

BE PROJECT SUMMARY**BEACAN PRESBYTERIAN CHURCH– BEAVERTON, ON**

New wood framed sanctuary and public space with a reinforced masonry block gymnasium and community centre.



PHOTO TAKEN OF THE SIDE ENTRANCE TO THE BUILDING WITH THE COMMUNITY CENTRE TO THE RIGHT.

Beacan Presbyterian Church is a two story multi-use community facility with a gymnasium, kitchen, offices, and sanctuary.

12,000 SF. \$2.2M

Foundations:

The interior and perimeter foundation walls and footings are typical reinforced concrete foundations set below the depth of frost.

Superstructure:

The superstructure for the kitchen, office and sanctuary was designed with wood framed exterior bearing walls which incorporated wood panel shear walls with discrete hold-down anchors. Interior framing was structural steel and incorporated large openings and glazing walls. The roof was framed with pre-engineered pre-fabricated light metal plate connected wood trusses.

The gymnasium superstructure was designed with load bearing reinforced concrete masonry block, which incorporated panels of sound block. Lateral loads were resisted by masonry shear walls.

Highlights:

High stud wall framing (16 ft) created conditions where combined compression and bending stresses required close analysis to provide an economical structure; partial second floor area created floor diaphragm discontinuities and special load transfer detailing requirements; ceiling profile varied requiring multiple end-wall framing solutions; roof trusses were detailed with both bottom and top chord profiles to accommodate a variety of interior architectural conditions and sanctuary window openings; gymnasium incorporated masonry sound block into the design of load bearing walls and shearwalls.

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