

Masonry in Hawaii

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2016 MIH Project of the Year

The **808 FUTSAL INDOOR SOCCER FACILITY** was selected as the Masonry Institute of Hawaii's 2016 Project of the Year. The facility is located in the Kapolei Business Park. The 2-story, 63,830 square foot air conditioned stadium contains 3- courts with bleacher viewing areas, pro shop and snack bar. FUTSAL is a derivative of futbol sala or "room football" in Spanish. The sport was started in Uruguay in 1930 and is a FIFA-sanctioned modified form of soccer played with 5 players per side on a smaller, hard surface court (132 feet by 76 feet) that is typically indoor.

The \$15.6 million design-build arena is constructed entirely of masonry and concrete and was built in under 24 months. The CMU bearing walls are 30 feet high on average, with some portions reaching 40 feet in height. Strength design techniques were employed to design the tall slender masonry walls from 8" CMU with no pilasters. Masonry was selected for the exterior/interior walls because of its flexibility, fire resistivity and aesthetics.



8-inch masonry walls range from 30-40 feet in height



808 FUTSAL Indoor Soccer Facility located in Kapolei



Rod Haraga, Ryan Wada (President, MIH) and the winning team members

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The winning team members are:

Owner: Pentecost Hawaii LLC

General Contractor: Swinerton Builders (Matt Jun, James Bui and Evan Thomas)

Architect: CDS International (Glenn Miura, Matt Chung, Anthony Deguzman)

Structural Engineer: Baldridge & Associates Structural Engineers Inc. (Craig Meierhoffer)

Mason Contractor: **Affiliated Construction LLC**
(Karl Kamada, Francis Pascual, Anthony Tomas)



808 FUTSAL built in 24 months using 8" CMU

TMS & STATE BUILDING CODE

The State Building Code Committee has approved changes in the Unit Strength Method in TMS 602-13 by making the same changes to the 2012 IBC Table 2105.2.2.1.2. The provisions of TMS 402-11 and TMS 602-11 will still be the same basis for design except the new net area compressive strength of masonry values in TMS 602-13 for unit strength method can be used.

The change in the unit strength method will also affect the “no cleanout” exception which is a current Hawaii amendment. One of the options to make changes to the current code is to increase the maximum $f'm$ from 1,500 psi to 1,900 psi in the “no cleanout” exception, a proportionally increase in the fine grout minimum required compressive strength should also occur from 2,500 psi to 3,000 psi. Also, with the changes in TMS 602-13 the same material used in construction can be assumed to have a higher compressive strength using the unit strength method.

The next step in the process is to obtain administrative approval.

SEISMIC DESIGN – MASONRY SEMINAR

Mr. John Tawresey, Structural Engineer, presented a seminar on design of masonry structures to a group of 37 architects and engineers. The seminar was held at Pearl Country Club on Monday, March 13, 2017. AIA participants earned 5 credits towards their continuing education requirements. Please visit www.masonryhawaii.com for seminar notes.

