Summary Report, Market Development Cooperator Program, “Building an Understanding of U.S.-Based Sustainable Construction Codes and Standards and the Underlying Relationship Necessary to Expand the Market for Domestic Products in the GCC”

October 2014 – September 2019

Summary
The MDCP project successfully leveraged an opportunity to prevent barriers to trade and increase U.S. construction sector export competitiveness in high-growth Gulf Cooperation Council (GCC) countries. Prior to the project, GCC nations made public commitments to increase the level of sustainable construction in the region, recognizing high quality infrastructure as a key driver of desired foreign direct investment. Use of international standards and building codes, which reference these standards, is critical to achieving sustainable construction and facilitating sector trade.

The MDCP project showcased U.S.-developed international standards and model building codes relevant to GCC priorities and engaged Gulf leaders in the development, implementation and evaluation processes. The resulting understanding and uptake of U.S.-developed international standards and model building codes achieved in the region will ease market access for U.S. construction products and services and increase U.S. export competitiveness. The agreements by Saudi Arabia and the GCC Standardization Organization to create national and regional building codes based on U.S.-developed model codes will reduce potential barriers to trade that could arise from implementation of alternate code solutions.

Project Details
In the ASTM-led Market Development Cooperation Program initiated in 2014, the primary objective was to build-on and enhance relationships among public and private sector participants responsible for developing and implementing standards and model codes for sustainable construction. ASTM entered the Program with a firm foundation, having signed memorandums of understanding with all the individual Gulf Standardization bodies as well as the regional body the GCC Standardization Organization (GSO). Over the five-year project, in conjunction with the International Code Council (ICC), the United States Department of Commerce, and several other participants such as laboratories, manufacturers, trade associations, universities and building code offices, in both regions, the objective was accomplished. “Understanding” pertained not only to technical knowledge of sustainable construction, but learning, comprehending and adjusting logistical, regulatory, and cultural aspects of assembling, implementing and enforcing standards and a model code for the GSO region.

The project presented a roadmap of purposeful actions and timelines designed to provide events and exchanges with organizations in support of sustainable construction and sustainable partnerships. Long-standing, independent two-party partnerships grew into a coalition of effort. The program provided training to dozens of standards and codes professionals and technical experts throughout the region. Equally important, it encouraged collegial professional and business relationships in industry, academia and government. These relationships are now well established and expected to continue thanks to the support of signed business agreements and other local initiatives that are now in place.

As noted in the project proposal’s executive summary, “…governments remain the most influential clients and investors in construction projects in the GCC.” While the standards and model codes in the United States are largely developed by the private sector, enforcement and implementation falls to local authorities having jurisdiction. Therefore, it was critical to link the public and private sectors in both
regions to develop a full understanding of sustainable construction. US government support, in the form of funding, but more importantly the knowledge and facilitation provided by the Department of Commerce in Washington, DC and the Gulf region, were critical to our success.

In the program’s early stages engagement began with showing GSO representatives what products and companies were available to support sustainable construction. Through attendance at the 2015 Green Build Expo, the world’s largest conference and exposition dedicated to green building, eight GCC delegates visited the exhibit hall and made seven site visits in the metropolitan Washington, DC area to see the implementation and measurement of sustainable construction. One such site visit included the Net Zero Energy building located on the campus of the United States’ National Institute of Standards and Technology campus in Gaithersburg, MD. During the U.S.-based portion of the program, site visits were enthusiastically embraced by the visiting delegates and the host venues which included manufacturing facilities, laboratories, construction sites and municipal building and inspection departments.

While virtual training sessions were intended to continue the uptake of information during the Program, they proved difficult to arrange due to time differences and the depth of the technical content. This was not indicative of a lack of interest. When technical training was conducted in the Gulf region, events were well-attended, and engagement was active. In-person training conducted by ASTM International or ICC technical experts on a wide range of topics related to sustainability including concrete, water efficiency, cool roofs and thermal insulation, was fully embraced.

To sustain standards and codes, to ensure they reflect innovative materials and processes and new social, economic and environmental realities, and to be able to recommend and defend proposed revisions which accommodate local conditions, it’s important to understand the development processes for standards and codes. Witnessing the organized sessions, transparent discussions and voting process was vital for participants contemplating a similar systematic process. Several “hands on” activities offered these procedural perspectives. Site visits complemented what was learned on the procedural side with real time, live examples of evaluation, implementation and enforcement – all part of the cycle.

During the 2nd quarter of 2016, eight representatives, some who had participated in the September 2015 Conference, were part of an “Intensive Training Program”. The two-week program included an extensive introduction to the ASTM organization and procedures at ASTM International headquarters, visits to ICC’s Chicago offices, site visits to laboratories and municipal code offices, and observation of the development of new or revised technical standards at ASTM Committee Week meetings. The Committee Week sessions not only introduced the GSO delegates to experts and peers involved in various aspects of sustainable construction but also featured the open and transparent discourse and market driven approach that results in ASTM’s voluntary consensus standards. The training program was viewed as so informative by the Saudi participant that the Saudi Arabian Standardization Organization (SASO) self-funded two of its staff to participate in a stand-alone six-week Intensive Training Program that mirrored the previous program. This independent initiative to support two participants, one a manager of standards development at SASO and one now promoted to Deputy Director of the Construction & Building Materials Department, is an example of how the MDCP encouraged the development of broader relationships and sustained knowledge among the participants and partners.

The opportunity to explain and demonstrate the multi-phased ICC code development procedure occurred in April and October of 2018. Again, observing why and how proponents offer code revisions
for consideration and the process of voting by code officials was more informative and impactful because it was witnessed in-person. The October ICC code hearings were co-located with the ICC’s Global Connections Day conference. Global Connections Day gathers stakeholders from around the world to present and discuss specific topics in the area of building safety. One of the topics for the 2018 program addressed innovative approaches to the building regulatory process. Again, these visits were attended by several of the same program participants, individuals directly engaged in and contributing to the formulation of national and regional codes. Participants had the opportunity to directly dialogue with peers and experts to compare challenges and solutions in the development and implementation of a model code.

While much of the MDCP focused on technical and procedural aspects of construction standards and codes, it also afforded the opportunity for executive leaders to meet their business peers in an array of organizations other than the partner organizations. When the ASTM Board of Directors’ October 2016 meeting took place in the United Arab Emirates, two training seminars and several outreach visits were conducted in Abu Dhabi and Dubai. These events with government and industry stakeholders helped highlight ASTM International’s long-term commitment to engaging in the region.

The benefits of participation and support from ITA and other U.S. government representatives cannot be overstated. Joanne Littlefair, Dao Le, Shakir Farsakh, and Ambassador Leaf all spoke at MDCP events to offer their support. In addition, there were many Embassy staff behind the scenes also supporting the effort in many of the Gulf countries including Qatar, Saudi Arabia, Kuwait, and the UAE. Our executive relationships in the region were further enhanced when ASTM joined the US/UAE Business Council in 2017, a partnership that was nurtured and begun under ITA’s guidance. The mutual respect for ASTM’s work in the region was highlighted with the awarding of ASTM’s President James Thomas with a special award from Department of Commerce for his contributions to field of standards development.

Because of the routine and dynamic dialogue of key representatives from both regions, it was possible to develop sustainable partnerships that will carry the initial objective into the future. For ICC this meant signing agreements with both the GCC Standards Organization and the Saudi Arabian Standardization Organization to support the development of building codes based on the ICC model codes. The Saudi Building Code National Committee (SBCNC) successfully launched the 2018 Saudi Building Code, which heavily incorporates provisions from the 2015 International Codes. As part of the implementation of the new Saudi Building Code, SBCNC has contracted independently with ICC to provide training materials and courses for code officials. Talks are still underway with the GSO regarding a regional building code that would be closely harmonized with the Saudi Building Code. Meanwhile the officials at the Abu Dhabi Department of Planning and Municipalities are considering updating their existing building codes to those based on the 2018 International Codes. All of this expansion in the use of U.S.-developed model codes, referencing U.S.-developed international standards will support the harmonization of building practices, enhance safety and facilitate commerce in the region. Once fully implemented, these local, national and regional building codes, accompanied by references to ASTM International standards made possible by ASTM’s MoU’s in the region, will reflect the latest advances in building safety, affordability and sustainability and be a driving force for innovation and safety advances in building design and construction. Training opportunities will continue to provide updated information.
For ASTM and ICC, the MDCP interactions and events enhanced existing relationships with the national standards bodies (NSBs) in the region. Stronger, more dynamic relationships were developed with the NSBs in Saudi Arabia and the UAE, as well as the regional body, GSO. In accomplishing the obligations and objectives of the Cooperator Program, ASTM and ICC staff were routinely in the region and able to work closely with several individuals. We foresee continued growth not only in the citation of standards and codes related to sustainable construction, but to related programs. For ASTM this growth will expand into other sectors than construction.

Thanks to the relationships developed and nurtured through the MDCP, the first-ever ASTM International Chapter has been established in the United Arab Emirates. Focused on the construction industry, the chapter will provide a local, direct link to ASTM International staff and technical experts, and provide a collaborative networking environment. Intended to serve technical and professional interests of government, industry and academic (including student) stakeholders, the chapter is a two-way conduit, providing a forum to better understand local needs and emerging trends, and amplify the Emirati voice in formulating consensus solutions in the form of market relevant standards and appropriate proficiency and development programs. Likewise, due to engagement in the MDCP, as ICC’s new global strategy has been developed and launched, the Gulf Region has been identified as a top priority. As a result, the first ever ICC international office is being opened in Dubai to serve the region, allowing ICC to continue to build and strengthen relationships with stakeholders in the region and provide a launchpad for developing and pursuing future business.

To be relevant and reflect technical quality, standards and codes must engage the full array of users in the public and private sectors and incorporate changing technology and innovations. Codes and standards are dynamic. While “book” knowledge is an important component of developing an understanding of these encompassing tools which support sustainable construction, seeing implementation and engaging other stakeholders in one-on-one discussion is a more effective teaching tool. These two pieces, the training and the linking of public and private sectors in both regions throughout the program, were at the crux of the MDCP’s success. Understanding the fundamentals of US-based international standards and codes so that they are called out in regional codes globally favors US-based suppliers of goods and services.