

# PROJECT: The Collegeway

## Summary:

During the Canadian winter heating season, heating starts in the most populated areas across the northern US border, by the end of September and continues through to late March early April. Traditional electric baseboard heaters are used extensively to heat Industrial, Commercial, Residential and Recreational spaces all across the country. These Heaters work on the principal of the traditional “convection heat” cycle.

With the introduction of a new generation of “radiant heaters” used extensively in Europe, it was thought to heat such spaces in a more effective way by using Infrared heating waves to heat objects directly (like the sun). This is a less wasteful way of heating and allows better energy efficiency.

## The Project:

Purpose: The project served to demonstrate the true energy savings by using Infrared heaters (radiant heat) instead of the common baseboard heaters (convection heat).

Approach: By taking two identical apartment units with equal exposure, one equipped with the normal baseboard heaters and the other refitted with REDWELL Infrared Heaters.

The building: A multi unit Apartment building with 146 Units ranging from 1 bedroom units (ca. 600 Sq. Feet) to multi level 3 bedroom units (ca. 1200 sq. feet).

The location 2285 The Collegeway  
Mississauga, Ontario  
L5L 2M3



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The building (Pict. 1) has apartment units where electricity is included in the monthly rental charges and other units where the tenants pay electricity themselves. All units are individually metered.

The total electricity consumption is approx. 2.2 million kWh.  
The total electricity bill is approx. Can \$ 200.000.- / year

Pict. 1



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The picture below shows the one bedroom with the typical base board heaters. The dimensions are given in the floor plans that follow.

**In Apartment 419 baseboard heaters remain!**



**Apartment 319 – refitted with Redwell Infrared Heaters**



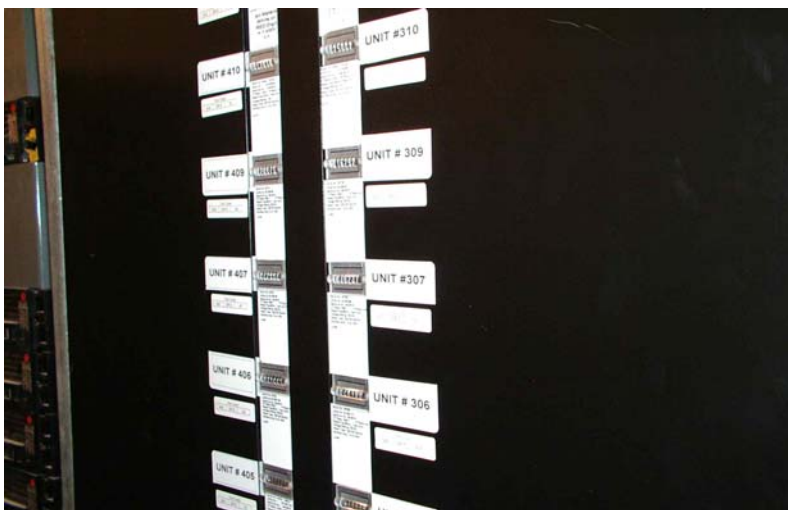
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All units are individually metered:

Current transformers to measure the electricity usage

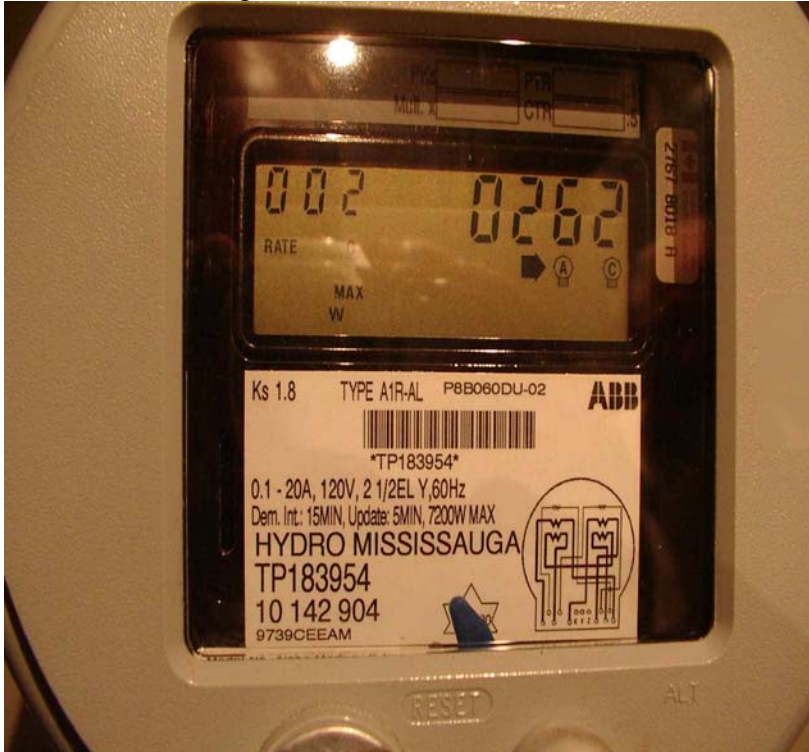


The meters for reading the electricity usage



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The main incoming meter:

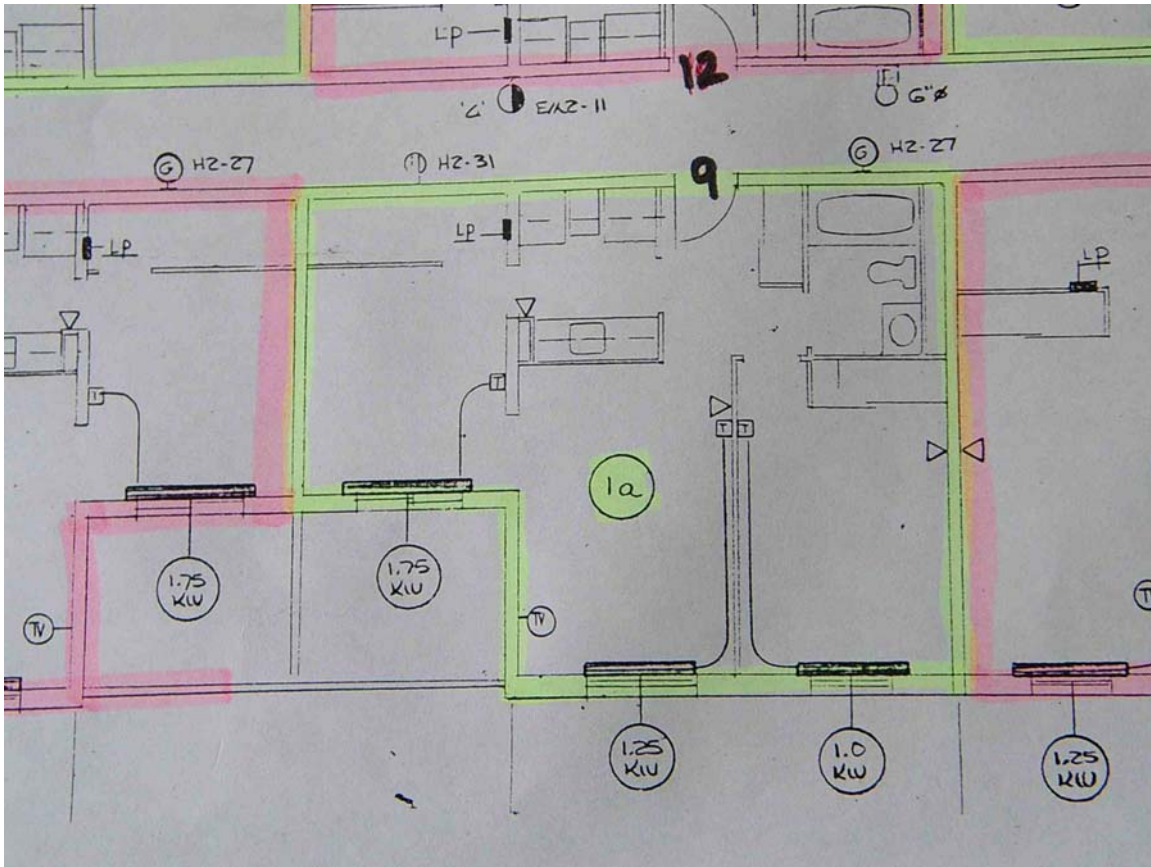


All baseboard heaters in the house are connected to 208 Volt. 12 gauge wires are used rated for 20 amps. All heaters have conventional thermostats wired to the heaters.



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## Lay out of Apartment units 319 and 419



The units in question was a 1 bedroom

Type 1a with 600 sq. feet

These units have identical exposure and layout (both empty).

