



Building Standards

CONSULTANTS . LABORATORY & FIELD TESTING . ANALYSIS
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ISO 9001 Certified

OHSAS 18001 Certified

ISO 14001 Certified

ENLISTED IN PAKISTAN ENGINEERING COUNCIL



The Company:

Building Standards is a construction inspection and material testing facility developed by a team of qualified and highly professional engineers having vast experience of different field of Construction Industry, covering Industrial & Commercial Buildings, Hydropower, Roads, Bridges, Large & Small Civil Structures. Building Standards offers full range of testing & inspection services in the areas of soil, reinforced concrete, fire proofing, chemical analysis, destructive and non-destructive testing and forensic analysis of fire damaged buildings. Building Standards is the only company in Pakistan that offers wide range of laboratory and field testing facility and quality control services under one organized system. Building Standards is registered with PEC and has highest degree of reliability, accuracy and operators with ISO 9001, ISO 14001 & OHSAS 18001 certifications.

Operation:

Our Lab Facility is located in commercial area of Architects Engineering Housing Scheme, Lahore Pakistan and is easy to access, anywhere from the Lahore city. Our field team can take / collect samples for material testing from site and have modern equipment facility for providing accurate & reliable material testing services at your site locations and also online system to witness the live testing. **We offer the following services.**

Corrosion Analysis:

Profometer corrosion analysis is most accurate non-destructive method for the information concerning corrosion activity of steel embedded in concrete. This test may be used at any time during the life of concrete member. It is an excellent test for corrosion analysis and is used for in service evaluation and calculating structural strength of concrete. The test results are very accurate and can be used for analysis, research and development works



Electrical Resistivity:

This test offers a complete solution for measuring the electrical resistivity of concrete both in the laboratory under controlled conditions at site. This method provides electrical indication of **concrete ability to resist Chloride Ion Penetration**. The Chloride Ion Penetration test by this method is covered by AASHTO TP-95. This is an ideal test method for use in quality control methods for assessment of durability of concrete structures.



Ferros scanning of RCC Structure:

Ferro scan is a NDT analysis and performed on concrete structure using state of the art Hilti and Proceq equipment. This test provides the information regarding steel reinforcement diameter, spacing and concrete cover. It provides 3D visual scan images to determine reinforcement steel details in RCC structure. This test is an effective means for details of reinforcement steel in any concrete structural member.



Ultrasonic Pulse Velocity (Pundit):

This test is widely used for the estimation of strength and durability of concrete structure. This test can also be used for evaluation of homogeneity and uniformity, presence of cracks, voids and deteriorated regions of concrete. It gives reliable results of dynamic measurement of size and depth of cracks. Ultrasonic Pulse Velocity can also be used to calculate elastic modulus of concrete.



Pavement Testing:

Our field team is well equipped with state of the art equipment especially designed to collect sample from the field. Our lab facility has the capability to perform all necessary tests to provide the failure analysis of roads. We help the engineers to formulate the design and remedial measures of pavement. We also perform tests according to client requirement for particular conditions.



Field Testing:

We have more than 18 years track record of providing efficient and reliable services in field testing. Our mobile laboratories and competent staff have successfully provided field testing services for hundreds of projects all over the country. Building Standards provides quality control construction testing and inspection services and has state of art equipment for extraction of core up to 30 meter in concrete and rock.



Chemical Testing:

Chemical analysis and physio chemical parameters of material has become prime factor in all engineering fields. Building Standards is equipped with most advanced and modern chemical testing equipment of Potentiometric analysis on samples of soil, water, detergents, oils and food processing materials. We use latest equipment for analysis and testing for water and soil in lab as well as in the field.



Evaluation of Fire Damaged Building:

Complete range of testing is available for the evaluation of fire damaged structures. Our services in this sector are available from preliminary site investigation to the detailed examination of structure for extent of damage and serviceability of fire damaged structures. Additionally, services for the rehabilitation and retrofitting design of fire damaged structure are provided under same setup.



Geotechnical Investigation:

All thorough understanding of soils and site characteristics is required to design a strong structural foundation. It is necessary to ascertain whether the soil and site characteristics are suitable for engineering design of any particular project site. Building Standards can provide reliable site evaluation and consulting services in the early stages of design and construction for the development of any project and has nearly 2000 successfully executed projects to its credit.



Active & Passive Fire Safety:

We offer active and passive fire safety design and supervision for building and provide automation building design for both pre-construction design and post construction status to facilitate the customer requirements as per international standards. We also offer cost effective and efficient fire safety material supply guideline to meet the latest UL, NFPA and ASTM Standards.



Fire Rating Test:

Our services in fire safety include testing of fire safety doors and frames as per NPFA standards. We have highly trained staff to conduct on site fire testing. Building Standards also provides fire rating test of passive fire safety materials like fire board, fire stop sealants, sprays, fire coating systems, fire extinguishers, fire mortars, fire collars/wraps and fire stop foam. We are able to design fire stop and protection system for a complete project.



Pullout Test:

Customized pull out test services are available, starting from very small anchor bolts to large scale bolts up to 50mm dia installed in concrete and rock surfaces. Pull Off testing as semi-destructive test for concrete can also be performed under similar setup. We are certified agency to perform pull out tests for Hilti anchor bolts and chemical anchoring system.



Laboratory Testing:

A team of Engineers, Scientists and Technicians is available with our accredited in-house material testing laboratory to provide wide range of material testing facilities to our clients. Our goal is to provide reliable and efficient services to achieve tough project schedule. Our expert team can work multiple shifts to meet tight deadlines. We perform tests according to ASTM and BS standards with most accurate and advance testing equipment and also provide facility to witness live online testing from our lab facility to anywhere in the world.



Rebound Hammer Test (Schimet Hammer):

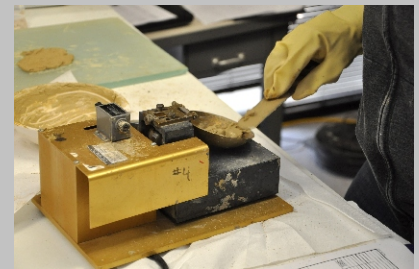
For quick and general assessment of concrete compressive strength, rebound hammer test is used all over the world. The commonly used testing facility provided to the site at very economical rates with highest level of accuracy. We have state of the art calibrated Proceq and Controls test equipment to conduct field testing with certified results.



Our Tests Range Includes:

Soil Testing:

- Gradation
- Specific Gravity
- Hydrometer Analysis
- Atterberg's Limits
- Particle Size Distribution
- Linear Shrinkage
- Volumetric Shrinkage
- Moisture Content
- Proctors (Lab and Field Density Tests)
- California Bearing Ratio (CBR)
- Water Absorption
- Hydraulic Conductivity
- Lab and Field Permeability
- Electric Resistivity Test
- Unconfined Compression Test
- Direct Shear Test
- Triaxial Shear Test
- Consolidation Test
- Organic Matter Content
- Sulphate Content in Soil/Water
- Chloride Content in Soil/Water
- Calcium Content in Soil/Water
- Sodium Content in Soil/Water



Aggregate Testing:

- Sampling
- Gradation
- Los Angeles Abrasion
- Flakiness and Elongation Index
- Specific Gravity and Water Absorption (Fine)
- Specific Gravity and Water Absorption (Coarse)
- Clay Lumps and Friable Particles
- Light Weight Pieces in Aggregate
- Sodium Sulphate Soundness
- Fineness Modulus (Including Gradation)
- Compaction Test (Lab) (Modified)
- Unit Weight and Voids
- Crushing Value
- Sand Equivalent
- Impact Value
- Relative Density
- Water Absorption



Chemical Testing:

- Lime
- Sulphate Contents of Soil/Water
- Chloride Contents of Soil/Water
- Carbonate Contents of Soil/Water
- Nitrate Contents of Soil/Water
- Calcium Contents of Soil/Water
- Sodium Contents of Soil/Water
- Organic Matter Content
- pH Value of Soil/Water
- Total Soluble Salt of Soil/Water (TDS)
- Organic Content in Soil by Loss on Ignition
- Cement Content (Cement/Sand Mixture)
- Cement Content (In Concrete)
- Organic Impurities
- Relative Density
- Turbidity



Cement & Concrete Testing:

- Concrete Mix Design
- Fineness by 200 Sieve
- Normal Consistency of Cement
- Time of Setting (Cement)
- Mixture Strength (Excluding Molding)
- Compressive Strength of Cylindrical & Cubical Concrete Specimen
- Compressive Strength of Core
- Core Extraction from Concrete (102mm Core) Maximum
- Extracted Length 2D for Compressive Strength
- Core Extraction from Concrete (150mm Core) Maximum
- Extracted Length 2D for Compressive Strength
- Core Extraction of 30 meter in Pile Concrete for Quality Test
- Cement Content (Cement Sand Mixture/Concrete)
- Flow Table
- Rebar Scanning (Maximum up to 125mm depth)
- Corrosion Analysis of Rebar Embedded in Concrete
- Ultrasonic Pulse Velocity Test (Pundit)
- Crack Detection & Depth of Crack
- In Service Analysis of Concrete Surface (Life Expectancy)
- Rebound Hammer Test (Schmidt Hammer Test)
- Cement Content in Concrete Sample
- Chloride Ion Penetration (Non-Destructive)
- Void Ratio



LIST OF CLIENTS

- Aamir Jaffari & Associates
- Aamir, Fatima & Associates
- ADH Works (Housing Dte. GHQ)
- Afco Steel Industries
- Alam Khan Brothers Engg. & Construction Co.
- Alaq Enterprises (Project for MCB Bank Arifwala)
- Al'Wasay Engineering (Pvt.) Ltd.
- Alan Dick Pakistan (Pvt.) Ltd.
- Al-Fatah Store
- Al-Hamd Foods (Pvt.) Ltd.
- Al-Miraj Enterprises
- Akzo Nobel Pakistan Limited
- Amin Tariq Associates
- Architectural Heritage
- Architectural & Engg. Services of Pakistan
- Arcop
- Arif Associates
- Arif Shah Private Limited-ASPL
- ACE (Pvt.) Ltd.
- Atlas Power Ltd.
- Atlas Processing Rice Mills
- Asian Consulting Engineers
- Askari Bank
- A.S. Group of Steel Industries
- Atiq Associates
- Axons Associates
- Bahauddin Zakariya University Sahiwal
- Bahria Town (Pvt.) Ltd.
- Barqaab Consulting Services (Pvt.) Ltd.
- Beacon House School System
- Berger Paints
- BISE Sargodha
- Builders Associates (Pvt.) Ltd.
- Bot Group
- Centaur (Pvt.) Ltd.
- Chem Coats (Pvt.) Ltd.
- Contect International Health Consultants
- Creative Constructors
- Dawn Foods (Pvt.) Ltd.
- Defence Housing Authority-DHA
- Descon Engineering Limited
- Development Infrastructure Services Lahore
- Dynamic Construction
- Dzinerz
- EA Consulting (Pvt.) Ltd.
- EHFPRO (Pvt.) Ltd.
- Etimaad Engineering (Pvt.) Ltd.
- Engro Chemical Pakistan Ltd.
- Evacuee Trust Property Board
- Fatima Fertilizer Company Ltd.
- Faysal Bank
- Froebel's International School Building
- Geomatics Engineering Services
- Gourment Bakery
- Gulf Rental Power Plant
- Habib Bank (Pvt.) Ltd.
- Habib Rafiq (Pvt.) Ltd.
- Highnoon Laboratories Limited
- Huawei Technologies Pakistan (Pvt.) Ltd.
- Huda Sugar Mills (Pvt.) Ltd.
- IK Associates
- Ibrahim Fibers Ltd.
- Indus Sugar Mills (Pvt.) Ltd.
- Indus Associates Consultant
- Infrastructure Development Authority Punjab-IDAP
- Intercon Construction Solutions
- Innovative Construction Co.
- Izhar Construction (Pvt.) Ltd.
- Kaizen Construction (Pvt.) Ltd.
- Karim Aziz Industries (Pvt.) Ltd.
- Kashif Aslam & Associates
- Khalil-UI-Rehman Associates
- Kohinoor Textile Mills
- Lahore Development Authority-LDA
- Lahore Meat Company
- Lahore Waster Management Company-LWMC
- Land Mark Consultants
- LG & RD Government of Punjab
- Mansoor Mazhar & Associates
- Masons Habib (Pvt.) Ltd.
- Mass Consultants
- MAT Cast (Pvt.) Ltd.
- Meinhardt Pakistan (Pvt.) Ltd.
- Mehmood Agro Group
- Metecon Pak (Pvt.) Ltd.
- Millat Tractors Limited
- Minhaj University Lahore
- Mobilink Telecommunication
- Mughals Pakistan (Pvt.) Ltd.
- Multidimensional Consultants
- National College of Arts-NCA
- NESPAK (Pvt.) Ltd.
- National Environmental Consultants
- National Highway Authority-NHA
- National Logistic Corporation-NLC
- National Management Foundation

LIST OF CLIENTS

- Niazi Design System
- Noor Durani Associates
- Northern Engineering Corporation
- OTTO Manufacturing (Pvt.) Ltd.
- Outffier
- Pak-Arab Refinery Company-PARCO
- Packages Limited
- Packages Mall
- Pakistan Agricultural Storage & Services Corporation
- Pakistan Tobacco Company
- Pakistan Power Resources-PPR
- Pakistan Services Ltd.
- Pakistan Sports Board
- Pakistan Civil Aviation Authority
- PD-GSC, LESCO Lahore
- PDIL
- Pearl Continental Hotel
- Pepsi Cola International
- Pharmagen
- Philips Pakistan
- Phytocon International (Pvt.) Ltd.
- Powertech Links (Pvt.) Ltd.
- Premier Developers (Lyallpur Galleria, Faisalabad)
- Professional Builders
- Professional Construction Services
- PTCL
- Progressive International
- Punjab Highway Department
- Qavi Engineers (Pvt.) Ltd. (Project for US Consulate)
- Ravi Engineers & Constructors
- Rehan & Associates
- Reliable Engineering Services
- Resource Development Institute
- Riaz Bottler (Pvt.) Ltd.
- Rising Sun Construction
- Royal Leather Industries
- Rupali Polyester Limited
- Safe Solutions
- Sabir Poultry Farm
- Sarwar and Company (Pvt.) Ltd.
- Sapphire Textile Mills Ltd.
- Sayyed Engineering (Pvt.) Ltd.
- SANPAK Engineering Industries (Pvt.) Ltd.
- Shaheen Associates
- Shahzad Ayyub Associates
- Shamim Feed Industries & Oil (Pvt.) Ltd.
- Shaukat Khanum Hospital
- Sialkot Cantonment Board
- Siemens Pakistan (Pvt.) Ltd.
- Sinaco Engineering (Pvt.) Ltd.
- SMC (Pvt.) Ltd.
- SNGPL
- Sourthen Punjab Urban Services Project-SPBUSP
- Swiss Impex
- TCS Express & Logistics
- Technical Associates Pak (Pvt.) Ltd.
- Telenor Telecommunication
- Tetra Pak Pakistan Ltd.
- Thameem Associates
- The Citizen Foundation
- The Signatures
- Toyo Group of Industries
- Treet Corporation Limited
- Tricon Construction & Restoration Services
- Trident Construct
- United Associates
- Umer Group of Companies
- Unifoam
- Unilever Pakistan Ltd.
- University of The Punjab
- US Apparel & Textile
- Velosi Integrity & Safety Pakistan (Pvt.) Ltd.
- Voith Hydro Shanghai Ltd.
- Winthrop-Meridian
- Zarcon
- Zeeruk International (Pvt.) Ltd.

Web Site: www.buildingstandards.com.pk