

Remodel Case Study

Kirkland Residence

McFadden home

The McFadden home was built around 1971 with interiors that were divided into small rooms. Michael is an architect and designed the remodel to remove interior walls so the spaces would have a larger feel without adding to the footprint. In anticipation of having children, he and his wife chose to upgrade the indoor air quality to provide a healthier environment by removing carpets and using low-voc paints and finishes. Outdoors, they incorporated green landscaping that using drought resistant plants. The home is certified Built Green at the Three-Star level.

Resources

- King County's Green Tools: www.greentools.us
- Energy Star: <u>www.energystar.gov</u>
- Built Green: www.builtgreen.net
- Built Green Remodeler Checklist: www.builtgreen.net/documents/ Remodeler%20Checklist.pdf
- LEED for Homes: www.usgbc.org/ DisplayPage.aspx?CMSPageID=147
- Natural Yard Care: <u>www.metrokc.gov/dnrp/swd/naturalyardcare/index.asp</u>

About the project

An Affordable Remodel:

The owners have found that by phasing their remodel, they are able to do more. They are upgrading as they go along, doing smaller projects based on their available budget and time.

Pre-design And Construction:

After coming up with the desired plan, the owners assessed materials within the home that could be reused later, such as doors that were incorporated into the entryway and pantry. They also found a large piece of wood from Urban Hardwoods that they used for a fireplace mantel. All during construction, materials were recycled or salvaged to keep them out of the landfill. They reused salvaged materials such as metal at the counter support and for a fireplace and woodstove surround, and used salvaged doors in the garage and entry. After construction, the ventilation system was thoroughly cleaned to remove construction particulates and dust.

"We wanted to use this resource – our house and property – wisely. By adapting the existing structure, we saved ourselves money and saved on the use of virgin materials. It gave us the opportunity to choose environmentally-friendly materials to create a space that works better for us."

- The Owners

Energy-saving Technologies:

Envelope: Added insulation to the floor for better R-value and to keep feet warmer; extra precautions to seal home against moisture and air leaks

Appliances: Energy Star® refrigerator and dishwasher were installed, along with a gas cooktop

Daylighting: Light colored interior finishes promote better natural light indoors and save on electric lighting; re-used a translucent door that allows light into the pantry so it's not necessary to turn on a light

Skylight: Replaced the old west-facing skylight with UV-blocker and installed aluminum-backed shade to reflect heat gain

Shades: shading devices were added in the sunroom to limit solar gain in summer

Fireplace: Replaced old, inefficient wood burning fireplace with a clean-burning gas fireplace with a blower

Interior Fixtures And Finishes:

Flooring: Bamboo and slate was finished with a waterbased instead of oil-based sealer, and plastic turf was replaced with cork flooring in the pantry

Mantel: Fireplace mantel was salvaged from a large wood beam from Urban Hardwoods in Seattle

Cabinets: Lyptus cabinets have non-toxic finishes that do not off-gas

Low Toxic Finishes: Low-VOC paints, adhesives, grouts and sealers reduce off-gassing

Windows: Operable windows allow cross ventilation and fresh air. Upgraded from single pane to double pane window.

Carpet: Carpet was removed and replaced with bamboo flooring for healthier indoor air quality







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Soil Amendments: The soil was amended with

topsoil and compost to promote better vegetation

Native Plants: Drought-tolerant plants were added

that require little water or maintenance. In addition

Contact info for architect/ owner:

Michael McFadden, Project Designer and Owner Phone: 206.355.9770 Address: Kirkland, WA Phone: 206.728.9500 x108

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Kitchen Counter: Granite counter tops provide durability and are biodegradable

Homeowner Recycling: Built-in kitchen recycling area facilitates homeowner recycling

Exterior:

The landscaping focus was on better, more natural drainage for the water falling on the yard and reducing water requirements for irrigation.

Removal: At the home's entrance, one-and-a-half ton of chemically-treated lumber and three yards of concrete were removed; and a shed was removed to further reduce impervious surfaces

Pavers: Pavers replaced removed concrete and were installed two inches apart and planted with a ground cover (Corsican mint) so water can drain easily into the ground

Master Bathroom:

growth and drainage

Master Dathroom.

After tackling the main living area and exterior, the owners remodeled the master bath by adding more durable materials and fixtures and light color low voc paint.

Toilet: A dual flush toilet now saves water with its .9 gallon-per-flush option for liquids and 1.6 gpf for solids

Countertop: Upgraded to a durable and non-toxic concrete countertop using a low toxic waterbased sealer as finish

Tile: Ceramic and recycled content glass tiles



Challenge:

Because of the original configuration of the interior spaces, it was a challenge to create larger, more usable areas for their lifestyle and let more light in.

Lesson Learned:

The owners recommend hiring contractors with experience in green materials and methods of construction to save time and headaches. There was a steeper learning curve for the contractor and subcontractors who were not familiar with green materials.



