AMENDED

Department of Health Care Access and Information
2020 West El Camino Avenue, Suite 800
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HOSPITAL BUILDING SAFETY BOARD
Instrumentation Committee

Tuesday, July 5, 2022
10:00 a.m. – 4:00 p.m.

Locations:
Department of Health Care Access and Information
2020 West El Camino Avenue Suite 930
Sacramento, CA 95833

Department of Health Care Access and Information
355 South Grand Avenue Suite 2000
Los Angeles CA 90071

Teleconference Meeting Access:
HBSB Teams Instrumentation Committee
Access Code: 741-653-566

Committee Members
Marshall Lew, Chair
Bruce Clark, Vice Chair
Jim Malley
Tim McCrink
Farzad Naeim

HCAI Staff
Arash Altoontash
Richard Tannahill
Hussain Bhatia
Roy Lobo
James Yi

Consulting Members
Hamid Haddadi
Moh Huang
Tony Shakal

HBSB Staff
Ken Yu, Executive Director
Evett Torres
Veronica Yuke

1. Call to order and Welcome

Marshall Lew, Committee Chair, called the meeting to order on July 5, 2022, at 10:00 a.m., and Veronica Yuke called roll.

2. Roll Call and Meeting Advisories/Expectations

Five members of the Committee present constitute a quorum. There being eight present at the time of roll, a quorum was established.

Ms. Yuke read the public announcement regarding COVID-19, meeting rules and procedures.

3. Review and approve the draft April 15, 2022 report/minutes

Presenter: Marshall Lew, Committee Chair

Discussion and Input

Mr. Lew said that there were no corrections in the report/minutes and called for a motion to approve.

MOTION: [Malley/Naeim]

The committee voted to approve the April 15, 2022 meeting report/minutes.

Informational and Action item

- None

4. The draft White Paper on "The Benefits of Strong-motion Instrumentation in Hospital Facilities"

Presenter: Marshall Lew, Committee Chair, and Fazard Naeim, HCAI

Discussion and Input

Mr. Clark was concerned about the evaluation of whether a hospital has been damaged or not. Mr. Naeim answered that the White Paper presents some case studies where the recorded strong motion instrumentation data recorded at the site and at the building was used to estimate and confirm what happened at that particular building.

Mr. Clark talked about a deficiency in the Community Seismic Network (CSN) approach to provide seismic motions at different levels within a building. Mr. Naeim added that application of CSN is not limited to free field motions as the CSN-type instrumentation can be installed at different levels in a building. The current operational CSN network has concentrated on measuring "free-field ground motions. Mr. Naeim suggested that

the last part of the paragraph be eliminated to be clear about the CSN approach. Mr. Haddadi mentioned that it would be wise not to conclude anything on the White Paper on low resolution instruments until evaluation is complete.

Mr. Bhatia said that HCAI has provided information on the instrumented data and requested that the URLs be mentioned on the White Paper. Mr. Lew suggested that information be put in the conclusion section.

Mr. Lew asked Mr. Malley about his experience regarding low-cost instrumentation. Mr. Malley gave an example of when a building was instrumented after an earthquake and the results were analyzed fairly quickly which gave a detailed analysis of the building; an example was given for a building that was instrumented in Utah and experienced the March 18, 2020, Magma earthquake. Mr. Farzad requested if Mr. Malley could send the results for the building to be included in section three. Mr. Malley answered that he could do that.

Mr. Haddadi suggested that the White Paper be clear on the goal and application of high-resolution instrumentation and low-resolution instrumentation. Mr. Naeim said that if the White Paper gets technical into the different types of resolutions, there will be loss of audience who are not familiar with the technical terms. Mr. Naeim suggested an additional paragraph to section 5 that describes the value high resolution instrumentation post-earthquake has compared to low resolution instrumentation.

Mr. Lobo asked if the low level resolution instrumentation was cheaper in terms of maintenance and monitoring. Mr. Naeim said that low level instrumentation is cheaper than high level instrumentation.

Mr. Haddadi suggested that instead of using a black box at the building that can be damaged in case of an earthquake or loss of data due to disruption of internet services, data be gathered immediately to a cloud server. Mr. Naeim answered that the “black box” is not necessarily physical, it is a comparison to the information that can is obtained from airplane incidents and how instrumentation can work the same way. So, it is a virtual black box in the clouds.

Mr. Lew asked Mr. Malley how information about the Magma earthquake was obtained. Mr. Malley answered that the data was posted automatically on the website from a notification from the supplier, then the data is downloaded.

Mr. Clark suggested that the White Paper include a section that details how the data is obtained, processed, and stored in the event there is loss of communication or loss of Wi-Fi.

An interested party asked if the White Paper poses competition between public and private entities. Mr. Lew answered that the purpose of the White Paper is to provide information about high resolution or low resolution instrumentation and promote the use of instrumentation as a whole.

Mr. Malley pointed out specific pages that needed editing:

- Page 5 - strengthen non-structural components
- Page 8 - clarification on instrumentation on buildings that have alternate means of compliance permit
- Page 21 - paragraph 3 and 4 to be merged since they talk about the same issue
- Page 24 – clarification on evacuation process on critical care hospital buildings

On page 7, Mr. Huang suggested the White Paper use a regular hospital building as an example. On page 9, Mr. Huang suggested they use a more updated map. Mr. Lobo stated they will update a new map. Mr. Naeim suggested that on page 7, the hospital be replaced with Olive View hospital since it is already used, and the report and data is available.

Mr. Huang asked the order in which the hospital buildings are aligned in Table A1. Mr. Haddadi answered that the order of the table was by station number. Mr. Naeim suggested the table be ordered alphabetically.

Mr. Lew suggested figure 8 use a map that shows locations and that the site number be removed so as to be less confusing. Mr. Haddadi said that figure 8 would have a new map and leave out the figures.

Mr. Lobo talked about changes on:

- Page 10 - hospitals be clarified as being under HCAI jurisdiction
- He suggested a language change on page 15, paragraph 6 and on page 20. Additional language on page 24, the first paragraph.
- Mr. Lobo said that the historical hospital instrumentation projects need to be added in Page 19.

Mr. Haddadi said that using MEMS technology may be too advanced for the White Paper because the technology is still in research. Mr. Naeim said that the MEMS technology can be potentially used, and other types of technology can be used.

Information and Action item

- None.

5. Comments from the public/committee members on issues not on this agenda

Presenter: Marshall Lew, Committee Chair

Discussion and input

- None

Information and Action item

- None.

6. Adjournment

Mr. Lew adjourned the meeting on June 22, 2022, at approximately 11:39 a.m.