Motorcyclist Advisory Council
Meeting #1 Summary
December 5, 2017

The first meeting of the Motorcyclist Advisory Council (MAC) was held on Tuesday, December 5, 2017 in the Virginia Room at the Federal Highway Administration's (FHWA) National Highway Institute offices in Arlington, VA. The meeting was attended by 36 people, including 10 MAC members, 13 US Department of Transportation staff, 11 members of the public, and 2 contractor staff. The following document provides a summary of the presentations, discussions, and comments received during the meeting.

Morning Session

1. Opening Remarks

Ms. Beth Alicandri, Associate Administrator for the Office of Safety (FHWA) opened the meeting at 8:30 am. Ms. Alicandri presented recent Fatality Analysis Reporting System (FARS) data on motorcycle crash fatalities and emphasized the importance of a collaborative approach to save lives. Congress asked FHWA to focus their work on engineering solutions and Ms. Alicandri noted several ongoing studies investigating motorcycle safety improvements.

She stated the core mission of the MAC is to identify infrastructure strategies to reduce motorcycle fatalities and crashes.

2. Introductions and Agenda Overview

Introductions

The meeting facilitator—Dr. Bob Scopatz (VHB)—led a round of introductions, beginning with the FHWA project team: Mr. Michael Griffith (FHWA) who serves as the Designated Federal Officer (DFO), Dr. Gabe Rousseau (FHWA), Ms. Guan Xu (FHWA), and Ms. Kara Peach (VHB).

Next, the MAC members introduced themselves and included information on their number of years motorcycling, the area of expertise they represent, and other anecdotal information on their motorcycling careers. In sum, the panel has over 200 years of motorcycle riding experience. The following individuals make up the MAC:

- Mr. Michael Sayre, MAC Chairperson, American Motorcyclist Association (DC)
- Mr. Joel Provenzano, MAC Vice Chairperson, Florida Department of Transportation (FL)
- Mr. James Baron, American Traffic Safety Services Association (VA)

- Mr. Michael Crow, Rocksol Consulting Group Inc. (CO)
- Dr. Chanyoung Lee, University of South Florida, Center for Urban Transportation Research (FL)
- Mr. Eric Line, Michigan Department of Transportation (MI)
- Dr. Shane McLaughlin, Virginia Technical Transportation Institute (VA)
- Ms. Jane Lundquist, Texas Department of Transportation (TX)
- Dr. Craig Shankwitz, Western Transportation Institute at Montana State University (MT)
- Ms. Fay Taylor, Ohio Department of Transportation (retired) (OH)

Other meeting attendees included the following individuals:

- Ms. April Canter (Harley-Davidson)
- Mr. Frank Carbone (Motorcycle Riders Foundation [MRF])
- Ms. Tiffany Cipoletti (MRF)
- Ms. Megan Ekstrom (MRF)
- Mr. Brian Fouch (FHWA)
- Mr. Mark Gardiner (Common Tread)
- Mr. Jeremy Gunderson (NHTSA)
- Mr. Mike Hernandez (BMW)
- Ms. Callie Hoyt (Motorcycle Industry Council)
- Mr. Joseph Jones (STG)
- Mr. Scott Kebschull (Dynamic Research)
- Mr. Andrew Kelly (Pennsylvania ABATE)
- Mr. Yusuf Mohamedshah (FHWA)
- Ms. Kara Peach (VHB, facilitator)
- Mr. Jonathan Porter (FHWA)
- Dr. Bob Scopatz (VHB, facilitator)
- Ms. Carol Tan (FHWA)
- Mr. Dillard Taylor (private attendee)
- Mr. Winson Wang (Robert Bosch)
- Ms. Kathryn Wochinger (NHTSA)
- Mr. Philip Weiser (NHTSA)
- Ms. Menna Yassin (FHWA)

Welcome and Agenda

Mr. Griffith provided background information on the MAC, noting that FAST Act authorization established the Council in Section 1426; the Office of the Secretary appointed the MAC members while FHWA manages the group. When establishing the MAC, the Office of the Secretary selected individuals with highly diverse professional backgrounds, riding experience, and an understanding of technical roadway design issues. Mr. Griffith reviewed recent FARS data and ongoing FHWA efforts to study motorcycle safety. One FHWA initiative of interest is a summary of an international scan tour investigating what other countries are doing to mitigate motorcycle crashes through infrastructure countermeasures. The complete report can be found at: https://international.fhwa.dot.gov/scan/12028/. Another recent activity was a series of Road Safety Audits (RSA) conducted as a byproduct of the International Scan. The RSA report can be found at: https://safety.fhwa.dot.gov/rsa/resources/docs/fhwasa16026.pdf.

Dr. Scopatz reviewed the agenda, meeting ground rules, and general housekeeping. He noted time was available for public comment in the afternoon and although individuals were to notify FHWA of their interest prior to the meeting, remaining time would be open for additional commenters. At

FHWA's suggestion, during the discussion period following each block of presentations, any remaining time left after the MAC members' questions and comments was designated for members of the audience to ask questions or make comments.

3. MAC Charter and Bylaws

MAC members were provided printed copies of the MAC Charter and MAC Bylaws for discussion. Additional copies were available for members of the public and are still available by request following the meeting.

Charter Overview

The Charter establishes the mission, duties, and general operational characteristics and is submitted to and approved by the General Services Administration (GSA). The MAC will make recommendations to FHWA, and the FHWA Administrator will determine how to act on those recommendations. Mr. Griffith is the Designated Federal Officer (DFO) for MAC, and is responsible for approving all meeting minutes and agenda items. The MAC can establish sub-committees and working groups. Meetings will be held approximately twice a year with resources available to conduct two in-person meetings and two virtual meetings in total for the current duration of MAC. The Charter will expire 2 years from filing (October 2019). The Charter is on the GSA website at: https://www.facadatabase.gov/committee/charters.aspx?cid=2602&aid=47

Bylaws Overview

The Bylaws establish the MAC committee operating procedures. MAC members and members of the public can submit ideas for agendas. The DFO, Chair, and Vice Chair will develop and finalize meeting agendas, which will be outlined in the Federal Register. The MAC is required to have a quorum and a consensus (measured by no dissent by a member) for all decisions. In the event that a MAC member cannot attend a meeting MAC, the member can designate a substitute with shared expertise. The DFO, Chair, and Vice Chair will approve all official meeting minutes and then make the minutes available to the public.

MAC Goals

Dr. Scopatz asked the MAC members to state their goals for the committee. The following list is a summary of the topics MAC members said they would like the MAC to address:

- Data-driven guidance
- Work zones
- Vehicle-to-vehicle (V2V)
- Vehicle-to-infrastructure (V2I)
- Lane keeping
- Autonomous vehicle technology
- Lane width
- Lane splitting
- Variable message signs
- Guardrail, concrete barrier design, and cable barriers
- Alternative barrier designs
- Clear Zones
- Low-cost solutions
- Local solutions
- Chip seal and maintenance issues
- Lighting

The MAC also had a general discussion on intelligent transportation systems (ITS), autonomous vehicles, and the role of automakers in testing the impact of new technologies on motorcyclists. The MAC discussed the merits of social network outreach or education similar to that in Europe where the public can notify DOT of adverse situations for motorcyclists (Mr. Moto).

4. Motorcycle Safety Data Analysis Related to Infrastructure

After a break, MAC members Dr. Lee and Mr. Line each gave presentations about motorcyclist-related safety data. In his presentation, Dr. Lee reviewed motorcycle crash data and specific variables (e.g., demographics, engine size) and crash reporting variables that limit the information that can be gleaned from crash reports (e.g., traffic controls, roadway design, roadway maintenance). Mr. Line presented Michigan-specific motorcycle crash data, crash reporting, and diagrams, and a study on crashes occurring at roundabouts. Following the presentations, the MAC had a roundtable discussion.

Dr. Shankwitz asked Dr. Lee if exposure data for vehicle miles traveled (VMT) and registration are available. Dr. Lee explained that VMT exposure data is not available, though highly desirable. Although V2I technologies may help, some motorcycles have the same axle distance as smaller motor vehicles so this research is challenging. Dr. Lee also explained the limitations of registration data.

Mr. Provenzano asked Mr. Line if the time of day was a factor for roundabout crashes. Mr. Line responded that the speed of traffic and the multi-lane design were the largest contributing factors. This elicited a discussion on the importance of advance signage, issues riders face with too much signage (specifically near work zones), and fish hook signage.

Following the MAC roundtable discussion, the floor was open for members of the public. Mr. Kebschull commented on Dr. Lee's presentation, noting recent research on gap acceptance that found that people misjudge the distance and speed of motorcycles and therefore, misjudge appropriate gaps. Mr. Kelly asked Dr. Lee if the number of fatalities is related to economic health, to which he responded positively. Dr. Lee cited research that found motorcycling is a recreational activity and when the economy is good, people are more likely to engage in recreational activities.

5. Motorcycle Safety State-of-Practice by States on Infrastructure Issues

Mr. Sayre opened the floor for roundtable discussion on the state-of-practice for motorcycle-related issues. The following summary is organized by topic areas. Following the MAC discussion, the public was invited to make additional comments. No comments were received.

Federal Plans and Funding

Mr. Griffith introduced State Strategic Highway Safety Plans (SHSPs) as data-driven, federally required plans that identify emphasis areas for highway safety improvement. The plans do not dictate how federal money is spent, however. There are 42 SHSPs that mention motorcycle safety. Mr. Gunderson from National Highway Traffic Safety Administration (NHTSA) explained that States need strong data to support an issue as an emphasis area – coalitions and stakeholder groups can bring more awareness for the need for specific data analysis. Dr. Shankwitz volunteered to review the SHSPs to identify how motorcycles are defined and included and identify points of contact for additional follow up, as needed. His review will identify which of the State SHSPs include infrastructure issues as part of the motorcycle emphasis area or specific mentions of motorcycle safety issues.

In terms of defining motorcycle riders, Mr. Provenzano observed that Florida informally categorizes motorcycles as vulnerable users and Mr. Line said it is more inclusive to say 'at risk' populations. Ms. Lundquist noted Texas recognizes issues related to riders but not to the level of inclusion in designs and Mr. Crow explained that riders are often viewed as part of the transportation system, but primarily as recreational users.

State Plans and Initiatives

Mr. Line said Michigan has a Motorcycle Safety Action Team comprised of several State, local, and rider groups. Although the Team cannot make laws or policy, they can have an influence. The benefit is in the networking and sharing information on motorcyclists' safety concerns, and advising the Governor's Traffic Safety Advisory Commission. Mr. Provenzano passed around a copy of the *Florida Motorcycle Strategic Safety Plan* (http://www.fdot.gov/safety/SHSP2016/Florida%20motorcycle%20safety%20plann%20(MSSP)%202016%20Update%20v5_9_w.pdf) and detailed the success of the Survive the Ride program, which educated emergency response teams how to best treat motorcycle crash victims.

Although Vision Zero plans are federally supported, local agencies are responsible for developing and implementing the plans. Dr. Lee observed that if the goal is zero deaths, then the plans must be motorcycle-inclusive. Highlights of the discussion include the observation that the national plan limits motorcycle issues to helmet usage; Michigan uses the plan to engage groups and bring more attention to motorcycle issues; and the Tampa-Bay District Secretary sends bi-weekly emails highlighting roadway fatalities to personalize the statistic.

Infrastructure

Mr. Crow noted that roads are often designed for large trucks with the assumption that this design should be able to accommodate any size vehicle, but signage and other roadside hardware do not work well for motorcycle riders. Dr. Shankwitz reported that several States have found it easier to change the law for motorcycles going through red signal phases (when the motorcycle's presence is not registered by the signal controller) rather than change infrastructure; as pointed out by Mr. Provenzano, this is likely because technology takes more time and money to implement than policy.

Dr. Shankwitz is also interested in identifying if anyone has developed GIS KML files to identify crash locations to correlate serious injury crashes with locations. Mr. Provenzano reported Florida

examines specific segments or curves if more than 1 crash occurs in 7 years. Mr. Griffith said that both FHWA and NHTSA provide funding and technical assistance for improving data-driven processes.

Break for Lunch

Afternoon Session

6. ITS Motorcycle Research and Applications

Dr. McLaughlin and Dr. Shankwitz opened the afternoon sessions with presentations. Dr. McLaughlin presented current research results from the Motorcycle Safety Foundation's MSF100 Motorcyclists Naturalistic Study and NHTSA 160 Study. He also described levels of automated driving systems and how automated systems in motor vehicles consider or benefit motorcycles. Dr. Shankwitz presented on V2V license place technologies which could be used to transmit basic safety messages to other connected vehicles, introduced the necessary hardware, and the need for robotic motorcycle riders to enhance research on issues like motorcyclists impacting roadside barriers and the interaction of motorcycles and bicycles with autonomous vehicles. Following the presentations, the MAC had a roundtable discussion.

Mr. Line asked Dr. Shankwitz the timeline and necessary steps for implementation of robotic motorcycle riders. Dr. Shankwitz replied that often tools are developed for one need and then other applications are identified after. For example, the robotic motorcycle was developed as a response to a durability test. Therefore, the robotic motorcycle rider may help answer research on how humans would interact with different barrier designs, but no funding source or client has yet been identified.

Mr. Crow asked Dr. McLaughlin which issues rose to the top in the MSF 100 study. Intersections were the primary issue, as was low-speed tip over. These crashes can be disabling, especially for older riders, but are not shown in FARS data. Roadway departure and lane maintenance were also common issues in the study. He explained the MSF100 was a naturalistic study, which is more detailed than a typical study based on crash report data; and therefore, provides insights that can inform countermeasure development for selected crash types. The study can also indicate factors that contribute to uneventful riding such as long following distances, proficient riding, moderate speeds, and maintaining motorcycle skills (i.e., frequent riding).

The discussion was then opened for public comment. Mr. Kebschull expressed interest in the value of using robotic motorcycles to research barrier designs. There is limited research on the topic, and those studies that do exist use a crash dummy. Dr. Lee explained humans are more likely to overcorrect in comparison to a controlled crash trial using a dummy, so crash dummies are not a good substitute for these investigations.

7. DOT Activities on Motorcycling

Mr. Mohamedshah and Dr. Scopatz presented updates from three ongoing FHWA research studies. Mr. Mohamedshah presented findings from the Motorcycle Crash Causation Study (https://www.fhwa.dot.gov/research/tfhrc/projects/safety/motorcycles/mccs/). He also introduced Identifying Infrastructure-Based Motorcycle Crash Countermeasures Phase 1—a new effort currently in the literature review phase. There will be a stakeholder workshop on February 13, 2018 and the study leaders will engage with MAC members. Dr. Scopatz presented the goals of the Motorcycle Safety at Intersections project, which will identify infrastructure-based motorcycle crash countermeasures. Findings will be presented to the MAC in 2018.

The discussion was open to the public. No comments were received.

8. Public Comment

Time was designated for public comment. The Federal Register announcement required commenters to send an email prior to the meeting to reserve time to speak; however, at FHWA's direction, any person present who wished to speak was allowed to take the floor. One person requested time prior to the meeting and the remaining scheduled time for public comment was opened to any of the public in attendance. Each person was allowed 3 minutes to speak.

Ms. Ekstrom submitted a petition signed by over 5,000 riders that calls on the USDOT to add 3 additional seats to the MAC to represent on-street riders; 1 seat for a national organization and 2 for regional/State rider associations. The Motorcycle Riders Foundation members are concerned the MAC is not representative of associations and coalitions that stand for motorcycle voices. After the meeting, the DFO received the petition package from Ms. Ekstrom.

Mr. Hernandez spoke on the Motorcycle Safety Research Consortium (MSRC) that is currently in the initial stages of formation. The group is organized by manufacturers with the goal to develop or conduct research on emerging issues, so there is the potential for overlap with the MAC. Mr. Hernandez requested coordination from the MAC and the new group. Dr. McLaughlin noted he is participating in the MSRC.

No additional comments were received at the time of the meeting. Written comments can be submitted to MAC@fhwa.dot for consideration.

9. Roundtable Discussion

The final portion of the day was an open roundtable for the MAC members to discuss any relevant topics, emerging issues, and future plans and accomplishments for the MAC. To further assist the MAC, Mr. Griffith will investigate the difference between working groups and sub-committees and discuss with the Chair and Vice Chair. Additionally, Mr. Griffith explained that the MAC will make draft recommendations to FHWA and then FHWA will determine what items they have the authority to potentially act on or move forward.

MAC members identified several key issues for further discussion. Although intersection crashes are shown to be dangerous, several ongoing research efforts are investigating the issue so the MAC decided to table this for now. Maintenance issues—specifically tar snakes and chip seal—are not addressed in the AASHTO Green Book and not addressed by FHWA. This is a potential topic the MAC could develop recommendations for research or noteworthy practices. Other potential maintenance and work zone topics can include construction barrels versus grabber cones, lighting in work zones, pavement conditions, and the use of high friction surfaces.

Dr. Shankwitz noted that these issues are all personal experiences but additional research is needed to quantify the data. Mr. Baron suggested examining the available data from NHTSA to identify which categories have data to support the effort. At this point, Dr. McLaughlin introduced a straw man work plan for the MAC. The following outline details the high-level decision points of the discussion.

1. Define the end goal (December 2017): Determine the most useful type of material for FHWA (e.g., report, research recommendations).
    a. FHWA response: FHWA achieves most of its reach on roadway safety through guidance, technical assistance, training, peer exchanges, and through promoting proven safety countermeasures. The MAC will continue to discuss with FHWA the most effective strategies for accomplishing this goal.
    b. Tie recommendations to performance goals.
    c. Include a public outreach component to increase visibility.
    d. Emphasize tools and resources for implementation.
2. Collect guidance/data regarding crash causation (May 2018): Identify the data needs, group similar contributing factors, and prioritize by impact on fatality statistics. Available data sources include:
    a. Motorcycle Crash Causation Study.
    b. FARS.
    c. Crash reports (some States have searchable databases for descriptive narratives).
    d. State SHSPs and Emphasis Area narratives.
3. Brainstorm and matching of candidate countermeasure to buckets (July 2018).
4. Systematic review/down selection by members and FHWA relative to the MAC Charter (August 2018).
5. Divide up selected approaches (August 2018).
6. Deep dive on countermeasure (March 2019).
7. Draft output (FHWA recommendations) per end goal defined at start.
8. Review and markup of draft (May 2019).
9. Finalize MAC output (July 2019).

MAC members will continue to discuss this plan electronically and at the second meeting.

10. Next Steps

The MAC will conduct a conference call in January 2018 to discuss potential agenda items for the second meeting. The DFO, Chair, and Vice Chair will finalize the agenda and target a March 2018

meeting timeframe. Meetings must be approved by the Office of the Secretary at least 60 days before the meeting. Meetings must be announced in the Federal Register at least 15 days before they occur.

Mr. Sayre will compile a complete contact list for the MAC members.

Mr. Mohamedshah will present the findings of the February workshop at the next MAC meeting.

Mr. Sayre thanked everyone for their participation.

Adjourn ***4:24 p.m.***