



Karman Beal, P.Eng.

Intermediate Civil/ Structural Engineer

Education

B.Sc. (Civil Engineering) 2003 University of Calgary

Affiliations

Association of Professional Engineers, Geologists, and Geophysicists of Alberta (APEGGA)
American Institute of Steel Construction Inc. (AISC)

Experience (2004 – Present)

BECK ENGINEERING (1992) LTD.

Since joining Beck Engineering, Karman has worked on a variety of civil and structural engineering assignments in the Oil & Gas industry as well as projects in light industrial and commercial fields.

Recent projects she has been involved in have included:

- Analysis and design of structures using computer modeling and analysis techniques. Structures include steel skid packages, pipe racks, control buildings, vessel supports, tower and stack bases, and other miscellaneous structures.
- Design of foundations for buildings, skid packages (compressors, dehydrators, separators, etc.), storage and process tanks, horizontal vessels, compressors, radio towers and flare stacks.
- Analysis and design of jib cranes, monorails and overhead cranes as well as davits, vessel attachments, lift lugs, etc.
- Design of concrete foundations and structures, including concrete piles, shallow foundations, grade beams, and slabs-on-grade.

PROJECTS OF INTEREST

CanDyne Pump Services Inc.

Design and analysis of numerous pump skids for lift conditions. Analysis also included design of overhead crane systems.

Exergy Engineers & Constructors Inc.

Designed numerous concrete foundations for a fractionation plant expansion.

Also involved in the design of miscellaneous steel structures.

Fortress Engineering

Structural design of a mobile dehydration unit for lifting and transport cases as well as worst-case snow, wind and seismic loads for the intended operating locations.

Gemini Engineering Limited

Involved in the design of a Wet Prill structure located in Galveston, Texas. The structure was required to withstand hurricane force winds.

Opti Canada Inc. – Long Lake Upgrader Project

Designed concrete foundations for numerous large towers and tanks. Also designed sulphur pit with removable concrete roof panels, and slab-on-grade for amine building.

O'Rourke Engineering Ltd.

Foundation design for numerous sites across Alberta and B.C. Foundation types used include driven steel piles and screw piles.

Structural steel design of piperacks and equipment support frames.

Propak Systems Ltd.

Designed shallow concrete foundations for a plant expansion in Kentucky. The site was located in a flood plain and had to be designed for flood and earthquake loads.

Sherritt Power

Design of a substation expansion in Boca de Jaruco, Cuba. The substation was located in a hurricane region and needed to be designed to withstand large wind loads.

Swift Engineering Inc.

Completed designs for site upgrade, including review of concrete foundation for larger compressor and foundation and steel support analysis.

Designed concrete and steel foundations for a compressor site. Also designed pipe supports and miscellaneous steel structures.

Tundra Engineering Associates Ltd.

Foundation design for numerous sites across Alberta. Foundation types used include driven and screw piles.

Structural steel design of piperacks and equipment support frames.

2001-2002

PWGSC – Parks Canada Dedicated Unit

As an internship student, Karman worked on projects for Western Canada's National Parks including trail bridge design and the inspection and redesign of the Johnston's Canyon catwalk system. This included completing surveys of sites where projects were to be constructed.