



Energy Efficiency Consulting Services and Solutions

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First Homes

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Rochester, MN 55901

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RPU account #2207931

MER account # 0504874903-00047

1. Hybrid Water Heater
 2. HRV Operational & Maintenance Signage
 3. Furnace Duct Updates
 - Return air
 4. Ventilation Updates
 - Bath Exhaust
 - Kitchen Hood Exhaust
 - Dryer Vent
 5. Rim Joist Insulation
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Observations

Stucco exterior

- Thermal shell air-tight for 1930s vintage construction

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Insulation

- Attic (blown & blanket) R60
- Sidewall R13
- Basement rim joist R0
- Basement foundation R0
- Windows Double-pane
- Entry Doors Good/fair condition

- Return air duct system is deficient

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AC, 2-ton 1 year old

Water Heater, 40 gallon, electric 1 years old

Bath exhaust fan and kitchen hood are ineffective

Clothes dryer flex duct is substandard

HRV, heat recovery ventilator 1 year old

Recommendations

1. Hybrid Water Heater (ASHP, air-source-heat-pump)
 - Hybrid water heater operates dehumidifier (ASHP) during the spring/summer/fall and operates electric resistance during the winter
 - Damp basement is an ideal application

RPU Rebate	\$400
Projected Annual Savings	\$240 per year

2. HRV Signage
 - Install signage to help new owner on proper operation and maintenance
Clean air filters annually (fall)

Heating season operation will improve indoor air quality and reduce window condensation

<i>November 1</i>	<i>40%</i>
<i>December 15</i>	<i>20%</i>
<i>March 15</i>	<i>10%</i>
<i>June 1</i>	<i>0%</i>

3. Furnace Duct Updates
 - Fabricate one (1) additional return register in the hallway
 - 7-inch duct, baseboard wall register
 - Eliminate two (2) wild return registers located in the basement

4. Ventilation Updates

Bath Exhaust Replacement
80 CFM
4-inch exhaust duct connected to roof vent

Kitchen Exhaust Duct Installation
Round (cabinet) or Oval (wall cavity) exhaust duct
6-inch exhaust duct connected to roof vent

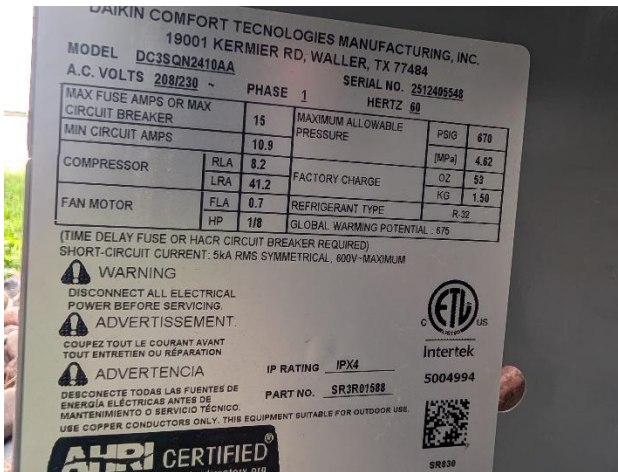
Clothes Dryer Vent
Replace flex duct with rigid duct

5. Basement Rim Joist Insulation
 - Spray foam perimeter rim joist, R20 to increase basement temperature and occupant comfort

MER Rebate	\$125
Projected Annual Savings	\$60 per year



Electric water heater and clothes dryer flex duct



Furnace and central AC 2025-vintage