

# Dr. Nabeel Ali, P.E., PhD, PMP, LEED GA, CXLT

Civil Engineering, Construction, & Premises Liability

## Professional Experience

- **Genuine Engineering Group**

- Principal Consultant – Construction, Property, & Premises

- **Construction Projects Analysis:**

- Evaluate and analyze the planning, design, documentation, and constructability of diversified projects related to industrial, commercial, healthcare, municipal, and residential buildings, wastewater, roadways, and infrastructure.
- Expert consultation and analyses of construction contracts, claims, defects, disputes, and accidents, including qualitative experience-based recommendations for resolution.
- Perform forensic analysis of facilities and construction accidents to determine the cause and origin of material or system failures and accidents.
- Analyze claimed deficiencies in design, specifications, and documentation.
- Examine design and construction compliance with contract documents, industry standards, applicable codes, and regulations.
- Construction bracing and shoring requirements analysis and review.

- **Property Structural, Civil, and Architectural Analysis:**

- Responsible for investigating and evaluating commercial, healthcare, industrial, residential, and public properties to determine the cause of structural and other failure and damage along with recommending remedial repair.
- Analyze facilities and developments for compliance with federal, state, and local code requirements, as well as for safety and hazards identification and utilization studies.

- **Standard of Care/Premises Liability Analysis:**

- Assessment of site safety standard of care and code, regulations and standards compliance including include OSHA, ANSI/ASSE, federal, state, and local codes.
- Analysis of incident liability interrelations with owners, agents, contractors, and construction managers following incident/accident.

- **Hill International, Inc.**

2015 – 2019

- Program and Project Manager/Engineer/Owner Agent, Central Ohio Projects

**City of Dublin Bridge Street District Program, Program/Project Engineering and Management**

The new district envisions a vibrant and walkable city center with a dynamic mix of land uses and housing that is integrated with natural wonders that tie corridors together. Key components of the program are an iconic bridge over the Scioto River that links a riverfront park and mixed-use development with Historic District.



## Contact Information

(216) 266-7153

[genuineconsultant@outlook.com](mailto:genuineconsultant@outlook.com)

[mahmood.39@osu.edu](mailto:mahmood.39@osu.edu)



- Conceptualization, master planning/scheduling, land use, design, preconstruction & construction for infrastructure, roads, bridges, facilities, buildings, parks, lots, etc., according to local & discipline codes. Value engineering and master planning/prioritization, aided by Primavera P6, Visio Pro, ArcGIS Pro, AutoCAD, & RSMMeans had great impacts on program success.
- Administration, coordination, and operation of design-bid-build projects at initiating, planning, monitoring, controlling, executing, and closing phases. Services include quality, time, cost, and safety planning, estimating, developing, assurance and control; also contract administration and integrated change control.

Ohio Dept. of Natural Resources, Capital Program Engineering, Management, & Funding Database Consulting/Owner Agent Services for \$500 million projects located at various sites, state parks, nature preserves and associated support and operating facilities for ODNR programs and regulatory agencies. The projects utilize a variety of construction delivery methods, including general contracting and design-build.

Buildings, dams, parks, parking/roadways, bridges, piers, wastewater treatment plants, utility infrastructure upgrades, fuel storage tank, etc., new projects, rehabilitation/renovation, expansion, design, estimation, specifications, bid documents, supervision, quality and scope control and assurance, claims, settlements.

- Implementation of recycling, waste and wastewater management and system solution projects.
- Managing large scale civil projects for dam renovation and new construction. Dams and embankments construction management, quality assurance and control, construction design, planning and sequencing.
- Forensic engineering, prognostic/diagnostic assessments, and risk mitigation for multidisciplinary issues.
- Time, cost and quality claims, risks, dispute, and resolutions management.
- Database system building and maintenance for capital program funding management using Power-BI/Access/SharePoint, cost/budget/funding/analysis, projects accounting and coordination. Review of project initiation forms, refining project scope, development of program total cost worksheets and reports.

#### John Glenn International Airport, Project Engineering and Management

Providing the Columbus Regional Airport Authority (CRAA) with task order-based construction management advisor services in connection with various improvement projects.

- Served in the multi-phase renovation and reconfiguration of the Airport facilities including ID Office at John Glenn Columbus International Airport. The work consisted of remodeling and reconfiguration of the entire space, including demolition of specified walls; installation of new walls; patching, painting, and repair of walls; and new ceiling, flooring, and millwork.
- Responsibilities include estimation, specifications, and bid documents for renovation and expansion.

#### Correction and Public Safety Facilities - Franklin County Board of Commissioners, Engineering



Providing project management services for pre-design and design services in support of a new public safety and corrections center. This new \$175 million, 430,000 SF, 868-bed facility can house both male and female inmates in thirteen classification categories.

- With an emphasis on redefining rehabilitation and incorporating more space for programming and mental health treatment, the new facility incorporates the latest jail design philosophies and built to utilize the Direct Supervision model of inmate supervision. The project comprises administrative offices for the Franklin County Sheriff's Office, a vehicle sally port, public entrance and visitor's area, inmate processing center, full-service kitchen and laundry, officer's command center, medical facility, dining facility, warehouse, central utility plant, and small-level and mid-rise inmate housing units.
- Responsibilities include project drawings and specifications development and review, and QA/QC.

#### **Ohio Turnpike and Infrastructure Commission (OTIC), Management and Claims Support Services**

- Time, cost and quality claims, risks, dispute and resolutions management for Highways and Bridges projects including claim data management, review, analysis, arguments, and recommendations.
- Work included qualitative and quantitative assessments by correlating and measuring compliance to contract/specifications/drawings, differing site conditions, underrun/overrun quantities, etc.

#### **City of Columbus, Department of Public Service Construction Inspection and Materials Testing**

Technical and Management services provided the City with additional resources/expertise to continuously support multiple federal, state, or private construction projects while adhering to codes & regulations.

- Professional technical assurance, control, verification, and reporting of construction quality on multiple projects according to construction and material codes, including Hess AEP Substation Phase 2, Herrick Transit Center, several underground utility installation projects as Columbia Gas and Time Warner Cable, and several asphalt and concrete pavement, storm and electrical ROW developments and restore.
- Multitasked and managed to fulfill duties at multiple projects and locations on a daily basis. Along with specifications and code compliance, duties included maintenance of traffic, construction and public safety, scope control, pay items reporting, and providing answers to technical questions.

#### **Central Ohio Transit Authority, Planning Department**

CM/PM services for multiple capital programs, major Transit System Redesign, and Rapid Bus.

- Program management, planning, scheduling, estimation, design and constructability review and enhancement for Transit System Redesign project (TSR), Bus Rapid Transit (BRT CMAX) infrastructure components, facilities, Compressed Natural Gas Station (CNG), park and ride lots, stations and more.



- CMAX is COTA's first Bus Rapid Transit line, a 16-mile route between Downtown Columbus and suburbs, with service to attractions and critical locations. The program includes dedicated lanes/routes during rush hours and effective use of technology of traffic signal priority.
- The projects range from bus shelters and streetscape infrastructure to the management of transit center rehabilitation, expansions, parks, etc.
- Evaluation and enhancement of technology for: LCD real-time bus information screens, traffic signal priority, during trip rider convenience, new fare boxes mobile payment, etc.
- **Central Ohio Transit Authority** 2013 - 2014
  - Civil Engineer, Capital Infrastructure Projects
    - Engineered, designed, and planned transit infrastructure projects in compliance with codes and standards.
    - Assessed public transit system network operations, routes, stops, infrastructure, etc.
    - Developed transit network scenarios plans for a complete Transit System Redesign for Central Ohio area.
    - Visioning the transit implantation plans and technology use and implementation plans.
    - Analyzed and compiled public transportation routes and infrastructure data using ArcGIS package.
- **Consolidated Contractors International Company** 2012 - 2013
  - Structural Design Engineer, Civil Engineering Department
    - Engineered & designed structural systems i.e., reinforced concrete & steel, for industrial & commercial structures, e.g., Wastewater Structures, using design codes, e.g., ACI, ASCE, ASTM, BS, AICS, UBC, IBC.
    - Managed, assured, & controlled the drafting of drawings by drafting team.
    - Introduced sustainability measures and practices as a member of the sustainability committee.
- **Bayti Real Estate Investment Company** 2012
  - Civil Engineer, Engineering Supervision & Contracts Management Department
    - Developed master project planning and engineering for the construction process assuring optimum productivity and performance are met along all city zones.
    - Supervised the execution of construction projects and contracts management.
    - Developed & controlled construction submittals i.e., schedules, BOQs, estimates, bid packages.
- **MWH Americas Inc.** 2010 - 2011
  - Site Engineer, Roads Construction Management for Infrastructure Needs Program
    - Conducted construction quality assurance & control according to project codes, scope control & validation, quantities surveying & payments, integrated change control, progress control reports, & drawings revision.
    - Effectively managed the large project's work force at field and office levels even in harsh environments to implement the projects components according to high standards, such as: road structures, drainage sewer systems, sanitary systems, and retaining structures.



- Civil Design, Water Design Department
  - Prepared & revised water/wastewater/sanitary infrastructure design projects at various stages.
  - Collected and processed data for infrastructure and resources master plan project.
  - Prepared approval and permit applications for infrastructure projects.

## Education and Certifications

- Professional Engineer (PE): Ohio, Oklahoma, Georgia, Alabama, West Virginia
- Project Management Professional (PMP)
- LEED Green Associate (LEED GA)
- Civil Engineering, Ph.D.: The Ohio State University
- Civil Engineering, M.S.: The Ohio State University
- Civil Engineering, B.E.: Birzeit University
- Certified for Engineering and Management, Ohio Department of Transportation (ODOT)
- Project Management Certification, Construction Management Association of America (CMAA)
- EXCEL Tribometers Certification for Slip Resistance (CXLT)
- Computer Aided Engineering Programs: BIM, Primavera P6, STAAD.Pro, ETABS, and more.

## Publications

- Mahmood, N. A. (2016). Real-time Construction Site Safety Risk Detection for On-foot Building Construction Workers Using RFID, The Ohio State University (OSU).
- Mahmood, N., Qin, R., & Butalia, T. (2021). Safety Risk Assessment Intelligent System for On-Foot Construction Worker Using Fuzzy Fault Tree. Journal of Intelligent & Fuzzy Systems.
- Mahmood, N. A. (2022). Real-Time Site Safety Risk Assessment & Intervention for On-Foot Building Construction Workers Using RFID-Based Multi-Sensor Intelligent System. OSU.
- Mahmood, N., Qin, R., Butalia, T., & Manasrah, M. (2022). Concurrent Events Risk Assessment Generic Models with Enhanced Reliability Using Fault Tree Analysis and Expanded Rotational Fuzzy Sets. Journal of Expert Systems with Applications.
- Mahmood, N., Qin, R., Butalia, T., & Manasrah, M. (2022). Real-time Site Safety Risk Assessment and Intervention Method Using RFID-Based Multi-Sensor Intelligent System, WORK: A Journal of Prevention, Assessment & Rehabilitation.

## Professional Engagements

- Bar Associations for Attorneys and Legal Professionals, Training Programs
- Risk and Insurance Management Society, Conferences
  - Instructor/Speaker for Construction Claims and Disputes, and Risk Assessment.
- American Association of Safety Engineers, Engineering Research Partnership
  - Award received for demonstrating leadership, professional excellence, & integrity.
- The Ohio State University, Scientific Research
  - Award received from OSU Civil Engineering Department.
  - Continuing state-of-the-art research and publications for: Realtime Risk Assessment &





Intervention Using Multisensor Intelligent System.

- **Rome City of Italy, Workshop on Urban Design**

Intensive workshop held at Rome city under the theme of “New City Centres to Live in.”

- Elaborated and developed scenarios of urban designs for Rome metropolitan and urban centralities.
- Integrated urban environmental and aesthetic quality with historical conservation.

- **Concrete Technology Project, Commercially Funded Research**

- Incorporation of limestone filler waste in concrete to improve concrete quality and durability, resulting in a win-win situation between environment and quality.

## Background

Dr. Nabeel Mahmood is a person of professional talents with more than twenty years of interdisciplinary engineering, planning, management and design experience in public, commercial, and residential building, and infrastructure projects. Along with his high academic qualifications achieved through engaging in state-of-the-art studies and pursuing valuable research in civil engineering and risk assessment disciplines, Dr. Nabeel brings a wealth of knowledge in engineering and management technologies, contracts administration, claims and dispute analysis and resolution, case research, value engineering, estimation, planning, scheduling, and implementing quality assurance and control procedures.

Nabeel's comprehensive leadership and experience promotes him to resolve project problems, develop contingency plans to mitigate unresolved problems without compromising quality, confirm decisions are made appropriately, develop and review inspection reports, develop alternate methods to recoup lost project time and interrupted sequences. His progressive experience and certified training provide him with the potential for applying professional methods and principles to plan and manage budgets and timelines to deliver optimum quality results.

Dr. Nabeel led multi-million-dollar projects as a Program Manager, from planning and design stages through construction, occupancy, and project close-out. He verifies that project planning, directing and control are per design and owner's intent. When serving as an owner's agent, he provided value-engineering and review of projects to ensure the optimum stability, strength, serviceability, and safety and considered balanced schedules and budgets. Nabeel has proven that he can deliver synergies and sustainability leading to the win-win resolutions.

Along with his leadership profile, Dr. Mahmood specializes in forensic investigation of construction defects, failures, accidents, injuries, vibration claims, and disputes. He is expert in evaluating residential and commercial buildings' flooring failures, ground and foundation settlement and collapses, concrete and masonry retaining wall cracks and distress, vehicle impact damage, fire, hail, and wind damage. Dr. Nabeel is experienced in steel and wood joist and truss failures, moisture intrusion through building envelopes, roofing system failures, and tile floor failures. His experience extended to premises liability and code compliance analysis. He is recommended for public walkways, ramps, parking lots, and stairs assessment for slip/fall and trip/fall incidents. Moreover, he is proficient with the English XL variable incident tribometer and the slip resistance evaluation of walking surfaces.