

Innovative Masonry Slender Walls

PROJECT DESCRIPTION

In 2011, the province of Alberta planned to modernize and build more than 230 schools. The program included many projects in which construction of tall, slender, reinforced-masonry walls were needed for gymnasiums. In addition to the primary moments due to wind pressure, these tall walls experience significant secondary moments due to P-delta effects. To resist these amplified loads, additional steel reinforcement must be placed within the masonry units. Engineers and architects found that a high percentage of steel in the masonry units would make it difficult to meet ductility objectives in the Canadian masonry code. To meet these provisions, wider, heavier concrete units were needed. Contractors reported that the larger units were uneconomical, taking away the competitive edge of masonry industry over other materials and technologies, such as walls made of steel studs, precast panels, or wood. The aim of the research at the UofA is to develop innovative masonry walls able to be built taller, with thinner units that exhibit comparable (or superior) strength, stiffness, and ductility than thicker walls of the same height.

FACULTY-DEPARTMENT

Engineering - Civil and Environmental Engineering

DESIRED FIELD OF (STUDENT) STUDY

Civil Engineering, Strength of Materials

INTERNSHIP LOCATION

University of Alberta Main Campus - Edmonton

NUMBER OF INTERNSHIP POSITIONS

2

INTERNSHIP START DATE

July 4

INTERNSHIP END DATE

October 4

ARE THE DATES FLEXIBLE?

Yes, I am flexible regarding the internship dates. Selected students can contact me to request a date change.

Contact: Brendan Cavanagh, Internship Coordinator (Inbound)
University of Alberta International
intern@ualberta.ca