

# Construction of Concrete Modular Foundations

## - Procurement and Quality Control

This project details the material procurement and quality control processes throughout the construction of two concrete modular foundations. The project focused on constructing the blocks as they were designed to ensure they meet strength parameters to be used in the High Bay Lab at California Polytechnic State University in San Luis Obispo (Cal Poly) for various testing performed as part of the curriculum for the Architectural Engineering (ARCE) and Construction Management (CM) departments. The complex designs, encompassing one-hundred coupler attachments and a dense rebar cage, required extensive attention and hours of labor and quality control review. This paper will cover the main phases of the construction process and how they were acquired. Furthermore, the considerations taken throughout the construction to provide a quality product will be discussed throughout the paper. The lessons learned during the build are important items discussed which will allow students in the future to build more foundations should the High Bay require broader testing capabilities. The foundations were built successfully on schedule and met the quality of the design requirements. The purpose of this project was to assist in creating more resources for research and classroom material to be completed at Cal Poly. With the use of the foundations, the ARCE department will be able to test various building components that are important for the construction industry as well as student understanding.

Jackson Runyan – Runyanj@icloud.com – 209-272-4455

