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Caring for Your Home

A home is a very complex system and this information manual will help you understand what should be expected – when problems arise – what you can do – what is expected of you – what is expected of us. This manual is based on Industry standards and our experience in 30+ years of homebuilding.

This manual is for information purposes only. Please refer to your contract for warranty information on your home and appliances.

Although quality materials and workmanship have been used in creating your home, it requires care from the first day, similar to an automobile. Regular homeowner maintenance is essential to providing a quality home for a lifetime.

KEM Homes is proud of the homes we build and the neighborhoods in which we build them. We strive to create lasting value. This is best achieved when you, as the homeowner, know and perform appropriate maintenance tasks. Periodic maintenance is necessary because of normal wear and tear, the inherent characteristics of the materials used in your home, and normal service required by the mechanical systems. Natural fluctuations in temperature and humidity also affect your home, resulting in maintenance items. The natural and manufactured components interact with each other and the environment.

KEM recognizes that it is impossible to anticipate and describe every aspect of good home care. This manual focuses on items that homeowners commonly ask about. The subjects are listed in alphabetical order to make finding answers to your questions convenient. Because we offer homebuyers a variety of floor plans and optional features, this manual may discuss components that are not present in your home.

Prompt Attention

In addition to routine care, many times a minor maintenance attention provided immediately saves you a more serious, time-consuming, and sometimes costly repair later. Note also that neglecting routine maintenance can void applicable limited warranty coverage on all or part of your home.

By caring for your new home attentively, you ensure uninterrupted warranty coverage as well as your enjoyment of it for years to come. The attention provided by each homeowner contributes significantly to the overall desirability of the neighborhood.

Manufacturer Literature

Please take time to read the literature (warranties and use and care guides) provided by the manufacturers of consumer products and other items in your home. The information contained in that material is not repeated here. Although much of the information may be familiar to you, some points may differ significantly from homes you have had in the past.

Activate specific manufacturer's warranties by completing and mailing any registration cards included with their materials. In some cases, manufacturer's warranties may extend beyond the first year and it is in your best interest to know about such coverages.

KEM makes every effort to keep the information in this manual current. However, if any detail in our discussion conflicts with the manufacturer's recommendations, you should follow the manufacturer's recommendations.

You also received the RWC 10-year Limited Structural Warranty documents at your closing. (This warranty may not apply to all homes built by KEM Homes, Inc.) We provided a specimen copy for your review at the time of contract. Please read through this information. If you have any questions, please contact KEM's office.

Warranty Procedures

Providing warranty service for a new home is more complicated than for other products. When you purchased your home, you actually purchased hundreds of items and the work of 35 to 50 independent trade contractors. With so many details and people involved, a planned system is essential.

Our warranty service system is designed to respond to your written report of non-emergency items. Emergency reports are the only service requests we accept by phone. As you notice items need attention, jot them down on a service request form. (You received two service request forms at closing; or you can submit the request online at our Website at www.kemhomes.com)

You are welcome to mail, fax, e-mail, or drop off your service request in person at our office. Keep a copy for your records.

30-45 Day Request

For your convenience and in order for our service program to operate at maximum efficiency, we suggest that you wait 30-45 days before

submitting a service request. This allows you sufficient time to become settled in your new home and to use most components repeatedly.

11-Month Request

Again, keep any further notations of items on a service request form. Near the end of the eleventh month of your one-year warranty, you should submit a year-end service request, if necessary. KEM will also be happy to discuss any maintenance questions you may have at that time.

Emergency Service

While emergency warranty situations are rare, if they do occur, prompt response is essential. Begin by verifying conditions that you can check. Troubleshooting tips appear in this manual for several of your home's components. Often the appropriate action by you can solve a problem immediately or mitigate the situation until a technician arrives.

If your review of the troubleshooting tips fail to resolve the problem during business hours, call KEM's office:

970-223-4900

After hours, or on weekends or holidays, call the necessary trade contractor or utility company directly. Their phone numbers are listed on the Emergency Phone Numbers sheet you received at closing. We suggest that you insert the Emergency Phone Numbers sheet in this section of your homeowner manual or secure it inside a kitchen cabinet, near your phone.

Our trade contractors or local utility companies provide emergency responses to the following conditions:

- Total loss of heat when the outside temperature is below 50 degrees F
- Total loss of electricity
- Total loss of water
- Plumbing leak that requires the entire water supply to be shut off
- Gas leak

NOTE: If a service (gas, electricity, water) is out in an entire area, attention from the local utility company is needed. Trade contractors are unable to help with such outages.

Air Conditioning

Understandably, if your air conditioner is not working, you want it fixed pronto. In a typical scenario, many other homeowners across our region will discover they too need service on their air conditioners on the same hot day that you do. The trades who address these needs generally respond to calls on a first come, first served basis. If your call for service comes during this time period, you may wait several days for a technician to arrive. For this reason, we recommend that you operate your air conditioner as soon as the weather starts to warm up. In this way, if service is needed, you can avoid the rush and get a more satisfactory response.

Roof Leak

While KEM agrees that a roof leak is indeed an emergency, the reality is that field repairs cannot always safely or effectively be performed while the roof is wet. During business hours, contact our office with the information, take appropriate steps to mitigate any ongoing damage, and we will follow up when conditions make repairs possible. (See *Roof* for more details.)

Other Emergencies

In addition to these emergency situations, be prepared for other kinds of emergencies. Post phone numbers for the fire department, police, paramedics, and poison control near phones in your home. Have companies in mind in the event you need a locksmith, water extraction, glass breakage repair, or sewer router service. If you are new to the area, neighbors may be able to recommend good service providers. Introduce your children to neighbors who might be available to help in an emergency if you are not home.

Kitchen Appliance Warranties

The manufacturers of kitchen appliances have asked to work directly with homeowners if any repairs are needed for their products. Customer service phone numbers are listed in the use and care materials for each appliance. Be prepared to provide the model and serial number of the item and the closing date on your home

Appliance warranties are generally for one year; refer to the literature provided by the manufacturer for complete information. Remember to mail in any registration cards you receive with manufacturer materials. Being in the manufacturer's system assures that in the event of a recall the company can contact you and arrange to provide the needed correction.

Warranty Item Processing Procedures

When KEM receives a warranty service request form, we may contact you for an inspection appointment. Warranty inspection appointments are available Monday through Friday, 8:00 a.m. to 5:00 p.m. This appointment will allow us to inspect the items listed in your written request to confirm warranty coverage and determine appropriate action. Occasionally the inspection step is unnecessary.

Help Us to Serve You

We can provide service faster and more accurately if we have all the necessary information. With your warranty request, please include:

- Your name, address, and the phone numbers where you can be reached during business hours.
- A complete description of the problem, for example, "guest bath—cold water line leaks under sink," rather than "plumbing problem."
- Information about your availability or the best days or times to reach you. For instance, if calling you at work is acceptable, let us know. Otherwise, we will use your home phone number. If you are usually home on Thursday, mention that.

Access to Your Home

KEM conducts inspections of interior warranty items only when an adult is available to accompany our representative and point out the items listed. Both our in-house service technicians and those of our trade contractors will likewise perform repairs only when an adult is available to admit them to your home. An adult is a person 18 or older who has your authorization to admit service personnel.

Exterior Items

Exterior items can usually be inspected and repaired without an adult present, provided access is available (for instance, no locked gate). However, we will contact you the day prior to any visit and let you know we will have someone on your property. If you prefer to meet with us and discuss the item(s) in question, we are happy to arrange an appointment to do that.

Repair Appointments

Depending on the work needed, at the conclusion of the inspection appointment, the KEM warranty representative will designate a date to do the work.

Pets

KEM respects the pets that many homeowners count as members of their households. To prevent the possibility of an animal getting injured or lost, or giving in to its natural curiosity about tools and materials used for repairs, we ask that you restrict all animals to a comfortable location during any warranty visit, whether for inspection or warranty work. This policy is also for the protection of our employees and trades personnel. We have instructed KEM and trades personnel to reschedule the appointment if pets have access to the work area.

Your Belongings

In all work that we perform for our homeowners we are concerned that their personal belongings be protected. When warranty work is needed in your home, we ask that you remove vulnerable items or items that might make performing the repair difficult. KEM and trade personnel will reschedule the repair appointment rather than risk damaging your belongings.

Surfaces

We expect all personnel who work in your home to arrive with appropriate materials to cover the work area, protecting it from damage and catching the dust or scraps from the work being performed. Similarly, all personnel should clean up the work area, removing whatever excess materials they brought in.

Repair personnel will routinely check the work area for any existing damage to surfaces. They will document any scratches, chips, or other cosmetic damage prior to beginning repairs to avoid any later disagreement about how and when such damage occurred.

Completion Time

Regular review of outstanding work orders is part of our office routine. Checking with trades and homeowners alike, we strive to identify the cause for delays and get all warranty work completed within an appropriate and reasonable amount of time. We intend to complete warranty work as soon as possible after the inspection unless you are

unavailable for access. If a back-ordered part or similar circumstance causes a delay, we will let you know. Likewise, when weather conditions prevent the timely completion of exterior items, we track those items and follow up to ensure that they are addressed when conditions are right. This can mean a wait of several months.

Missed Appointments

Good communication is one key to successful completion of warranty items. We strive to keep homeowners informed and to protect them from inconvenience. One of our challenges in this regard is when unexpected events sometimes result in missed appointments.

If a KEM employee or a trade person will be late, he or she should contact you as soon as the delay is recognized, offering you a choice of a later time the same day or a completely different appointment. If you must miss an appointment, we appreciate being alerted as soon as you realize your schedule has changed.

Air Conditioning

(See also Heating)

Air conditioning can greatly enhance the comfort of your home, but if it is used improperly or inefficiently, wasted energy and frustration will result. These hints and suggestions are provided to help you maximize your air conditioning system.

Your air conditioning system is a whole-house system. The air conditioning unit is the mechanism that produces cooler air. The air conditioning system actually involves everything inside your home including, for example, drapes, blinds, and windows.

Your home air conditioning is a closed system, which means that the interior air is continually recycled and cooled until the desired air temperature is reached. Warm outside air disrupts the system and makes cooling impossible. Therefore, you should keep all windows closed. The heat from the sun shining through windows with open drapes is intense enough to overcome the cooling effect of the air conditioning unit. For best results, close the drapes on these windows.

Time is very important in your expectations of an air conditioning system. Unlike a light bulb, which reacts instantly when you turn on a switch, the air conditioning unit only begins a process when you set the thermostat.

For example, if you come home at 6:00 p.m. when the temperature has reached 90 degrees F and set your thermostat to 75 degrees, the air

conditioning unit will begin cooling, but will take much longer to reach the desired temperature. During the whole day, the sun has been heating not only the air in the house, but the walls, the carpet, and the furniture. At 6:00 p.m. the air conditioning unit starts cooling the air, but the walls, carpet, and furniture release heat and reduces this cooling. By the time the air conditioning unit has cooled the walls, carpet, and furniture, you may well have lost patience...or be ready for bed.

If evening cooling is your primary goal, set the thermostat at a moderate temperature in the morning while the house is cooler, allowing the system to maintain the cooler temperature. The temperature setting may then be lowered slightly when you arrive home, with better results. Once the system is operating, setting the thermostat at 60 degrees will *not* cool the home any faster and can result in the unit freezing up and not performing at all. Extended use under these conditions can damage the unit.

Run furnace fan continuously in summer time to help equalize hot and cold areas. Change filters once a month in cooling times.

Adjust Vents

Maximize airflow to occupied parts of your home by adjusting the vents. Likewise, when the seasons change, readjust them for comfortable heating. You may choose to close vents in unused areas or rooms.

Compressor Level

Maintain the air conditioning compressor in a level position to prevent inefficient operation and damage to the equipment. (*See also Grading and Drainage.*)

Manufacturer's Instructions

The manufacturer's manual specifies maintenance for the condenser. Review and follow these points carefully. Since the air conditioning system is combined with the heating system, follow the maintenance instructions for your furnace as part of maintaining your air conditioning system.

Temperature Variations

Temperatures may vary from room to room by several degrees Fahrenheit. This is due to such variables as floor plan, orientation of the home on the lot, type and use of window coverings, vents open or closed, and traffic through the home.

TROUBLESHOOTING TIPS: AIR CONDITIONING

Before calling for service, check to confirm that the:

- Thermostat is set to "cool" and the temperature is set below the room temperature.
- Blower panel cover is installed correctly for the furnace blower (fan) to operate. Similar to the way a clothes dryer door operates, this panel pushes in a button that lets the fan motor know it is safe to come on. If that button is not pushed in, the furnace will not operate.
- Air conditioner and furnace breakers on the main electrical panel are on. (Remember if a breaker trips you must turn it from the tripped position to the off position before you can turn it back to the on position.)
- 220 switch on the outside wall near the air conditioner is on.
- Switch on the side of the furnace is on.
- Fuse in furnace is good. (See manufacturer literature for size and location.)
- Filter is clean to allow airflow.
- Vents in individual rooms are open.
- Air returns are unobstructed.
- Air conditioner has not frozen from overuse.

Even if the troubleshooting tips do not identify a solution, the information you gather will be useful to the service provider you call.

Your air conditioning system should maintain a temperature of 78 degrees or a differential of 15 degrees from the outside temperature, measured in the center of each room at a height of 5 feet above the floor. Lower temperature settings are often possible, but neither the manufacturer nor KEM guarantees such lower temperatures.

Compressor

The air conditioning compressor must be in a level position to operate correctly.

Coolant

The outside temperature must be 70 degrees Fahrenheit or higher for the contractor to add coolant to the system. If your home was completed during winter months, this charging of the system is unlikely to be complete and will need to be performed in the spring. Although we check and document this at orientation, your call to remind us is welcome in the spring.

Non-emergency

Lack of air conditioning service is not an emergency. Air conditioning contractors in our region respond to air conditioning service requests during normal business hours and in the order received.

Alarm System

If your home selections included pre-wire for an alarm system, you will arrange for the final connection and activation after you move-in. The alarm company will demonstrate the system, instruct you in its use, and provide identification codes for your family. We recommend that you test the system each month.

The System is warranted by the Manufacturer.

Appliances

Please see your *Appliance Service* information sheet.

We assign all appliance warranties to you, effective on the date of closing. The appliance manufacturers warrant their products directly to you according to the terms and conditions of these written warranties.

Attic Access

The attic space is neither designed nor intended for storage. We provide access to this area according to building codes and for maintenance of mechanical equipment that may traverse the attic space. If you perform needed tasks in the attic, use caution and avoid stepping off wood members onto the drywall. This can result in personal injury or damage to the ceiling below.

Brick

Brick is one of the most durable and lowest maintenance finishes for a home's exterior. On single-family homes, a record of your brick color is included in your selection sheets.

Efflorescence

The white, powdery substance that sometimes accumulates on brick surfaces is called efflorescence. This is a natural phenomenon and cannot

be prevented. In some cases, you can remove it by scrubbing with a stiff brush and vinegar. Consult your home center or hardware store for commercial products to remove efflorescence.

Tuck-Pointing

After several years, face brick may require tuck-pointing (repairing the mortar between the bricks). Otherwise, no regular maintenance is required.

Weep Holes

You may notice small holes in the mortar along the lower row of bricks. These holes allow moisture that has accumulated behind the brick to escape. Do not fill these weep holes or permit landscaping materials to cover them.

Water

Keep water from sprinkler systems off the bricks as it may deteriorate brick and grout.

Cabinets

Your selection sheets are your record of the brand, style, and color of cabinets in your home. Please retain this information for future reference. In wood or wood veneer cabinets, expect differences in grain and color between and within the cabinet components due to natural variations in wood and the way it takes stain.

Cleaning

Products such as lemon oil or polishes that include scratch cover are suggested for wood cabinet care. Follow container directions. Use such products a maximum of once every 3 to 6 months to avoid excessive build-up. Avoid paraffin-based spray waxes and washing cabinets with water, as both will damage the luster of the finish.

Hinges

If hinges catch or drawer glides become sluggish, a small amount of silicone lubricant will improve their performance.

Moisture

Damage to cabinet surfaces and warping can result from operating appliances (such as a crock-pot and coffee pot) that generate large amounts of moisture (humidity) too near the cabinet. When operating such appliances, place them in a location that is not directly under a cabinet. Moisture damage can also occur around sink areas. Do not hang damp towels over cabinets. Clean up water spills immediately.

Alignment

Doors, drawer fronts, and handles should be level and even.

Operation

Doors and drawers should operate properly under normal use.

Wood Grain

In wood or wood veneer cabinets, expect differences in grain and color between and within the cabinet components due to natural variations in wood and the way it takes stain.

Carpet

Your selection sheets (included in your closing packet) provide a record of the brand, style, and color of floor coverings in your home. Please retain this information for future reference. Refer to the various manufacturers' recommendations for additional information on the care of your floor coverings.

Burns

Take care of any kind of burn immediately. First, snip off the darkened fibers. Then use a soapless cleaner and sponge with water. If the burn is extensive, seek professional help to replace the damaged area.

Cleaning

You can add years to the life of your carpet with regular care. Carpet wears out because of foot traffic and dirt particles that are trampled deep into the pile beyond the suction of a vacuum. Dirt particles, which act like sandpaper, wear down carpet fibers, resulting in a dull look. The most important thing you can do to protect your carpet is to vacuum it frequently.

Vacuum twice each week lightly and once a week thoroughly. Heavy traffic areas may require more frequent cleaning. A light vacuuming consists of three passes; a thorough vacuuming may require seven passes. A vacuum cleaner with a beater-bar agitates the pile and is more effective in bringing dirt to the surface for easy removal.

Vacuuming high-traffic areas daily helps keep the area clean and maintains the upright position of the pile. Wipe spills and clean stains immediately. For best results, blot or dab any spill or stain; avoid rubbing. Test stain removers in an inconspicuous area, such as in a closet, to check for any undesirable effects.

Have your carpet professionally cleaned regularly, usually after the first 18 months in your home and then once a year thereafter.

Crushing

Furniture and traffic will crush carpet fibers. Frequent vacuuming in high-traffic areas and glides under heavy pieces of furniture can help reduce crushing. Rotating your furniture to change the traffic pattern in a room promotes more even wear. Some carpets resist crushing because of their level of fiber, but this does not guarantee that no crushing will occur. Heavy traffic areas such as hallways and stairways are more susceptible to crushing. This is considered normal wear.

Fading

All carpets will slowly lose some color due to natural and artificial forces in the environment. You can delay this process by frequently removing soil with vacuuming, regularly changing air filters in heating and air conditioning systems, regulating humidity and room temperatures, and reducing sunlight exposure with window coverings.

Filtration

If interior doors are kept closed while the air conditioning system is operating, air circulation from the closed room flows through the small space at the bottom of the door. This forces the air over the carpet fibers, which in turn act as a filter, catching particulate pollution. Over time, a noticeable stain may develop at the threshold.

See also Ghosting.

Fuzzing

Fibers may break in looped carpets. Clip the excess fibers with scissors. Contact a professional if the problem persists.

Pilling

Pilling, or small balls of fiber, can appear on your carpet. The amount of pilling depends on the type of carpet fiber and the amount of traffic. Polyester carpets exhibit large amounts of pilling. If pilling occurs, clip off the pills. If they cover a large area, seek professional advice.

Rippling

High humidity may cause wall-to-wall carpet to ripple. If humidity levels have decreased and the carpet remains rippled, have a professional re-stretch the carpet. Be sure that a power stretcher is used. A knee-kicker is not as effective.

Seams

Carpet usually comes in 12-foot widths, making seams necessary in most rooms. Visible seams are not a defect. Seams are more visible in more dense and uniform carpets.

Carpet styles with low, tight piles result in the most visible seams. Seams are never more visible than when the carpet is first installed. Usually with time, use, and vacuuming the seams become less visible.

Shading

Shading is an inherent quality of fine-cut pile carpets. Household traffic causes pile fibers to assume different angles; as a result, the carpet appears darker or lighter in these areas. A thorough vacuuming makes the pile resume the same direction and provides a temporary remedy.

Shedding

New carpeting, especially cut pile, sheds bits of fiber for a period of time. Vacuuming helps to remove these loose fibers. Shedding usually occurs more with wool carpeting than with nylon or other synthetics.

Snags

Sharp-edged objects can grab or snag the carpet fiber. When this occurs, cut off the snag. If the snag is especially large, call a professional.

Sprouting

Occasionally you may find small tufts of fiber sprouting above the carpet surface. Use scissors to cut off the sprout. Do not attempt to pull it, because other fibers will come out in the process.

Stains

No carpet is stain-proof. Although your carpet manufacturer may designate your carpet as stain-resistant, some substances may still cause permanent staining. These include hair dyes, shoe polish, paints, and India ink. Some substances destroy or change the color of carpets, including bleaches, acne medications, drain cleaners, plant food, insecticides, and food or beverages with strongly colored natural dyes as found in some brands of mustard and herbal tea.

Refer to your care and maintenance brochures for recommended cleaning procedures for your particular fiber. Pretest any spot-removal solution in an inconspicuous area before using it in a large area. Apply several drops of the solution, hold a white tissue on the area, and count to ten. Examine both tissue and carpet for dye transfer and check for carpet damage.

Static Electricity

Cooler temperatures outside often contribute to static electricity inside. To avoid this problem, look for static resistant carpets. A humidifier can help control static build-up.

During the orientation, we will confirm that your carpet is in acceptable condition. We will correct stains noted at this time by cleaning, patching, or replacing the carpet.

Edges

Edges of carpet along moldings and edges of stairs should be held firmly in place. In some areas, metal or other edging material may be used where carpet meets another floor covering.

Seams

Carpet seams will be visible.

Caulking

(See also Countertops, Expansion and Contraction, Stairs, and Wood Trim.)

Time and weather will shrink and dry caulking so that it no longer provides a good seal. As routine maintenance, check the caulking and make needed repairs. Caulking compounds and dispenser guns are available at hardware stores. Read the manufacturer's instructions carefully to be certain that you select an appropriate caulk for the intended purpose.

Colored Caulk

Colored caulking is available where larger selections are provided. As with any colored material, dye lots can vary.

Latex Caulk

Latex caulking is appropriate for an area that requires painting, such as along the stair stringer or where wood trim meets the wall.

Silicone Caulk

Caulking that contains silicone will not accept paint; it works best where water is present, such as where a tub meets tile or a sink meets a countertop.

Ceramic Tile

Your selection sheets from our Subcontractor include the brand and color of your ceramic tile. Please retain.

Cleaning

Ceramic tile is one of the easiest floor coverings to maintain. Simply vacuum when needed. Occasionally, a wet mopping with warm water may be appropriate. Avoid adding detergent to the water. If you feel a cleaning agent is required, use a mild solution of warm water and dishwasher crystals (they will not result in a heavy, difficult-to-remove lather on the grout). Rinse thoroughly with water.

The ceramic tile installed on walls or countertops in your home can be washed with any nonabrasive soap, detergent, or tile cleaner. Abrasive cleaners will dull the finish.

Grout Discoloration

Clean grout that becomes yellowed or stained with a fiber brush, cleanser, and water. Grout cleansers and whiteners are available at most hardware stores.

Sealing Grout

Grout sealing is recommended. However, it is your responsibility to do so, at your option. Regular maintenance is required to ensure an adequate seal.

Separations

Expect slight separations to occur in the grout between tiles. This grout is for decorative purposes only; it does not hold the tile in place. Cracks in the grout can be filled using premixed grout purchased from flooring or hardware stores. Follow package directions.

Tile around bathtubs or countertops may appear to be pulling up after time. This is a normal condition and caused by normal shrinkage of grout or caulk and shrinkage of wood as they cure. If this occurs, the best remedy is to purchase tub caulk or premixed grout from a hardware store. Follow package directions. This maintenance is important to protect the underlying surface from water damage.

Concrete Flatwork

(See also Grading and Drainage; Gutters and Downspouts; Landscaping)

Contrary to some popular misconceptions, concrete flatwork is not maintenance-free. By being aware of basic maintenance requirements, and by maintaining good drainage, you can help protect your home's basement floor, garage floor, driveway, porch, patio, and sidewalks.

Cleaning

Abrupt changes in temperature can damage the surface bond of the concrete. Avoid washing exterior concrete slabs with cold water from an outside faucet when temperatures are high and the sun has been shining on the concrete. We suggest sweeping, rather than washing, for keeping exterior concrete clean. If washing is necessary, do so only when temperatures are moderate and minimize the volume of water used.

Repeated washing of interior slabs, including the garage, can also increase soil movement by allowing water to penetrate any existing

cracks. We suggest sweeping to clean the garage floor. Wash only rarely. Do not use soap on unpainted concrete. Instead, use plain water and washing soda.

Cracks

The cracking of concrete slabs is not an abnormal occurrence. A concrete slab 10 feet across may shrink approximately 5/8 inch as it cures. Some of this shrinkage may result in cracking. Cracking of concrete flatwork can also result from temperature changes that cause expansion and contraction. If concrete cracks, the cracks may be expected to reach 3/16 of an inch in width and/or vertical displacement may occur. Width and displacement may also change according to other external conditions.

During warmer months, moisture may find its way under concrete slabs along edges or through surface cracks. In colder months, this moisture can then form frost that can lift the concrete, increasing the cracking. Maintaining drainage away from all concrete slabs will minimize cracking from this cause.

Should cracks occur, the homeowner should seal them with a waterproof concrete caulk (available at hardware or home improvement stores) to prevent moisture from penetrating to the soil beneath. This is a standard homeowner maintenance responsibility.

Expansion Joints

Cracks in the control joints can be expected (this is what control joints are for). KEM installs expansion joints (where slabs meet walls and/or where differing slab installations may abut) to help control expansion. However, as the concrete shrinks during the curing process, moisture can penetrate under the concrete and lift at the expansion joint. When this occurs, you should fill the resulting gap with a gray silicone sealant, available at hardware or home improvement stores. This is a standard homeowner maintenance responsibility.

Heavy Vehicles

Prohibit commercial or other extremely heavy vehicles, such as moving vans and other large delivery trucks, from pulling onto your driveway. Driveways are designed for conventional residential vehicle use only: family cars, vans, light trucks, bicycles, and so on.

Ice, Snow, and Chemicals – ‘Spalling’

KEM applies a curing and sealing spray on all newly installed concrete surfaces. This treatment affords adequate and sufficient protection for your concrete surfaces under normal conditions (e.g., barring some of the conditions noted below) for approximately one year. Avoidance of the conditions indicated below, as well as the continued maintenance of concrete surfaces after this first year, is a **homeowner** responsibility.

Never use salt as a de-icer on your concrete.

Driving, parking or walking on snow creates ice on concrete surfaces. Prolonged ice and/or snow buildup on concrete surfaces encourages surface deterioration (spalling-- chipping/scaling of a surface). Shovel ice and snow as promptly as possible after snow storms. Protect concrete surfaces from damage caused by chemical agents including pet urine, fertilizers, radiator overflow, repeated hosing, or de-icing agents (such as ‘mag-chloride’ or salts) which may be picked up during normal driving activities. Once salt and/or other chemicals have permeated a concrete surface, alternate wetting and drying facilitates dissolving, migration and re-crystallizing which causes the cement bond to fracture.

Vehicles which may have been driven on chemically-treated streets should not be parked on a concrete surface unless the undercarriage has been cleaned and/or unless the surface has been adequately sealed with a protective coating formulated to prevent damage by de-icing chemicals. If possible, avoid parking on untreated concrete surfaces after driving on wet, treated streets. Park elsewhere until the automobile undercarriage has thawed and dried. *KEM’s standard curing and sealing spray is not formulated to protect against repeated exposure to such chemicals*

Interior concrete slabs

Interior concrete slabs (basement and garage floors) are ‘floating’—they are not attached to the home's foundation walls. Because we understand that they may move in response to some soil conditions, KEM incorporates details such as the following in the construction of concrete slabs:

- A flexible collar is installed around the top of the furnace plenum.
- Gas and water supply and drain lines include flexible connections or joints such that any slab movement will not compromise their integrity.
- Control joints separate floor slabs from surrounding support posts under steel I-beams.

The cracking of concrete slabs is not an abnormal occurrence. Normal movement of any concrete slab may result in cracking. Minimize this movement by following KEM's landscaping recommendations, the objective of which is to prevent moisture from reaching soils around and under the home

“Puddling”

Slabs are installed within normal tolerances. Water may “puddle” in certain areas of interior concrete slabs after any washing. Water may stand on exterior concrete slabs for several hours after precipitation.

Sealers

A concrete sealer, available at hardware or home improvement stores, will help you keep an unpainted concrete surface clean and protected.

Color

Concrete slabs may vary in their natural color, this is a normal condition.

A note regarding gutter downspouts: KEM recommends against the use of buried pipes to evacuate water from downspouts. In our northern Colorado climate, their use can create blockages and subsequent undesirable water build-up resulting in heaving and/or settling.

Condensation

When warm, moist air comes into contact with cooler surfaces, the moisture condenses. Outside we see this as dew; inside you may see it as a layer of moisture on glass windows and doors. This condensation comes from high humidity within the home combined with low outside temperatures and inadequate ventilation. Family lifestyle significantly influences two out of three of these conditions.

Humidifier Operation

If your home includes a humidifier, closely observe manufacturer's directions for its use. Instructions to turn the humidifier off during air conditioning season are typical. Moderate settings in winter can maintain desired comfort levels without contributing too much moisture to your home. You may need to experiment to find the correct level for your family's lifestyle.

New Construction

Some experts have estimated that a typical new home contains 50 gallons of water. Water is part of lumber, concrete, drywall texture, paint, caulk, and other materials used in building. Wet weather during construction adds more. This moisture evaporates into the air as you live in your home—adding to the moisture generated by normal living activities. Over time, this source of moisture will diminish.

Normal Activities

As you live in your home, your daily lifestyle contributes to the moisture in the air also. Cooking, laundry, baths and showers, aquariums, plants, and so on all add water to the air in your home. Likewise, your daily routine can mitigate the amount of moisture in your home and reduce condensation on interior surfaces.

Temperature

Avoid setting your thermostat at extreme temperatures. Heating your home will cause the materials to dry out faster, generating more moisture into the air; drying the materials out too fast also increases shrinkage cracks and separations.

Ventilation

Develop the habit of using exhaust fans in bathrooms and over the stove. When weather conditions permit, open windows so fresh air can circulate through your home. Keep the dryer exhaust hose clean and securely connected to the outdoors.

See also Ventilation.

Countertops

Use a cutting board to protect your countertops. Protect countertops from heat and from hot pans. If you cannot put your hand on it, do not put it on the countertop. Do not use countertops as ironing boards and do not set lighted cigarettes on the edge of a countertop.

Caulking

The caulking between the countertop and the wall, along the joint at the backsplash (the section of counter that extends a few inches up the wall along the counter area), and around the sink may shrink, leaving a slight gap. This is a normal condition. Maintaining a good seal in these locations

is important to keep moisture from reaching the wood under the laminates and to prevent warping.

Cleaning

Avoid abrasive cleaners that will damage the luster of the surface. There are products available on the market for countertops.

See also Ceramic Tile.

Mats

Rubber drain mats can trap moisture beneath them, causing laminated countertops to warp and blister. Dry the surface as needed.

Crawl Space

Concrete is installed on the “floor” of the crawl space. Crawl spaces are not intended as storage areas. You may notice slight dampness in a crawl space. Landscaping that is correctly installed helps prevent excessive amounts of water from entering crawl spaces. Report standing water to KEM for inspection.

See also Ventilation.

Damp-proofing

We spray your foundation walls with an asphalt waterproofing material. Although we make every effort to assure a dry basement, during times of excessive moisture you may notice some dampness. Over time, natural compaction of soils in the backfill areas will usually eliminate this condition. Careful maintenance of positive drainage will also protect your basement from this condition.

Decks

Decks add to the style and function of your home and some are a higher maintenance part of your home's exterior.

Effects of Exposure

Wood decks are subject to shrinkage, cracking, splitting, cupping, and twisting. Nails or screws may work loose and will need routine maintenance. Plan to inspect your decks regularly, a minimum of once

each year, and provide needed attention promptly to maintain an attractive appearance and forestall costly repairs. KEM recommends that you treat or re-stain your decks annually to keep them looking their best.

Composit decks (Trex® or others) are pretty much maintenance free. They can scratch when moving outdoor furniture or other things across the deck. They do contract and expand due to weather conditions.

Foot Traffic

As you use your decks, abrasives and grit on shoes can scratch or dent the wood surface. Regular sweeping and mats can mitigate this but will not completely prevent this minor wear.

Outdoor Furniture

The surface of the decking can be damaged by moving grills, furniture, or other items. Use caution when moving such items to prevent scratches, gouges, and so on.

Sealing or Water Repellent

To prolong the life and beauty of your wood deck, treat it periodically with a water repellent or wood preservative. Local home centers or hardware stores offer several products to consider for this purpose. Always follow manufacturer directions carefully.

Snow and Ice

Heavy snow or ice that remains on the deck over long periods increases wear and tear on the deck. Prompt removal can reduce adverse effects. Use caution in shoveling to avoid needless scratching of the deck boards.

Stain

KEM uses weather resistant wood for wood decks. Staining is a maintenance item that is taken care of by the homeowner. Each board takes the same stain differently and variations in color will be readily noticeable. Over time, with exposure to weather and use, further variations in color will occur.

Boards or Rails

Shrinkage, cracking, splitting, cupping, and twisting are natural occurrences in wood decks.

Color Variation

Color variations are a natural result of the way in which wood accepts stain.

Doors and Locks

The doors installed in your home are often wood products subject to such natural characteristics of wood as shrinkage and warpage. The use of forced air furnaces, showers, and dishwashers, may occasionally require minor adjustments of doors.

Doors could also be metal or fiberglass. Metal doors are usually painted, be sure to keep the edges of the door painted to seal out moisture. Fiberglass doors can be stained. The exterior should be checked yearly for maintenance

Bi-fold Doors

Interior bi-folds sometimes stick or warp because of weather conditions. Apply a silicone lubricant to the tracks to minimize this inconvenience.

Exterior Finish

To ensure longer life for your exterior wood doors, plan to refinish them at least once a year. Stained exterior doors with clear finishes tend to weather faster than painted doors. Treat the finish with a wood preserver every three months to preserve the varnish and prevent the door from drying and cracking. Reseal stained exterior doors whenever the finish begins cracking or crazing. Painted doors need to be maintained periodically.

Failure to Latch

If a door will not latch because of minor settling, you can correct this by making a new opening in the jamb for the latch plate (re-mortising) and raising or lowering the plate accordingly.

Hinges

You can remedy a squeaky door hinge by removing the hinge pin and applying a silicone waterproof lubricant to it. Avoid using oil or graphite as they can gum up and/or smudge.

Keys

Keep a duplicate privacy lock key where children cannot reach it in the event a youngster locks him or herself in a room. The top edge of the door casing is often used as a place to keep the key. A small screwdriver or similarly shaped device can open some types of privacy locks.

Locks

Lubricate door locks with silicone waterproof lubricant. Avoid oil, or graphite as they can gum up and/or smudge.

Shrinkage

Use putty, filler, or latex caulk to fill any minor separations that develop at mitered joints in door trim. Follow with painting. Panels of wood doors shrink and expand in response to changes in temperature and humidity. Touching up the paint or stain on unfinished exposed areas is your home maintenance responsibility.

Slamming

Slamming doors can damage both doors and jambs and can even cause cracking in walls. Teach children not to hang on the doorknob and swing back and forth; this works loose the hardware and causes the door to sag.

Sticking

The most common cause of a sticking door is the natural expansion of lumber caused by changes in humidity. When sticking is caused by swelling during a damp season, do not plane the door unless it continues to stick after the weather changes again.

Before planning a door because of sticking, try two other steps: first, apply either a paste wax, light coat of paraffin, or candle wax to the sticking surface; or second, tighten the screws that hold the door jamb or door frame. If planing is necessary even after these measures, use sandpaper to smooth the door and paint the sanded area to seal against moisture.

Warping

If a door warps slightly, keeping it closed as much as possible often returns it to normal.

Weather Stripping

Weather stripping and exterior door thresholds occasionally require adjustment or replacement.

Adjustments

Because of normal settling of the home, doors may require adjustment for proper fit.

Panel Shrinkage

Panels of wood doors shrink and expand in response to changes in temperature and humidity. Although touching up the paint or stain on unfinished exposed areas is your home maintenance responsibility.

Drywall

Over time slight cracking, nail pops, or seams may become visible in walls and ceilings. These are caused by the shrinkage of the wood and normal deflection of rafters to which the drywall is attached.

Repairs

Most drywall repairs can be easily made. This work is best done when you redecorate a room.

Repair hairline cracks with a coat of paint. You can repair slightly larger cracks with spackle or caulk. To correct a nail pop, reset the nail with a hammer and punch. Cover it with spackle, which is available at paint and hardware stores. Apply two or three thin coats. When dry, sand the surface with fine-grain sandpaper, and then paint. You can fill indentations caused by sharp objects in the same manner.

Touch-ups may be visible due to normal changes in surfaces over time. Repainting an entire wall or entire room to correct this is your choice and responsibility. You are also responsible for custom paint colors or wallpaper that have been applied subsequent to closing. Because of the effects of time on paint and wallpaper, as well as possible dye lot variations, touch-ups may not match the surrounding area.

Easements

Easements are areas where such things as utility supply lines can pass through your property. They permit service to your lot and/or adjacent lots,

now and in the future. Your lot will also include drainage easements, meaning the runoff from adjacent lots may pass across your property. Likewise, water from your property may run across a neighboring lot. Easements are recorded and are permanent.

Trees, shrubs, gardens, play equipment, storage sheds, fences or other items which you install in or across these easements may be disturbed if service entities—such as the gas, electric, or phone companies—need access to lines for repairs or to connect service to nearby home-sites.

Utility companies and others have the right to install equipment in easements. These might include streetlights, mailboxes, or junction boxes. You as the homeowner do not have the authority to prevent, interfere with, or alter these installations. Plans for the location of such items are subject to change by the various entities involved. Because they have no obligation to keep KEM informed of such changes, we are unable to predict specific sites that will include such equipment.

See also Property Boundaries.

Electrical System

Know the location of your breaker panel; it includes a main shut-off that controls all the electrical power to the home. Individual breakers control the separate circuits. Each breaker is marked to help you identify which breaker is connected to which major appliances, outlets, or other service. Should a failure occur in any part of your home, always check the breakers in the main panel box.

Breakers

Circuit breakers have three positions: on, off, and tripped. When a circuit breaker trips, it must first be turned off before it can be turned back on. Switching the breaker directly from tripped to on will not restore service.

Breakers Tripping

Breakers trip because of overloads caused by plugging too many appliances into the circuit, a worn cord or defective appliance, or operating an appliance with too high a voltage requirement for the circuit. The starting (power surge) of an electric motor can also trip a breaker.

If any circuit trips repeatedly, unplug all items connected to it and reset. If it trips when nothing is connected to it, you need an electrician. If the circuit remains on, one of the items you unplugged is defective and will require repair or replacement.

Buzzing

Fluorescent fixtures use transformer action to operate. This action sometimes causes a buzzing.

Fixture Location

We install light fixtures in the locations indicated on the plans. Moving fixtures to accommodate specific furniture arrangements or room use is your responsibility.

GFCI (Ground-Fault Circuit-Interrupters)

GFCI receptacles have a built-in element that senses fluctuations in power. Quite simply, the GFCI is a circuit breaker. Building codes require installation of these receptacles in bathrooms, the kitchen, outside, and the garage (areas where an individual can come into contact with water while holding an electric appliance or tool). Heavy appliances such as freezers or power tools will trip the GFCI breaker.

Caution: Never plug a refrigerator or food freezer into a GFCI-controlled outlet. The likelihood of the contents being ruined is high.

Each GFCI circuit has a test and reset button. Once each month, press the test button. This will trip the circuit. To return service, press the reset button. If a GFCI breaker trips during normal use, it may indicate a faulty appliance and you will need to investigate the problem. One GFCI breaker can control up to three or four outlets, as explained in your orientation.

Jetted tubs are also GFCI protected. For your convenience, the GFCI outlet that protects your tub maybe located either in the master closet or in the bathroom, in a location where it won't be confused with the standard GFCI outlets, for example behind the stool door. If your tub is not working, check that the outlet is not tripped. Push in the test button, and then the reset button. Make sure that you push in the reset button firmly.

Grounded System

Your electrical system is a three-wire grounded system. Never remove the bare wire that connects to the box or device.

Light Bulbs

You are responsible for replacing burned-out bulbs other than those noted during your orientation.

Luminous Light Panels

Translucent panels covering ceiling lights are made of polystyrene plastic. To clean, gently push up, tilting the panel slightly and remove it from the fixture frame. Wash with a diluted (1 to 2 percent) solution of mild detergent and warm water. Do not rinse; the soap film that remains reduces static electricity that attracts dust.

Over time, the plastic panel may yellow and will become brittle and may need to be replaced if it cracks or breaks. Replacement material can be found at home center and hardware stores. Most suppliers will cut the panel to fit so be sure to note the size you need.

Bulbs for these fixtures can be purchased at home centers or hardware stores. Avoid exceeding the wattage indicated inside the fixture.

Modifications

If you wish to make any modifications, we suggest you contact a qualified electrician.

If a refrigerator, freezer, welder, etc. is added to the garage, they must have a dedicated circuit breaker.

Outlets

If an outlet is not working, check first to see if it is controlled by a wall switch or GFCI. Next, check the breaker.

If there are small children in the home, install safety plugs to cover unused outlets. This also minimizes the air infiltration that sometimes occurs with these outlets. Teach children to never touch electrical outlets, sockets, or fixtures.

Underground Cables

Before digging, check the location of buried service leads by calling the local utility locating service. In most cases, wires run in a straight line from the service panel to the nearest public utility pad. Maintain positive drainage around the foundation to protect electrical service connections.

Under or Over Cabinet Lights

The selection of optional under-or-over- cabinet lighting provides either task lighting or atmosphere to your kitchen. We suggest you note the size and type of bulbs in these fixtures and keep replacements on hand.

Recessed Lighting

All recessed lighting is thermally protected within the fixture to prevent over-wattage of a light bulb. If a recessed fixture constantly goes off and then back on, it is probably because the fixture light bulb is too large of wattage. The fixture comes back on after it cools off, and then will go out again when it heats up over the limits of the thermocouple. Reduce the wattage of your bulb, as different trims will allow different thermal conditions. Enclosed trims will not accept higher wattage bulbs.

Christmas Lighting Outlets

Any outlets in your exterior soffits for Christmas lighting are also GFCI protected. These GFCI devices are either in a breaker in your panel box or a receptacle in one or more of your soffit outlets. Also there is probably a switch in an inconvenient location (behind the front door, in the entry closet, or behind the garage door to your house as noted in your orientation). Since these circuits are usually seasonally used, sometimes the location of these switches may be forgotten. If the circuit is not working, check the breaker and make sure all GFCI devices are set. Then try to find a switch that you may think does not turn anything on.

TROUBLESHOOTING TIPS: NO ELECTRICAL SERVICE

No Electrical Service Anywhere in the Home

Before calling for service, check to confirm that the:

- Service is not out in the entire area. If so, contact the utility company.
- Main breaker and individual breakers are all in the on position.

No Electrical to One or More Outlets

Before calling for service, check to confirm that the:

- Main breaker and individual breakers are all in the on position
- Applicable wall switch is on
- GFCI is set (see details on GFCIs, earlier in this section)
- Item you want to use is plugged in

- Item you want to use works in other outlets
- Bulb in the lamp is good

Even if the troubleshooting tips do not identify a solution, the information you gather will be useful to the service provider you call.

Power Surge

Power surges are the result of local conditions. These can result in burned-out bulbs or damage to sensitive electronic equipment such as TVs, alarm systems, and computers.

Energy and Water Conservation

Good planning and thoughtful everyday habits can save significant amounts of energy and water. In the process of conserving, you also save money as an additional benefit. Keep these hints in mind as you select and use your home's features:

Heating and Cooling

- Maintain all your home's systems in clean and good working order to prevent inconvenience and maximize efficiency. Arrange for a professional to service heat and air conditioning systems a minimum of once every two years.
- Keep filters clean or replace them regularly.
- Learn how to use your day/night thermostat for comfort and efficient energy use. (if applicable)
- If you have a zoned system (more than one furnace and separate controls) think through operating schedules and temperature settings to maximize comfort and minimize energy consumption.
- During cold days, open window coverings to allow the sun to warm your home. Close them when the sun begins to set.
- Limit use of your fireplace in extremely cold or windy weather when the chimney draft will draw room air out at an extreme rate.
- During the winter, humidifying the air in your home allows the air to retain more heat and is a general health benefit. Note: If condensation develops on your windows, you have taken a good

thing too far and need to lower the setting on the humidifier. Avoid use of the humidifier when you are using your air conditioner.

- Ceiling fans cost little to operate and the moving air allows you to feel comfortable at temperatures several degrees higher.
- On hot days, close all windows and the window coverings on windows facing the sun to minimize solar heating and reduce demands on your air conditioner.
- Whole house fans draw cool outside air into the home through open windows, often effectively creating a comfortable temperature. Avoid running a whole house fan at the same time as air conditioning.
- Plan landscaping elements that support efficient energy use:
 - Deciduous trees provide shade during the summer and permit solar warming in winter.
 - Evergreen trees and shrubs can create a windbreak and reduce heating costs.
 - Position trees to shade the roof and still allow good air flow around the home.
 - Plant shrubs and trees to shade the air conditioner without obstructing air flow around the unit.
- Keep the overhead garage doors closed.

Water and Water Heater

Set your water heater at 120 degrees if your dishwasher has a water booster heater. If not, set the water heater at 140 degrees. Add a rinsing agent such as “Jet Dry” to quicken drying time.

Follow the steps outlined in the manufacturer's directions for draining water from your water heater in order to remove accumulated hard-water scale that builds up inside the tank. Timing will depend on the nature of your water supply.

Correct plumbing leaks, running toilets, or dripping faucets ASAP. Keep aerators clean.

- At least once every six months a visual inspection should be made of the air intake screen. Clean if lint has accumulated.
- Maintenance information is included in the manufacturer's manual.

Appliances

In selecting your home's appliances, compare the information on the (yellow and black) Energy Guide sticker. Sometimes spending a bit more up front can reduce operating costs over the life of the appliance, conserving energy at the same time.

Use cold water when operating your disposal. This not only saves hot water you pay to heat, it preserves the disposal motor.

When baking, preheat your oven just five minutes before you use it. When possible, bake several items at the same time or at least consecutively. Turn the oven off a few minutes before baking time is done.

Microwave, rather than using the range when possible, especially during hot weather.

Run the dishwasher when it has a full load and use the air-dry cycle. Avoid regular use of the rinse and hold cycle.

Turn electric burners off a few minutes before cooking is complete.

Refrigerators with the freezer on top generally use significantly less energy than side-by-side models. Select an appropriate size for your needs; two small refrigerators use more energy than one large one.

Electrical

Use compact fluorescent bulbs or fluorescent tubes where possible. Incandescent bulbs are the least efficient source of light.

Turn lights and other electric items off when you finish using them or leave the room.

Maintenance

Caulk in dry weather when temperatures are moderate. Check all locations, such as:

- Foundation penetrations (electrical, phone, water, cable TV, and gas line entrances)
- Around fans and vents
- Joints between door or window frames and siding

Check weather-stripping on all exterior doors and adjust as needed. Ensure that door thresholds are a good fit—most are adjustable.

After any activity in the attic, check that the insulation is evenly distributed.

Expansion and Contraction

Changes in temperature and humidity cause all building materials to expand and contract. Dissimilar materials expand or contract at different rates. This movement results in separation between materials, particularly dissimilar ones. You will see the effects in small cracks in drywall and in paint, especially where moldings meet drywall, at mitered corners, and where tile grout meets a tub or sink. Such cracks are a normal occurrence.

Shrinkage of the wood members of your home is inevitable and occurs in every new home. Although this is most noticeable during the first year, it may continue beyond that time. In most cases, caulk and paint are all that you need to conceal this minor evidence of a natural phenomenon. Even though properly installed, caulking shrinks and cracks. Maintenance of caulking is your responsibility.

Fencing

Depending on the community in which your home is located, fencing may be included with your home, it may be an optional item, or it may be an item you consider adding after your move-in. All types of fencing require some routine attention.

Drainage

In planning, installing, and maintaining fencing, allow existing drainage patterns to function unimpeded. When installing a fence, use caution in distributing soil removed to set posts to avoid blocking drainage swales. Plan enough space under the bottom of a fence for water to pass through.

Homeowner Association Design Review

If you choose to add fencing after moving into your new home, keep in mind the need to obtain approval from the Design Review Committee of your homeowners association. Specific requirements about style, height, and position on the lot can be obtained from a committee member. Special requirements may apply to homes on corner lots where drivers must have adequate visibility. Additionally, in some communities, zoning laws may impact private fencing. Your responsibilities include checking on such details.

KEM recommends that you engage the services of professionals to install your fence. Be certain to inform a fence installer of all design review requirements.

See also Property Boundaries.

Variation

Height and location of KEM installed fences will vary with lot size, topography, and shape. KEM must meet the requirements of the Design Review process just as any homeowner would.

Wood Fences

The lumber used to construct wood fences is typically rough cedar. Over time it may crack, warp, and split. Unless extreme, these conditions require no action on your part. As the wood ages and shrinks, nails may come loose and require attention. Also check the posts and any gates twice a year and tighten hardware or make needed adjustments.

Wrought Iron Railings

Wrought iron is subject to rusting if it is not maintained. Use touch-up paint on any scratches or chips. Inspect the fence twice a year and touch-up as needed.

As with wood fencing, prevent sprinklers from spraying your wrought iron fence or rails. Check monthly to confirm that water does not stand around the fence posts. Make corrections to drainage as needed to prevent this.

Vinyl (PVC) Fencing

Vinyl fencing is a maintenance free product but does require a yearly check up. A characteristic of vinyl fencing is that it does expand and contract with heat and cold. When this happens the rails are subject to shrink and can pop out of the posts. This needs to be addressed by putting the rails or panels back into the posts. Any dirt/dust can be washed off with a hose as needed. Take care when you are doing lawn maintenance to not hit the fence with a weed-eater or lawnmower.

Fireplace

Gas Fireplace

KEM installs direct-vent gas fireplaces. They are demonstrated during the orientation. Read and follow all manufacturers' directions. Fireplaces are not intended to be the sole heat source in the home.

A slight delay between turning the switch on and flame ignition is normal. The flames should ignite gently and silently. If you notice any deviation from this, or any gas smell, immediately shut off the switch and report it to the fireplace subcontractor on the Subcontractor List.

Our fireplaces do not have pilot lights.

Caution: The exterior vent cover for a direct-vent gas fireplace becomes extremely hot when the fireplace is operating.

The fireplace should function properly when KEM and the manufacturer's directions are followed.

Cracks

Normal shrinkage of mortar results in hairline cracks in masonry.

Exterior masonry may have chips, irregular surfaces, and color variations, which occur during manufacturing, shipping, or handling. Unless such conditions affect the structural integrity of the home, no repair is necessary.

Downdraft

Although extremely high winds can result in a downdraft, this condition should be temporary and occasional

Water Infiltration

In unusually heavy or prolonged precipitation, especially when accompanied by high winds, some water can enter the home through the chimney.

Foundation

We install the foundation of your home according to the recommendations of our consulting engineer. The walls of the foundation are poured

concrete with steel reinforcing rods. To protect your home's foundation, follow guidelines for installation and maintenance of landscaping and drainage in this manual.

Cracks

Even though an engineer designed the foundation and we constructed it according to engineering requirements, surface cracks can still develop in the wall. Surface cracks are not detrimental to the structural integrity of your home. Should a crack develop in a foundation wall that allows water to come through, follow the procedures for submitting a warranty claim. Shrinkage or backfill cracks are not unusual in foundation walls, especially at the corners of basement windows.

Dampness

Due to the amount of water in concrete, basements may be damp. Also, condensation can form on water lines and drip onto the floor.

Future Construction in Basement

If you decide to perform additional construction in the basement, obtain guidelines from a licensed engineer, obtain a building permit, and comply with all codes and safety requirements

Cosmetic Imperfections

Slight cosmetic imperfections in foundation walls, such as a visible seam where two form panels meet or slight honeycombing (aggregate visible), are possible and require no repair unless they permit water to enter.

Garage Overhead Door

The garage door is a large, moving object and periodic maintenance is necessary.

Light Visible

Garage overhead doors are not airtight. Some light may be visible around the edges and across the top of the door. Weather conditions may result in some precipitation entering around the door as well as some dust, especially until most homes in a neighborhood have landscaping installed.

Lock

If the lock becomes stiff, apply a silicone or graphite lubricant. Do not use oil on a lock, as it will stiffen in winter and make the lock difficult to operate.

Lubrication

Every 6 months, apply a lubricant such as silicone spray to all moving parts: track, rollers, hinges, pulleys, and springs. Avoid over lubricating to prevent drips on vehicles or the concrete floor. At the same time, check to see that all hardware is tight and operating as intended without binding or scraping.

Opener

To prevent damage to a garage door opener, be sure the door is completely unlocked and the rope-pull has been removed before using the operator. If you have an opener installed after closing on your home, we suggest that you order it from the company that provided and installed the garage door to assure uninterrupted warranty coverage (see the subcontractor list). Be familiar with the steps for manual operation of the door in the event of a power failure.

Use care not to place tools or other stored items where they interfere with the function of the electric eye. Expect to replace the battery in the garage opener remote controls about once a year. The battery is usually a 9-volt. Check all safety devices once a year. Refer to the opener owner's manual.

Painting

Repaint the garage door when you repaint your home, or more often if needed to maintain a satisfactory appearance.

Safety

Follow the manufacturer's instructions for safe and reliable operation. Do not allow anyone except the operator near the door when it is in motion. Keep hands and fingers away from all parts of the door except the handle. Do not allow children to play with or around the door.

Have any needed adjustments made by a qualified specialist. The door springs are under a considerable amount of tension and require special tools and knowledge for accurate and safe servicing. Have the door inspected by a professional garage door technician after any significant impact to the door.

Sag

The garage door may sag slightly due to its weight and span. This will stabilize after the panels have dried. We recommend any adjustments to the door are done by a qualified person.

Gas Shut-Offs

You will find shut-offs on gas lines near their connection to each item that operates on gas. In addition, there is a main shut-off at the meter. We point these out during the orientation.

Gas Leak

If you suspect a gas leak, leave the home, don't turn anything off or on. Call the gas company immediately from outside of the home for emergency service.

The gas company is responsible for leaks up to the meter.

Ghosting

Recent feedback from homeowners (in both old and new homes) regarding black sooty stains which develop on surfaces in homes (on carpet, walls, ceilings, appliances, mirrors, and around area rugs—to list a few examples) have caused much investigation and research.

The conclusion of the research and laboratory tests has been that the majority of this staining or "ghosting" results from pollution of the air in the home caused by burning scented candles. Incomplete combustion of hydrocarbons as these candles burn contributes a considerable amount of soot to the air. This sooty substance then settles or accumulates on surfaces of the home. The sooty deposits are extremely difficult to remove; on some surfaces (light-colored carpet, for instance), they are impossible to clean completely away.

The popularity of scented candles has increased many-fold in recent years. If this is an activity that is part of your lifestyle, we caution you about the potential damage to your home

See also Carpet/Filtration.

Grading and Drainage

The final grades around your home have been inspected and approved for proper drainage of your lot. Our surveyor completes a drainage certification and then the local building authorities and KEM inspect the site. Yards may drain from one to another. You and your neighbors share an overall drainage plan for the community. Use caution when installing landscaping, fencing, or additions to your home to prevent causing water problems on adjacent lots.

Drainage

Typically, the grade around your home should slope 1 foot in the first 10 feet, tapering to a 2 percent slope. In most cases, drainage swales do not follow property boundaries. Maintain the slopes around your home to permit the water to drain away from the home as rapidly as possible. This is essential to protect your foundation.

Exterior Finish Materials

Maintain soil levels 6 inches below siding, stucco, brick, or other exterior finish materials. Contact with the soil can cause deterioration of the exterior finish material and encourages pest infestations.

Roof Water

Do not remove the splash blocks or downspout extensions from under the downspouts. Keep these in place at all times, sloped so the water drains away from your home quickly.

Rototilling

Rototilling can significantly change drainage swales. You can minimize this by rototilling parallel to the swales rather than across them.

Settling

The area we excavated for your home's foundation was larger than the home to allow room to work. In addition, some trenching is necessary for installation of utility lines. Although we replaced and compacted the soil, it does not return to its original density. Some settling will occur, especially after prolonged or heavy rainfall or melting of large amounts of snow. Settling can continue for several years. Inspect the perimeter of your home regularly for signs of settling and fill settled areas as needed to maintain positive drainage.

Subsurface Drains

Occasionally KEM installs a subsurface drain to ensure that surface water drains from a yard adequately. Keep this area and especially the drain cover clear of debris so that the drain can function as intended.

See also Landscaping.

We established the final grade to ensure adequate drainage away from the home. Maintaining this drainage is your responsibility.

Backfill Settlement

Backfilled or excavated areas around the foundation and at utility trenches should not interfere with the drainage away from your home.

New Sod

New sod installation and the extra watering that accompanies it can cause temporary drainage problems, as can unusually severe weather conditions.

Soil Information

We provide soil information when the purchase agreement is written or as soon thereafter as it becomes available. Landscaping recommendations are designed based on soils and engineering reports and thus may vary slightly.

Swales

KEM does not alter drainage patterns to suit individual landscape plans. Typically, a lot receives water from and passes water on to other lots, so changes in grade often affect adjacent or nearby lots. KEM advises against making such changes. After heavy rain or snow, water may stand in swales up to 48 hours.

Gutters and Downspouts

Check gutters periodically and remove leaves or other debris. Materials that accumulate in gutters can slow water drainage from the roof, cause overflows, and clog the downspouts.

Gutters over 3 feet long are installed with a slight slope so that roof water will flow to the downspouts.

Extensions or Splash-blocks

Extensions should discharge to a point outside of rock or bark beds so that water is not dammed behind the edging materials that might be used.

Ladders

Use caution when leaning ladders against gutters, as this may cause dents. Straddle spikes or hangers with ladder.

Leaks

If a joint between sections of gutter drips, seek professional help.

Paint

Gutters and downspouts are either pre-painted or painted to match your homes trim color. You may repaint them when you repaint your home.

Snow and Ice

Clear excess snow from downspouts as soon as possible to allow the gutter to drain and to prevent damage. Severe ice or snow build-up can damage gutters, and may result in interior damage as well.

See also Roof/Ice Dam.

Overflow

Gutters may overflow during periods of excessively heavy rain. This is expected and requires no repair.

Standing Water

Small amounts of water (up to one inch) will stand for short periods of time in gutters immediately after rain. No correction is required for these conditions.

Hardware

Doorknobs and locks should operate correctly with little attention. Over time, they may need slight adjustments due to normal shrinkage of the framing. Occasionally, you may need to tighten screws or lubricate.

Hardwood Floors

Preventive maintenance is the primary goal when caring for your hardwood floor.

Cleaning

Sweep on a daily basis or as needed. Never wet-mop a hardwood floor. Excessive water causes wood to expand and can possibly damage the floor. When polyurethane finishes become soiled, damp-mop with a mixture of one cup of vinegar to one gallon of warm water. When damp-mopping, remove all excess water from the mop.

Dimples

Placing heavy furniture or dropping heavy or sharp objects on hardwood floors can result in dimples.

Filmy Appearance

A white, filmy appearance can result from moisture. This is often caused by wet shoes or boots.

Furniture Legs

Install proper floor protectors on furniture placed on hardwood floors. Protectors will allow chairs to move easily over the floor without scuffing. Clean the protectors regularly to remove any grit that may have accumulated.

Humidity

Wood floors respond noticeably to changes in humidity in your home. During winter months the individual planks may expand and contract as water content changes. A humidifier helps, but does not eliminate this natural process.

Separation

Expect some shrinkage around heat vents or any heat-producing appliances, or during seasonal weather changes.

Mats and Area Rugs

Use protective mats at the exterior doors to help prevent sand and grit from getting on the floor. Sand is hardwood flooring's worst enemy.

However, be aware that rubber backed area rugs and mats can cause yellowing and warping of the floor surface.

See also Warping.

Shoes

Keep high heels in good repair. Heels that have lost their protective cap (thus exposing the fastening nail) will exert over 8,000 pounds of pressure per square inch on the hardwood floor. That's enough to damage hardened concrete; it will mark your hardwood floor.

Spills

Clean up food spills immediately with a dry cloth. Use a vinegar-and-warm-water solution for tough food spills.

Splinters

When hardwood floors are new, small splinters of wood can appear.

Sun Exposure

Exposure to direct sunlight can cause irreparable damage to hardwood floors. To preserve the beauty of your hardwood floors, install and use window coverings in these areas.

Traffic Paths

The finish of a hardwood floor will dull in heavy traffic areas.

Warping

Warping will occur if the floor repeatedly becomes wet or is thoroughly soaked even once. Slight warping in the area of heat vents or heat-producing appliances is also typical.

Wax

Waxing and the use of products like oil soap are neither necessary nor recommended. Once you wax a polyurethane finish floor, recoating is difficult because the new finish will not bond to the wax. The preferred maintenance is preventive cleaning and recoating as needed to maintain the desired luster.

Heating System: Gas Forced Air

(See also Air Conditioning System)

Good maintenance of your furnace can save energy dollars and prolong the life of the furnace. Carefully read and follow the manufacturer's literature on use and maintenance. The guidelines here include general information only.

Adjust Registers

Experiment with the adjustable registers in your home to establish the best heat flow for your lifestyle. Generally, you can reduce the heat in seldom-used or interior rooms. This is an individual matter and you will need to balance the system for your own family's needs.

Avoid Overheating

Do not overheat your new home. Overheating can cause excessive shrinkage of framing lumber and may materially damage the home. In the beginning, use as little heat as possible and increase it gradually.

Blower Panel (Fan cover)

You need to position the blower panel cover correctly for the furnace blower (fan) to operate. This panel compresses a button that tells the blower it is safe to operate. Similar to the way a clothes dryer door operates, this panel pushes in a button that lets the fan motor know it is safe to come on. If that button is not pushed in, the furnace will not operate.

Combustion Air

Furnaces we install include a combustion air duct. The outside end of this duct is covered with a screen to prohibit insects or animals from entering the duct. Cold air coming in through this duct means it is functioning as it should.

Caution: Never cover or block the combustion air vent in any way. Outside air is needed to supply the furnace with sufficient oxygen. Blocking the combustion air vent could cause the furnace to draw air down the vent pipe and pull poisonous gases back into your home.

Ductwork Noise

Some popping or pinging sounds are the natural result of ductwork heating and cooling (expanding and contracting) in response to airflow as the system operates.

Filter

A clean filter will help to keep your home clean and reduce dusting chores. Remember to change or clean the filter monthly during the heating season (year-round if you also have air conditioning). A clogged filter can slow airflow and cause cold spots in your home. Although it takes less than one minute to change the filter, this is one of the most frequently overlooked details of normal furnace care. Be sure to install the furnace filter with the correct direction of airflow.

If you have a permanent, washable, removable filter, you need to clean this monthly. Use water only to clean the filter, tap to dry or air dry, and leave unit off for a brief period. Do not use soaps or detergents on the filter.

Furnished Home

The heating system was designed with a furnished home in mind. If you move in during the cooler part of the year and have not yet acquired all of your draperies and furnishings, the home may seem cooler than you would expect.

Fuse

Some furnaces have a fuse directly above the on-off switch. This fuse is an S10, S12, or S15 fuse. It absorbs any spikes in the line such as close electrical strikes or power surges. Unlike old fuses that burn out and clearly indicate that they are blown, these fuses, similar to automobile fuses, have a spring that depresses when tripped. Unless you have examined these quite carefully before, it may be hard to determine if the fuse has blown. We suggest that you buy some extra fuses of the same size to have on hand.

Gas Odor

If you smell gas, call the gas company immediately from a phone outside of your home.

Odor

A new heating system may emit an odor for a few moments when you first turn it on. An established system may emit an odor after being unused for an extended time (such as after the summer months if you do not use air conditioning). This is caused by dust that has settled in the ducts and should dissipate quickly.

Pilot

Your furnace is electronic ignited so there are no pilot lights.

Registers

Heat register covers are removable and adjustable. You are responsible for adjusting the dampers in these covers to regulate the heat flow within the home. Registers in the rooms farther away from the furnace will usually need to be opened wider.

Return Air Vents

For maximum comfort and efficient energy use, arrange furniture and draperies to allow unobstructed airflow from registers and to cold air returns.

Temperature

Depending on the style of home, temperatures can normally vary from floor to floor as much as 10 degrees or more on extremely cold days. Run the fan continuously to reduce such variations.

Thermostat

The furnace will come on automatically when the temperature at the thermostat registers below the setting you have selected. Once the furnace is on, setting the thermostat to a higher temperature will not heat the home faster. Thermostats are calibrated to within plus or minus 5 degrees.

Trial Run

Have a trial run early in the fall to test the furnace. (The same applies to air-conditioning in the spring.) If service is needed, it is much better to discover that before the heating season.

TROUBLESHOOTING TIPS: NO HEAT

Before calling for service, check to confirm that the:

- Thermostat is set to "heat" and the temperature is set above the room temperature.
- Blower panel cover is installed correctly for the furnace blower (fan) to operate.
- Breaker on the main electrical panel is on. (Remember, if a breaker trips you must turn it from the tripped position to the off position before you can turn it back on.)
- Switch on the side of the furnace is on.
- Fuse in furnace is good. (See manufacturer literature for size and location.)
- Gas line is open at the main meter and at the side of the furnace.
- Filter is clean to allow airflow.
- Vents in individual rooms are open.
- Air returns are unobstructed.

Even if the troubleshooting tips do not identify a solution, the information you gather will be useful to the service provider you call.

Furnaces are warranted by the manufacturer.

We will install heating systems according to local building codes, as well as to engineering designs of the particular model home.

Adequacy of the system is determined by its ability to establish a temperature of 70 degrees Fahrenheit, as measured in the center of the room, 5 feet above the floor. In extremely cold temperatures (10 degrees below or colder), the system should be able to maintain a temperature differential of 80 degrees from the outside temperature.

Duct Placement

The exact placement of heat ducts may vary from those positions shown in similar floor plans.

Ductwork

The heat system is a sealed system. The ductwork should remain attached and securely fastened.

Furnace Sounds

Expansion or contraction of metal ductwork results in ticking or popping sounds. Eliminating all these sounds is impossible. (Oil canning occurs when a large area of sheet metal like those found in air ducts makes a loud noise as it moves up and down in response to temperature changes.)

Humidifier

Operate a humidifier only with the furnace, not with the air conditioner. If you notice condensation on windows, the humidifier should be adjusted to a lower setting. Clean the moisture pad according to the manufacturer's instructions and suggested timetable.

Humidifiers are warranted by the manufacturer.

Also see Moisture Control

Insulation

The effectiveness of blown insulation is diminished if it is uneven. As the last step in any work done in your attic (for example, the installation of speaker wire), you should confirm that the insulation lays smooth and even. Do not step on drywall ceilings, because this can result in personal injury or damage to the drywall.

Electrical outlets normally emit noticeable amounts of cold air when outside temperatures are low.

Landscaping

Providing complete details on landscape design is beyond the scope of this manual. Many excellent books, videos, and computer software programs are available that offer you this information. Local nurseries and landscape professionals can also assist you.

In planning your landscaping, think of proportion, texture, color, mature size, maintenance needs, soft and hard surfaces, lighting, fencing, edging, and water requirements. A beautiful yard requires considerable planning and regular attention. Most homeowners take years to achieve the yard they want. Planning to install items in stages can spread the cost and work over several seasons.

Whatever the source of your design, plan to install the basic components of your landscaping as soon after closing as weather permits. In addition to meeting your homeowner association requirements to landscape in a timely manner, well-designed landscaping prevents erosion and protects the foundation of your home.

Additions

Before installing patio additions or other permanent improvements, consider soil conditions in the design and engineering of your addition.

Backfill

We construct the foundation of your home beginning with an excavation into the earth. When the foundation walls are complete, the area surrounding them is backfilled. Soil in this area is not as compact as undisturbed ground. Water can penetrate through the backfill area to the lower areas of your foundation. This can cause potentially severe problems such as wet basements, cracks in foundation walls, and floor slab movement. Avoid this through proper installation of landscaping and good maintenance of drainage.

Backfill areas will settle and they require prompt attention to avoid damage to your home.

Keep downspout extensions in the down position to channel roof runoff away from the foundation area of your home. Routine inspection of downspouts, backfill areas, and other drainage components is an excellent maintenance habit.

See also Grading and Drainage.

Bark or Rock Beds

Do not allow edging around decorative rock or bark beds to dam the free flow of water away from the home. You can use a non-woven landscape fabric between the soil and rock or bark to restrict weed growth while still permitting normal evaporation of ground moisture.

Erosion

Until your yard is established and stable, erosion will be a potential concern. Heavy rains or roof runoff can erode soil. The sooner you restore the grade to its original condition, the less damage will occur.

Erosion is of special concern in drainage swales. If swales become filled with soil runoff, they may not drain the rest of the yard, causing further problems. Correcting erosion is your responsibility. You may need to protect newly planted seed with erosion matting or reseed to establish grass in swales. It can take several years to fully establish your lawn in such challenging areas.

First 3-4 Feet

Place no plants of any type or sprinkler heads within 3-4 feet of your home.

Hired Contractors

You are responsible for changes to the drainage pattern made by any landscape, concrete, deck, or pool contractor. Discuss drainage with any company you hire to do an installation in your yard. Do not permit them to tie into existing drainage pipes without approval from KEM.

Gutter downspouts

KEM recommends against the use of buried pipes to evacuate water from downspouts. In our northern Colorado climate, their use can cause blockages and subsequent undesirable water build-up.

Natural Areas

During construction, we remove construction debris from natural areas. Removing dead wood, tree limbs, fallen trees, or other natural items is your responsibility.

Planning

Locate plants and irrigation heads out of the way of pedestrian or bicycle traffic and car bumpers. Space groves of trees or single trees to allow for efficient mowing and growth. Group plants with similar water, sun, and space requirements together.

Plant Selection

Plant with regard to your local climate. Favor native over exotic species. Consider ultimate size, shape, and growth of the species.

See also Property Lines.

Requirements

Check with your local building department and homeowners association before designing, installing, or changing landscaping for any regulations that they require you to follow.

Seeded Lawns

If lawn seeding is part of your home purchase, consider this just the first step in establishing your yard. Remember that the forces of nature are far stronger than grass seed. You will need to over-seed at some point, perhaps more than once. Heavy storms can cause washouts and erosion that you will need to correct. It generally takes 1-2 growing seasons, if properly irrigated, to establish a good lawn, longer if weather conditions are difficult or if you do not have the time to devote to lawn care. Fertilize both sod and seed after installation. Fertilize sod immediately; fertilize 1-2 months after a seeding.

Before over-seeding, remember to fill any slight depressions with a light layer of topsoil. Minimize traffic of all kinds on newly seeded areas and avoid weed killer for at least 120 days. Keep the seed moist, not wet.

Sod

Newly placed sod requires extra water for several weeks. Water in the cool part of the day (ideally just before sunrise) at regular intervals for the first three weeks. Be aware that new sod and the extra watering it requires can sometimes create drainage concerns (in your yard or your neighbor's) that will disappear when the yard is established and requires normal watering.

Soil Mix

Provide good soil mixes with sufficient organic material. Use mulch at least 3 inches deep to hold soil moisture and to help prevent weeds and soil compaction.

In areas with high clay content, prepare the soil before installing your grass. First cover the soil with 1 inch of manure (3-4 cubic yards/1000 square foot) that is treated and odorless. Rototill this into the soil to a depth of 6 inches (rototill parallel to the swales). Whether you use seed or sod, this preparation helps your lawn to retain moisture and require less water. Installing a lawn over hard soil permits water to run off with little or no penetration and your lawn will derive minimal benefit from watering or rain.

Apply appropriate fertilizer and weed and pest controls as needed for optimal growth. Investigate organic compounds for additional protection of the environment.

Sprinkler System

If KEM included a sprinkler system with your home, we will arrange to have the installer demonstrate the system and make final adjustments shortly after you move in. The installer will note and correct any deficiencies in the system at the same time. Whether we install your sprinkler or you install it yourself, keep these points in mind.

You are responsible for routine cleaning and adjusting of sprinkler heads as well as shutting the system down in the fall. Failure to drain the system before freezing temperatures occur can result in broken lines, which will be your responsibility to repair. Insulate outdoor exposed copper parts from September 1st through May 15th.

Conduct weekly operational checks to ensure proper performance of the system. Direct sprinkler heads away from the home. Trickler- or bubbler-type irrigation systems are not recommended for use adjacent to your home.

Automatic timers permit you to water at optimum times whether you are at home, away, awake, or asleep. The amount of water provided to each zone can be accurately and consistently controlled and easily adjusted with a timed system. Check the system after a power outage and keep a battery in place if your system offers that as a backup.

Stones

The soil in your area may have stones and rocks. Removing these naturally occurring elements is a maintenance activity. You will need to provide continued attention to this condition as you care for your yard.

Trees

KEM values trees as one of the features that make up an attractive community and add value to the homes we build. We take steps to protect and preserve existing trees in the area of your home. In spite of our efforts, existing trees located on construction sites can suffer damage from construction activities, which manifest months after the completion of construction.

Damage to existing trees can be caused by such things as compaction of soil in the root zone, changing patterns of water flow on the lot, disturbing

the root system, and removing other trees to make room for the home. The newly exposed tree may react to conditions it is unaccustomed to. Caring for existing trees, including pruning dead branches or removing these trees altogether is your responsibility.

Remember to water trees during the summer or during warm dry periods in the winter.

Mulch around trees and avoid tilling or planting flowerbeds around trees. This is especially important while trees are recovering from the construction process.

Utility Lines

A slight depression may develop in the front lawn along the line of the utility trench. To correct this, roll back the sod, spread topsoil underneath to level the area, and then relay the sod.

Before any significant digging, check the location of buried service leads by calling the local utility locating service: 1-800-922-1987. In most cases, wires and pipes run in a straight line from the main service to the public supply.

See also Easements.

Waiting to Landscape

If you leave ground un-landscaped, it erodes. Correcting erosion that occurs after closing is your responsibility.

Weeds

Weeds will appear in your new lawn whether seed or sod is used. Left un-landscaped, your yard will quickly begin to show weeds. When soil is disturbed, dormant seeds come to the surface and germinate. The best control is a healthy lawn, achieved through regular care and attention.

Xeriscape®

KEM recommends careful consideration of landscape design and selection of planting materials to minimize the demands of your yard on water supplies. Detailed information about Xeriscape® is available from reputable nurseries. This has the triple benefit of helping the environment, saving on water bills, and reducing the amount of moisture that can reach your foundation.

MARBLE, GRANITE, TRAVERTINE, ONYX AND SLATE

Introduction:

Marble, granite, travertine, onyx and slate are extremely durable, long lasting natural stones. Although they require little maintenance, as with other fine products, periodic care is recommended. The natural stone industry recommends the following regimen to keep all of your natural stones beautiful.

Stain Prevention:

Most stones are porous and readily absorb liquids and moisture. Materials like limestone and sandstone are extremely absorbent, whereas granites and serpentine (green marble) are denser, but will still absorb liquids that are allowed to remain in contact with them for extended periods of time. In areas where stains are likely to develop, protective measures should be taken.

The use of a sealer will help prevent staining in most situations. The natural stone industry recommends an impregnating stone sealer, which is specifically formulated for sealing stone surfaces. They act by actually filling the small pores in the surface of the stone and can be easily applied to polished, honed, rough or sanded surfaces. Impregnating sealers can be found at most hardware stores.

Even a sealed surface can be stained if left in contact with a staining agent for a long period of time. Therefore, all spills should be cleaned up as soon as possible, and coasters or napkins should be used when serving food or drinks on a stone bar, table, or countertop. Soft drinks, coffee, tea, and fruit juices contain mild acids and can etch the polished surface of a stone and stain quite rapidly. These should be cleaned off immediately with a mild soap and warm water. Remember, do not use any abrasive cleansers.

Regular Cleaning:

In order to prevent staining or dirt build-up, regular cleaning is recommended. Stones should be rinsed weekly with warm water and a non-abrasive, clear, non-acidic soap.

Stain Removal:

If stains do occur a poultice may be required. Whereas a cleaner will wash off surface dirt, a poultice will actually act to draw out deep-seated dirt and stains from the stone's pores. Some poultice solutions are premixed which is easily applied to light colored marbles. Several applications may be required for difficult stains, and darker marbles should be tested to make sure that the poultice will not bleach the stone. For recurring problems, and/or a deep stain, scratches, or cracks, a professional stone fabricator should be contacted. KEM can provide a reference of a fabricator for your convenience.

When spills occur:

No matter how careful you are, spills are going to happen. Quick response time and the right solution will assist you in limiting the possible damage to your stone and/or sealer.

Food Spills - Carefully scoop up spill, do not wipe across the surface. Blot with dry cloth.

Liquid Spills – Blot away excess with clean dry cloth, turning regularly. Do not wipe across surface. For both types of spills, clean with a non-abrasive, clear, non-acidic soap. Then, wipe until dry.

Oily Stains – Stains that are oily in nature (olive oil) will dissipate over time.

Do's

- **Do** use coasters under glasses, especially if they contain alcohol, citrus juice or soda.
- **Do** use mats under hot or cold dishware.
- **Do** dust and clean surfaces frequently.
- **Do** blot up spills immediately to minimize permanent damage.
- **Do** clean surfaces with recommended cleaners.

Don'ts

- **Don't** use vinegar, bleach, ammonia or other general cleaners.
- **Don't** use cleaners that contain acid, such as bathroom cleaners, grout cleaners or tub and tile cleaners.
- **Don't** use alkaline cleaners not specifically formulated for stone.

Mirrors

To clean your mirrors, use any reliable liquid glass cleaner or polisher available at most hardware or grocery stores. Avoid acidic cleaners and splashing water under the mirror; either can cause the silvering to deteriorate. Acidic cleaners are usually those that contain ammonia or vinegar. Avoid getting glass cleaners on plumbing fixtures as some formulas can deteriorate the finish.

Moisture Control

Moisture control should be your biggest concern. Areas of the home where water is used or is a byproduct of everyday living, attention to the details may save you from a serious problem in the future.

- Use bath fans in the baths and laundry whenever water is running.
- There is often a range hood or vent to the outside in the kitchen that should be used if there is excessive moisture while cooking. If you do not have a vent, open a window a bit.
- Check the tile, caulking, and grout in your showers or tubs for discoloration or cracking that may be the sign of a leak.
- Quickly wipe up water spills on floors in wet areas (bath, etc.).
- Check exterior siding, corners windows and vents for cracked caulking. In our dry climate this is a common occurrence. Learn how to caulk or have a painting professional do this for you.
- Touch up paint any areas outside where paint is missing or scraped off.
- Re-paint the exterior at the proper interval of time for normal weathering.
- Watch for ice dams on the roof during cold spells where there is precipitation. Shovel or use heat tape.
- Clear or break ice out of frozen grates, gutters and downspouts. Heat tape can be used in some cases.

- Always leave downspout extensions in a down position. The up position is ok only for a short period for landscape maintenance.
- Rock or planter beds around the foundation must have ways for water to drain out. Any edging that causes damming or water around the foundation could cause structural damage.
- No significant landscape plantings should be within 10 feet of the foundation.
- KEM recommends against the use of buried pipes to evacuate water from downspouts. In our northern Colorado climate, their use can cause blockages and subsequent undesirable water build up.
- Humidifier setting should never be above 25% to 30%.

Paint and Stain

Painted surfaces must be washed gently using mild soap and as little water as possible. Avoid abrasive cleaners, scouring pads, or scrub brushes. Flat paints show washing marks more easily than gloss paints do. Often better results come from touching up rather than washing the paint.

Colors

Your selection sheets are your record of the paint and stain color names, numbers, and brands in your home.

Exterior

Regular attention will preserve the beauty and value of your home. Check the painted and stained surfaces of your home's exterior annually. Repaint before much chipping or wearing away of the original finish occurs; this will save the cost of extensive surface preparation.

Plan on refinishing the exterior surface of your home approximately every three to four years, or as often as your paint manufacturer suggests for your area and climate. Climatic conditions control the chemical structure of the paint used on the exterior. Over time, this finish will fade and dull. Depending on the exposure to weather of each surface, the paint on some parts of your home may begin to show signs of deterioration sooner than others. Siding does not tend to peel but will fade. When severely faded, it loses its protection and will need to be repainted.

When you repaint the exterior of your home, begin by resetting popped nails and removing blistered or peeling portions of paint with a wire brush or putty knife. Sand, spot with primer, and then paint the entire area. Use a quality exterior paint formulated for local climate conditions.

Avoid having sprinklers spray water on the exterior walls of your home. This will cause blistering, peeling, splintering, and other damage to the home.

Severe Weather

Hail and wind can cause a great deal of damage, so inspect the house after such weather. Promptly report damage caused by severe weather to your insurance company.

Interior Stain

For minor interior stain touch-ups, a furniture-polish-and-stain treatment is inexpensive, easy to use, and will blend in with the wood grain. Follow directions on the bottle.

Touch-Up

When doing paint touch-ups, dilute paint 25% with water (this makes the touch up blend with the old paint). Use a small brush, applying paint only to the damaged spot. Touch-up may not match the surrounding area exactly, even if the same paint mix is used. When it is time to repaint a room, prepare the wall surfaces first by cleaning with a mild soap and water mixture or a reliable cleaning product.

We provide touch up quantities of each paint, putty sticks, etc. used on your home. Store these with the lids tightly in place and in a location where they are not subjected to extreme temperatures. Do not store in the garage due to extreme temperatures. Store in a dry place, like under stairway in basement. See selection list for colors.

Cracking

As it ages, exterior wood trim will develop minor cracks and raised grain. Much of this will occur during the first year. Raised grain permits moisture to get under the paint and can result in peeling. This is not a defect in materials or workmanship. Paint maintenance of wood trim and gutters is your responsibility.

Fading

Expect fading of exterior paint or stain caused by the effects of sun and weather.

Wood Grain

Because of wood characteristics, color variations will result when stain is applied to wood. This is natural and requires no repair. Today's water-base paints often make wood grain visible on painted trim.

Pests and Wildlife

Insects such as ants, spiders, wasps, bees, "miller moths", and animal life such as woodpeckers, squirrels, mice, and snakes, may fail to recognize that your home belongs to you. Addressing concerns involving these pests and wildlife goes with being a homeowner. Informational resources include, among others, the state wildlife service, animal control authorities, the county extension service, pest control professionals, Internet, and the public library.

Phone Jacks/Cable

The wiring used (CAT5E for phone and RG6 for Cable) is the most advanced available in the non-custom residential market.

Your home is equipped with voice/data jacks. Initiating phone, satellite, and cable service (additions to phone service) and moving phone outlets for decorating purposes or convenience are your responsibility.

From the service box outward, care of the wiring is the responsibility of the local telephone/cable service company.

Plumbing

Your plumbing system has many components, most of which require little maintenance. Proper cleaning, occasional minor attention, and preventive care will assure many years of good service from your system.

Aerators

Even though your plumbing lines have been flushed to remove dirt and foreign matter, small amounts of minerals may enter the line. Aerators on the faucets strain much of this from your water. Minerals caught in these

aerators may cause the faucets to drip because washers wear more rapidly when they come in contact with foreign matter. Clean these aerators periodically.

Basement Construction

If you perform any construction in your basement, ensure that the plumbing lines in the basement or crawl space are not isolated from the heating source without insulation being added.

Cleaning

Follow manufacturer's directions for cleaning fixtures. Avoid abrasive cleansers. They remove the shiny finish and leave behind a porous surface that is difficult to keep clean. Clean plumbing fixtures with a soft sponge and soapy water (a nonabrasive cleaner or a liquid detergent is usually recommended by manufacturers). Then polish the fixtures with a dry cloth to prevent water spots.

Clogs

The main causes of toilet clogs are domestic items such as disposable diapers, excessive amounts of toilet paper, sanitary supplies, Q-tips, dental floss, and children's toys. Improper garbage disposal use also causes many plumbing clogs. Always use plenty of cold water when running the disposal. This recommendation also applies to grease; supplied with a steady flow of cold water, the grease congeals and is cut up by the blades. If you use hot water, the grease remains a liquid, then cools and solidifies in the sewer line. Allow the water to run 10 to 15 seconds after shutting off the disposal.

You can usually clear clogged traps with a plumber's helper (plunger). If you use chemical agents, follow directions carefully to avoid personal injury or damage to the fixtures.

Clean a plunger drain stopper—usually found in bathroom sinks—by loosening the nut under the sink at the back, pulling out the rod attached to the plunger, and lifting the stopper. Clean and return the mechanism to its original position.

Dripping Faucet

You can repair a dripping faucet by shutting off the water at the valve directly under the sink, then removing the faucet stem cartridge, changing the cartridge, and reinstalling. The showerhead is repaired the same way. Replace the cartridge with another of the same type and size. You can

minimize the frequency of this repair by remembering not to turn faucets off with excessive force.

Extended Absence

If you plan to be away for an extended period, you should drain your water supply lines. To do this, shut off the main supply line and open the faucets to relieve pressure in the lines. You may also wish to shut off the water heater. Do this by turning off the cold water supply valve on top and the gas control at the bottom. Drain the tank by running a hose from the spigot on the bottom to the basement floor drain. If you leave the tank full, keep the pilot on and set the temperature to its lowest or "vacation" setting. Check manufacturer's directions for additional hints and instructions.

See also Extended Absence checklist.

Fiberglass Fixtures (Jetted tubs, shower pans etc.)

For normal cleaning use a nonabrasive bathroom cleanser and sponge or nylon cleaning pad. Do not use steel wool, scrapers, or scouring pads.

Freezing Pipes

Provided your home is heated at a normal level, pipes should not freeze at temperatures above 0 degrees Fahrenheit. Set the heat at a minimum of 55 degrees F if you are away during winter months. Keep garage doors closed to protect plumbing lines running through this area from freezing temperatures.

In unusually frigid weather or if you will be gone more than a day or two, open cabinet doors to allow warm air to circulate around pipes. Use an ordinary hair dryer to thaw pipes that are frozen. Never use an open flame.

Jetted Tubs

If your home includes a jetted tub follow manufacturer directions for its use and care. Never operate the jets unless the water level is at least one inch above the jets. Be cautious about using the tub if you are pregnant or have heart disease or high blood pressure; discuss the use of the tub with your doctor. Tie or pin long hair to keep it away from the jets where it might become tangled—a potentially dangerous event.

Clean and disinfect the system every one to two months, depending on usage. To do this, fill the tub with lukewarm water and add one cup of

liquid chlorine bleach. Run the jets for 10 to 15 minutes, drain and fill again. Run for 10 minutes with plain water, drain.

Refer to Manufacture's Manual.

Leaks

If a major plumbing leak occurs, the first step is to turn off the supply of water to the area involved. This may mean shutting off the water to the entire home. This valve was demonstrated to you at your orientation. Then contact the appropriate contractor.

Low Flush Toilets

Regulations prohibit the manufacture of toilets that use more than 1.6 gallons of water per flush. In the search for a balance among comfort, convenience, and sensible use of natural resources, the government conducted several studies. The 1.6-gallon toilet turned out to be the size that, overall, consistently saves water.

As a result of implementing this standard, flushing twice is occasionally necessary to completely empty the toilet bowl. Even though you flush twice on occasion, rest assured that overall you are saving water and we have complied with the law. Similarly, flow restrictors are manufactured into most faucets and all showerheads and should not be removed. It is recommended when flushing your toilet that you hold the flush lever down briefly to allow the bowl to completely flush.

Low Pressure

Occasional cleaning of the aerators on your faucets (normally every three to four months) will allow proper flow of water. The water department controls the overall water pressure.

Most homes have a pressure-reducing valve. Tampering with this device can cause excess pressure in the system.

Main Shut-Off

For single-family homes, the water supply can be shut-off at the street or the meter. Multi-family homes have a main water shutoff for each dwelling unit. We will point both of these out during your orientation.

Marble or Manufactured Marble Fixtures

Marble and manufactured marble will not chip as readily as porcelain enamel but can be damaged by a sharp blow. Avoid abrasive cleansers or razor blades on manufactured marble; both damage the surface. Always mix hot and cold water at manufactured marble sinks; running only hot water can damage the sink.

Outside Faucets

Outside faucets (sillcocks) are frostproof, but in order for this feature to be effective, you must remove hoses during cold weather, even if the faucet is located in your garage. If a hose is left attached, the water that remains in the hose can freeze and expand back into the pipe, causing a break in the line. Repair of a broken line that feeds an exterior faucet is a maintenance item.

Porcelain

You can damage porcelain enamel with a sharp blow from a heavy object or by scratching. Do not stand in the bathtub wearing shoes unless you have placed a protective layer of newspaper over the bottom of the tub. If you splatter paint onto the porcelain enamel surfaces during redecorating, wipe it up immediately. If a spot dries before you notice it, use a recommended solvent.

Running Toilet

There is a colored plastic screw adjustment on top of the valve assembly in the tank, turn clockwise to keep water from rising up in the overflow. Check the stopper also to see if it is closing completely. The float should be free and not rub the side of the tank or any other parts. Also check the chain on the flush handle. If it is too tight, it will prevent the rubber stopper at the bottom of the tank from sealing, resulting in running water.

Shut-Offs

Your main water shut-off is located near your meter as noted during your orientation. You use this shut-off for major water emergencies such as a water line break or when you install a sprinkler system or build an addition to your home. Each toilet has a shut-off on the water line under the tank. Hot and cold shut-offs for each sink are on the water lines under the sink.

Sprinklers

You should routinely inspect sprinkler heads and provide seasonal service to maintain proper functioning.

See also Landscaping

Stainless Steel

Clean stainless steel sinks with soap and water to preserve their luster. Avoid using abrasive cleaners or steel wool pads; these will damage the finish. Prevent bleach from coming into prolonged contact with the sink as it can pit the surface. An occasional cleaning with a good stainless steel cleaner will enhance the finish. Rub in the direction of the polish or grain lines and dry the sink to prevent water spots.

Avoid leaving produce on a stainless steel surface, since prolonged contact with produce can stain the finish. Also avoid using the sink as a cutting board; sharp knives will gouge the finish.

Local water conditions also affect the appearance of stainless steel. A white film can develop on the sink if you have over-softened water or water with a high concentration of minerals. In hard water areas, a brown surface stain can form appearing like rust.

Toilet Tank Care

Avoid exposing the toilet to blows from sharp or heavy objects, which can cause chipping or cracking. Avoid abnormal pressures against the sides of the tank. It is possible to crack the tank at the points where it is attached to the bowl. The tablets made for inside the tank often cause the flapper and other rubber parts to deteriorate quickly, causing failure of these parts.

Water Filter or Softener

If you install either a water filter or a water softener, carefully read the manufacturer's literature and warranty for your specific model.

If your home includes a septic system, prior to installing a water softener, discuss with the vendor whether the system you are considering will adversely affect your septic system.

See also Septic System.

TROUBLE SHOOTING TIPS

No Water Anywhere in the Home

Before calling for service, check to confirm that the:

- Main shutoff (on the meter) inside your home is open (this was pointed out at orientation). Not available to multi-family homeowners.
- Individual shutoffs for each water-using item are open.
- Be sure the water company has received your payment

No Hot Water

See Water Heater

Leak Involving One Sink, Tub, or Toilet

- Check caulking and grout.
- Confirm shower door or tub enclosure was properly closed.
- Turn water supply off to that item.
- Use other facilities in your home and report problem on next business day.

Leak Involving a Main Line

- Turn water off at the meter in your home (this was pointed out at your orientation). Does not apply to multi-family homeowners.
- Call emergency number for service.
- On a water heater leak, call the plumber listed on the sticker on your water heater or from your subcontractor list.

Back Up at One Toilet

- Shut off the water supply to the toilet involved.
- Use a plunger to clear the blockage.
- Use a snake to clear the blockage.

Even if the troubleshooting tips do not identify a solution, the information you gather will be useful to the service provider you call.

Noises

Changes in temperature or the flow of the water itself may cause some noise in plumbing supply and drain lines. This is normal and requires no

repair. Expect temperatures to vary if water is used in more than one location in the home at the exact same time.

Supply

Disruption of service due to failure of the water department system is the responsibility of the water department to correct.

Plumbing Fixtures (Brushed Chrome, Chrome, other)

The manufacturer treats fixtures with a clear protective coating, electrostatically applied, to provide beauty and durability. This coating is not impervious to wear and tear. Atmospheric conditions, sunlight, caustic agents such as paints, and scratches from sharp objects can cause the protective coating to crack or peel, exposing the base metal and resulting in spotting and discoloration.

Cleaning

Initial care of these products requires only periodic cleaning with a mild, nonabrasive soap and buffing with a soft cloth.

Property Boundaries

At closing you will receive a copy of a survey that shows your lot and the location of your home on the lot. Prior to construction of the home, KEM established the property boundaries and corners.

During construction, some of the monuments that mark the lot corners may be affected or covered up by grading, excavation, installation of utility lines and other typical construction activities. If you wish to install a fence, swimming pool, add a deck or patio to your home, or otherwise establish a permanent structure, we advise that you have professional surveyors locate and mark property boundaries to be certain they are accurate and you have found all corners.

See also Easements.

Radon

There is disagreement among various experts and disciplines as to the actual health impacts of radon. Consequently, while some inspection jurisdictions require some type of radon mitigation in new construction

others do not. Your KEM home has been constructed in accordance with the requirements of your particular inspection jurisdiction. In addition, KEM provided you with information about radon as part of your contract documentation.

The following is a summary only. If you have further questions regarding radon or its mitigation, KEM suggests you check the local 'yellow pages' and/or go to www.radongas.org.

What is radon?

Radon is an invisible, odorless, radioactive gas created during the natural decay of uranium in soils. Therefore, radon is present just about everywhere, and some locales within Colorado do have higher concentrations than other regions. Radon may enter homes and other buildings through cracks and openings in basements and crawl. Radon levels vary from area to area and house to house and have nothing to do with age, quality or upkeep of the home.

Why radon may be a concern.

It is believed that prolonged exposure to elevated levels of radon gas may cause lung cancer. On this basis, the US Environmental Protection Agency (US EPA) recommends, but does not mandate, mitigation when radon levels reach or exceed 4 picocuries per liter of air (pCi/L).

What should homebuyers and sellers know about radon?

When buying a home, you may wish to take time to test radon levels. If your home has levels above the EPA guidelines, does this mean you should walk away? Absolutely not! There are ways to effectively reduce radon levels, either before or after you buy, by installing some type of radon mitigation system.

Am I required to test for radon?

No, but this may vary from jurisdiction to jurisdiction. This information is provided to all buyers of residential property at point of sale (prior to the execution of a contract on a home) as an informational service by KEM.

How do I test for radon?

There are two basic approaches to the measurement of radon:

- (1) Conduct self-administered tests. Follow the directions in a radon test kit (available at home improvement and other retail outlets).

Remember: radon levels fluctuate due to factors such as humidity and air circulation, as well as other naturally occurring variations. Conduct tests in the lowest level of your home that is currently occupied on a regular basis (e.g. basement). Do NOT test in a room with high moisture content, such as a kitchen or a bathroom.

- (2) Hire a professional tester. A list of qualified testers can be found at www.radongas.org; or check the local 'yellow pages'.

Railings (Exterior)

Stained or wrought iron railings in your home require little maintenance beyond occasional dusting or polishing. Protect railings from sharp objects or moisture. Cover them during move-in so large pieces of furniture do not cause dents or scratches.

Stained railings will show variation in the way the wood grain took the stain. Some designs show seams where pieces of wood came together to form the railing.

Roof

The shingles on your roof do not require any treatment or sealer. The less activity (i.e. walking, etc.) your roof experiences, the less likely it is that problems will occur.

Clean Gutters

Maintain the gutters and downspouts so that they are free of debris and able to quickly drain precipitation from the roof.

Ice Dam

On occasion, depending on conditions and solar orientation, as water runs down and when it reaches the cold eaves, it may freeze. An accumulation of this type of ice dams the subsequent runoff and the water begins to back up, sometimes working its way up and under shingles, ultimately leading into your home through windows or ceilings.

If your home design or orientation makes it vulnerable to this occurrence, you may want to install an electric gutter heater strip in the susceptible areas.

Leaks

If a leak occurs, try to detect the exact location and check the time you noticed it after the storm. This will greatly simplify finding the area that requires repair when the roof is dry.

Limit Walking

Limit walking on your roof. Your weight and movement can loosen the roofing material and in turn result in leaks. Never walk on the roof of your home when the shingles are wet—they are slippery.

Severe Weather

After severe storms, do a visual inspection of the roof for damages. Notify your insurance company if you find pieces of shingle in the yard or shingle edges lifted on the roof.

TROUBLESHOOTING TIPS: ROOF LEAK

Please keep in mind that roof leaks cannot be repaired while the roof is wet. However, you can get on the schedule to be in line when conditions dry out, so do call your roof leak to the roofing company listed on your subcontractor list.

- Confirm the source of the water is the roof rather than from a
 - Plumbing leak
 - Open window on a higher floor
 - Ice dam
 - Clogged gutter or downspout
 - Blowing rain or snow coming in through code required roof vents
 - Gap in caulking
- Where practical, place a container under dripping water.
- If a ceiling is involved, use a screwdriver to poke a small hole in the drywall to help release the water.
- Even if the troubleshooting tips do not identify a solution, the information you gather will be useful to the service provider you call.
- Remove personal belongings to prevent damage to them. If damage occurs, contact your homeowner insurance company to submit a claim.

Rough Carpentry

Floor Deflection

Your floor joists are engineered for your specific home. Floors will deflect (bend) when walked on. This will be more noticeable next to hutches, bookcases, pianos, chairs, and other heavy furniture. This is not a structural deficiency

Septic System

A septic system consists of two basic parts. First a septic tank, and second an underground disposal field. Bacteria breaks down solids forming a sludge which is moved by incoming water out to the disposal field where it is filtered out into the soil. To help preserve the effectiveness of the system, keep these points in mind:

- Avoid disposing of chemicals such as solvents, oils, paints, and so on, through the septic system.
- Avoid using commercial drain cleaners. They can kill the bacteria that are working to break down the solid waste matter.
- Food from a disposal decomposes more slowly and adds to the solids in the tank. Coffee grounds may clog the system.
- Avoid disposing of any paper product (diapers, sanitary supplies, paper towels and so on) other than toilet paper through the system.
- Do not rely on yeast or chemical additive to digest sludge. They are not an alternative to regular pumping and may actually harm the system.
- Drain surface water away from the disposal field. Eliminate unnecessary sources of water in the area of the disposal field. Plant only sod over the disposal field. Avoid fertilizers in this area.
- Conserve indoor water use to put less strain on the system. Correct leaky faucets or running toilets promptly. Keep in mind that a water softener will generate 30 to 85 gallons of water every regeneration cycle.
- Do not drive on the disposal field or build over it.

Pumping the System

Over time, the matter not broken down by the bacteria can clog the system. This will happen in spite of careful use and good maintenance. To prevent serious problems, regular pumping to clean out the tank is essential—usually every 1 to 2 years, more often if usage is heavy.

System Failure

Signs that your septic system is failing include:

- Black water with a foul odor backing up in drains or toilets.
- Toilets flush slowly.
- Water pools on top of the disposal field.
- Grass stays green over the disposal field even in dry weather.

If you believe your system requires attention, call a professional to assess the situation. Have the system pumped. If a new system is required, a permit must be obtained from the county or municipality where your home is located.

Water Softener

Prior to installing a water softener, discuss with the vendor whether the system you are considering will adversely affect your septic system.

Shower Doors or Tub Enclosures

Shower doors and tub enclosures require minimal care. Using a squeegee to remove water after a bath or shower will keep mineral residue and soap film to a minimum. A coating of wax can also help prevent build up of minerals and soap.

Use cleaning products suggested by the manufacturer to avoid any damage to the trim and hardware. Avoid acidic cleaners, which usually contain ammonia or vinegar. Avoid getting glass cleaners on plumbing fixtures as some formulas can deteriorate the finish.

Avoid hanging wet towels on corners of doors; the weight can pull the door out of alignment and cause it to leak.

Check and touch up caulking on an as needed basis.

Siding

Different KEM homes include different types of siding. All siding expands and contracts in response to changes in humidity and temperature. Slight waves may be visible in siding under moist weather conditions; shrinkage and separations will be more noticeable under dry conditions. These behaviors cannot be entirely eliminated.

Do not put dirt or landscape material against siding. When the dirt or landscape material is against siding, it does not allow the siding to breath and expel moisture.

Wood and Wood Products

Wood, wood-product and concrete siding will require routine painting. The timing will vary with climatic conditions. Maintain caulking to minimize moisture entry into the siding. Note that some paint colors will require more maintenance than others and some sides of the home may show signs of wear sooner based on their exposure to the elements. Some wood siding, such as cedar, is subject to more cracking and will require more maintenance attention.

Cement-Based Products

Cement-based siding will require repainting and caulking just as wood products do but generally less frequently. Such siding also has a longer life span than wood or wood product siding.

See also Paint and Wood Trim.

Smoke Detectors

Read the manufacturer's manual for detailed information on the care of your smoke detectors.

Battery

If a smoke detector makes a chirping sound that is a sign that the battery needs to be replaced. Follow manufacturer instructions for the frequency of and installing a new battery. Most smoke detectors use a 9-volt battery.

Cleaning

For your safety, clean each smoke detector monthly to prevent a false alarm or lack of response in a fire. Smoke detectors detect particles in the

air, not smoke itself. During high wind conditions, it is common that fine dust from the insulation in your attic, will find its way into the smoke detector box in the ceiling. If you experience erratic smoke detector chirping or they just go off at irregular times, blow them out.

Remove the smoke detectors from the ceiling by turning slightly to the left, pull down, and remove wiring harness clip from smoke detector, by depressing tabs. Cleaning should be done with a blast of air from an aerosol can, which can be obtained at a local hardware store. After blowing out each smoke detector, replace them in the reverse order stated above. After cleaning, push the test button to confirm the alarm is working.

Locations

Smoke detectors are installed in accordance with building codes, which dictate locations.

Stairs

No known method of construction installation prevents all vibration or squeaks in a staircase. A shrinkage crack will develop where the stairs meet the wall. When this occurs, apply a thin bead of latex caulk and, when dry, touch up with paint.

Stone

Maintenance

Cultured Stone® are virtually maintenance-free. If required, lightly wash to remove dust or dirt. Do not sandblast or wash with acid, abrasives or high-pressure water. Damaged or graffiti-marred stones can be removed and replaced with matching materials.

Stucco

Stucco is a brittle cement product that is subject to expansion and contraction. Minor hairline cracks may develop in the outer layer of stucco. This is normal and does not reduce the function of the stucco in any way.

Drainage

To ensure proper drainage, keep dirt and concrete flatwork a minimum of 6 inches below the stucco screed (mesh underneath final coat of stucco).

Do not pour concrete or masonry over the stucco screed or right up to the foundation.

Maintenance

To remove ordinary dirt and environmental contaminants, thoroughly rinse the wall with clean water to remove surface particles. Stucco can then be cleaned with a mild detergent solution or commercial grade cleaner. Prior to cleaning, first test cleaning solution in an inconspicuous area to assess the strength of the solution and ensure no deleterious effect to the finish. Apply the cleaning solution to the entire area using a soft bristle brush. Do not allow the cleaning solution to dry on the wall. Rinse the wall thoroughly with clean water to remove all traces of loosened dirt and cleaning solution. If the stucco is heavily soiled, contact the Degussa Wall Systems Technical Service Department for recommendations. (www.senergy.cc)

Visually inspect the wall system at least twice a year. Contact an approved Senergy applicator if repairs are necessary. Provide temporary protection from water penetration until permanent repairs are complete. If a color change is desired, Degussa Wall Systems manufactures exterior coatings (ASAP and COLOR COAT) specifically designed for this purpose. Contact an approved Senergy applicator if a color change is desired.

Other building items and components which may affect the integrity of the Senergy Wall System should be properly maintained and regularly inspected. Visually inspect all sealant joints, flashing, roof, etc. at least twice a year (spring and fall). If deficiencies are found, contact the appropriate manufacturer or applicator.

Mold and Mildew Stain Removal

Mold and mildew are living organisms, consisting of a root system and a "bloom", which must be completely removed or killed to stop growth. To kill the roots and remove the bloom, use a fungus and algae remover in conjunction with low-pressure power-washing. Do not use a phosphate-based cleaner. Contact Senergy for additional information. (www.senergy.cc)

To treat stains which may remain after mold and mildew removal, apply a solution of 1 part household bleach and 20 parts clean water to the wall with a soft bristle brush. Rinse the wall thoroughly with clean water to remove all traces of bleach solution.

Efflorescence

The white, powdery substance that sometimes accumulates on stucco surfaces is called efflorescence causing the finish to appear bleached or spotted and seem to lose color. Efflorescence is a salt-like deposit that originates from cement and can leach through the permeable finish coat to appear as a deposit to the surface of the finish. This is a natural phenomenon and cannot be prevented. In some cases, you can remove it by scrubbing with a stiff brush and vinegar. Efflorescence can usually also be removed by dry-brushing the finish surface, and then flushing the surface with plenty of clean water to remove the dislodged salts. Consult your home center, hardware store or the supplier for commercial products to remove efflorescence.

Sump Pump

If conditions on your lot made it appropriate, the foundation design includes a perimeter drain and sump pump. The perimeter drain runs around the foundation to gather groundwater and channel it to the sump pit, or crock. When the water reaches a certain level, the pump comes on and pumps the water out. Read and follow the manufacturer's directions for use and care of your sump pump.

Continuous Operation

The pump may run often or even continuously during a heavy storm or long periods of rain. This is normal under such conditions.

Discharge

Know where the discharge for your sump pump system is and keep the end of the drain clear of debris so that water can flow out easily. The discharge must be on your property, not into the floor drain or into the storm sewer.

Power Supply

The sump pump runs on electricity. If power goes off, the pump cannot operate. Storm water (not sewage) could then enter your basement. You may wish to install a backup system to guard against this possibility. Homeowner insurance does not usually cover damage to your property from this source; you may want to obtain a rider to cover this.

Roof Water

Ensure that roof water drains quickly away from the home to avoid circulating it through your sump pump. Keep downspout extensions or splash blocks in place to channel water away from your home.

Routine Check

Periodically check to confirm the pump is plugged in, the circuit breaker is on and that the pump operates. To check the operation of your sump pump, pour five gallons of water into the sump pump crock (hole). The pump should come on and pump the water out. Follow this procedure once a year.

Trees and Shrubs

Avoid planting trees or shrubs with aggressive root growth patterns near your home's foundation. The roots can make their way into the perimeter drain and eventually clog the system.

Vacation / Extended Absences

Whether for a vacation, business travel, or other reasons, nearly all of us occasionally leave our homes for days or weeks at a time. With some preparation, such absences can be managed uneventfully. Keep these guidelines in mind and add additional reminders that are appropriate to your situation.

- Shut off the main water supply.
- Summer: Turn your air conditioner fan to on. Set the thermostat to 78.
- Winter: Set the thermostat to a minimum of 55. Leave doors on cabinets that contain plumbing lines open.
- Leave room doors open as well. This allows heat to circulate.

Ventilation

Homes today are built more tightly than ever. This saves energy dollars but creates potential concerns. Condensation, cooking odors, indoor pollutants, radon, and carbon monoxide may accumulate. We provide mechanical and passive methods for ventilating homes. Your attention to ventilation is important to health and safety.

Attic Vents

Building codes require attic and crawl space vents to minimize accumulation of moisture.

Attic ventilation occurs through vents in the soffit (the underside of the overhangs) or on gable ends. Driving rain or snow sometimes enters the attic through these vents. Do not cover them to prevent this. Instead, cover the insulation in front of the vent. When you do this, precipitation that blows in safely evaporates and ventilation can still occur.

Crawl Space Vents

Homes with crawl spaces usually include two or more vents. Open crawl space vents for summer months and close them for winter months, pulling insulation over them. Failure to close these vents and replace insulation may result in plumbing lines freezing in the crawl space.

Daily Habits

Your daily habits can help keep your home well ventilated:

- Do not cover or interfere in any way with the fresh air (combustion air) supply to your furnace.
- Develop the habit of running the hood fan when you are cooking.
- Ditto the bath fans when bathrooms are in use.
- Air your house by opening windows for a time when weather permits.

Proper ventilation will prevent excessive moisture from forming on the inside of the windows. This helps reduce cleaning chores considerably.

See also Humidifiers.

Vinyl Flooring

Although vinyl floors are designed for minimum care, they do have maintenance needs. Follow any manufacturer's specific recommendations for care and cleaning.

Color and Pattern

Your color selection sheets provide a record of the brand, style, and color of floor coverings in your home. Please retain this information for future reference.

Limit Water

Wipe up spills and vacuum crumbs instead of washing vinyl floors frequently with water. Limit mopping or washing with water; excessive amounts of water on vinyl floors can penetrate seams and get under edges, causing the material to lift and curl.

Moving Furniture

Moving appliances across vinyl floor covering can result in tears and wrinkles. Install protection pads on furniture legs to prevent permanent damage. If you damage the vinyl floor, you can have it successfully patched by professionals. If any scraps remain when installation of your floor covering is complete, we leave them in the hope that having the matching dye lot will make such repairs less apparent.

No-Wax Flooring

The vinyl flooring installed in your home may be the “no-wax” type. No-wax means a clear, tough coating that provides both a shiny appearance and a durable surface. However, even this surface will scuff or mark. Follow the manufacturer's recommendations for maintaining the finish.

Raised Nail Heads

Raised nail heads are the result of movements of the floor joist caused by natural shrinkage and deflection. We have used special nails and glued the underlayment to help minimize this movement. If a nail head becomes visible through vinyl flooring, place a block of wood over it and hit the block with a hammer to reset the nail.

Seams

Any brand or type of vinyl flooring may separate slightly due to shrinkage. Seams can lift or curl if excessive moisture is allowed to penetrate them. You can use a special caulking at tub or floor joints to seal seams at those locations. Avoid getting large amounts of water on the floor from baths and showers.

Water Heater: Gas

Carefully read and follow the manufacturer's literature for your specific model of water heater.

Condensation

Condensation inside your new water heater may drip onto the burner flame. This causes no harm and in most cases will disappear in a short period of time.

Drain Tank

Review and follow manufacturer's timetable and instructions for draining several gallons of water from the bottom of the water heater. This reduces the buildup of chemical deposits from the water, prolonging the life of the tank and saving energy dollars.

Pilot

Never light a gas pilot when the water heater tank is empty. Always turn off the gas before shutting off the cold water supply to the tank.

To light the water heater pilot, follow the instructions on the water heater tank.

While away from home for an extended period of time, set the temperature to its lowest point and leave the pilot lit.

Safety

Vacuum the area around a gas-fired water heater to prevent dust from interfering with proper flame combustion. Do not use the top of a heater as a storage shelf.

Temperature

The recommended thermostat setting for normal everyday use is "normal." Higher settings can result in wasted energy dollars and increase the danger of injury from scalding. Hot water will take longer to arrive at sinks, tubs, and showers that are farther from the water heater.

TROUBLESHOOTING TIPS: NO HOT WATER

Before calling for service, check to confirm that the:

- Pilot is lit. (Directions will be found on the side of the tank.)
- Temperature setting is not on "low" or "pilot lighting".
- Water supply valve is open.

Refer to the manufacturer's literature for specific locations of these items and possibly other troubleshooting tips. Even if the troubleshooting tips do not identify a solution, the information you gather will be useful to the service provider you call.

See also Plumbing

Windows, Screens, and Sliding Glass Doors

Annual inspections of all windows, screens, and sliding glass doors will allow you fix a problem before it becomes major.

Contact a glass company for re-glazing of any windows that break. Glass is difficult to install without special tools.

Acrylic Blocks

In normal conditions, simply wash with a mild soap or detergent and lukewarm water, or a quality plastic cleaner. Use a clean sponge or soft cloth to avoid scratching and always rinse well with water. Furniture polish may be used after cleaning to add sparkle and to make future cleaning easier.

When selecting cleaning products, read the manufacturers' label to ensure that the product is safe for use on acrylic. Several popular cleaning products contain chemicals that will cause cracks in the acrylic blocks over time.

Do not use tile cleaners, or abrasive cleaners.

Do not use benzene, acetone, gasoline, or paint thinner.

Do not use petroleum-based products.

Avoid cleaning in hot sun or at elevated temperatures.

For very light scratches that are not very obvious, use a spray of furniture polish. Apply the polish to a soft cloth, then rub the blocks. Instead of furniture polish you may want to use a commercial cleaner for very light scratches. Use a standard acrylic polish for light scratches. For further information, contact Hy-Lite Customer Service. (www.hy-lite.com)

Vinyl

Use the mildest cleaners possible, NEVER use solvents or abrasive cleansers – some chemicals can harm vinyl surfaces and other window components.

Clad Casement

Clad surfaces exposed to sunlight are subject to color-fading due to ultraviolet radiation. If your cladding has faded, apply a coat of high quality, non-abrasive car wax to the entire surface. If this doesn't help, contact your dealer (listed on your subcontractor list) for further options.

Aluminum cladding does not require painting or finishing. However, we offer special paints with matching colors for touching up scratches.

Clean glass as needed with vinegar and water, a commercial glass cleaner, or the product recommended by the window manufacturer.

Condensation

Condensation on interior surfaces of the window and frame is the result of high humidity within the home and low outside temperatures. Your family's lifestyle controls the humidity level within your home. If your home includes a humidifier, closely observe the manufacturer's directions for its use.

Screen Storage and Maintenance

Many homeowners remove and store screens for the winter to allow more light into the home. To make reinstallation more convenient, label each screen as you remove it. Use caution: screens perforate easily and the frames bend if they are not handled with care. Prior to reinstalling the screen, clean them with a hose and a gentle spray of water.

Sills

Window sills in your home are made of wood, wood product, man-made marble, or marble. The most common maintenance activity is dusting. Twice a year, check caulking and touch up as needed. Wax is not necessary but can be used to make sills gleam. Protect wood and wood product sills from moisture. If you arrange plants on a sill, include a plastic tray under the pot.

Sliding Glass Doors

Sliding glass doors are made with tempered glass that is more difficult to break than ordinary glass. If broken, tempered glass breaks into small circular pieces rather than large splinters that can easily cause injury.

Keep sliding door tracks clean for smooth operation and to prevent damage to the doorframe. Silicone lubricants work well for these tracks. Acquaint yourself with the operation of sliding door hardware for maximum security.

Under certain lighting conditions, door glass may be hard to see. If you keep the screen fully closed when the glass door is open, your family will be accustomed to opening something before going through. You may want to apply a decal to the glass door to make it readily visible.

Sticking Windows

Most sliding windows (both vertical and horizontal) are designed for a 10-pound pull. If sticking occurs or excessive pressure is required to open or close a window, apply a silicone lubricant. This is available at hardware stores. Avoid petroleum-based lubricants.

Tinting

If you add tinting to dual-glazed windows, all warranties are voided. Damage can result from condensation or excessive heat buildup between the panes of glass. Refer to the manufacturer's literature for additional information.

Some manufacturers void their warranty on the windows if you apply tinting or foil lining. Contact the manufacturer to check on their current policy before you apply any tinting coatings.

Weep Holes

In heavy rains, water may collect in the bottom channel of window frames. Weep holes are provided to allow excess water to escape to the outside. Keep the bottom window channels and weep holes free of dirt and debris for proper operation.

Infiltration

Some air and dust will infiltrate around windows, especially before the installation of landscaping in the general area.

See also Ventilation

Wood Trim

Shrinkage of wood trim occurs during the first two years or longer, depending on temperature and humidity. All lumber is more vulnerable to shrinkage during the heating season. Maintaining a moderate and stable temperature helps to minimize the effects of shrinkage. Wood will shrink less lengthwise than across the grain. Wood shrinkage can result in separation at joints of trim pieces. You can usually correct this with caulking and touch-up painting.

Shrinkage may also cause a piece of trim to pull away from the wall. If this occurs, drive in another nail close to, but not exactly in, the existing nail hole. Fill the old nail hole with putty and touch up with paint or stain as needed.

See also Expansion and Contraction/ Paint and Stain

Raised Grain

Because of the effects of weather on natural wood, you should expect raised grain to develop. This is normal and not a defect in the wood or paint.