To: Members of the IACMI Infrastructure & Construction (I&C) Working Group

From: Joe Fox

Subject: Summary of I&C Working Group meeting held 1/31/22

The sixth meeting of the Infrastructure & Construction (I&C) working group was held on January 31, 2022. This meeting was held virtually using Microsoft Teams and attracted 84 attendees. John Unser and Joe Fox co-facilitated the meeting, which lasted two hours.

This summary is accompanied by a pdf file that contains all the slides shown during the meeting. Slide 2 shows the agenda and the slide numbers for each topic. The entire slide deck can also be accessed in the folder for the I&C working group on Microsoft Teams.

Here is a link to the recording of the meeting:

<https://www.dropbox.com/s/mjpajfq3x2y2qpy/JanuaryInfastructureConstructionWG_0.mp4?dl=0>

Joe Fox opened the meeting by reviewing the objectives of the working group and tying them to the agenda (slides 3-6). He gave a detailed update on the $1.2B infrastructure bill (Infrastructure Investment & Jobs Act or IIJA) that has been signed into law and several pieces of infrastructure legislation still making their way through Congress (slides 7-48). Joe divided the funding in these bills into two buckets: 1) construction projects to repair existing infrastructure and 2) funding for infrastructure-related R&D. The funding for the latter is much smaller than the former, but Joe noted that there are tens of billions of dollars intended to support R&D. To increase IACMI’s chances of securing some of that funding, a funding sub-committee was formed. Nine members of the working group have volunteered to serve on the sub-committee, which will be chaired by John Unser.

John Busel gave an update (slide 51) on ACMA’s recently-announced plant certification initiative with the American Concrete Institute (ACI) and NEx. Richard Krolewski provided an update on the FRP Institute for Civil Infrastructure, its DOT advisory committee, and its auditing program for FRP rebar and carbon fiber ropes. (slides 52-53).

The next portion of the meeting (slides 54-103) was devoted to a discussion of three potential R&D projects:

1. *Use of Trimer’s fire-resistant resin for I&C applications:* Trimer Technologies, Orenco and Strongwell are teaming up on a project to fabricate and test infused and pultruded samples made with Trimer resin in FR tests such as E1354, E84 and E119. (slides 66-76)
2. *Use of recycled wind blades in I&C applications:* This project has overlap with both the Wind Energy working group and the Recycling/Circular Economy working group. Steve Nolet from the Wind Energy working group described the Wind-a-Palooza session held during the meeting in Dearborn last October and a recently-issued Request for Information (RFI) from the ReMade Institute (slides 81-85). Joe Fox provided a summary (slides 86-89) of the work on selective dis-assembly of blades performed by the Re-Wind Project, a collaboration between universities in Ireland, Germany and the U.S. Two emerging technologies involving un-selective disassembly of blades were also described: 1) the DuC board technology from RiversEdge (slides 90-97) and 2) the recycling technology from GreenTex Solutions (slides 98-100). Work to define a collaborative project that involves all three working groups continues.
3. *Infrastructure for Rural Communities:* John Unser provided an update on ongoing efforts to outline a project that would offer a menu of composite bridge solutions to the FHWA and state DOTs. (slides 101-103)

Joe and John urged members of the working group to submit other potential R&D projects for consideration at the next working group meeting, tentatively planned for late April

On the Life Cycle Cost front, John Unser gave a detailed summary (slides 104-127) of the Benefit Cost Analysis (BCA) he has conducted for the Morgan County bridge in Tennessee. In this analysis, John used the BCA guidance document from the DOT that can be accessed with this link: <https://www.transportation.gov/sites/dot.gov/files/2021-02/Benefit%20Cost%20Analysis%20Guidance%202021.pdf>

On the education front, Joe Fox presented details (slides 128-130) for an upcoming American Society of Civil Engineers (ASCE) webinar that will feature three members of the working group. It is entitled *“An Introduction to Designing with FRP Composites for Civil and Environmental Engineers”* and will be presented by Prof. Dayakar Penumadu (UTK), Prof, Habib Dagher (U Maine) and Prof. Francisco DeCaso (U Miami) on **Monday, April 4 from 11:30 to 1:00 EST**. You can use this link to get additional information and to register: <https://mylearning.asce.org/diweb/catalog/item?id=8989000>

Members of the working group can receive the ASCE member rate ($99) using the discount code IACMI20.

The **action items** are summarized on slide 134 and are copied here:

* Distribute the information from the meeting (meeting summary, presentation slides, recording)
* Schedule the next working group meeting (mid to late April)
* Everyone - Send ideas for potential R&D projects to John Unser & Joe Fox
* Send out reminders with info about the ASCE webinar on Designing with FRP on April 4th
  + Forward the information to your civil engineering, architectural & construction colleagues
* Everyone - Recruit downstream members of the working group
  + Civil engineers, design engineers, structural engineers, architects, construction, OEMs….
* Form a funding sub-committee with the volunteers from today’s meeting

Comments/questions/suggested can be directed to Joe Fox ([foxconsulting147@gmail.com](mailto:foxconsulting147@gmail.com)) or John Unser ([john@compositeapplicationsgroup.com](mailto:john@compositeapplicationsgroup.com)).