Older homes contain ventilated attics that buffer the heat radiated through roofs. However, it is common for people today to inhabit their attics or construct cathedral ceilings. Both of these design situations require the rafters to contain sufficient insulation to buffer the radiant heat and conversely, do not ventilate heated air. General question, is the traditional design feature of a well insulated and properly ventilated attic the most appropriate means for buffering radiant heat through a roof? The proposed research will involve the evaluation of an alternative design proposal that allows the attic spaces to be inhabited.