 2005)	Optional	
47		With Flexural Strength		Optional	
48	10.0 Cement Concrete Cube	Compressive Strength	CTM 1000 /2000 KN IS- 516 - 1959 RA and IS - 1121 - 1974 RA	Mandatory	
49	Flexural strength of concrete beam			Mandatory	
50	11.0 Foundation Cores	Drilling machine for Core cutting with 50,75,100 & 150mm cutter from rubble or Concrete specimen and testing the Same for Compressive strength, CTM 1000 / 2000 KN IS1199, 456, 516		Mandatory	
51		Cutting and polishing of cores	IS - 1121 - 1974 RA	Mandatory	
52		Compressive strength	CTM 1000 / 2000 KN	Mandatory	
53		Specific gravity and water absorption	Vernier calipers, Jars etc.	Mandatory	
54		Density	Two pan balance, oven	Mandatory	

Sr. No.	Material	Name of Test	Required Equipment / Accessories	Mandatory Optional Test	Available yes/No
55	12.0 Bitumen	Penetration	Penetro meter with digital timer & other accessories like low temp. water bath, container, Air Condition Facility etc. I.S.1203 (1978)	Mandatory	
56		Ductility	Ductility machine, with all mould, Air Condition Facility and accessories I.S.1208 (1978)	Mandatory	
57		Softening point	Ring and Ball apparatus digital, with all accessories automatic I.S.1205 (1978)	Mandatory	
58		Absolute Viscosity & Kinematics Viscosity	Absolute & Kinematics Viscometer with accessories 1206-1978	Mandatory	
59		Loss on Heating	Loss on Heating Apparatus	Mandatory	
60		Sp. Gravity	Sp. Gravity wide mouth bottle	Mandatory	
61	Bituminous Mix Test	Binder Content Test	S-2386 -1963, IS-1202-1978-1988RA Centrifuge Extractor, Extraction Unit Bowl, ( 650 gm to 2.5 kg. capacity), trichloro ethylene, Steam bath and other accessories	Mandatory	
62		Stability & flow test (One set of three samples)	ASTM -D 2172-1979 Marshall Apparatus, Mould etc.	Mandatory	
63	13.0 Bituminous Mix Design	Compacted density of mix	Paraffin Wax, Jar, Balance etc.	Mandatory	
64		Marshall Stability, flow value, density of mix, Optimum Binder Content	Loading Unit, Marshall mould (4" dia. X 3" ht), Specimen Extractor, Constant temp. Water bath, Asphalt Mixture, Breaking Head assembly with proving ring & flow meter, mould making assembly and other accessories	Mandatory Optional	
65		Dimension and tolerance (20 No. of bricks)	ASTM 1559-1979, ASTM-D 1075, ASTM-2172, 2004 RA Steel tape 3.0 mt & Scale 30 cm IS:1077-1997 RA	Mandatory	
66	14.0 Bricks	Water absorption (5 No. of bricks)	Oven, two pan balance, water tank IS : 1077 - 1992	Mandatory	
67		Compressive strength (5 No. of bricks)	Compression testing machine 1000 KNIS : 3495-(Part-I - IV)-1976, 1997 RA	Mandatory	
68		Efflorescence (5 No. of bricks)	Glass dish or porcelain or stoneware dish with cover IS : 3495-(Part-I - IV)-1997 RA	Mandatory	

Sr. No.	Material	Name of Test	Required Equipment / Accessories	Mandatory Optional Test	Available yes/No
69	15.0 Vitrified Tiles	<b>Dimensions &amp; Surface Quality</b> Length, Width, Thickness, Straightness, Rectangularity & Surface Flatness Deviation	Vernier calipers, vessels oven 110oC, fluorescent colour lighting of temp. meter ruler, light meter IS-4457-2007	Optional	
70		<b>Physical Properties</b> Water Absorption, Breaking Strength, Modulus of Rupture & Abrasion Resistance	Abrasion, Flexural or Breaking Machine, Autoclave, Flatness etc.		
		<b>Chemical Properties</b> Resistance to Concentrated HNO3 and H2SO4	Chemicals required for Acid Resistivity Test		
71	16.0 Concrete/ Paver block	Compressive strength	2000KN, CTM, Plain meter, IS - 15658 - 2006 RA	Optional	
72		Water absorption	Oven, balance IS - 15658 - 2006 RA	Optional	
73	17.0 LDPE	Measuring thickness	Thickness gauge IS - 2508, 1997	Optional	
74		Tensile strength, Elongation	Tensile tester	Optional	
75		impact	Impact tester machine	Optional	
76	18.0 Other field Tests	Benkelman beam deflection test	Benkelman beam apparatus with other tools without truck & labour	Optional	
77		Design of Crust thickness by CBR method	IRC-81-1997 or the latest IRC - 37 - 2012 or the latest	Optional	
78		Testing of concrete by ultrasonic concrete mortar testing	Ultrasonic Pulse Velocity / per reading	<b>Mandatory</b>	
79		Concrete rebound hammer test	Rebound Hammer / per reading	<b>Mandatory</b>	
80		Cover measurement	Cover Meter	Optional	

N.B. : All machinery / equipments photographs shall be submitted indicating page number for proper evaluation

**STAFF EVALUATION**  
**Annexure - III**

**Statement showing the Staff Availability as per CVs Submitted**

Sr. No.	Description	Materials	Min. No. of Staff Required	Name	Qualification	Field of Experience	Reqd. Experience in Yrs.	Experience in Yrs. And months	CV copy on Page No.	Mandatory	Remark	
1	Overall incharge of Laboratory	Key professional	1		Master Degree (OR)	In material testing or work experience as Material Engineer (OR)	2 to 5					
					B.E. Civil	--- do ---	5 to 10			Mandatory		
2	Soil testing.	Soil	1		B. Sc. or D.C.E.	In laboratory as well as field testing	2			Mandatory		
					B.E. Civil	In Geo-Technical Services	3					
3	Road	Soil investigation and exploration	1		B. Sc. or D.C.E.	In laboratory testing	3					
					B. Sc. or D.C.E.	In laboratory as well as field testing	2			Mandatory		
		Sand, Aggregates etc.	1		B. Sc. or D.C.E.	as above	3					
					D.C.E.	as above	2					
Bitumen	1		D.C.E.	In laboratory as well as field testing	2							
			B.E. Civil	In Field as well as in Laboratory	3			Mandatory				

Sr. No.	Description	Materials	Min. No. of Staff Required	Name	Qualification	Field of Experience	Reqd. Experience in Yrs.	Experi-ence in Yrs. And months	CV copy on Page No.	Mandatory	Remark
4	Building	Cement, Aggregate, Sand, Concrete mix design etc	1		D.C.E.	In laboratory as well as field testing	2			Mandatory	
		Wood, tiles, PVC pipes, bricks, FRP etc.	1		D.C.E.	In laboratory as well as field testing	2				
5	Laboratory Assistant		2		D.C.E. Or 12th pass	Fresh				Mandatory	
6	Skilled Labour		3		S.S.C	3 Yrs and Preferably with computer knowledge	3			1 Mandatory	
	Unskilled		7		Any					3 Mandatory	
7	CAD operator		1		Any Graduate	---	1				
8	Accountant		1		B. Com	---	3				
9	Office administrator		1		B. Com / Any Graduate	---	3				
10	Peon		2		8th pass	---					

Owners Signature & Seal

N.B. : For all Technical Staff Notarized Affidavit as attached herewith should compulsory submitted.

### AFFIDAVIT

I, \_\_\_\_\_ aged \_\_\_\_\_  
 years, \_\_\_\_\_ Residing \_\_\_\_\_ at \_\_\_\_\_  
 \_\_\_\_\_ Certified that  
 all details submitted herewith that is General Information Staff & Machinery details  
 as per Annexure-1, Annexure-2 & Annexure-3 are true and correct to the best of my  
 knowledge and belief.

Place :  
 Date :

For \_\_\_\_\_  
 ( Laboratory Owner's Sign )