

info@irsolution.in | marketing@irsolution.in Contact: +91 9168631515 | +91 9112323636 **www.irsolution.in**  Sr. No. 122, Near Raw water Works, P.L.Deshpande Garden, Chunabhatti, Sinhgad Road, Pune-411030.

### **OUR COMPANY**

IR Solutions Construction Material testing Laboratory aims at providing reliable, accurate and defensible data in a standardized user friendly format. We are located in an area of 6000 sq.ft at Sinhgad Road, Pune Maharashtra India.

We have expertise in mechanical and chemical testing. We also provide geotechnical, civil engineering and construction inspection services.

Our goal is to achieve unique and unbeatable position in the field of testing and analysis of materials through our constant efforts, commitment of quality and customer satisfaction.

### **OUR STRENGTHS**

IR Solutions Construction Material testing Laboratory is one of the best laboratory providing accurate and reliable test results. Managed by a team of professionals, availability of modern high quality analytical equipments which are calibrated at regular intervals make it a credible destination for the customers. We are certified by NABL accredited as per ISO/IEC:17025-2017 and by ISO 9001:2015.

### **OUR SCOPE**

We are continuously attached with our clients to offer them various testing solutions for Concrete, Soil, AAC Block, Cement, Stone/Rock, Bricks, NDT, Geotechnical investigation, Paver Block, Bitumen, Bituminous Mix, Concrete Mix Design, and many more. Our professionals understand the needs of the clients and accordingly provide supporting services. All the products are inspected in our lab using high technologies. The testing activities include physical and chemical of all types of construction materials besides micro-structural analysis. We also provide on site services like NDT-Rebound hammer/UPV, Sand replacement, Core Cutter and Geotechnical Investigation.





### IR SOLUTIONS QA/QC POLICY

The laboratory is committed to provide excellent and prompt services for testing by implementing the management system as per ISO/IEC 17025:2017 and thereby ensuring total customer satisfaction through effective, efficient, reliable, accurate and conforming to national and international standards. The management is committed to continually improve the effectiveness of the management system through review and training to all employees and by adopting good laboratory practices to make the laboratory known for its quality of services and customer focus.

### **CONSISTENCY AND QUALITY**

These are the two pillars of the infrastructure and construction industry. Material testing becomes a means of ensuring both. Laboratory testing of materials through a trusted and experienced source can go a long way in creating structures that are safe and stable.

Material testing involves the analysis of various construction materials to determine their quality by checking their response to various factors that these materials are likely to encounter during their life span. The process also includes establishing the optimum ratio and blend of materials required to build the sturdiest structure.

Not only is the process cost saving and time saving, it also plays a key role in averting disaster that can occur due to compromised materials. Moreover, by minimizing wastage it also contributes towards responsible usage of nature resources and therefore, towards ecological balance.









### ISO CERTIFICATE





### CERTIFICATE

Quality Management System As per

ISO 9001: 2015

Evidence of conformity with the above Standard has been furnished and Certified for

### **IR SOLUTIONS**

Address: Survey No.122, Near Water Works, Chunabhatti, Sinhgad Road, Pune - 411 030, Maharashtra, India.

Scope.

PROVISION OF ALL MATERIAL TESTING SERVICES FOR CIVIL ENGINEERING WORKS.

Certificate Registration No. 91/Q/6521

Original Issue Date : 08<sup>th</sup> December 2020 Certificate Issue Date : 08<sup>th</sup> December 2020 Audit Cycle : 12<sup>th</sup> Months

This certificate is valid for three years & Subject to the satisfactory completion of annual Surveillance Assessment, Lack of fulfillment of conditions set out for issuance of this certificate may render this certificate invalid.





### **IQCS** Certifications Private Limited

Corporate Office: 9, Akshardhara-A, Opp. Shanti Park, Upnagar, Nashik - 422006, Maharashtra, India. Tel.: +91-253-2410430, Telefax: +91-253-2410289, Mob.: +91 9970183617 Email: info@iqcsindia.com, iqcs.global@gmail.com, Web: www.iqcsindia.com



ACCREDITATION SERVICE FOR CERTIFYING BODIES LLC.

8, The Green, Dover, DE, 19901, United States, Tel 00 1 (302) 310-5048  $\,$  www.ascb.com



# NABL ACCREDITATION CERTIFICATE







### National Accreditation Board for Testing and Calibration Laboratories

### CERTIFICATE OF ACCREDITATION

### IR SOLUTIONS

has been assessed and accredited in accordance with the standard

**ISO/IEC 17025:2017** 

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

SR.NO.122, DANDEKAR BRIDGE, SINHGAD ROAD, NEAR CHUNABHATTI, PUNE, MAHARASHTRA, INDIA

in the field of

**TESTING** 

Certificate Number: TC-8993

Issue Date: 14/09/2020 Valid Until: 13/09/2022

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL. (To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity: IR Soultions

Signed for and on behalf of NABL



N. Venkateswaran Chief Executive Officer









### National Accreditation Board for Testing and Calibration Laboratories

**Laboratory Name** 

: IR SOLUTIONS, SR.NO.122, DANDEKAR BRIDGE, SINHGAD ROAD,

NEAR CHUNABHATTI, PUNE, MAHARASHTRA, INDIA

**Accreditation Standard** 

: ISO/IEC 17025:2017

**Certificate Number** 

: TC-8993

Validity

: 14/09/2020 to 13/09/2022

Last Amended on

S.No	Discipline / Group	Materials or Products Tested	Component, Parameter or Characteristic Tested/ Specific Test Performed/Tests or Type of Tests Performed	Specification against which tests are performed and/
		Permanent F	acility	
1	MECHANICAL- BUILDINGS MATERIALS	AAC Block	Bulk Density	IS 6441 1972 (Part 1)
2	MECHANICAL- BUILDINGS MATERIALS	AAC Block	Compressive Strength	IS 6441 1972 (Part 5)
3	MECHANICAL- BUILDINGS MATERIALS	AAC Block	Moisture Content	IS 6441 1972 (Part 1)
4	MECHANICAL- BUILDINGS MATERIALS	Bitumen	Ductility	IS 1208
5	MECHANICAL- BUILDINGS MATERIALS	Bitumen	Penetration	IS 1203
6	MECHANICAL- BUILDINGS MATERIALS	Bitumen	Softening Point	IS 1205
7	MECHANICAL- BUILDINGS MATERIALS	Bituminous Mix	Binder Content	IRC SP 11
8	MECHANICAL- BUILDINGS MATERIALS	Bituminous Mix	Marshall Flow Value	ASTM D 6927
9	MECHANICAL- BUILDINGS MATERIALS	Bituminous Mix	Marshall Stability	ASTM D 6927
10	MECHANICAL- BUILDINGS MATERIALS	Brick	Compressive Strength	IS 3495 1992 (Part 1)
11	MECHANICAL- BUILDINGS MATERIALS	Brick	Dimension - Length	IS 1077 1992
12	MECHANICAL- BUILDINGS MATERIALS	Brick	Dimension - Width	IS 1077 1992







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Accreditation Standard : ISO/IEC 17025:2017

Certificate Number : TC-8993

	S.No	Discipline / Group	Materials or Products Tested	Component, Parameter or Characteristic Tested/ Specific Test Performed/Tests or Type of Tests Performed	Specification against which tests are performed and/
			Permanent Fa	acility	
	13	MECHANICAL- BUILDINGS MATERIALS	Brick	Dimension -Height	IS 1077 1992
	14	MECHANICAL- BUILDINGS MATERIALS	Brick	Water Absorption	IS 3495 1992 (Part 2)
	15	MECHANICAL- BUILDINGS MATERIALS	Cement	Compressive Strength	IS 4031 1988 (Part 6)
	16	MECHANICAL- BUILDINGS MATERIALS	Cement	Density	IS 4031 1988 (Part 11)
	17	MECHANICAL- BUILDINGS MATERIALS	Cement	Final Setting Time	IS 4031 1988 (Part 5)
	18	MECHANICAL- BUILDINGS MATERIALS	Cement	Fineness By Blaine Air Permeability Method	IS 4031 1999 (Part 2)
	19	MECHANICAL- BUILDINGS MATERIALS	Cement	Initial Setting Time	IS 4031 1988 (Part 5)
	20	MECHANICAL- BUILDINGS MATERIALS	Cement	Soundness By Le- Chatelier Method	IS 4031 1988 (Part 3)
	21	MECHANICAL- BUILDINGS MATERIALS	Cement	Standard Consistency	IS 4031 1988 (Part 4)
	22	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregate	Bulk Density	IS 2386 1963 (Part 3)
	23	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregate	Crushing Value	IS 2386 1963 (Part 4)
	24	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregate	Elongation Index	IS 2386 1963 (Part 1)
-					







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Certificate Number : TC-8993

S.No	Discipline / Group	Materials or Products Tested	or Characteristic Tested/ Specific Test Performed/Tests or	Specification against which tests are performed and/
		Permanent Fa	acility	
25	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregate	Sieve Analysis	IS 2386 1963 (Part 1)
26	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregate	Water Absorption	IS 2386 1963 (Part 3)
27	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregates	Flakiness Index	IS 2386 1963 (Part 1)
28	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregates	Impact Value	IS 2386 1963 (Part 4)
29	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregates	Specific Gravity	IS 2386 1963 (Part 3)
30	MECHANICAL- BUILDINGS MATERIALS	Concrete	Compressive Strength	IS 516 1959
31	MECHANICAL- BUILDINGS MATERIALS	Concrete	Flexural Strength	IS 516 1959
32	MECHANICAL- BUILDINGS MATERIALS	Concrete Paver Block	Compressive Strength	IS 15658 Annex D
33	MECHANICAL- BUILDINGS MATERIALS	Concrete Paver Block	Water Absorption	IS 15658 Annex C
34	MECHANICAL- BUILDINGS MATERIALS	Fine Aggregate	Bulk Density	IS 2386 1963 (Part 3)
35	MECHANICAL- BUILDINGS MATERIALS	Fine Aggregate	Material Finer than 75 Micron	IS 2386 1963 (Part 1)
36	MECHANICAL- BUILDINGS MATERIALS	Fine Aggregate	Sieve Analysis	IS 2386 1963 (Part 1)
	25 26 27 28 29 30 31 32 33 34	25 MECHANICAL- BUILDINGS MATERIALS  26 MECHANICAL- BUILDINGS MATERIALS  27 MECHANICAL- BUILDINGS MATERIALS  28 MECHANICAL- BUILDINGS MATERIALS  29 MECHANICAL- BUILDINGS MATERIALS  30 MECHANICAL- BUILDINGS MATERIALS  31 MECHANICAL- BUILDINGS MATERIALS  32 MECHANICAL- BUILDINGS MATERIALS  33 MECHANICAL- BUILDINGS MATERIALS  34 MECHANICAL- BUILDINGS MATERIALS  35 MECHANICAL- BUILDINGS MATERIALS  36 MECHANICAL- BUILDINGS MATERIALS	Products Tested  Permanent Factoria Mechanical- Buildings Materials  Mechanical- Buildings Coarse Aggregate Materials  Mechanical- Buildings Coarse Aggregates Materials  Mechanical- Buildings Concrete Materials  Mechanical- Buildings Concrete  Materials  Mechanical- Buildings Concrete Paver Block  Materials  Mechanical- Buildings Concrete Paver Block  Materials  Mechanical- Buildings Fine Aggregate  Mechanical- Buildings Fine Aggregate  Mechanical- Buildings Fine Aggregate  Mechanical- Buildings Fine Aggregate  Mechanical- Buildings Fine Aggregate	Products Tested Performed/Tests or Type of Tests Performed  Permanent Facility  25 MECHANICAL- BUILDINGS Coarse Aggregate Sieve Analysis  26 MECHANICAL- BUILDINGS Coarse Aggregate Water Absorption  27 MECHANICAL- BUILDINGS Coarse Aggregates Flakiness Index  28 MECHANICAL- BUILDINGS Coarse Aggregates Impact Value  29 MECHANICAL- BUILDINGS Coarse Aggregates Specific Gravity  MATERIALS  30 MECHANICAL- BUILDINGS Concrete Compressive Strength  MATERIALS  31 MECHANICAL- BUILDINGS Concrete Flexural Strength  MATERIALS  32 MECHANICAL- BUILDINGS Concrete Paver Block  MATERIALS  33 MECHANICAL- BUILDINGS Concrete Paver Block  MATERIALS  34 MECHANICAL- BUILDINGS Fine Aggregate Material Finer than  MATERIALS  35 MECHANICAL- BUILDINGS Fine Aggregate Sieve Analysis







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Accreditation Standard : ISO/IEC 17025:2017

Certificate Number : TC-8993

S.No	Discipline / Group	Materials or Products Tested	Component, Parameter or Characteristic Tested/ Specific Test Performed/Tests or Type of Tests Performed	Specification against which tests are performed and/
		Permanent F	acility	
37	MECHANICAL- BUILDINGS MATERIALS	Fine Aggregate	Water Absorption	IS 2386 1963 (Part 3)
38	MECHANICAL- BUILDINGS MATERIALS	Fine Aggregates	Specific Gravity	IS 2386 1963 (Part 3)
39	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Structural Steel	0.2% Proof Stress/ Yield Stress	IS 1608 (Part 1)
40	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Structural Steel	Elongation	IS 1608 (Part 1)
41	MECHANICAL- MECHANICAL PROPERTIES OF METALS	Structural Steel	Tensile Strength	IS 1608 (Part 1)
42	MECHANICAL- MECHANICAL PROPERTIES OF METALS	TMT Steel	0.2 % Proof Stress/ Yield Stress	IS 1608 (Part 1)
43	MECHANICAL- MECHANICAL PROPERTIES OF METALS	TMT Steel	Bend Test	IS 1599
44	MECHANICAL- MECHANICAL PROPERTIES OF METALS	TMT Steel	Elongation	IS 1608 (Part 1)
45	MECHANICAL- MECHANICAL PROPERTIES OF METALS	TMT Steel	Mass	IS 1786 2008
46	MECHANICAL- MECHANICAL PROPERTIES OF METALS	TMT Steel	Re-bend Test	IS 1786 2008
47	MECHANICAL- MECHANICAL PROPERTIES OF METALS	TMT Steel	Tensile Strength	IS 1608 (Part 1)
48	MECHANICAL- SOIL AND ROCK	Natural Building Stones	Porosity	IS 1124







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S.N	Discipline / Group	Materials or Products Tested	Component, Parameter or Characteristic Tested/ Specific Test Performed/Tests or Type of Tests Performed	Specification against which tests are performed and/
		Permanent F	acility	
49	MECHANICAL- SOIL AND ROCK	Natural Building Stones	True Specific Gravity	IS 1122
50	MECHANICAL- SOIL AND ROCK	Natural Building Stones	Water Absorption	IS 1124
51	MECHANICAL- SOIL AND ROCK	Rock	Unconfined Compressive Strength	IS 9143
52	MECHANICAL- SOIL AND ROCK	Soil	California Bearing Ratio	IS 2720 (Part 16)
53	MECHANICAL- SOIL AND ROCK	Soil	Free Swell Index	IS 2720 (Part 40)
54	MECHANICAL- SOIL AND ROCK	Soil	Grain Size Analysis	IS 2720 (Part 4)
55	MECHANICAL- SOIL AND ROCK	Soil	Heavy Compaction- Maximum Dry Density	IS 2720 (Part 8)
56	MECHANICAL- SOIL AND ROCK	Soil	Heavy Compaction- Optimum Moisture Content	IS 2720 (Part 8)
57	MECHANICAL- SOIL AND ROCK	Soil	Light Compaction- Maximum Dry Density	IS 2720 (Part 7)
58	MECHANICAL- SOIL AND ROCK	Soil	Light Compaction- Optimum Moisture Content	IS 2720 (Part 7)
59	MECHANICAL- SOIL AND ROCK	Soil	Liquid Limit by Casagrade Apparatus	IS 2720 (Part 5)
60	MECHANICAL- SOIL AND ROCK	Soil	Plastic Limit	IS 2720 (Part 5)







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S.No	Discipline / Group	Materials or Products Tested	Component, Parameter or Characteristic Tested/ Specific Test Performed/Tests or Type of Tests Performed	Specification against which tests are performed and/
		Site Facili	ty	
1	NON-DESTRUCTIVE- BUILDING MATERIALS – REINFORCED CONCRETE STRUCTURES	Reinforced Concrete Structures	Rebound Hammer Test	IS 13311 (Part 2)
2	NON-DESTRUCTIVE- BUILDING MATERIALS – REINFORCED CONCRETE STRUCTURES	Reinforced Concrete Structures	Ultrasonic Pulse Velocity	IS 516 (Part 5/Sec 1)



### **Cement Testing**

- Standard consistency
- Initial setting time
- Final setting time
- Compressive strength
- Density of cement
- Soundness by lechatelier method
- Fineness by blaine air permeability method



### **Concrete Testing**

- Compressive strength
  - Cubes
  - Cores
  - Cylinders
- Flexural strength
  - Beam













### **Steel Testing**

- Tensile Strength
- 0.2% Proof Stress/Yield Stress
- Elongation
- Bend Test
- Re-Bend Test
- Mass per Meter



# Structural Steel Testing

- Tensile Strength
- 0.2% Proof Stress/Yield Stress
- Elongation









# Non Destructive Test

- Rebound Hammer
- Ultrasonic Pulse Velocity





### Soil Testing

- California BearingRatio (Soak/Unsoak)
- Light Compaction (MDD/OMC)
- Heavy Compaction (MDD/OMC)
- Free Swell Index
- Liquid Limit
- Plastic Limit
- Grain Size Analysis











### Coarse Aggregate

- Sieve Analysis
- Flakiness Index
- Elongation Index
- Impact Value
- Crushing Value
- Specific Gravity
- Water Absorption
- Bulk Density



### Fine Aggregate

- Sieve Analysis
- Specific Gravity
- Water Absorption
- Bulk Density
- Material Finer
  Than 75-Micron













### Bitumen Test

- Ductility
- Penetration
- Softening Point

### Bituminous Mix

- Marshall Stability
- Flow Value
- Binder Content









### Bricks (Clay/Fly Ash)

- Compressive Strength
- Water Absorption
- Dimension

# Paver Block Testing

- Water Absorption
- **■** Compressive Strength













### AAC Block Testing

- Compressive Strength
- Bulk Density
- Moisture Content









### Mix Design

- Conventional ConcreteMix Design
- Pumpable ConcreteMix Design
- Self CompactingConcrete
- Mortar Mix Design
- Bituminous Mixes/Bituminous JobMix Design





### Field Testing

- Sand Replacement
- **■** Core Cutter











### Pulverised Fuel Ash (Fly Ash)- Physical Test

- Consistency
- Fineness by Blaine Air permeability
- Fineness by dry sieving
- Fineness by wet sieving
- Soundness by Le Chatelier Apparatus
- Initial and final setting time
- Specific ravity of Fly Ash
- **■** Compressive strength





# Chemical Testing

- Steel
- Hydraulic Cement
- Gypsum
- Soil
- Admixture
- Fly Ash
- Tiles
- **■** Concrete
- Water (Drinking/Construction)











Plate Load Test



### Tile Test

- Dimension Analysis
- Water Absorption
- Modulus of Rupture/ Wet Transverse











### **Core Testing**

- Bitumen Core
  - Thickness
  - Density
  - Dressing
  - Bitumen Content
  - Gradation
- Concrete Core
  - Compressive Strength
- Density
- Thickness





# Geotechnical Investigation

- Drilling
- Testing Of Rock And Soil Strata
- Laboratory Testing Of Soil Rock And Water
- Geotechnical Investigation Report Recommended By Geologist







## **OUR TEAM**



Team of our professionals comprises of geologist, engineer, technicians, quality controllers, researchers, administration and management staff, etc. All these experts work in collaboration according to the needs of customers. We have appointed professionals who have sufficient knowledge in their respective domain. Owing to their rich industrial experience and abilities to fulfill client's demand, we are function in the most flawless manner. We also conduct several learning programs and seminars to enhance their knowledge and keep them update with emerging market trend.







## **LOCATION MAP**





### **CLOSURE PROXIMITICS**

8.00KM
4.00KM
5.00KM
7.00KM
7.50KM
11.00KM
5.00KM
6.00KM
12.00KM
5.00KM
10.00KM
20.00KM
3.00KM
20.00KM



"Quality of Service For Excellence"

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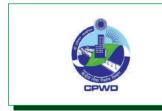














































































































PIONEER ENGINEERS



A & D CONSTRUCTION







**SPIRE GRACE** 

**VENTURES** 

**VISTAARA** 

LIFESPACE LLP

**KHINVASARA** 

CONSTRUCTION

**MAHESH** 

PROPERTIES

**DATTATRAYA** 

CONSTRUCTION

**VANSH** 

DEVELOPERS

**JAI GANESH** 

DEVELOPERS

**A.P. ASSOCIATES** 

**SWARAJ** 

DEVELOPERS

T AND T INFRA

**RMK INFRA** 

**VOLTAGE INFRA** 

**WADIA** 

CONSULTANT

**ARV GROUP** 

**B K CHAVAN** 

BUILDERS

**PSC INFRA** 

**K.N.ASSOCIATES** 

**ASUNTO INFRA** 

**SATYASAIBABA** 

CONSTRUCTION

**RJ CONSULTANCY** 

SERVICES

**GAURI VIJAYA SWARAJ** 

INDOLOG PARK

**ARYAVARTA** 

CONSTRUCTION COMPANY

**YASHRAJ** 

GLOBAL INFRACON

**VEERAI** 

INFRA PVT. LTD.











TC-8993

### **NABL** Accredited Laboratory

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