



**A Demonstration Project Proudly Sponsored
by The City of White Bear Lake**

Creative and affordable possibilities for renovating a post WWII Rambler.





The intent of the Rambler Revolution Demonstration Project, located at 3790 McKnight Road in White Bear Lake, was to show the public creative and affordable possibilities for renovating a post-WWII rambler. The City's hope has been that the project educated homeowners about the design, permitting and construction process. The goal has been to provide examples of how to remodel a rambler-style, three bedroom house of 1,000 sq. ft. or less by opening up the floorplan to create a

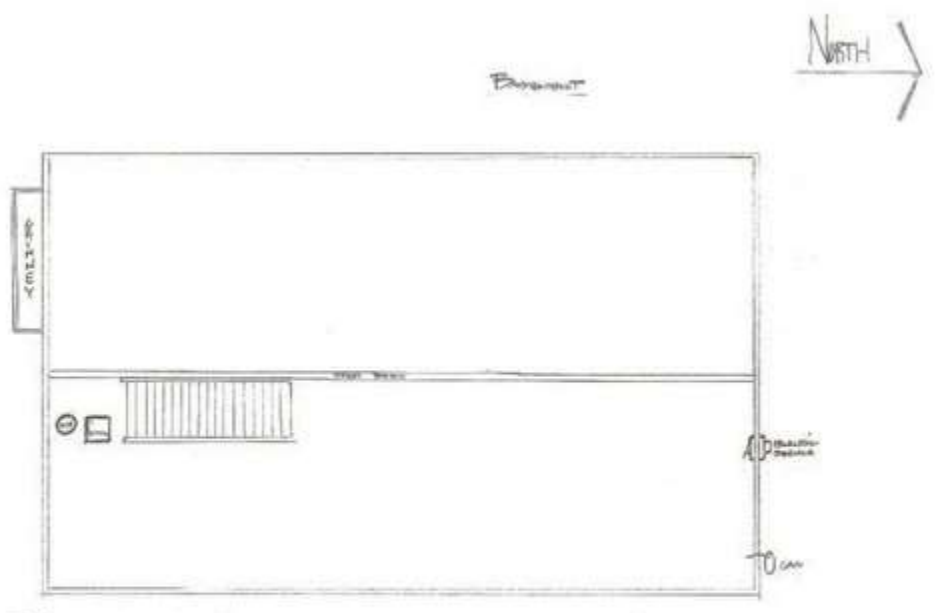
spacious and inviting great room feel, with a more functional kitchen, generous master bedroom, and energy enhancements. The City held four open houses, where the public toured the home before, during, and after the improvements were made.

Many Thanks Go to Our Rambler Revolution Partners:





The City of White Bear Lake 3790 McKnight Road
RAMBLER REVOLUTION SCALE: 1/4"=1'



The City of White Bear Lake 3790 McKnight Road
RAMBLER REVOLUTION SCALE: 1/4"=1'



RAMBLER REVOLUTION

BEFORE & AFTER

EXTERIOR



UPSTAIRS LIVING ROOM



STAIRWAY



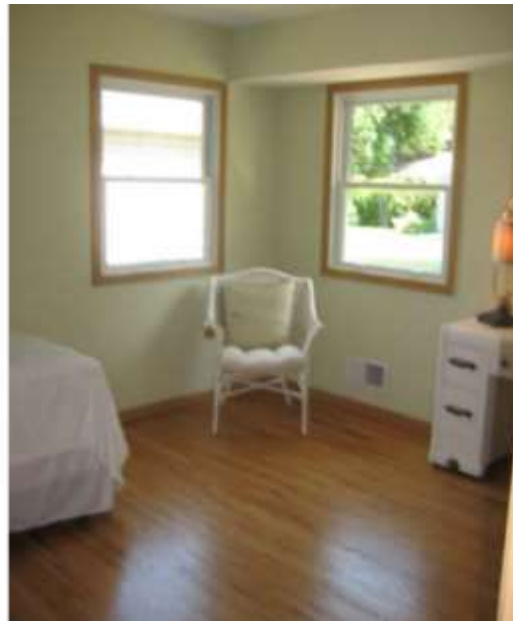
FORMER SIDE ENTRANCE



KITCHEN



BEDROOMS



FLOORING



BATHROOM (WITH NEW SKYLIGHT) FLOORING



NEW THIRD BEDROOM



DOWNSTAIRS REC ROOM



ALL NEW MECHANICALS





Thanks to our project partners!



Neighborhood Energy Connection
tools for energy-efficient living



GREEN STRATEGIES



The [Building Green Brochure](#) was produced by Anoka County's Integrated Waste Management Department. It's a great guide to recycling, buying and selling used building materials.

Minnesota GreenStar is a state-wide residential building standards and certification program, which strives to maximize sustainable environmental strategies utilized in both home remodeling and new housing construction. MN GreenStar aims to take the guesswork out of what it means to build green for homeowners. The program is divided into 12 main categories, which span all aspects of construction practices. Within each category is an extensive list of tasks that a trained contractor can choose from to receive points. A certain number of points must be attained in order to achieve Bronze, Silver or Gold certification. The City chose to participate in the GreenStar certification process to educate the public about, and to emphasize, green remodeling practices. To learn more, click on Minnesota GreenStar's logo.



To improve energy efficiency, durability and comfort of single-family residences, Xcel Energy and the Neighborhood Energy Connection offer residential customers Home Energy Audits. During an in-home audit, a Certified Energy Auditor assesses how much energy the home uses, and then evaluates

what measures can improve the efficiency and safety of the home. There are three types of audits: Walk-through (\$30); Standard (includes blower-door test, \$60); and Standard with Infrared Scan (\$100). To learn more about Energy Audits, visit Xcel Energy's website by clicking on the logo above.



Xcel Energy, CenterPoint Energy, and the NEC offer another great program called the Home Energy Squad. The Home Energy Squad consists of skilled crews that will make a variety of simple energy improvements in one easy visit. They install products like energy-efficient lights, water-saving showerheads, exterior door weather stripping, and programmable thermostats. They also recommend the next steps for bigger energy savings, and help homeowners learn about utility rebates. For more information about the



Home Energy Squad, or to schedule an appointment, click on the Home Energy Squad above.



Rambler Revolution

DIY Radon Test Kits only \$6.95* each

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Coupon # 205



Planbooks:

[Rambler and Cape Cod Remodeling](#)

[Split-Level and Split-Entry Remodeling](#)

Additional Remodeling Projects:

The cities of Coon Rapids, Fridley, and Golden Valley have completed projects similar to the one White Bear Lake has done. Check out the following links:

Coon Rapids' [Home for Generations](#)

[Fridley Foundations](#)

Acacia Architects recently used green design strategies to completely transform a rambler in Golden Valley. Take a Look: [Acacia Architects Golden Valley Remodel](#)

A LOOK BACK

1950's & 1960's Rambler Photos and Stories Wanted!

The White Bear Lake Area Historical Society has collaborated with the City on the Rambler Revolution project by collecting images and stories of ramblers in our community. This architectural style, constructed in the 1950's and 1960's, represents 40% of the housing within the City of White Bear Lake.

[White Bear Lake Area Historical Society - Rambler Revolution Photo Collection](#)



Oak Terrace



The main road on the right side of the image is McKnight, and the undeveloped rectangle toward the bottom is Spruce Park.



Over 4th Street, looking east towards White Bear Lake

LOANS

The City of White Bear Lake has teamed up with Ramsey County and the Minnesota Housing Finance Agency to promote several loans available to homeowners for general repairs, energy improvements, and necessary fixes. Most loans have qualifications, such as income level, that designate who can receive the loans. The Neighborhood Energy Connection has disbursed approximately 75 grants and 60 loans to White Bear Lake homeowners in the past five years, and the Housing Resource Center has disbursed even more loans. There is no deadline for applying, and new funds are dispersed every July. For more details, contact the Greater Metropolitan Housing Corporation at 651-486-7401, or the Neighborhood Energy Connection at 651-221-4462.

MHFA FIX UP FUND LOAN



This is a home improvement loan for a maximum of \$35,000 and a maximum term of 20 years, with a fixed rate for the term of the loan. Please contact the Housing Resource Center for the current interest rate. The loan is available to credit-worthy applicants for owner-occupied, single-family homes, duplexes, tri-plexes and four-plexes statewide. The maximum income to qualify for the loan is at or below \$93,100. Most home improvements qualify, except for luxury items such as swimming pools. This is a program of the MHFA. As an initiative of the Fix Up Fund, the MN Energy Loan involves getting an NEC Home Energy Audit before applying for the loan. This loan has eligibility requirements similar to the Fix Up Fund Loan, but is administered by the [Neighborhood Energy Connection \(NEC\)](#).

RAMSEY COUNTY REHABILITATION DEFERRED LOAN



Rehabilitation funds are available for low-income homeowners (at or below 50% of Area Median Income, AMI) or moderate income homeowners (between 50-80% of AMI) who live in suburban Ramsey County. Home improvement loans are deferred without interest or monthly payments. Up to \$15,000 may be used for basic and necessary improvements which make the home more livable, more energy efficient, or more accessible for disabled persons. The types of projects eligible for funding might include: replacement of a deteriorating roof, old/inefficient furnace, new storm windows and doors, bringing electrical and plumbing up to code, and improvements to meet the needs of disabled persons. This program is administered by [The Housing Resource Center](#), a program of the Greater Metropolitan Housing Corporation of the Twin Cities.



RAMBLER REVOLUTION COSTS

(All prices include installation unless otherwise stated. All prices rounded to the nearest dollar.)

CONTRACTOR'S BUDGET: \$77,100

(Please keep in mind that these prices were reduced slightly by the contractor in order to get the project, which provided a high level of publicity. Consequently, the prices paid by individual homeowners may be slightly more.)

\$1,288 - Construction Permits
\$38,400 - Kitchen/Mudroom Addition
\$4,800 - Reconfiguring Bedroom Walls
\$3,900 - Removing the Walls around the Stairway
\$4,320 - Bathroom Remodel
\$8,000 - Basement Living Room Finish
\$4,600 - Basement Bedroom Finish
\$2,950 - A/C unit: \$3,200 minus \$250 Xcel rebate for 14.5 seer [Luxaire]
\$3,300 - Furnace: \$3,600 minus \$300 Xcel rebate for 94% efficiency [Luxaire]
\$1,650 - Water Heater \$1,800 minus \$150 Xcel rebate for 0.67 efficiency factor [A.O. Smith]
\$1,600 - Blown Cellulose Attic Insulation (R50): (w/ venting shoots) at 1,130 square feet = \$1.41 per sq. ft.
\$2,300 - GreenStar Certification

(TOTAL: \$77,100)

Further Itemization of Contractor's Expenses:

(The following numbers do not add-up to the above-listed amounts.)

Egress Window: \$1,500
Materials: \$700
Labor: \$800

Block Window: \$180 ea.
Materials: \$80
Labor: \$100

Refinishing the Hardwood Floors: \$1,700 (with patching) [KW Floors, Maple Grove]
InSoFast Basement Insulation Panels: \$900 / 616 square feet = \$1.46 per sq. ft.
Spray Foam Insulation in Well Room: \$250
Foil Faced Rigid Foam Board in Crawl Space: \$380 / 150 square feet = \$2.50 per sq. ft.
Dumpster (40 cubic yards) \$460 per haul (sorting & recycling provided off-site) [Allied Waste]

Kitchen Addition: \$8,880

Dig hole & backfill: \$900
Footing & block work: \$2,930
Concrete slab floor: \$250

Siding: \$700
Roofing: \$800
Framing: \$1,800

Interior rough-ins (plumbing, electrical): \$1,500
Kitchen Cabinets: \$3,700 [Ellingson Woodcraft]
Kitchen Countertops: \$1,600 [Ellingson Woodcraft]
Sliding Glass Doors to Future Deck: \$1,300
New Exterior Door to Mudroom: \$290
Kitchen/Mud/Dinning Flooring: \$1,600

Bathroom Remodel:

Solar Tube in Bathroom: \$380
Wall Tile: \$350
Vanity: \$400

Floor Tile: \$450 Materials: \$230
Labor: \$150

New oak tread on stairs to basement: \$2,500
New Windows: roughly \$260 ea. [Anderson – Silver Line]

GREENSTAR EXPENSES: \$5,952*

Registration: \$392
Third Party Inspections: \$950
Extra Full-Size Copy of Plan Set: \$13 [UPS Store]
Calcium Chloride Test: \$125 [Intersource]
Rating Fee: \$950 - \$450 (Donated) = \$500
Grass Seed: \$15

Radon Mitigation: \$1,207

Testing: \$7.00 [AirChek, Inc.]
Mitigation System Materials: \$600
Mitigation System Installation: \$600 [Energy and Environmental Services]
Additional Contractor Time: \$2,300*

*Our building official contributed a significant amount of time and assistance towards the tasks and duties required for GreenStar certification. The average contractor bid for GreenStar certification on this project was \$8,584 more than bids for construction without GreenStar certification.

ADDITIONAL EXPENSES INCURRED BY CITY: \$8,318

(Items which were donated are not included in total)

Pre-Purchase Home Inspection by Private Inspector: \$325 (donated)

Neighborhood Energy Connection Energy Audit: \$100

Asbestos Testing: \$1,000 - \$250 (Donation) = \$700 [Red Pine Industries]

Asbestos Abatement (removal): \$1,115

Lead Testing: \$13

Architectural Services: \$3,250 [Rust Architects]

Home Energy Squad: \$80

Maytag Laundry Package: \$950 [Appliance Smart]

Washer: \$425 (-\$50 Xcel rebate = \$375)

Dryer: \$425

Installation: \$150 (delivery included in kitchen appliance total)

Sprinkler System: \$4,606 [Escape Fire Co.] (Donated)

Material: \$1,450

Labor: \$2,756

Design & Permit: \$400

Frigidaire Kitchen Package: \$1,960 [Appliance Smart]

Refrigerator: \$700 - \$15 Xcel rebate = \$685

Stove/Oven: \$500

Dishwasher: \$250 -\$15 Xcel rebate = \$235

Microwave: \$150

Delivery: \$90

Installation: \$300

Interior Design: \$200 [Jackie Dekker-Travis] (Donated)

Veggie Garden: \$100

Plants: \$22 [Boy Scouts Sale]

Lumber: \$50.00 [Home Depot]

Misc: \$28

Rain Barrel: \$45.00 [City Hall] (Donated)

Compost Bin: \$35.00 [City Hall] (Donated)

Recycle Bin: First one free [City Hall]

APPROXIMATE COSTS PER SQUARE FOOT:

Upstairs bedroom reconfiguration: \$26/sq.ft.

Basement living room finish: \$20/sq. ft.

Bathroom remodel: \$90/sq. ft.

Kitchen addition & remodel: \$240/sq. ft.

Basement bedroom finish: \$33/sq.ft.

IMPROVEMENTS NOT INCLUDED IN PROJECT:

(Although not included at this time, we still wanted to show what they would have cost had they been included.)

Deck: \$2,500 - \$3,100
Relocate Laundry to Main Level: \$2,500 - \$3,600
Front Porch/Entry Feature: \$5,196 - \$9,300
Basement Bathroom Finish: \$10,000

SUB CONTRACTORS:

Escape Fire (Jason Gahm): 651-771-8874 InSoFast (Ed Sherrer): 651-653-3677
Brite Lite Electric (Dan Henschell): 651-774-0308 Toni DiLorenzo, Painter: 651-503-2705
Swift Mechanical (Chuck Wark): 651-486-6473 KW Floors: 612-759-0705
Arrow Building Center (Bill Clemen): 651-439-3518
Glacier Plumbing (Steve): 612-386-8719
Energy & Environmental Service (Worth Frank): 651-646-3470
Jackie Dekker, In Home Designer: 651-207-8907

AVERAGE RATES OF RETURN ON INVESTMENT:

(Based on National Average, Source: Remodeling Magazine value Report 2010-2011)

Minor Kitchen Remodel: 72.8% Home Office Remodel: 45.8%
Bathroom Remodel: 64.1% Sunroom/Porch Addition: 48.6%
Master Suite Addition: 63%

AVERAGE RATES OF RETURN ON ENERGY EFFICIENCIES:

(These numbers are the amount of reduction in utility 'spent' on the improvement, for example, the furnace will save about 15% of cost of heating the home and the water heater about 12% of water heating costs.)

Furnace: 15% Water Heater: 12%
Air Conditioner: 25% - 35% Attic Insulation: 10% - 14%
Rim Joist Insulation: 3% - 5%

GENERAL RULES OF THUMB:

Cold air leaks in at the ground level of the home and flows upward, then warm air leaks out the top of the home. When dealing with leaks, it's best to start high and work your way down. When crack sealing, if the crevice is less than 0.5-inch, use caulk. If the crevice is more than half an inch, use foam.

If you improve the value of your home by 5% or more, don't forget to adjust your homeowner's insurance coverage.

SOME EXPLANATIONS:

With the kitchen addition, the City had 3 options: a full basement, a crawl space or slab on grade construction. The extra space provided by a full basement was not necessary and the extra cost was significantly more. Slab on grade would've been the cheapest, but we believed it would be too cold and not as securely attached to the home as a crawl space would be. The crawl space was a "happy medium" temperature-, price- and structural integrity-wise.

City staff didn't really consider the home to be modernized without a distinguishable master bedroom with a walk-in closet. At the same time, our consulting realtor advised that a two-bedroom home would not be as marketable as a three-bedroom home. The debate became whether we should leave the three bedrooms up and forgo the master bedroom idea, or create the master bedroom up, but then have the added expense of creating a third bedroom downstairs. We chose the latter option primarily because of the demonstration value to the community, but also in small part because we expect the market will support the improvement.

The redesign process looked closely at enlarging the only bathroom. But in our opinion, the small amount of extra space it provided was not worth the cost of relocating the walls and plumbing fixtures. Unfortunately adding a second bathroom to the basement virtually from scratch was also outside of our budget.

The decision to close the basement fireplace was made for aesthetic as well as energy efficiency reasons. Below 40 degrees, the basement would have a negative pressure, causing the loss of warm air through the flue. The basement is a poor location in that it doesn't draft well and therefore more soot than normal would circulate back into the basement, which is unhealthy to breathe, not to mention dirty. Burning wood is not as sustainable a practice as a gas burning fireplace. If a future owner desires to, the fireplace could easily be reopened and converted to gas or used as is.

The counter top in the bathroom is a "comfort height" of 36 inches vs. the traditional 30-inch height. Also, all the door handles throughout the home are levers versus knobs, which are more accessible.