

SUMMARY:

- Civil Design Engineer with 5 years of professional experience in Designing of Reinforced concrete & Steel Buildings, along with Assessment, Retrofitting, and Restoration works on projects ranging from \$2 million to \$ 10 million.
- M.EngCEM Student from U of T, during the first semester the main focus on the resilience of critical infrastructure.
- Prospective Project Management Professional(PMP) License holder with the Project Management Institute.
- Technical reporting and Record-Keeping skills empowered smooth correspondence between project Stakeholders framing the capacity to work efficiently in a time of stress and workload.
- Proficient user of ETABS, SAP2000, SAFE, GRASP, Response2000, MS Project, and Microsoft Office Suite with hands-on familiarity with AutoCAD, STAAD pro, CSI Bridge, Revit, and Primavera P6
- EIT no. 100552755

EDUCATION & TRAINING:

Master of Engineering (Cities Engineering and Management) Ongoing **2020-2021**

University of Toronto, St. George Campus, Toronto, ON

- Focus on Resilience and Planning of Critical Infrastructure
- Selected courses
Infrastructure Resilience, Infrastructure Protection, Infrastructure Planning, Making Sense of Accidents, Cognitive and Psychological Foundations of Effective Leadership, Project Management, Infrastructure, and Urban Prosperity, Cities as Complex Systems, Empirical Study of Cities, The Challenges of Urban Policy-Making

Engineering Connections Program **2020**

Seneca College - by Acces Employment, Ontario, CA

- Canadian regulations, Ontario building code, Ethics and Law for Engineers and industry culture of Canada
- Estimating Process, quantity take-off, Basics of safety & supervision, LEED and MS Project

Master of Engineering (Structural Engineering) **2016**

NED University of Engineering & Technology, Karachi, Pakistan

- Accredited by WES, Equivalent to a Canadian Master's degree
- Selected courses
Advanced Structural Analysis, Advanced Reinforced Concrete, Structural Dynamics, Structural Stability, Prestressed Concrete Design, Advanced Engineering Mathematics, Finite Element Method, Seismic analysis and design, Mechanics of solid, Project Management Framework and Tools

Bachelor of Engineering (Civil Engineering) **2014**

NED University of Engineering & Technology, Karachi, Pakistan

- Accredited by WES, Equivalent to a Canadian Bachelor's degree

PROFESSIONAL EXPERIENCE:

FC Associate **Sep'2020 – Jun'2020**

Amazon Fulfillment Center, Mississauga, ON, CA

Structural Engineer **Dec'2019 – Jan'2015**

Sadaf Fatima Structural Engineers (merged to Mushtaq and Bilal) – Karachi, Pakistan

- Developed a strategy for efficient site inspections which included a stringent quality check to monitor the compliance to design at regular intervals allowing effective control over the construction works leading to increased turnover of inspection reports and reduced lead time for proceeding works
- Calculated and presented a comparison of material requirement and construction cost for different building systems; suggested the cost-effective solution to the client

- Acknowledged for providing swift solutions utilizing experience from site inspections resulting in concise correspondence, resolved issues proactively at no additional re-work costs to the client
- Diversified my design portfolio with experience in retrofits of historic structures and other projects like unique steel stairs and study of minor fire incidents
- Reviewed existing site conditions including blueprints, survey reports, topographical maps, zoning restrictions, and client requirements to meet project goals before initiating the project
- Performed detailed loads analysis by complex calculations and 3D modeling precision using computer simulation with software like Etabs, SAP2000 & SAFE, etc. to predict structural behavior that enabled the selection of appropriate construction materials and design approach prompting faster project progression
- Gained valuable practical experience by supervising and reviewing process of tender preparation, bid packages, and project reports for assigned projects, ensuring that structural design complied with legal guidelines, administrative codes (UBC, ACI, AASHTO & PBC), environmental directives, and fire, health & safety standards while prepared estimations and cost analysis supported by quantity take-offs enabled the client to make informed decisions
- Close collaboration on construction plans, design conflicts, and issuance of coordinated drawings with different project stakeholders including clients, architects (working as sub-consultant), project managers, and other relevant consultants. Moreover, extended technical support in obtaining building regulations approval in liaison with relevant professional staff such as Architects and Client representatives
- Innovated, designed, and developed new approaches to retrofit running facilities cutting the time of construction while remaining within the budget

KEY PROJECTS:

- **Factory Extension & Assessment of Existing Structure & Strengthening Works for Existing Factory building, EBM, Karachi, Pakistan**
Detection of Diagonal cracks in beams of an existing building. Retrofitting works using Carbon Fiber Reinforced Polymer wraps. Factory extension was designed for the commercial purpose having Basement+ Ground + 2 floors consisting of Covered area approx. 200,000 sq.ft. Estimated cost \$7 million
- **AKUH Radiology Modification, AKU Hospital, Karachi, Pakistan**
Extension on the roof required for the facility which was originally designed as ground + partial 1 story building. Lightweight steel sections design. The major concern was the expansion joint passing between the proposed new structure. Estimated cost \$4 million
- **Izhar Construction Office and guest House, Karachi, Pakistan**
Building usage was changing from residential to office and guest house. From assessment, retrofitting, strengthening to extension, and making of openings this project is a living example of several complex design problems an engineer can experience. Estimated cost \$2 million.
- **French Medical Institute for Children-FMIC, Kabul, Afghanistan**
The project is composed of a temporary structure built in Kabul to provide clinical facilities for children. The scope was to design the temporary structure by fitting the containers in a systematic arrangement as specified by the architecture Foundation was also designed after keeping all the considerations of hillside location and the seismicity of the location. Estimated cost \$5 million

PROFESSIONAL CERTIFICATIONS, LICENSES & AFFILIATIONS:

- The Canadian Society of Civil Engineering, Student Member – 094676
- Ontario Society of Professional Engineers, Student Member – 40025473
- Project Management Institute PMI, Toronto Chapter Membership ID: 6045051
- Supervisor Health and Safety Awareness in 5 Steps – MOL, Ontario
- Worker Health and Safety Awareness in 4 Steps – MOL, Ontario
- The American Concrete Institute (ACI)- Student Member
- Pakistan Engineering Council, Registered Engineer PEC No. Civil-40541
- Member Institute of Engineers Pakistan, IEP Membership No. M-19123