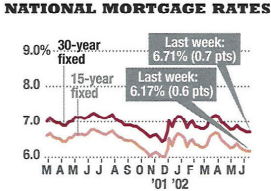


**BRENDEL PATTERSON
IN FRIDAY
REAL ESTATE**



A look at Lenox Township in northern Macomb County. **ONLY IN THE FREE PRESS**



KENNETH HARNEY

An easier way to fix credit report mistakes.
PAGE 2H.

CREATING SPACES

Home revamped to accommodate aging parents and disabled son. **PAGE 1J.**


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PHASE 8

THE PROFESSIONALS PUT PLUMBING, HEATING AND ELECTRICITY INTO THE HOUSE CHRONICLES HOME

THE HOUSE CHRONICLES


THE BIG THREE



Photos by GABRIEL B. TAIT/Detroit Free Press


ABOVE: Andrew Graham, of the Romulus plumbing company Mechanical Resources, solders a copper water pipe.

RIGHT: Electrical wires are run through holes that were drilled in the house frame earlier.



An electrician from Centerpoint Electric in Novi works near the bay window in what will be the dining room of the House Chronicles home.

JUDY ROSE
REAL ESTATE WRITER



Plumbing, heating and electricity — together they're the difference between living in a home or a cave.

In fast-moving house construction, they go in quickly — one, two, three — right after the wood framing is done, just before insulation is packed between the wall studs.

Good scheduling can get this all done in a week, says Matt Kime, project manager for RDK Homes, the contractor that's building a 2,600-square-foot, \$289,215 house in Van Buren Township for the Free Press' 12-part series, the House Chronicles. That's one day for heating and cooling, then two days for plumbing, followed by one or two days for electrical installation.

At the House Chronicles home, it all started on a Thursday when the heating contractor started running ductwork through the walls.

Friday the plumbers arrived and ran copper water lines and PVC waste lines to and from the sinks, toilets and tubs.

Monday the plumbers finished; Tuesday the electrician arrived.

Wednesday, as the electrician

wound up, the gas fireplace got installed and the phone and cable service went in.

At this point — like previous pauses after the basement was dug and after the wood frame was finished — work stopped for a round of inspections.

The typical home buyer is not qualified to oversee or second-guess the mechanical systems in a house. That has to be left to the building inspectors. The best you can do is choose a builder who employs skilled subcontractors with good track records and good reputations for quality work.

But there are plenty of lifestyle decisions to weigh. The people immersed in the work — the staff of RDK Homes and the three key subcontractors at the House Chronicles home — offer some facts and advice:

ELECTRICAL SYSTEM

The building code calls for a wall plug every 12 feet in general living space, because cords are generally 6 feet long. At kitchen counters plugs are placed every 4 feet, because appliance cords are 2 feet long. Plugs around potentially wet areas must have a ground fault interrupter or GFI, a device in the plug that cuts power if there's a surge. That includes the kitchen, bathrooms, basement, garage and yard.

Please see SYSTEMS, Page 15H

THE PROJECT SO FAR:

Free Press readers are taking a 12-part trip as the House Chronicles documents a home growing from blueprints to a real home with carpet, kitchen appliances and landscaping.

In earlier installments we picked the builder, picked the options, dug and poured the basement, built the frame, insulated it and added the exterior sheath of shingles, bricks and siding. Find those stories online at www.freepress.com/realestate/chronicles.htm

Today in Phase 8, we see skilled trades workers installing the key systems — heating, plumbing, electricity. Here is a recap of the house:

HOUSE: Two stories plus basement, 2,600 square feet, living, dining and family rooms, kitchen, nook, three bedrooms, 2½ baths and an upstairs loft.

PRICE: Base \$267,990, options \$21,225, total \$289,215.

LOCATION: Van Buren Township, Walden Woods subdivision, Tyler Road between Belleville Road and Morton-Taylor Road.

- Phase 8. Today**

THE SYSTEMS
Plumbing, heating and electricity — choices you can live with.
- Phase 9.**

THE INSIDE SKIN
The drywall, the paint, the trim.
- Phase 10.**

THE INSTALLATIONS
Choosing cabinets, countertops, floors and fixtures.
- Phase 11.**

THE SURROUNDINGS
Landscape, hardscape, patios and decks.
- Phase 12.**

THE FINALE
The walkthrough, the closing, the warranty, the keys.



SYSTEMS| Wire, pipes, ducts added

From Page 1H

■ 150 amps — installed in the House Chronicles home — is a nice amount of power for a mid-sized house like ours, although 200 amps is worth having if available. A small condo, say 1,200 square feet, may get by on 100. — *Mike Anton, owner and master electrician, Centerpoint Electric, Novi.*

■ Upgrade to 200 amps if you might finish the basement later, for example, adding a kitchen there or a workshop with power tools. — *Anton*

■ Think about your lifestyle, for example whether your kitchen needs extra plugs for special appliances, or special lighting like under-the-cabinet lighting. — *Bob Kime, founder, RDK Homes*

■ Take the time to lay out your floor plan and figure how you'll arrange your furniture, decide how much lighting you need and where. "You can put it anywhere you want, but it's a major hassle to move it or add more later." — *Anton*

■ Many buyers add extra outlets. "I'd say three-fourths of our customers now want electrical, cable and phone lines in a special location for a computer." — *Bob Kime*

■ If you'll put a freezer or refrigerator in the garage or basement, don't put it on the standard GFI line installed there. Any power surge can shut it off. "You might not know it before the food starts to smell." The electrician can install a separate circuit just for the freezer in the basement or garage without a GFI, but it will have room for only one plug. — *Anton*

■ If you have a full home office and use it — computer, fax, copy machine — you might want a separate circuit. "So it can't knock out your computer if the kids turn on the hair dryer and the iron at the same time." — *Anton*

■ You often have two bathrooms with GFIs wired to the same circuit. So the electricity may be off in one bathroom apparently without cause. Check the other bathroom to see whether the GFI is tripped there. — *Anton*

■ If your GFI trips and you can't get power back on, remember that it has three positions — on, off and trip. If it has switched to the trip position, you must switch it to off before you can switch it on. — *Anton*

■ Don't install a ceiling fan later where you have a ceiling light, unless you prepare for the fan with an extra support. — *Anton*

■ This house, like some other new homes, is prewired with low-voltage wiring. If the buyer wishes, RDK will recommend a specialist who'll use the low-volt power to install an alarm system, sound system, home theater or lighting for stairs or yard. — *Bob Kime*

PLUMBING SYSTEM

As required in Van Buren Township, our house has fresh water pipes of copper and waste pipes of PVC. Tub and showers are molded fiberglass, an alterna-



GABRIEL B. TAIT/Detroit Free Press

Dan Closser, 21, of Centerpoint Electric takes a wire through the attic space of the House Chronicles home in Van Buren Township.

tive to ceramic tile.

The floor plan includes nice extras RDK tries to include in large-enough houses. The master bath and the other full bath have two sinks. Both also have separate rooms for the shower and toilet, not common in houses under \$300,000. That makes it easier for two adults or two children to use the facilities at the same time. The master bath has a built-in garden tub under a window. The water heater holds 50 gallons.

■ "Probably 70 percent of our jobs now are going to the fiberglass enclosures, at least in the market under \$300,000." — *Matthew Berkett, president, Mechanical Resources, Romulus. The company plumbs about 1,500 new houses a year.*

■ Molded fiberglass is easier to repair than tile walls. "It's pretty much like fixing the hull of your boat. You just call a fiberglass repairman." — *Berkett*

■ But tile walls are very popular in Macomb County, even in moderate price houses. "A lot of your owners there have been tile or brick men and they like the look." — *Berkett*

■ Can the buyer find special fixtures and bring them to the plumber? "No." (pause) "No." (pause) "No. We'd have way too much liability." The buyer might drop off a special faucet in the morning, but it could get stolen. Or it might break during installation or malfunction later. "Now we're responsible for the special faucet and we're not even making money off it." — *Berkett*

■ 50 gallons is a good size for the water heater. "With a 40-gallon heater, you're typically not going to get two hot showers right in a row." — *Berkett*

■ It's hard to know which of today's new low-water toilets flush best. "Everybody's changed the design so much in the past two years, nobody has any long track record." — *Berkett*

■ But pressure-assisted toilets may not be the answer. The pressure does flush out water. "But, how can I put this? The pressure flush doesn't swirl. It doesn't have the cleansing ability of your standard toilet. There have been a lot of complaints." — *Berkett*

■ The little upgrade people should get but don't: An elongated toilet bowl. "I can't believe people paying all that money for a home and not taking it." Other good small upgrades are a water line to the refrigerator and a bigger, deeper kitchen sink. — *Berkett*

■ The best luxury upgrade: Body sprays — separate wall jets — in the master shower. "If you don't have time for a Jacuzzi bath, you take a Jacuzzi shower. It's relaxing and quick." — *Berkett*

HEATING AND COOLING SYSTEM

Our house includes a Carrier brand 80-percent efficient furnace, but air conditioning is an option. That's typical for new houses priced below about \$330,000. Condos almost always come with air conditioning.

■ This house's furnace is rated at 135,000 BTUs. The size is more related to cubic feet — which counts the height of the ceilings and any two-story rooms, than to square feet. — *Don Williams, partner, Quality Heating and Cooling, Livonia*

■ Even though ceilings are higher

today than they used to be, furnaces are slightly smaller, because homes are better insulated. — *Williams*

■ The biggest decision in most heating systems is whether to take the 90-percent-plus efficient furnace, occasionally included but most often an option. If you take it, you probably won't need the metal pipe chimney that sticks out of the roof, but can use a side-wall vent instead. — *Williams and Brian Kime, designer, RDK Homes*

■ The next decision is whether to take the air conditioning. As long as you have forced air heat, your house is ready to accept the system, and it can be added later easily. Macomb County buyers rarely take it, builders say, because many are related to workers in the building trades and know they can install it themselves. — *Williams and Free Press*

■ If you choose air conditioning, you'll choose again between traditional freon coolant and the new puron, a refrigerant that doesn't damage the environment. Puron costs more now, but after 2010, freon air conditioners won't be manufactured. Then the price of servicing the freon mechanism is expected to go up. — *Brian Kime*

■ Other choices you'll make are air cleaner and humidifier. A humidifier is recommended if you have hardwood floors. — *Brian Kime and Williams*

Here's what some options mentioned above would cost in an RDK home in Walden Woods in Van Buren Township:

Additional electric outlets, \$150; recessed light, \$150; eyeball light, \$175; ceiling fan preparation, \$125; water line to refrigerator, \$175; humidifier, \$775; mechanical air cleaner, \$425; Kohler kitchen sink, \$450; freon AC, \$3,800; puron AC, \$5,400; 90-percent efficient furnace, \$1,350.

Contact JUDY ROSE at 313-222-6614 or rose@freepress.com.

DECISIONS TO MAKE BEFORE WORK BEGINS

The major issues of plumbing, heating and electrical service have to be left to experts. But the buyer can make many lifestyle decisions before the skilled workers start. Here are some of the issues to consider that might not occur to you:

- **Built-in microwave.** These are a blessing if counter space is limited, but they need their own electrical circuit.
- **Coffee maker, toaster.** If you keep these out, put outlets where they're needed to keep cords from trailing down the counter.
- **Island.** It probably has one electrical outlet. Plan its location or even add another one to suit the way you'll use small appliances or set up the island for a buffet.
- **Basement.** A basement is required to have only one outlet. Ask for more if you'll use that

space for activities.

- **Furnace.** A high-efficiency furnace is much quieter than a standard one. Consider it if your basement will be used for a media room or office.
- **Future air conditioning.** Once you have ducts for forced-air heat, you're ready to add AC any time. With heat systems that don't use ducts, like hot water heat, adding AC will be much more expensive.
- **Stove hood.** A standard stove hood vents into the kitchen. If you are a constant cook, one who uses many spices, you may want it vented outside.
- **Kitchen sink.** Switching to a good, deep two-compartment sink from a maker like Kohler and a faucet with a sprayer will feel like a big kitchen upgrade.
By Judy Rose

Talk about paint just like a pro

ORANGE COUNTY REGISTER

When it comes to paint, knowing the right terms can help you be a better do-it-yourselfer or deal better with professional painters.

A few of the more useful or misunderstood terms are defined here with help from the folks at Behr Paints:

Acrylic. A synthetic polymer used in high-performance latex or water-based paints. As the paint's binder, acrylic resins enable the coating to last longer and retain its color.

Alkyds. Resins used mostly in trim paints. Alkyds cure to a relatively durable film but tend to yellow and become brittle with age. They're highly prone to failure as an exterior paint on surfaces that might contain moisture.

Binder. It helps the paint adhere to the surface.

Enamel. In most uses, it refers to a topcoat characterized by its ability to form a smooth surface. Originally it meant a high gloss.

Holidays. Refers a spot where there's supposed to be paint but someone skipped it. Similar terms are misses, skips, discontinues and vacations.

Latex paint. Water-thinned paint made with synthetic binders. In contrast to oil-based paint, latex paint dries fast, flows smoothly and cleans with water.

Polymer. A binder made from petrochemical stock.

Resin. Polymer that is basic material for coatings and plastics.