

# Richard C. Moeur, P.E.

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## Overview

- Experienced leader at the team, office, group, region, state, and national level
- Nationally-recognized leader in the development of traffic engineering standards and guidelines
- Nationally-recognized expert in traffic engineering and traffic control devices
- Experienced educator and trainer (sign software, cycling skills)
- Talented facilitator
- Delivering innovative and effective solutions for difficult problems and issues

## Education

### University of Arizona, Tucson:

- Bachelor of Science in Civil Engineering, May 1988
- Transportation and traffic engineering emphasis
- GPA: 3.28
- Member Tau Beta Pi honor society, Theta Tau engineering fraternity

### Specific training in:

- Traffic and transportation engineering
- Intersection design and channelization
- Bicycle planning and facilities
- Freeway traffic operations
- National Incident Management System and Incident Command System
- Complete Streets and accommodating all transportation modes
- Cycling skills instruction

## Registrations, Certifications, and Memberships

### Registered Professional Engineer

- Arizona - Registered Civil Engineer #27424

### National Committee on Uniform Traffic Control Devices (NCUTCD)

- Voting Member on NCUTCD Council, 1999-2017
- Member, NCUTCD Bicycle Technical Committee, 1997-present
- Chair, Bicycle Technical Committee, 2002-2017

### American Association of State Highway and Transportation Officials (AASHTO)

- Member, Subcommittee on Traffic Engineering (SCOTE), 2004-2017
- Chair, AASHTO Task Force on US Numbered Bicycle Routes, 2003-2017

### Transportation Research Board (TRB)

- Member, Committee on Bicycle Transportation {ANF20}, 2003-2012
- Member, Committee on Traffic Control Devices {AHB50}, 2014-present
- Chair, NCHRP Panel 15-42 - Use of Bicycle Lanes for Various Roadway Characteristics
- Member of several current & previous NCHRP panels (10-78, 15-37, 15-42, 15-48, 20-7)

### Arizona State Board on Geographic and Historic Names

- Member, April 2016 - March 2017

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## Publications and Presentations

### Published works:

- Transportation Research Record 1705, 2000
  - "Analysis of Gap Patterns in Longitudinal Rumble Strips to Accommodate Bicycle Travel"
- ITE Traffic Control Devices Handbook, First and Second Editions
  - Author / Co-Author of Chapter 14 (Bicycle Facilities)
- ITE Journal, May 2008
  - "Rolling into the Future: Emerging Resources and New Initiatives for Bicycle Transportation"
- Creator, designer, and owner of the Manual of Traffic Signs website (<http://trafficsign.us>)
  - Recognized internationally as the premier website for US traffic sign information
- Created figures and diagrams for the 1999 AASHTO *Guide for Development of Bicycle Facilities*
- Manual on Uniform Traffic Control Devices, 2000, 2003, and 2009 editions
  - Created text, figures, sign designs, and diagrams

### Technical presentations and papers:

- Institute of Transportation Engineers Annual Meeting, 1999
  - "Bicycle-Specific Traffic Control – Is it Bicycle-Friendly?"
- Western Association of State Highway and Transportation Officials, 2001
  - "Rumble Strips – What's All The Rumbling About?"
- Institute of Transportation Engineers Annual Meeting, 2001
  - "Now That's a Detour – Problems and Challenges of Multi-State Detours"
- National Bike Summit, 2003
  - "The Public Agency Official"
- AASHTO Traffic Engineering (SCOTE) Meeting, 2003 and National Bike Summit, 2004
  - "US Numbered Bicycle Routes – Expanding The Vision"
- ProWalk/ProBike Conference, 2004
  - "The 2003 MUTCD"
- AASHTO Traffic Engineering (SCOTE) Meeting, 2006
  - "Clarifying Clearview"
- ProWalk/ProBike Conference, 2006
  - "The MUTCD – What's Next for Bicyclists?"
- Iowa Bike Summit, 2007
  - "Bicycle Facility Design Workshop"
- Bi-State (Iowa/Illinois) Regional Discussion Forum, 2008
  - "Complete Streets Workshop"
- ProWalk/ProBike Conference, 2008
  - "The US Bicycle Route System"
- TRB Annual Meeting, 2010 and Arizona Roads & Streets Conference, 2010
  - "The 2009 MUTCD - Practitioners' Perspective"
- TRB Annual Meeting, 2011
  - "The 2009 MUTCD - State Perspective"
- ProWalk/ProBike Conference, 2012
  - "Developing, Using, and Expanding Design Standards and Guidelines"

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## Technical Proficiencies

Leader in development of traffic engineering standards and guidelines at the state and national level  
Nationally-recognized expert in traffic engineering and traffic control devices

Over 25 years experience in:

- Transportation project management
- Freeway and highway signing design and traveler guidance
- Work zone traffic control design
- Pavement marking design
- Project estimation
- Contract language and special provisions development
- Engineering plans and specifications review
- Bicycle facility and nonmotorized transportation design and operations
- Vehicle lighting and conspicuity

### Software:

- MacOS, iOS
- Windows (NT, 2000, XP, Vista, 7, 10)
- Computer-aided design {CADD} (Microstation)
- Sign design (SignCAD) - expert and trainer
- Word processing
- Spreadsheets & charting
- Graphic design
- Desktop publishing
- HTML coding and webpage design
- Desktop video and sound editing

## Professional Experience

### *Moeurengineering PLLC, Phoenix, Arizona*

#### *Principal and Chief Engineer*

*October 2017 to present*

Expert design review for complex urban traffic control projects

Expert analysis of signing issues for regulatory and contract compliance

Advising clients on engineering and risk management issues involving traffic control devices

SignCAD sign design software trainer

Leading the revision and update of high-profile US traffic sign websites

Assisting and advising NCUTCD leadership

### *Arizona Department of Transportation, Phoenix, Arizona*

#### *Transportation Engineer II, Traffic Group (Traffic Standards Engineer)*

*January 2012 to March 2017*

Directed creation and development of State standards, policies, procedures, and guidelines

Provided technical guidance on projects, studies, and reports

Maintained traffic engineering information resources

Coordinated with internal and external customers to ensure quality of technical guidance

#### *Team products:*

- Arizona Supplement to the Manual on Uniform Traffic Control Devices
- Arizona Manual of Approved Signs (MOAS) and other signing guidelines
- Statewide signing and marking standard drawings
- Statewide signal and lighting standards and drawings
- Statewide temporary traffic control guidelines and details
- Statewide technical guidance on school-related traffic control
- ADOT traffic engineering policies, guidelines, and procedures
- ADOT traffic engineering stored specifications and special provisions

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## Professional Experience (continued)

### *Arizona Department of Transportation, Phoenix, Arizona Transportation Engineer II, Traffic Group (Traffic Design Manager, Northern Region) February 2000 to January 2012*

Managed team of 2 engineers, 3 engineering specialists, 1 plans technician  
Directed technical activities and design efforts  
Directed on-call traffic engineering services and approving billings  
Coordinated with internal and external customers to ensure quality of design  
Coached team to improve communication, performance, and effectiveness  
Mentored engineers and team members on project planning and management  
Developed new and updated standards and guidelines for highway and freeway signing  
Managed ADOT adoption of the 2009 MUTCD  
Directed development of the Arizona Supplement to the 2009 MUTCD

#### **Team products:**

- Signing and pavement marking plans
- Work zone traffic control plans
- Project estimates and special provisions
- Signing work orders
- Traffic operational analyses

#### **Project Manager for the following projects:**

- I-10, Dysart Road to 3rd Avenue - Sign Update
  - Complex project in a challenging urban environment
- I-40, Sun Valley to New Mexico State Line - Sign Update
  - Ambitious large-scale project involving partnership with State of New Mexico
- Loop 101, Glendale Avenue to 75th Avenue - Sign Update
  - Extremely accelerated schedule with successful results
- SR 73, FATCO Road and SR 260 - Traffic Signals
  - Coordinated consultant signal design in scenic corridor
- B-40, Florida Street – Traffic Signal
  - Managed accessible design in a historic environment
- I-15, Mesquite to Black Rock - Sign Update
  - Challenging project in a remote corridor involving coordination with Nevada and Utah DOTs

### *Arizona Department of Transportation, Phoenix, Arizona Transportation Engineer I, Traffic Group (Western Region Team Engineer) May 1994 to February 2000*

Managed team technical activities and directed design efforts  
Directed on-call traffic engineering services and approved billings  
Coordinated with internal and external customers to ensure quality of design  
Coached team to improve communication, performance, and effectiveness

#### **Team products:**

- Signing and pavement marking plans
- Work zone traffic control plans
- Project estimates and special provisions
- Signing work orders
- Traffic operational analyses

#### **Project Manager for the following projects:**

- I-10, SR 85 to Dysart Road - Sign Update
  - Accelerated in-house design, delivered high-quality project
- I-8, California State Line to Liguarta - Sign Update
  - Created multi-state partnership with Caltrans to improve traveler guidance
- I-17, Pinnacle Peak Road to Cherry Road - Sign Update
  - Directed partnership with consultant on 64 mile, \$1.5 million project
- I-17, Maricopa TI to Thomas Road - Sign Update
  - Coordinated consultant, FHWA and AASHTO input on urban signing project
- Historic US 66 - Historic Route Signing
  - Signing created a renewed sense of pride in this famous highway

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## Professional Experience (continued)

### *Arizona Department of Transportation, Phoenix, Arizona Transportation Engineering Specialist, Traffic Studies Section October 1992 to May 1994*

Directed team of analysts, technicians, and field crews  
Developed traffic signal and safety studies and operational evaluations  
Coached team to improve communication, performance, and effectiveness  
Improved safety by designing warning light systems for Traffic Group vehicles  
Participated in statewide team to create new ADOT radio system

### *Arizona Department of Transportation, Phoenix, Arizona Transportation Engineering Specialist, Urban Highway Section October 1989 to October 1992*

Managed computerized graphical project information and management system  
Reviewed consultant plans for Phoenix freeway system  
Coordinated updates to Urban Highway Design Manual  
Created presentations, reports, and displays for ADOT leadership and public

### *Arizona Department of Transportation, Phoenix, Arizona Transportation Engineering Associate, Engineer in Training Program May 1988 to October 1989*

Gained an enhanced understanding of the mission, functions, and scope of ADOT  
Developed experience in many areas of ADOT Highways Division  
Engaged in construction project management and field engineering

### *Arizona Department of Transportation, Phoenix, Arizona State Service Intern, Student Engineering Program May 1986 to May 1988*

Gained experience in asphalt mix design and materials testing  
Engaged in construction project inspection and field testing

## Other Activities

- Past President (3 terms), Ride Leader - Arizona Bicycle Club
- Amateur Radio Operator - FCC call sign WC7RCM