**Community Libraries in Guatemala**

Since 2017, ESC has been assisting the Reickens Foundation with the architectural design and assessment of nine community libraries in Guatemala. These libraries provide a population of over 9,000 with a place to convene and learn. ESC is addressing electric, plumbing and roofing infrastructure needs for each library structure, ensuring that they are a safe space for community education.

**Improving Health Systems in Sierra Leone**

In 2014, the world's largest Ebola outbreak spread rapidly across the West African nations of Guinea, Liberia and Sierra Leone. In response, King's College London contacted ESC with a request for engineering assistance to support critical infrastructure improvements at Connaught and three other hospitals in Freetown, Sierra Leone. ESC deployed a series of experienced engineers to the field over a period of one year. The volunteers designed an installation of an oxygen factory, an emergency entrance to the hospital, improved water and sanitation facilities throughout the hospital campus, and constructed a tuberculosis clinic. This assistance improved the hospital's overall operations and reduced intensive care unit and emergency room fatality rates by 30 percent.

**Wastewater Feasibility Study in the West Bank**

In Spring 2014, two ESC volunteers in partnership with United Nations Relief and Works Agency (UNRWA) assisted in the design and assessment of a proposed wastewater and storm water infrastructure for Ein Sultan Refugee Camp in the West Bank. The camp, home to 4000 refugees, lacked a public sewer system and relied on poorly built percolation pits. ESC volunteers contributed 13 full days in the field conducting assessments with an additional three months working on a final report with UNRWA. This report provides recommendations, cost estimates and design elements for UNRWA with the necessary information to apply to grant opportunities in order to fund construction.

**Vehicle Bridge Construction in Guatemala**

EWB-USA has been working with the municipalities of Joyabaj and San Martin Jilotepeque of Guatemala since 2005. The municipalities identified the need for a vehicular bridge because of the region’s lack of access to hospitals, schools, markets and other necessary services. In early 2018, ESC volunteers, in partnership with community members and municipal engineers, constructed a new concrete vehicle bridge. The bridge stands 22 feet tall and spans 50 feet across the canyon and is engineered to hold a semi-truck, per American Association of State Highway and Transportation Officials (AASHTO) standards. The project included design and construction management capacity building for municipal staff.