

MUHAMMAD RASHID IQBAL



Profession:	Ph.D. Civil Engineer
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Driving Licence:	UAE, Qatar, and Japan
Specialization	Infrastructure construction and supervision including road works, utilities (sewerage, irrigation, electrical and communication cable laying), Road work including setting out, monitoring, field testing, and culverts work: offshore and onshore soil investigation and surveying, destructive and non-destructive material testing.

EDUCATION AND PROFESSIONAL STATUS

- **Post Doctoral Researcher, Saitama University, Japan (Sept 2020- Till date)**
- **Ph.D. Geotechnical Engineering, Saitama University, Japan (2017-2020)**
- M.Sc. Civil Engineering, Saitama University, Japan (2013-2015)
- B.Sc. Civil Engineering Honors (University of Engineering & Technology, Lahore, Pakistan) (2005-2009)
- F.Sc. Pre-Engineering, BISE D.G. Khan, Pakistan (2003-2005)
- Matriculation BISE, Lahore, Pakistan (1993-2003)

KEY QUALIFICATIONS AND EXPERIENCE:

Ph.D. in civil engineering, having specialization in Geotechnical Engineering. The research topic was related to recycling waste materials, especially industrial waste material in developed and under-developing countries for road construction. Conducted numerous geotechnical and geoenvironmental experiments and proposed an economical way to improve the low-quality materials of the road subgrade material with a CBR value ≥ 100 %.

10 Years of proven experience in construction and supervision experience. Have been part of the multinational organization's Originations in Thales Gulf Qatar, AECOM Qatar, Mott MacDonald Dubai, Al Tital surveying and engineering services Abu Dhabi, and continental overseas construction services, Lahore Pakistan.

I have executed small to large-scale infrastructure projects in the Middle East (Abu Dhabi, Dubai, Qatar) and Pakistan. I have been a part of infrastructure projects, e.g., Qatar New seaport Project (NPP), Al Wukaira infrastructure project, Jumeriah Golf estates Dubai, Gulf rental power project Pakistan.

Computer Skills:

- Auto CAD
- ACAD Civil 3D
- M.S. Office
- M.S. Project
- Primavera
- GPS, Total Station, and all types of survey (RTK, Fast Static, and Static)
- Surfer (Contouring) for the data of density of the soil and forecasting the density of the soil
- Surveying data management and extraction (Contouring, interpolation, profiles, drafting's, and quantities calculation of cull and fill materials, etc.)

3 INTERNATIONAL JOURNALS AND 8 CONFERENCE PAPERS:

- "Characterization of Gas Transport Properties of Compacted Solid Waste Materials" *Environments* 2021, 8(4), 26; <https://doi.org/10.3390/environments8040026>
 - "Geotechnical utilization of sludge blended with crushed concrete and incineration ash" *Geotec., Const. Mat. & Env.*, DOI: <https://doi.org/10.21660/2019.57.8130>
 - "Compaction characteristics and CBR of sludge blended with recycled clay bricks for road subgrade application." *International Journal of GEOMATE*, 19(75): 133-143.
 - 8 International conference publications on Consolidation characteristics of landfilling waste samples in Japan: Effects of waste composition and various mixing proportions in Japan Geoscience Union (JpGU), Yokohama, Japan Geotechnical Society (JGS) Tokyo, ACEPS, Ruhna, Sri Lanka.
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EXPERIENCE RECORD

🚧 Having more than 10 years of experience:

SAITAMA UNIVERSITY (Japan): October 2020 Todate
POSITION: Post Doctoral Researcher/Assistant Professor
PROJECT: Recycling of Industrial and CDW Waste Materials

Working on recycling industrial waste material like water treatment sludge and construction and demolition waste (CDW) concrete and clay bricks generally for road work. Road works included the environmental assessment of the waste materials, their mechanical properties, and sustainability for the project life. In mechanical properties, we check the compaction properties, breakage of the particles, and California Bearing Ratio (CBR) and set up the permeable pavements and long-term clogging of the permeable pavements under natural turbid conditions.

THALES (Qatar): March 2016- September 2017
POSITION: Civil/Site Engineer
PROJECT: New Port Project (Hamad Sea Port Project)

Worked as a Civil Engineer at the seaport project, including ducting, camera installation, light poles, road, parking, interlock fixing, security gate installation (Sensor installation), and laying the ducting of the networks and concrete work. sewerage, water, and irrigation line installation, having length 17.50 km length on the outer perimeter and Port Duties were but not limited to:

- Shop drawings review, submittal, and addressing the NRC of PMC.
- Raising I.R. for the material approval, coordinating with consultants, and submitting the material for third-party testing and finalizing the report submitted to the consultant.
- Coordinating for the material inspection and approval processes from the consultants.
- Ensuring the proper excavations, checking setting out, estimation of the backfill, and excavated quantities.
- Checking the backfilling of each layer and inspecting the field compaction test for achieving more than 95% compaction.
- Checking the reinforcement as per approved drawings, shuttering, insulation, alignment, and concreting, curing, repairing, and relevant test of the concrete onsite (e.g., slump test and cubes for compressive strength).
- Supervising the Non-Destructive tests, like wind load test, rebound hammer test, Ultrasonic pulse velocity test, "Pull out test" of anchors and consultants' comments, and NCR's.
- Supervising the fence, Road, Light pole foundations, ducting, and JRC Manholes installation

and checking its horizontal and vertical alignment.

- Installation of accessories shadow clamps, flat bars, U-Clamps, Y-brackets, and razor wire for the access control.
- Civil work supervisor of the main security gates, bollard, and road blockers foundation installation and making the M.H. grouting, screeds, sumps, and Schedule-80 4" primary and redundant line installation, Mandrill testing, taking As-Built, and warning tapes.
- Making the work environment according to the HSE policy, evaluating risk assessment.
- Preparing daily and weekly achieved progress of the working and planning.

AECOM (Qatar): **June 2015- Feb 2016**

POSITION: **Senior Site inspector**

PROJECT:

Government Residential Building Division South of Wukair: Scope of work includes the landscaping and infrastructure work worth of **800 million Qatari Royal** for the Government residential building division south of Wukair, Doha (Qatar), including the development of infrastructure, residential villas, and utilities, water line, sewerage, telecom, and community road work.

Key Responsibility:

- Ensure the performance of the work in strict accordance with the drawings, plans, and specifications.
- Inspection of all kinds of materials at the site, soil samplings, concreting while ensuring that ingredients (aggregate, sand, cement, water, bitumen, filler, admixture) are from an approved source, mixing procedure & calculation and automation features of the plan. Maintaining documents of routine tests and delivery, the witness of material testing, and related activities in the contractor's material testing laboratory.
- Material Testing and witness of the sample's collections along with marked locations to suggest and rectify the material properties by mixing with suitable materials.
- Segregating the different types of material and witness the Compaction tests.
- Discussion of inspection results with those responsible for products and recommend necessary corrective actions.
- Maintaining (HSE) Health Safety and Environment to achieve zero accident culture at the site.
- Maintain a detailed diary of the daily work activities, issues, work approved or rejected, hours of operation, labor, and equipment used.
- Coordinated with the contractor's construction manager and in charge of the work frequently to ensure timely execution of work and progress monitoring.
- Review and comment appropriately to RFI's as received from the contractor, when directed by the RE/SRE.
- Report to the Resident Engineer any failure of the contractor to conform to drawings, plans, and specifications and to provide excellent workmanship.
- Review and comment appropriately to shop drawings received from the contractor when directed by the Resident Engineer.
- Ensure that the works are being constructed to the latest construction and shop drawings.
- Assist the Resident Engineer in monitoring the contractor's progress of the works.

M.Sc (Civil Engineering, JAPAN): April 2013 - March 2015

M.Sc Civil & Environmental Engineering from Saitama, University **Japan** with the course and research work and specialization in **Geotechnical Engineering**.

Investigate the engineering properties of the waste samples and practical for engineering projects to reduce the landfill space requirement and checking the settlement analysis for future construction, including recommendations, and predicting the best proportion of the least settlement. Course work during the study included Environmental Engineering, Soil Physics, Mechanics of Materials, advanced soil Mechanics, Geotechnical Earthquake Engineering, Advance theory on Earthquake Engineering, Advance lectures on Construction materials, and construction management.

MOTT MACDONALD GROUP (DUBAI): Feb 2012 – March 2013

POSITION: Site inspector
PROJECT: Jumeirah Golf Estate (Dubai)

Worked as a site inspector of Infrastructure work at **Jumeirah Golf Estates (JGE), Dubai**. JGE site consists of the 1100 villas, which were further divided into 10 communities, Ring road of 10km length of flexible pavement, community's road including the complex curves, alignments, and slopes as per design, construction of the substations, checking the streetlights foundations and verticality. Engaged in inspections, material testing, including compaction tests, leakage tests, pressures tests, and witness of concreting (slump, compacting factor, etc.) and execution of the utilities work as per assigned corridor and profile, e.g., Water pipelines, Irrigation pipeline, sewerage system (Vacuum system), Checking manhole cover levels and setting out and matching with road profile where required and execution of the boundary wall and building works.

Key Responsibility:

- Supervise site construction activities, advising & assisting the contractor on construction procedures, and following up site inspections and supervision.
- Evaluate and review shop drawings, method statements, contractor progress reports, and other relevant submittals.
- Respond to contractor inquires of RFI's and issue required site instructions, field memorandums, and non-conformance reports.
- Contractor's operation inspection in the placement of concrete, cube sampling, manhole chambers pouring, pavements, method of handling & placing concrete to minimize segregation, finishing of concrete, method of curing, concrete paving operation along with onsite tests such as air content, slump test, and temperature monitoring and obtaining concrete cubes for subsequent compressive strength test and durability tests if required.
- Asphalt pavement inspection, temperature, layer thickness, and compaction according to project specification.
- Completed permeable pavement system (PPS) with soak pits at regular intervals for the ground recharging.
- Inspection of all kinds of material at the site, concrete, and asphalt batching plant while ensuring that ingredients (aggregate, sand, cement, water, bitumen, filler, admixture) are from an approved source, mixing procedure & calculation and automation features of the plan.
- Maintained documents of routine tests and delivery, a witness of material testing, and related activities in the contractor's material testing laboratory.
- Contractor's steel fixing inspection for correct placement, spacer as per requirement, surface preparation, and epoxy coating of steel to avoid erosion. Inspection in the installation of culverts, sewers, ditches, and excavation of trenches to obtain proper alignment and grade securely.
- Construction inspection assignments may include inspection of curbing, sidewalk, signs, guide railing, drainage pavement marking, landscape items, traffic signals, maintenance,

highway lighting, fencing, crack sealing, and joint filling.

AI TILAL SURVEYING & ENGG. SERVICES, ABU DHABI, UAE: Feb 2010 – Jan 2012

POSITION: Projects Engineer

Worked as Projects Engineer on a couple of projects, including the supervision and inspections of water supply projects (onshore and offshore), soil investigations (onshore and offshore).

Key Responsibility:

- I was submitting and raising quotations for projects bidding.
- Client meeting for rates finalizations and correspondence and responding to inquiries.
- Planning and managing the site teams for the execution of the assigned tasks.
- Inspecting and checking the construction activities, setting outs, piling, concreting (concrete tests, slump test, casting cubes for compressive strength, etc.), steel fixing shuttering and its alignments (vertical), making sure proper packing to avoid any leakage.
- Monitoring day-to-day progress of work at the site and reporting to Manager.
- Managing the surveying teams and data collection, processing data, and extracting required information for surveying (interpolation, data correction, profile generation as per client requirements, drawings preparations, report writing, submission, etc.).
- Supervise the site teams for soil investigations, check the borehole's locations, and relate to the datum points.
- Soil testing to define the geotechnical properties of materials and strata identifications and soil profile.
- Preparing the soil investigation and updating the client's comments with the technical teams and incorporating accordingly.
- Raising invoices and chasing the payments from the client, writing letters and reminders in case of any delay.

PROJECTS:

GASCO Water Supply Project- Execution of the 32 km water supply project in the western region of Abu Dhabi, UAE, in the oil and gas field. Soil investigation and trial pits for strata identifications and soil resistivity and conductivity tests, including the Geotechnical Investigation report: (Client ADDC and Consultants AECOM).

Ras-Ghurab Project- Conducting initial detailed bathymetric survey and Offshore soil investigations of 10m depths (3 No) for identification of suitable strata of Ras Ghurab Project in addition to the installation of CTD, Current meter for the water speed at the various positions of the available depths (Bottom, middle and top) and Tide Gauge for monitoring the variation of the water levels during the prescribed period and cross-checking with the Tide Table, for the initial designing the location recommendation of the Reverse Osmosis plant (Client: ADDC & Consultants: Mott MacDonald, Abu Dhabi)

Mafraq Area Water Supply Project- Execution of the Water Supply to Mafraq area Project having 13 km length, Soil investigation Trail pits of 5m depth, setting out and laying the pipeline, inspecting the civil works and manholes inspection, concreting and in addition to finalizing the manholes top levels w.r.t. adjacent roads profiles, Abu Dhabi, UAE (Client: ADDC & Consultants: Mott MacDonald)

B1, B2, B3, and B4 Projects- Initial soil investigation and trial pits of 5m depth along the water pipeline and determine the various soil parameters and strata identification to adjust the pipeline route of 55 km length and 3km bathymetric survey including the offshore 10m depth 3 B.H.'s geotechnical investigation for the pipeline, Abu Dhabi, UAE. (Client: ADDC & Consultants: Halcrow International)

Water Supply to Jubail and adjacent Island- Water supply to the Jubail Island and to its adjacent island with the directional drilling for laying the undersea pipeline including the Marine Boreholes and soil investigation consisting various geotechnical test and for drawdown recovery test for the installation of pumps and water quality analysis, report Preparation of Soil Investigation including various laboratory testing, 13 km in Jubail Island Water Supply project 5 km Geophysical survey in Jubail Island Water Supply Project, Abu Dhabi, UAE.

Water Supply to H.H.Sheikh Muhammad Bin Zayed Island- 22 Km onshore and 4.50 Km offshore water supply to Sheikh Muhammad Bin Zayed Island, and providing the site supervision assistance with the collaboration of Tebodin Middle East for the surveying and Civil work. Marine Boreholes and report Preparation of Soil Investigation for the water supply designing and rerouting the water supply alignment due to obstructions, Abu Dhabi, UAE. (Consultant Tebodin Middle East and Client ADDC)

Villa's Construction- Supervise the Villa's construction, including the setting out of the piles/deep foundations, construction of the sub and superstructure work, dealing with the Abu Dhabi municipality. Carrying out the concrete testing, including the slump test and compress strength tests (Mohammad Bin Zayed City, Abu Dhabi UAE.)

Imaginary Correction PDO Project- 100 km x 50 km area GPS Survey of 100 Points in Oman for extension of the oil pipelines in Fahoud, Oman under Oman Petroleum Development (PDO) Project for Imaginary correction and proving the detailed recommendations for initial pipeline designing and rout determining.

CONTINENTAL O.C. SERVICES, LAHORE, PAKISTAN:

Aug 2009 – Jan 2010

POSITION: Site Engineer

PROJECT: Gulf Rental Power Project

Completion of the Gulf Rental Power Project **64 Mega Watts** as a Site In-charge having cost **560,000,000 PKR**, consisting double story building and 65m span truss erection, 7 diesel engine block foundations with the installation of the 34 sleeves of 1m length for each engine and turbines with an accuracy of 12.5 mm in 3D (x, y, z) and grouting engine sleeves, cooling tower consisting retaining walls, water pool for exchanging hot engine water circulation, two oil storage tanks (30m x 40m), foundations for the installation of the grid, laying the sewer lines and paved access roads inside the project area.

Key Responsibility:

- Planning a daily schedule for all the laborers and staff of 300 people and assigning the task daily.
- Preparing the BOQ and Bar bending schedule for isolated and combined footings, columns, slabs, engine foundations.
- Installation of the sleeve for the engine foundation and making sure the right pockets to avoid the concrete blockage.
- Keeping the record of all the materials steel, cement, sand, aggregate, and requesting according to if required.
- Checking the steel fixing, monitoring the concrete, slump testing, cube samples collections, and curing.
- Checking the finishing and repairing if required due to any cause of honeycombing.
- Keeping the record of all the staff timesheet and signing the overtime by consulting the relevant staff.
- Dealing with the client engineer and adequately maintained the records of the executed task for payments and claims.

COUNTRIES VISITED

Japan, Qatar, Malaysia, Vietnam, South Korea, United Arab Emirates, Oman, Kingdom of Saudi Arabia, Turkey, Netherlands.

LANGUAGE CAPABILITY

Punjabi: Mother's tongue

Urdu: Native

English: Spoken – Fluent; Written – Fluent; Reading – fluent

Japanese: Spoken- Fair; Written- Fair; Reading Fair

Arabic: Spoken – Fair, Written-Fair, Reading Fluent