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Building Inspection Report

Prepared For: Mr and MRS Homebuyer
789 Homestreet, St. Louis, MO 63143

Report Number: 041280
Inspection Date: 12/1/04 2:00 PM

Property Information

Address: 1234 Anystreet, St. Louis MO 63116
Sale Price: 159999
Approximate Age: 78



Notes

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Terms and conditions crucial to interpretation of the report are contained in a separate Pre-Inspection Agreement. Do not use this report without consulting the Pre-Inspection Agreement.

The report conforms to the standards of the American Society of Home Inspectors®. Components are identified and their apparent condition is reported. The client should consult the terms of the sales contract to determine whether any of the items contained within must be repaired by the seller prior to closing. Reporting on other issues such as cosmetic damage and suggestions for improvements is included for your information only, and should not be relied upon as items that may or may not be repaired under the terms of your Sales Contract. If in doubt, consult your Sales Contract and/or an attorney to explain your rights and obligations under your Sales Contract. The Inspector offers no warranties or representations as to your rights or obligations under any Sales Contract.

Comments that refer Tradesmen and Professionals for specific repairs noted in the report are intended to provide general guidance. Without specific referrals from a trusted source you can and should fall back on state and municipal licensing and certification when choosing contractors to perform repairs. The report will refer to "Electrician" meaning Licensed and Insured Electrical Contractor for example or "Architect" meaning Licensed and Insured Architect. Unlicensed and uninsured personnel may be capable of performing needed repairs but Farrell Home Inspections Inc. cannot approve such repairs.

Identifying Repairs in the Report

Items that appear to need attention or repair are listed in the following formats:

- Major Repair** These are repairs to items not performing their intended function that, in the opinion of the inspector, might cost more than \$500.00 to remedy.
- Minor Repair** These are repairs that, in the opinion of the inspector, are minor repairs to items not performing their intended functions. Cost to repair may range from minimal to several hundred dollars.
- Maintenance** These are repairs that, in the opinion of the inspector, are regular maintenance typical for buildings this age. Repairs to these items are not urgent, but should be made within the next six months.
- Safety Concern** Conditions that are judged to be a real or potential threat to safety or health (regardless of cost to repair) are listed as safety concerns. **These items should be repaired immediately and prior to occupancy.** Cost may be minimal or significant.
- Investigate Further** Conditions that warrant further investigation by an appropriately licensed specialist are identified here. Often, only a specialist can confirm that repairs are needed and determine the scope of the repairs. This includes conditions that require destructive inspection, engineering, analysis beyond the scope of a visual home inspection, or subjects outside the general knowledge of a home inspector.

Conditions During the Inspection

Weather during the inspection: cool and overcast.

Outdoor temperature during the inspection: 55

Soil: damp

Present during the inspection: the buyer

STRUCTURE

Description

The inspected property is a one and a half story two family.

The exterior walls are constructed of wood frame.

Support for the structure is provided by wood columns that support the front entry porch roof.

The foundation is a combination of concrete footings, block and poured concrete foundation walls.

The floor construction is wood joists sheathed with wood planks.

The roof is constructed using conventional rafters sheathed with wood planks.

Ceilings are supported by ceiling joists.

Observations and Recommendations

Investigate Further The cracks in the southeast addition foundation at the corner and at the joint between the addition and house foundation should be closed with cement patch and monitored for further movement. With proper drainage maintenance I doubt that the foundation will move any more. Although I do not believe piling is needed at this time, if you wish a guarantee that future movement will be stopped or minimized, then you should obtain bids from qualified foundation contractors to install piling as necessary.

There was no structural damage to the visible portions of the wood framing in the attic.

Investigate Further The interior entrance to the basement is a lift-up section of the stairs to the bedrooms. The stair balance mechanism was functioning at the inspection. There is no hand rail for the basement steps and when the stairs are in the up position egress from the second floor is blocked. Be aware of the safety hazards. Consider relocating the inside basement entry.

BASEMENT

Description

The foundation walls are constructed of mainly poured concrete with some block at the additions.

The walls are partially concealed by storage. Some areas are not readily accessible. These areas were not inspected.

The basement floor is concrete.

The subfloor rests on the foundation walls.

No sump pump is present in the basement.

Observations and Recommendations

Signs of past water entry consisting of mineral deposits and staining were observed on the basement walls and/or floor. Other signs of moisture intrusion may be found if and when basement storage is removed. Determining whether or not water entry has occurred is often difficult during a one time inspection, particularly if walls are finished or have been recently painted. Be sure to ask the current owner if water entry has been a problem. Almost all basements suffer from water entry at one time or another.

Floor insulation is not installed. I do not recommend the installation of insulation here.

I observed no significant damage to the structural components visible in the basement.

SIDING AND TRIM

Description

The primary siding on the house is vinyl.

Trim on the house is primarily wood and aluminum.

Soffits and fascia are constructed of aluminum.

Observations and Recommendations

I observed the exterior surfaces while walking around the exterior of the house. The siding is in poor condition. Repairs are needed.

Minor Repair The starter strips at the south side of the building at loose in several areas. I recommend removing the bottom row of siding and firmly attaching the starter strips.

Minor Repair The siding and trim joints at the rear sunporch window sills are poor and need to be caulked to keep water from running behind the siding. I recommend having the siding on the sunroom replaced.

Minor Repair The vinyl siding is installed over tar-paper brick siding and possibly other siding material. The material used is low quality and the installation is sloppy. This siding will continue to function but will need regular maintenance. Be on guard for leakage around windows and at wall roof joints.

The exterior trim on the main part of the building is in adequate condition for the most part. Minor repairs are needed. See recommendations below.

Minor Repair J-channel is missing at the south casement window on the first floor. Repair as needed.

The soffits and fascia are in adequate condition.

GARAGE

Description

The house has a detached wood frame garage.

The garage doors are metal.

Both doors have automatic openers. The openers do not have automatic electric eyes to reverse the doors when an object crosses the door's path. This is a safety feature. I recommend you consider installation of these devices. To add electric eyes new operators must be installed.

Observations and Recommendations

Garage door safety tips: The garage door is the largest moving object in the home. Operation of the safety mechanisms should be verified monthly. Test the reversing mechanism by laying a 2x4 block of wood flat on the floor and closing the door on the block. The door should reverse. Switches for door openers should be located as high as practical to prevent children from playing with the door. Children should be warned of the potential risk of injury.

Regular lubrication of the garage door tracks, rollers, springs, and mounting hardware is recommended.

The garage is an old shed style wood frame building. Maintain the exterior as needed to extend service life. Make needed structural repairs and replace the garage when extensive repairs are needed. Consider adding gutters and downspouts directed away from the foundation to extend service life.

Investigate Further There is evidence of extensive termite infestation in the framing at the north wall and lean-to addition on the north side of the garage. The lean-to was full of stuff and I could not see the extent of damage. Be prepared to make structural repair / reinforcement as needed.

Minor Repair The garage is leaning to the south. I recommend bracing to keep the garage from leaning any further or collapsing.

Investigate Further The garage was filled with household items limiting what could be observed. Additional defects may be found when the garage is cleaned out.

Minor Repair I operated the garage doors. The garage doors are functional. Hardware fastening together and supporting the door is in adequate condition. The second panel from the ground on the north door is damaged. The panel needs to be replaced.

Investigate Further The garage doors are dented from a ball striking the surface. Improvement of appearance requires replacement.

The door was checked for balance. (The door should stay at any height without rising or falling.) The doors are balanced.

The automatic garage door openers reversed properly when they struck a 2 inch block on the floor.

Garage Electric:

Safety Concern The overhead electric feeds to the garage are not installed safely or to any accepted standard. I recommend having an electrician replace the overhead electric with an underground feed.

Minor Repair Surface mounted wiring in the garage should be protected from damage. Have an electrician install the surface mounted non-metallic sheathed cable in conduit, inside the framing void or protect by approved wiring method.

Minor Repair A light fixture above the garage access door is hanging from the wire. Have the fixture installed properly.

WINDOWS AND EXTERIOR DOORS

Description

The windows are a combination of double hung wood with aluminum storm windows and insulated vinyl replacements.

The windows have sealed insulated and single pane glazing.

The doors are wood.

Observations and Recommendations

I operated the accessible windows. The windows are the replacement windows are in functional condition. The original wood windows need repair or replacement.

Investigate Further Broken thermal seals are noted below: first floor south bathroom window. The sealed gazing units have broken seals. A sealed glass unit is comprised of two or more glass panes separated by an aluminum divider strip and sealed at the edges with butyl rubber. When the butyl rubber seal at the perimeter of the sealed glass unit separates from the glass or tears the outside atmosphere is allowed into the space between the glass panes. With the air comes water vapor and mold spores. The water vapor condenses inside the double pane unit and eventually mold grows creating a “fogged” condition. Replace the units to restore clarity.

Investigate Further Replace broken window sash cords as necessary if you want the windows to stay open properly. Sash chain is a long lasting replacement.

Safety Concern Sampled windows operated stiffly and some were stuck or painted shut. Loosen and clean as necessary for easier operation.

Safety Concern The windows in the bedrooms do not meet modern requirements for size of openings to allow escape during a fire. This is typical for homes this age. You may wish to consider changing the bedroom windows to a type that would allow escape.

Minor Repair Some window screens are missing from window openings. Confirm with the owner if screens are available for all operable windows.

I operated the exterior doors and found them to be functional.

I did not check the locks for function. I recommend having a locksmith change the keys for all the locks before occupying the home.

DRIVE AND WALKWAYS

Description

The driveway is concrete.

Walks are constructed of concrete.

Exterior steps are constructed of concrete.

The front porch is a covered masonry and concrete front porch.

The back porch is a two story enclosed wood porch at the back of the house.

The basement entry is a concrete stair well.

Observations and Recommendations

The drive has bed recently replaced. The driveway is in serviceable condition with only minor cracks visible. The drainage looks OK. I did not determine the discharge location of the surface drain in the drive. Keep this drain clear to maintain proper drainage.

Safety Concern The front walk steps are uneven; the steps are a trip hazard and should be replaced. The porch slabs are in functional condition.

Safety Concern Some of the steps and stairs have no handrails. I recommend the installation of handrails for safety reasons. Falling on steps and stairs is one of the primary causes of injury in the home. **Location:** basement steps

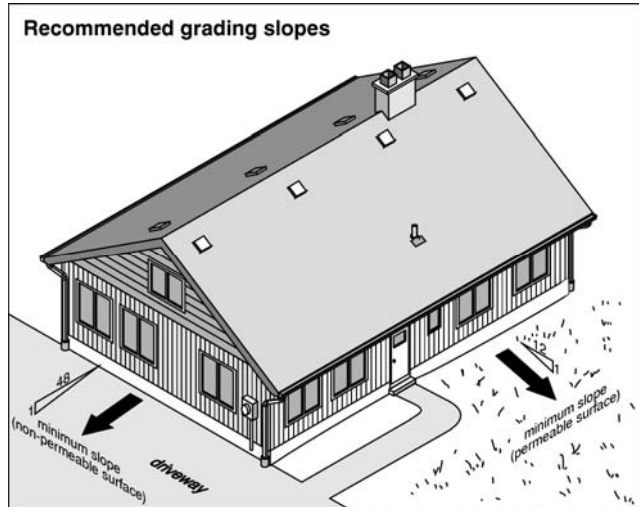
Investigate Further The stucco panels on the inside of the front porch wall on the north side of the porch need repair. I recommend replacing the stucco as needed. Consider having the porch wall replaced with a railing or concrete block wall.

SITE CONDITIONS

Description

The lot is graded to slope toward the house in the rear.

Proper grading is important to keep water away from the foundation. Soil should slope approximately 1 inch per foot in a direction away from the building for at least 6 feet to prevent problems caused by excess water. Excess water here can cause settlement of soil and lead to cracking of foundations and walls and water entry into the building. The water discharged from roof gutters and downspouts should be directed away from the foundation for the same reason.



Observations and Recommendations

Grading of soil around the house appears adequate.

Safety Concern The tree at the rear of the house is too close to the roof and foundation. The tree is in bad condition. There are dead limbs hanging from upper branches. This is a safety hazard. Get bids from qualified, insured tree service contractors to remove the tree.

Safety Concern There is a pipe sticking up out of the ground at the south side of the back porch.
This is a safety hazard. Remove the pipe.

ROOF AND ATTIC

ROOF AREA: MAIN HOUSE

The roof type is intersecting gables. The roof was examined by walking on it.

The roof covering is asphalt fiberglass three tab strip shingles. The shingles were installed over organic roofing felt. Based on visible wear, its age is estimated to be five to eight years.

The reported roof age is five years.

Gutters are installed on the house.

The gutters are made of aluminum.

The house has three masonry chimneys.

The gutters discharge to surface and underground drains. I cannot determine the condition or destination of the underground drains.

Recent weather has been wet.

The gutters and downspouts are intact but need to be cleaned.

Observations and Recommendations

I inspected the flashings visible from the roof surface. The flashings appear to be in functional condition.

Maintenance The center chimney needs to be spot tuckpointed.

Minor Repair No cap is present at the top of the chimney. Consider having one installed at some point in the future to protect the chimney masonry and/or metal flue from the deteriorating effects of rainwater. The flue is open next to the metal liner for the north apartment furnace. Closing this gap is also a good idea. Screening should be installed to prevent the entry of birds and rodents that could block the flue.

Minor Repair The downspouts are missing at the southeast corner of the back porch and northwest corner of the front porch. Install downspouts to direct water away from the foundation.

Based on the condition of the roof, I estimate that the roof is in the first third of its typical expected lifespan.

The report is not intended to be conclusive regarding the life span of the roofing system or how long it will remain watertight in the future. The inspection and report are based on visible and apparent conditions at the time of the inspection. Unless rain has fallen just prior to the inspection, it may not be possible to determine if there are active leaks. In most homes, not all attic areas are readily accessible for inspection. Conclusions made by the inspector do not constitute a warranty, guaranty, or policy of insurance.

I recommend that you ask the seller about the presence of any roof leaks, including past leakage. If repairs are needed, a licensed roofing contractor should make them.

All roofs require periodic maintenance to achieve typical life spans and should be inspected annually. Expect to make minor repairs to any roof.

ROOF AREA: REAR PORCH

The roof type is low slope. The roof was examined by walking on it.

The roof covering is modified bitumen with a granular surface. Based on visible wear, its age was estimated to be five to eight years.

Actual age was reported to be five years.

Observations and Recommendations

The roof flashings were observed. The flashings appear to be in functional condition.

Based on the condition of the roof, I estimate that the roof is in the first third of its typical expected lifespan.

Attic

Description

I entered through the access opening in the back porch ceiling.

I examined the attic by crawling into it.

Observations and Recommendations

The condition of readily visible elements in the attic appears adequate except as noted elsewhere in the report. Roof sheathing and framing were examined and probed for signs of deterioration in limited areas. None were found except as noted elsewhere in the report.

The remote areas of the attic were not examined due to limited access. Conditions in these areas (including water tightness of the roof) are unknown and are specifically excluded from the inspection and report.

I saw no evidence of leakage in the readily accessible areas.

The attic ventilation is provided by infiltration. There are no vents for the attic. I recommend installing additional ventilation.

Insulation

Ceiling insulation is cellulose and mineral fiber. R-value is estimated to be 19.

Wall insulation could not be observed. Houses of this age typically do not have wall insulation. R-value is estimated to be 4.

(R-Value is the ability to resist the movement of heat. Higher numbers are better.)

Based on my visual inspection vapor barriers are not present in the walls and ceiling insulation. This may lead to condensation problems.

Observations and Recommendations

Insulation R- Value is below the level typically installed in this climate. Upgrading would be advisable to reduce energy use.

ELECTRICAL SYSTEM

Description

The 120/240 volt, 100 200 amp service enters the house from overhead.

The main service panel is located in the basements. The main panel contains circuit breakers.

The main disconnect is a group of circuit breakers 200 amp circuit breaker located in the main panels.

Service grounding connections are visible at a metal water lines and a driven rod at the south unit. This is typical. The path of the service ground wires is not completely visible.

Safety Concern There is no earth ground for the north service panel. Have a licensed electrical contractor install a ground wire for the service panel.

A sub-panel is located next to the main panel in the south unit. The panel was opened and examined. No sub-panels were found in the north unit.

The readily visible wiring is the original knob and tube. Some of the newer wiring is modern non-metallic cable.

Receptacles are a mixture of the older two hole ungrounded type and the modern three hole grounded type.

Smoke detectors: are present outside the sleeping areas only. Additional devices are recommended.

Observations and Recommendations

Electrical systems require regular maintenance for safety reasons. I recommend that you have a licensed electrician perform annual inspection and maintenance.

Safety Concern Abandoned service wire is visible at the small weather head at the northeast corner of the house. Have an electrician remove and properly terminate the wiring.

I opened and inspected all main and sub-panels. Conditions appear adequate at the south unit panels.

Investigate Further The sub panel at the south unit is an obsolete design where the upper row of breakers in the down position when energized. This design can cause someone to mistakenly energize a circuit while trying to disconnect power. The panel should be replaced if possible. This may be required if an electrical permit is taken out for repairs.

Major Repair Two wires are connected to a single terminal on circuit breakers in the north unit main panel. While often done, this is not permitted unless the device is suitable for more than one wire and is so labeled. Double tapping often leads to overloaded circuits and loose connections that can overheat. I recommended that this be evaluated and corrected by an electrician. The north panel cabinet is well secured and without apparent signs of corrosion, arcing or burn marks at the wiring connections however this panel is no longer adequate for the connected loads.

Safety Concern Insert appropriate fillers in the open knockouts in the north panel access to avoid possible shock.

Investigate Further The service drop has inadequate overhead clearance. Contact electrician and/or consult with the electric company for an appropriate reattachment to the house to elevate it to the minimum requirement.

Investigate Further Old Knob and tube wiring was observed in the house. This is the original wiring system used when the house was built. While often left in service, it is at the age where its insulation may be brittle and crumbling. Knob and tube is not as safe as modern wiring due to the lack of modern thermoplastic wire insulation, which increases the risk of fire in the event of a fault. It is an ungrounded system, which increases the risk of shock in the event of a fault. Connections are exposed rather than enclosed in boxes, which increases the risk of fire in the event of overheating or sparking at connections. Attic insulation should not be installed over this type of wiring as it is designed to be in free air to prevent overheating. Many homeowners' insurance companies will not write insurance for homes with this type of wiring. Replacement of this wiring would be prudent. This involves considerable work and expense. I recommend you discuss replacement with an electrician. The knob and tube wiring has been extended with open splices in several areas. It has also been covered with insulation in the attic.

Major Repair I recommend having an electrician convert all accessible knob and tube wiring visible in the basements as well as that covered by insulation in the attic to non-metallic sheathed cable.

I tested a representative number of receptacles using a testing device. Numerous safety concerns were found while testing receptacles. See below.

Safety Concern Old ungrounded receptacles have been replaced with modern 3 prong grounded type receptacles giving the illusion that they are grounded. The original wiring of the house did not provide for grounded receptacles. These new receptacles should be connected to ground, replaced with ungrounded receptacles, or replaced with GFCI receptacles where appropriate. While it is considered acceptable to leave older equipment in place that does not meet modern standards, any item you replace must meet them. Any

appliance that has a three-prong plug must be provided with at grounded receptacle for safety reasons.

Location: right side of the north kitchen sink, first floor sunroom

Safety Concern The GFCI outlet in the south kitchen is not grounded. This compromises the safety feature of the outlet. Consider having GFCI outlets grounded to minimize the risk of electrical shock.

Safety Concern One or more receptacles in the house were tested and found to have reversed polarity. This is a potential hazard that can be easily corrected by reversing wires to the receptacle. **Location:** next to the south kitchen stove

Investigate Further Testing a receptacle located in the northeast bedroom on the second floor on the east wall using a Suretest tester indicated a false ground. This condition should be evaluated by an electrician and repaired as judged necessary.

Investigate Further There is no receptacle in the first floor north bathroom. Have the electrician install a grounded GFCI outlet in the bathroom.

There are GFCI devices at some of the recommended locations. GFCI devices tested functional using a testing device except as noted below.

A GFCI receptacle was operated using a testing device and found to be not working. This type of receptacle is a safety device that shuts off the current in the event of a fault to ground, such as current passing through your body. An electrician can easily replace this receptacle. **Location:** south first floor bathroom

See the GFCI information below for recommendations for GFCI installation.

A ground fault circuit interrupter (GFCI) is a modern electrical device, either a receptacle or a circuit breaker, which is designed to protect people from electric shock. In the event of a fault in an appliance that you are touching, the current that passes through your body to ground is detected and the circuit is shut off, protecting you from potentially fatal shocks. GFCI devices are now required in new homes in wet or damp environments. I recommend that all receptacles located in the kitchen at countertops, in bathrooms, in the garage, at spas, hot tubs, fountains, pools, in crawl spaces, near laundry tubs, and outdoors be upgraded to the Ground Fault Circuit Interrupter type by a licensed electrician if not already present. This will considerably improve electrical safety for occupants of the building.

Investigate Further I could not determine the function of two switches. **Location:** bottom of stairs to bedrooms.

Overall, I found the system to be somewhat below today's safer standards. Upgrading should be considered. Consult an electrician regarding this.

Note: The inspection does not include low voltage systems, outdoor lighting, telephone wiring, intercoms, alarm systems, cable TV wiring, timers or the operation of smoke detectors.

Smoke detectors should be installed (if not already present) on each floor (including attics and basements.) Modern standards require that smoke detectors be installed inside and outside of all sleeping areas. They should be hard wired and have battery backups. All smoke detectors should be interconnected so that they all sound at once. I recommend upgrading to this level of protection (if not already present.)

Consult the manufacturer's literature for recommended mounting locations of smoke detectors. Be sure to test your smoke detectors upon moving in and monthly thereafter.

PLUMBING SYSTEM

Description

The water is supplied by the municipal system. The water service pipe is iron.

The curbside stop box for the main water shut off is visible in the front sidewalk, level with the surface with the lid in place.

The water meter is not required in the city.

The main shut off valve for the water supply piping was found at the front wall of the basement.

The fuel supply is natural gas.

The gas meter is separate gas meters for each unit are located in the basement and the main shut off valves are at the meters.

The waste system is municipal sewers.

Readily visible plumbing supply pipes are a mixture of older galvanized iron and newer copper. (Most of the piping is concealed and cannot be identified.) Readily visible waste pipes are a mixture of old cast iron and newer PVC plastic. The gas piping is black iron pipe.

Hot water is provided by a separate water heaters for each unit.

The gas 40 gallon water heaters for the south unit are located in the south basement. The water heaters are estimated to be four years old and over fifteen years old. A temperature pressure relief valve is present on the water heater.

A second gas 30 gallon water heater is located in the north basement I estimate the age of the water heater to be over twenty years old. A temperature pressure relief valve is present on the water heater.

There are fixtures connected at the bathrooms, kitchens and laundries.

The laundry, located in the basement has hook-ups for a gas or electric dryer (three prong). The dryer is vented to the exterior with flexible plastic ducting. I recommend replacing the plastic ducting with metal to reduce the risk of fire.

Have the Gas Company inspect the water heater and all gas appliances prior to closing. Their standards are rigorous and their safety inspections are typically part of the sales contract. The Gas Company is the final authority on the operational safety of all gas equipment and fuel lines.

Observations and Recommendations

Galvanized steel service pipe becomes unsatisfactory over time. Mineral deposits build up inside galvanized pipe and reduce water flow. When water flow becomes too low for normal household functions, replacement is required. When replacement of the water supply is needed get bids from licensed plumbing contractors for a new water service.

Minor Repair There is a little leak at the main shut off valve that requires repair.

The readily visible supply piping system appears to be in functional condition.

Minor Repair The laundry supply piping in the north basement is loose and need to be fastened and supported.

The readily visible drain piping system appears to be in functional condition but repairs are needed.

Major Repair The waste plumbing was not professionally and needs significant repair to meet minimum standards. The sink traps are not vented, the north bath shower waste is undersized, some of the waste pipes fall in the wrong direction. I recommend having plumbing contractors give proposals and bids to replace waste piping as needed to bring the system up to code.

The readily visible gas fuel piping system was not leak tested but appears adequate with the following exceptions:

Safety Concern There is an open fuel line by the stack at the south wall of the basement. Have the line capped.

Water was run through all fixtures and drains. There is functional flow at the fixtures. There is functional drainage in most of the fixtures.

Valves and fixtures were operated.

Minor Repair The north unit bathroom toilet is loose at the connection to the floor. Reset the toilet. This is usually a simple task of removing the toilet and replacing the wax o-ring. Contact a plumber or qualified handyman.

Maintenance There is an active leak in the waste/drain pipe at second floor bathroom sink. Have a qualified plumber repair/replace as necessary.

Maintenance There is loose tile at the whirlpool tub fixture wall. Repair tile as needed.

There was no hot water at the time of inspection.

Investigate Further The gas was locked off at the time of inspection and I was not able to evaluate the function of any of the gas appliances. The TPR extension pipe on the TPR valve is too short to comply with the Gas Company safety standards. Replace with a metal pipe that extends to within six inches of the floor with no threads or bends. This is a simple homeowner repair.

Safety Concern The reduced diameter TPR extension pipe on the north water heater relief valve is not the proper size for maximum safety. In the event the controls became defective and failed to stop heating, the smaller pipe may not be able to carry the discharge from the valve if it activated. In this case, the tank would be likely to explode. While the risk from this is relatively small, it does happen with catastrophic results. A 30-gallon water heater explodes with the force of one pound of dynamite. Replace with a metal pipe of the same diameter as the TPR valve that extends to within 6 inches of the floor with no threads or bends. Repair of this condition is inexpensive. A licensed plumber should be consulted.

Major Repair The chimney flue is too large for the water heater vent connector according to the seven times rule. There is risk of backdrafting Carbon Monoxide and acidic decay to the chimney without a proper liner. Have a qualified contractor install an approved metal liner for the water heater.

The seven times rule states that a masonry flue requires a metal liner if the cross sectional area of the flue is more than seven times the cross sectional area of the vent connector for the smallest appliance, usually the water heater.

Be aware of the risk of scalding from water temperatures above 120° F. The risk is especially acute for infants, children, and the elderly. Water temperatures should never be set higher than 120° F. Newer water supply valves contain anti-scalding mechanisms to prevent scalding. These can be retrofitted. Note that higher water temperatures are not necessary for modern dishwashers, which heat the water.

Maintenance The temperature pressure relief valve on the water heater should be tested upon moving in and on a regular basis thereafter. This is an important safety device that prevents the water heater from exploding in the rare event of a defect in the built in operating and safety controls. I do not test these valves.

A tub trap access panel was not present in the units.

Wells, septic systems, sewer lines, and water treatment equipment are not inspected and are expressly excluded from the inspection and report. If a well is present, it is recommended that you sample the well water for testing by local health authorities. No water testing of any type is performed during the inspection.

If the house has a septic system, inspection and pumping by a septic tank contractor should be done before closing. Septic tanks need regular pumping. Evaluation of the system can be made at that time. Reliable evaluation of the septic system cannot be made during a visual inspection.

HVAC (Heating Ventilation and Air Conditioning)

Description

The heating system for the apartments located in the basement consists of gas fired mid efficiency and average efficiency hot air furnaces.

Part of the living space is not heated by the central heating system. The sunroom is not heated.

The heating systems at the north second floor and the south apartments are estimated to be six to ten years old. The first floor south unit is fifteen to twenty years old.

The air conditioning system for the south apartment is an electric split system

Part of the living space is not cooled by the air conditioning system. There are no vents for cooling in the sun room.

The estimated size of the system is two tons at each unit.

The estimated age of the cooling system is fifteen to twenty years old.

Combustion System:

The supply of combustion air appears adequate.

Combustion byproducts exhaust through a metal b-vent and masonry flues.

I found the flue draft to be deficient. This is an important safety concern.

The condition of the flue appears OK at the upstairs furnace and at the south unit in the basement. The vent connectors need repair at the south basement furnace.

Clearance to combustibles appears to be

The heat exchanger is the chamber in the furnace where combustion takes place. The heat exchanger separates the house air and the combustion air. When cracks or holes develop in the heat exchanger, potentially toxic gases can mix with the house air. Replacement of the furnace is required at that time as replacement is not practical or cost effective. The average life span is eighteen years. The presence of holes or cracks usually cannot be determined during a home inspection. The heat exchanger is very rusty and may need to be replaced.

Defective furnaces and blocked flues can be fatal due to carbon monoxide poisoning. I strongly recommend the installation of a UL listed carbon monoxide detector.

Regular service and inspection of the heating system is strongly recommended.

Observations and Recommendations

Investigate Further The gas was locked off at the meter during the inspection. None of the gas appliances were tested. The gas piping was not inspected. The condition of the gas piping system is excluded from the inspection and report. The Gas Company will inspect all gas appliances as part of a mandatory safety check when the service is placed in your name. I suggest that you have this done prior to closing to allow time for any repairs they may require.

There is an abandoned furnace in the south basement. Have the old equipment removed.

Note: The report should not be read as a prediction of the remaining lifespan of the system. Typical lifespans of equipment may range from 12-18 years, but there are many exceptions to this. Most air conditioning compressors are warranted for only 5 years. Replacement of a compressor alone may cost from \$800-\$1200. I recommend that you purchase a warranty or service contract to cover replacement or repair. Be advised that defects or failure can occur at any time, and that the inspection in no way lessens the risk or likelihood of repairs or replacements being needed at any time in the future, including the day after the inspection. Any mechanical equipment can fail without warning at any time.

I recommended that all equipment be serviced twice a year. Regular service is very important for efficient operation and to achieve maximum lifespan. Filters in forced air systems should be changed monthly.

CENTRAL AIR CONDITIONING:

Minor Repair The outdoor temperature is too low to operate the air conditioning system without the possibility of damage. I cannot inspect the system. The condition of the system is specifically excluded from the inspection and report. I recommend you have the system checked by a qualified contractor prior to closing (if weather allows.) If not, be sure that the system has a warranty or service contract that would cover the cost of repairs.

Coils in the condensing unit and air handler were examined and found to be in need of cleaning. The condensing unit coil is dirty and clogged limiting airflow.

The primary condensate drain line was inspected where readily visible. Condensate drains are present.

An auxiliary drain line is not installed. (Not needed as the unit is installed in the basement.) An auxiliary drain line is not present at the second floor. Installation is advised, as the inevitable overflow of the main drain (if it clogs) will damage interior surfaces.

Investigate Further The air conditioning system is in adequate condition with repairs needed. I recommend you purchase a warranty to cover this system.

The failure probability of this system is high due to the advanced age of the system. Plan on the need for replacement at any time. I recommend the purchase of a homeowner's warranty or service contract to cover the cost of repair or replacement.

Investigate Further Air conditioning is available with window units at the north apartment. None were specifically tested. Confirm with the owner that they are functional and will remain with the property.

DUCTWORK:

Safety Concern The tape on the ducting at the north basement in all probability contains asbestos. Confirmation requires laboratory analysis. Most reports on asbestos indicate that when the material is properly encapsulated by painting and/or wrapping there is little health hazard risk. Identification of asbestos requires laboratory analysis that is outside the scope of a Home Inspection. Special regulations exist for the removal and disposal of asbestos. I recommend that you obtain the booklet "Asbestos in the Home" published by the U.S. Consumer Products Safety Commission (800-638-2772), which discusses asbestos and makes recommendations. This document is available on the web at <http://www.epa.gov/iaq/pubs/asbestos.html>

Filters should be cleaned or changed on a regular basis. This helps keep the system and the house clean and reduces operating costs.

Minor Repair Visible ductwork was observed where readily accessible and found to need repair. The air return panning on the floor joists at the north unit is loose and needs repair or replacement.

The furnaces have disposable fiberglass filters installed in the return air ducts.

The filters are dirty and need to be replaced.

FANS

There are kitchen vent fans and ceiling fans in some of the rooms.

Minor Repair The second floor bathroom window is painted shut. Fix the window so the bathroom will be ventilated.

Room ventilation fans help remove humidity from the air and create a more comfortable interior living space. Opening the house occasionally can also improve indoor air quality depending on individual sensitivities to mold, pollen and other airborne particles. Bathroom exhaust fans are especially important for reducing humidity which preserves wall finishes and discourages mold growth. Kitchen exhaust fans remove cooking odors if they discharge to the exterior. Whole house fans are great for bringing in cool air during spring and fall. Automatic power attic ventilators help cool the attic but may draw your conditioned air into the attic to do the job.

INTERIOR

Description

The walls and ceilings are plaster and drywall.

Floors are carpet, vinyl, ceramic tile and wood.

Kitchen cabinets are hardwood faced.

The tub / shower surround is ceramic tile over drywall and fiberglass.

Observations and Recommendations

Minor cracks are found on interior surfaces in all buildings and are typically cosmetic in nature. This type of cracking is usually caused by settlement, shrinkage of building components or thermal expansion and contraction. Small cracks of this type are not mentioned in the report.

I cannot determine the condition of floors underneath carpet and other coverings. The condition of concealed floors is specifically excluded from the inspection and report.

Walls and ceilings were found to be in adequate condition. Stains and some ceiling damage are visible below upper unit plumbing fixtures and furnace.

Interior floors were found to be in adequate condition except as noted below.

Maintenance Tile surfaces were tapped to test for signs of deterioration. I tapped the tile walls by hand and found some to be loose. Secure, grout and caulk loose tiles as necessary. It is possible there is wall damage that needs repair to provide a solid substrate for the tile. The extent of substrate damage can only be determined when loose tile are removed.

A Word About Mold and Other Indoor Air Contaminates

Susceptibility to mold and other contaminants has become an issue for some homeowners. There are no acceptable or unacceptable levels of mold contamination set by the Center for Disease Control, the Environmental Protection Administration, or any other independent authoritative source.

I do not inspect for or provide an opinion on the potential for, or the existence of mold or related damage in the home. If you have concerns about mold or other indoor air quality issues I recommend that you contact specialists in the field such as the CDC, the EPA and other experts.

If you have concerns about mold or other indoor air quality issues I recommend that you contact specialists in the field such as the CDC, the EPA and other experts.

Investigate Further Remove the abandoned freezer from the basement under the sunroom addition.

Safety Concern The paint on the floor joist is most likely lead based paint. Take precautions when working in the basement and especially if you have to remove any of the paint.

APPLIANCES

Description

The following appliances were inspected by operating the appliance using the normal operating controls as you would under every day use:

Range: Did not operate properly during inspection, repair is needed.

Range hood: Operated during the inspection and found to be functional.

Disposer: Operated during the inspection and found to be functional.

Observations and Recommendations

I inspected appliances by turning them on briefly. Extensive testing of timers, thermostats, and other controls is not performed. No report can be made regarding the effectiveness of any appliances. (For example, it is impossible to thoroughly check a washer and dryer without a load of clothes.) The inspection only determines whether or not the appliances run.

I found the appliances to be in adequate condition, except as noted below.

Minor Repair There are no anti-tip devices on the stoves as required by the manufacturer. Have the anti-tip brackets installed as a safety precaution.

Discovery of recalled appliances and other products is outside the scope of this inspection.

Refrigerator maintenance: Regular maintenance of your refrigerator will pay for itself in terms of better efficiency and a longer life. Refrigerators, like air conditioners, move a lot of air across the condenser coils located behind a grille under the door. With this air comes dust, pet hair and lint that clings to the coils, reducing their ability to dissipate heat. When this happens, the compressor runs longer and cools less. This makes for an inefficient appliance and higher electrical bills. Cleaning these coils twice year makes a big difference and will take only minutes.

In addition to the condenser coil, a refrigerator also has an evaporator coil or plate which needs regular cleaning. Location of the evaporator plate (or evaporator coil) will vary. On older models, the evaporator coil is next to the compressor at the appliance's back behind an access panel. Newer models usually have an exposed coil in the form of a large metal grid on the refrigerator's back.

Unplug the refrigerator before starting. Begin by lifting the grille from its place below the front door. Use a vacuum cleaner on the coils. If the coils are greasy, use a spray bottle and a degreasing cleaner to rinse the fins and tubes. Next, pull the refrigerator out so you can work on the compressor. Remove the access panel and vacuum the compressor and the evaporator coil. Finally, replace the grille and access panel and move the refrigerator back.

The door seal on your refrigerator should be kept clean, especially along the bottom edge where food particles and liquids are spilled. Spilled soda is the primary cause of deterioration of refrigerator door seals.

Dryer Maintenance: Adequate venting of your dryer is a priority. Vents clogged with lint, or crushed or kinked vents can and do cause fires. The vent itself and the outlet screen should be cleaned of lint and debris twice a year. I recommend you clean this vent upon moving into the home. During a typical home inspection, I usually can't observe or evaluate any of the dryer vent. Often, the dryer itself blocks our view of the vent. In most cases, much of the vent is hidden by finish materials (such as wallboard), and insulation.

I recommend that you make sure your dryer vent is made of proper materials, and is properly installed. You should do this before closing, when you have a good opportunity to observe the dryer vent. Here's why I make the recommendations: The U.S. Consumer Product Safety Commission (CPSC) estimates that in 1997, there were 16,700 fires, 30 deaths and 430 injuries associated with clothes dryers. Some of these fires occur when lint builds up in the filter or in the exhaust duct. Under certain conditions, when lint blocks the flow of air, excessive heat build-up can cause a fire in some dryers.

To prevent fires, closely follow manufacturers' instructions for new installations. Most manufacturers specify the use of a rigid or flexible metal duct to provide a minimum restriction of airflow. If metal duct is not available at the retailer where the dryer was purchased, check other locations; such as hardware or builder supply stores. If you are having the dryer installed, insist upon metal duct unless the installer has verified that the manufacturer permits the use of plastic duct. Source: CPSC Document #5022.

End, summary follows.

SUMMARY

The inspected components appear to be in adequate condition, with some exceptions. Comparing this house to other houses of this age and type that I have recently inspected, the overall condition is more or less typical.

The number of repairs listed in the report is typical for property this age. Bear in mind that all homes need repairs of one type or another, even if only minor. Generally, older homes need more repairs. This varies depending on maintenance and upgrading performed over the years. Some of the reported repairs are of the type that you might be inclined to live with under ordinary circumstances. Buyers and sellers of homes often have different perspectives on this issue.

Immediate repairs that should be completed prior to occupancy include:

Electrical Repairs

Repairs to stairs and railings

Gas fuel hazard repairs

Asbestos Mitigation

Other repairs are needed as mentioned in the report. All safety concerns listed in the report should be completed prior to occupancy.

1. The cracks in the southeast addition foundation at the corner and at the joint between the addition and house foundation should be closed with cement patch and monitored for further movement.
2. The interior entrance to the basement is a lift-up section of the stairs to the bedrooms. Be aware of the safety hazards. Consider relocating the inside basement entry.
3. The starter strips at the south side of the building at loose in several areas. I recommend removing the bottom row of siding and firmly attaching the starter strips.
4. The siding and trim joints at the rear sunporch window sills are poor and need to be caulked to keep water from running behind the siding. I recommend having the siding on the sunroom replaced.
5. The vinyl siding is installed over tar-paper brick siding and possibly other siding material. The material used is low quality and the installation is sloppy. This siding will continue to function but will need regular maintenance. Be on guard for leakage around windows and at wall roof joints.
6. J-channel is missing at the south casement window on the first floor. Repair as needed.
7. There is evidence of extensive termite infestation in the framing at the north wall and lean-to addition on the north side of the garage. The lean-to was full of stuff and I could not see the extent of damage. Be prepared to make structural repair / reinforcement as needed.
8. The garage is leaning to the south. I recommend bracing to keep the garage from leaning any further or collapsing.
9. The garage was filled with household items limiting what could be observed. Additional defects may be found when the garage is cleaned out.
10. I operated the garage doors. The second panel from the ground on the north door is damaged. The panel needs to be replaced.
11. The garage doors are dented from a ball striking the surface. Improvement of appearance requires replacement.

12. The overhead electric feeds to the garage are not installed safely or to any accepted standard. I recommend having an electrician replace the overhead electric with an underground feed.
13. Surface mounted wiring in the garage should be protected from damage. Have an electrician install the surface mounted non-metallic sheathed cable in conduit, inside the framing void or protect by approved wiring method.
14. A light fixture above the garage access door is hanging from the wire. Have the fixture installed properly.
15. Broken thermal seals are noted below: first floor south bathroom window. Replace the units to restore clarity.
16. Replace broken window sash cords as necessary if you want the windows to stay open properly. Sash chain is a long lasting replacement.
17. Sampled windows operated stiffly and some were stuck or painted shut. Loosen and clean as necessary for easier operation.
18. The windows in the bedrooms do not meet modern requirements for size of openings to allow escape during a fire. This is typical for homes this age. You may wish to consider changing the bedroom windows to a type that would allow escape.
19. Some window screens are missing from window openings. Confirm with the owner if screens are available for all operable windows.
20. The front walk steps are uneven; the steps are a trip hazard and should be replaced.
21. Some of the steps and stairs have no handrails. I recommend the installation of handrails for safety reasons. Falling on steps and stairs is one of the primary causes of injury in the home. Location: basement steps
22. The stucco panels on the inside of the front porch wall on the north side of the porch need repair. I recommend replacing the stucco as needed. Consider having the porch wall replaced with a railing or concrete block wall.
23. The tree at the rear of the house is too close to the roof and foundation. The tree is in bad condition. There are dead limbs hanging from upper branches. This is a safety hazard. Get bids from qualified, insured tree service contractors to remove the tree.
24. There is a pipe sticking up out of the ground at the south side of the back porch. This is a safety hazard. Remove the pipe.
25. No cap is present at the top of the chimney. Consider having one installed at some point in the future to protect the chimney masonry and/or metal flue from the deteriorating effects of rainwater.
26. The downspouts are missing at the southeast corner of the back porch and northwest corner of the front porch. Install downspouts to direct water away from the foundation.
27. There is no earth ground for the north service panel. Have a licensed electrical contractor install a ground wire for the service panel.
28. Abandoned service wire is visible at the small weather head at the northeast corner of the house. Have an electrician remove and properly terminate the wiring.
29. The sub panel at the south unit is an obsolete design where the upper row of breakers in the down position when energized. This design can cause someone to mistakenly energize a circuit while trying to disconnect power. The panel should be replaced if possible. This may be required if an electrical permit is taken out for repairs.
30. Two wires are connected to a single terminal on circuit breakers in the north unit main panel. I recommended that this be evaluated and corrected by an electrician.
31. Insert appropriate fillers in the open knockouts in the north panel access to avoid possible shock.

32. The service drop has inadequate overhead clearance. Contact electrician and/or consult with the electric company for an appropriate reattachment to the house to elevate it to the minimum requirement.
33. Old Knob and tube wiring was observed in the house. The knob and tube wiring has been extended with open splices in several areas. It has also been covered with insulation in the attic. I recommend having an electrician convert all accessible knob and tube wiring visible in the basements as well as that covered by insulation in the attic to no-metallic sheathed cable.
34. Old ungrounded receptacles have been replaced with modern 3 prong grounded type receptacles giving the illusion that they are grounded. Location: right side of the north kitchen sink, first floor sunroom
35. The GFCI outlet in the south kitchen is not grounded. This compromises the safety feature of the outlet. Consider having GFCI outlets grounded to minimize the risk of electrical shock.
36. One or more receptacles in the house were tested and found to have reversed polarity. This is a potential hazard that can be easily corrected by reversing wires to the receptacle. Location: next to the south kitchen stove
37. Testing a receptacle located in the northeast bedroom on the second floor on the east wall using a Suretest tester indicated a false ground. This condition should be evaluated by an electrician and repaired as judged necessary.
38. There is no receptacle in the first floor north bathroom. Have the electrician install a grounded GFCI outlet in the bathroom.
39. I could not determine the function of two switches. Location: bottom of stairs to bedrooms.
40. There is a little leak at the main shut off valve that requires repair.
41. The laundry supply piping in the north basement is loose and need to be fastened and supported.
42. The waste plumbing was not professionally and needs significant repair to meet minimum standards. The sink traps are not vented, the north bath shower waste is undersized, some of the waste pipes fall in the wrong direction. I recommend having plumbing contractors give proposals and bids to replace waste piping as needed to bring the system up to code.
43. There is an open fuel line by the stack at the south wall of the basement. Have the line capped.
44. The north unit bathroom toilet is loose at the connection to the floor. Reset the toilet. This is usually a simple task of removing the toilet and replacing the wax o-ring. Contact a plumber or qualified handyman.
45. There is an active leak in the waste/drain pipe at second floor bathroom sink. Have a qualified plumber repair/replace as necessary.
46. There is loose tile at the whirlpool tub fixture wall. Repair tile as needed.
47. The gas was locked off at the time of inspection and I was not able to evaluate the function of any of the gas appliances.
48. The TPR extension pipe on the TPR valve is too short to comply with the Gas Company safety standards. Replace with a metal pipe that extends to within six inches of the floor with no threads or bends. This is a simple homeowner repair.
49. The reduced diameter TPR extension pipe on the north water heater relief valve is not the proper size for maximum safety. Replace with a metal pipe of the same diameter as the TPR valve that extends to within 6 inches of the floor with no threads or bends.
50. The chimney flue is too large for the water heater vent connector according to the seven times rule. There is risk of backdrafting Carbon Monoxide and acidic decay to the chimney without a proper liner. Have a qualified contractor install an approved metal liner for the water heater.

51. The gas was locked off at the meter during the inspection. None of the gas appliances were tested. The gas piping was not inspected. The condition of the gas piping system is excluded from the inspection and report. The Gas Company will inspect all gas appliances as part of a mandatory safety check when the service is placed in your name. I suggest that you have this done prior to closing to allow time for any repairs they may require.
52. The outdoor temperature is too low to operate the air conditioning system without the possibility of damage. I cannot inspect the system. The condition of the system is specifically excluded from the inspection and report. I recommend you have the system checked by a qualified contractor prior to closing (if weather allows.) If not, be sure that the system has a warranty or service contract that would cover the cost of repairs.
53. The air conditioning system is in adequate condition with repairs needed. I recommend you purchase a warranty to cover this system.
54. Air conditioning is available with window units at the north apartment. None were specifically tested. Confirm with the owner that they are functional and will remain with the property.
55. The tape on the ducting at the north basement in all probability contains asbestos. Confirmation requires laboratory analysis. Most reports on asbestos indicate that when the material is properly encapsulated by painting and/or wrapping there is little health hazard risk. Identification of asbestos requires laboratory analysis that is outside the scope of a Home Inspection. Special regulations exist for the removal and disposal of asbestos. I recommend that you obtain the booklet "Asbestos in the Home" published by the U.S. Consumer Products Safety Commission (800-638-2772), which discusses asbestos and makes recommendations. This document is available on the web at <http://www.epa.gov/iaq/pubs/asbestos.html>
56. Visible ductwork was observed where readily accessible and found to need repair. The air return panning on the floor joists at the north unit is loose and needs repair or replacement.
57. The second floor bathroom window is painted shut. Fix the window so the bathroom will be ventilated.
58. Tile wall surrounds were tapped to test for signs of deterioration. I tapped the tile walls by hand and found some to be loose. Secure, grout and caulk loose tiles as necessary. It is possible there is wall damage that needs repair to provide a solid substrate for the tile. The extent of substrate damage can only be determined when loose tile are removed.
59. Remove the abandoned freezer from the basement under the sunroom addition.
60. There are no anti-tip devices on the stoves as required by the manufacturer. Have the anti-tip brackets installed as a safety precaution.
61. The paint on the floor joist is most likely lead based paint. Take precautions when working in the basement and especially if you have to remove any of the paint.

While I make an effort to identify existing or potential problems, it is not possible for a home inspector to predict the future. I recommend that you budget perhaps \$1,000.00 to \$1,500.00 dollars a year for unforeseen repairs and maintenance. This would hold true for any house you were considering.

Please feel free to call at any time if you have any questions.

END OF REPORT



12/01/04

CLIENT

Mr and Mrs Homebuyer

PROPERTY

1234 Anystreet , St. Louis MO 63143

INVOICE

Building Inspection:	
Termite	
Radon	
Total	
Paid	
Balance Due	

PAID IN FULL

THANK YOU