



**Abdulrahman Madani, BSCE, M.Eng., E.I.T.**

(416) 368-1700 | amadani@30fe.com

902 – 40 University Avenue, Toronto ON M5J 1T1

**EXPERT SUMMARY**

Mr. Abdulrahman Madani is an Associate with the Transportation team at 30 Forensic Engineering. He graduated from the University of Sharjah with Bachelor of Science in Civil Engineering and a Master of Engineering in Civil Engineering from McMaster University, with a specialization in geometric design risk and reliability assessment and highway safety. Prior to joining 30, Abdulrahman worked for the Transportation sector in the Government of Dubai where he gained a range of skills in traffic safety, work zone safety and traffic management, road users' safety, policy updates, and Vision Zero projects.

**SPECIALIZED PROFESSIONAL COMPETENCIES**

- Assessment of traffic safety using local standards, manuals, and guidelines
- Area safety studies for intersections, street segments and other roadway locations
- Collision analysis to determine collision prone locations and severity types for road safety programs
- Risk and reliability assessment for the highway geometric design using statistical analysis
- Economic evaluation of the traffic safety countermeasures using Benefit-Cost analysis and Net Present Value method
- Travel demand analysis and modeling using socio-economic data
- Strategic safety and planning policies that influence overall traffic safety outcome
- Safety assessment in winter on roads, parking lots, driveways, sidewalks, and trails
- Safety assessments related to road design, urban street and intersection design, design and maintenance for active transportation facilities, operational and maintenance safety for private road and parking lots

**ACADEMIC BACKGROUND**

Master of Engineering in Civil Engineering, Transportation, McMaster University, Hamilton, Ontario, 2022

Bachelor of Science in Civil and Environmental Engineering, University of Sharjah, Sharjah, UAE, 2017

**ADDITIONAL COURSES**

Data collection, design, and operation of ITS, ITE McMaster Chapter, Hamilton, Ontario, April 2022

Framing traffic safety, McMaster University, Hamilton, Ontario, March 2022



## PROFESSIONAL EXPERIENCE

### **30 Forensic Engineering**

Associate, Transportation

2022 – Present, Toronto, ON

- Investigator for transportation operations and maintenance files for public, legal, and insurance sector clients
- Assessment of winter maintenance operations for private and public properties, including roadways, parking lots, driveways, plazas, and private walkways
- Conduct comparative analyses of minimum maintenance standards, the Highway Traffic Act, OTM manuals, and other guidelines related to winter maintenance incidents and collisions
- Assessment of collisions during temporary work conditions on highways, roads, sidewalks, and cyclist facilities to ensure safety
- Statistical analysis of historical collision data to identify patterns and assess underlying factors that contribute to collisions on highways, intersections, and pedestrian crossings
- Examination of street illumination and assessment of visibility on highways, intersections, and midblock crossings
- Intersections safety assessment in rural and urban areas
- Assessment of the appropriateness of stop signs, speed limits, warning signs, and pavement markings on highways and intersection approaches
- Safety assessment of pedestrian and cyclists integrated facilities
- Assessments of visibility and sightlines of road curvature, and vertical alignments on roads and highways
- Assessments of road geometry and safety for private roads and access driveways
- Transportation safety and traffic engineering peer review services
- Intersection microsimulation, spatial analysis of collision trend and influencing factors in ArcGIS, preliminary analysis of street design, and collected data using 3D scanner

### **Road and Transportation Authority (RTA)**

Assistant Engineer

2018 – 2021, Dubai, UAE

- Issued temporary construction permits related to projects within the right-of-way, like work zone traffic management, temporary construction fencing and access points on a daily basis
- Inspected sites and proposals for the design and adjustment of access points and external pavements for upcoming and existing projects to raise the level of traffic safety according to the standards
- Monitored road diversions weekly, to control vehicular and pedestrian traffic to ensure safe & effective work zones
- Led a Unified Inspection Team responsible for issuing Building Completion Certificates as per the authority standards
- Coordinated with consultants/contractors and the relevant authorities at the RTA and facilitated obtaining the required NOC's



### **Sharjah Science Museum**

Instructor

2015 – 2018, Sharjah, UAE

- Conducted scientific experiments for visitors with static electricity, liquid nitrogen, and organized planetarium shows
- Collaborated with different museums to conduct World Space Day and Science Summer Camps for kids and teens
- Managed a team of hosts for exhibition hall and assisted visitors by offering exploratory tours around the museum
- Investigated the most recent scientific experiments and reported the results in presentations to the Education Department

### **PROFESSIONAL SOCIETIES AND ASSOCIATIONS**

- Registered E.I.T. with Professional Engineers Ontario (PEO)

### **AWARDS AND ACHIEVEMENTS**

- The leading Right-of-Way Inspector for the year of 2018, Roads and Transportation Authority, Dubai, UAE, February 2019

### **PUBLICATIONS AND ACADEMIC SPEAKING ENGAGEMENTS**

- Madani A., “Calibration of Geometric Design Guidelines to Account for Drivers' Mental Workload, Department of Civil Engineering”, McMaster University, Hamilton, ON, July 2022
- “Transport Inequality and Transportation Poverty Seminar”, Transport Policy course. McMaster University, Hamilton, ON, April 2022
- “Re-Envision of HSR Route 16: Low-Cost Planning Solutions for Improved Ridership”, Transit Modeling and ITS course, McMaster University. McMaster University, Hamilton, ON, April 2022