



## US CASE STUDY #21

January 10, 2006

### **Warwick, Rhode Island Warwick House of Hope**

Warwick House of Hope seeks to provide long-term comprehensive care to homeless individuals with physical and mental disabilities who have the potential to live independently. The Warwick, Rhode Island location was recently renovated to host eleven studio apartments, each with bath and cooking facilities, plus a common living and kitchen area, and space for group meetings and training.

According to Frank Murphy of Frank Murphy Architects, both heating and cooling were part of the original design of the building. Working with Jeannie Lamb, Housing Development Director for the Warwick House of Hope, Murphy discovered the building's narrow windows and concrete exterior walls presented a challenge due to the need for several individual heating and cooling units.

According to Lamb, a chilled water system was the first consideration for this facility. However, when the building's physical challenges and budgetary constraints came to light, High Tech Engineering's Jon Jarvis, a mechanical contractor in Pawtucket, RI, suggested the use of two Daikin® VRV® 8-ton RXYQ96MTJU heat pump condensing units connected to 17x FXAQ12MTJU indoor wall mount units as the perfect solution.

According to Murphy and Jarvis, the Daikin outdoor units' flexible design enabled them to be installed in the facility's mechanical room, satisfying the challenge of no available outdoor space. Low sound and no ductwork were additional benefits that met more challenges faced by architect Murphy when initially taking on this renovation.

Lamb pointed out that since the Warwick House of Hope is a not-for-profit organization that relies on state and federal government subsidies and only 30% of residents' income, system efficiency and individual operation and zoning was a key factor. Furthermore, Lamb noted that this location is a "housing first model," the first eleven of 50 apartments to be constructed as mandated by the governor of Rhode Island. "The quiet operation of these systems is amazing," says Lamb.

Both Lamb and Jarvis pointed out that Pariseault Builders, the general contractors on the project, had remarked that the Daikin system provided an easier installation considering the challenges of the windows and wall construction. They also remarked how a chilled water system would have required added costs of concrete drilling and concealing of chilled water lines within the building. Daikin's indoor and outdoor units provided solutions that the chilled water system would not accomplish.

According to Jarvis and Lamb, Daikin's VRV heat pumps hold "precise temperature throughout the space, consistently." In addition they add, "It is nearly impossible to detect when the units are in defrost, compared to heat pumps of old, no cold blow whatsoever." The added benefit of installing the condensing units indoors enabled the Daikin systems to provide the majority of the heating demands. Jarvis indicated that "on a recent 17°F day, he recorded 120°F leaving air temperature off the indoor units, amazing technology."

Jarvis added that the Daikin systems were easier to install compared to chilled water, simpler to wire and met all the challenges and needs of the customer.

- written by Russell Tavalacci, Daikin AC (Americas), Inc.

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**Product Profile**

	Qty / Outdoor Model	Qty / Indoor Model
Daikin Equipment	2 / RXYQ96MTJU	18 / FXAQ12MVJU 1 / FXAQ18MVJU

