

RIVERWAY BUILDERS, LLC
DBA RIVERWAY HOMES

1027 Yale
Houston, TX 77008
Phone: 713-621-6111

Dear Homeowner:

Congratulations on the purchase of your new home! As one of the leading builders in the Houston area, Riverway Builders, LLC, dba Riverway Homes, is pleased to provide you with "Riverway Homes" handbook.

This book is divided into several sections to give you an overview of the home buying process and to help make caring for your home easier for you.

Section I: Riverway Homes Homebuyer's Guide -- gives you an overview of the home buying process, the construction process, settlement and our customer service program.

Section II: Riverway Homes Homeowner Manual and Warranty Guide -- describe the warranty policy and offer thorough instructions on how to maintain the interior and exterior of your home. A glossary is also provided in this section so you can easily access information about appliances, painting, landscaping and more. Should you need to file a warranty claim, a warranty directory is included with pertinent phone numbers, addresses, and email accounts.

Section III: Riverway Homes Warranty Program -- this legal document explains how to make a warranty claim, the protection you are provided under the program and your responsibilities as a homeowner. An addenda and appendix are included in this section, as is the Warranty Request Form.

If you have additional questions about home maintenance or the warranty program, please call our office at (713)-621-6111.

Thank you again for choosing Riverway Homes. We wish you many happy years in your Riverway home.

Sincerely,

Riverway Builders, LLC

RIVERWAY HOMES HOMEBUYER'S GUIDE

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WELCOME TO RIVERWAY HOMES

CONGRATULATIONS!

You've just begun the exciting and rewarding experience of buying a new Riverway home. As a result of this important investment, you'll soon enjoy the pride of living in your own new home and you'll benefit from the significant income tax advantages that homeowners are currently eligible to receive. It's no wonder that owning a home continues to be the American Dream!

AND THANK YOU!

Thank you for choosing Riverway Homes to build your home. We are one of the leading home builders in Houston Area since 2002. We are also a proud company with a strong reputation for building homes of quality and value.

Further, we are strongly committed to customer satisfaction, and we'll strive to maintain your complete and continuing satisfaction. Referrals and repeat home purchases from our long and growing list of satisfied customers are important to Riverway's future. So rest assured that we will do all we can to meet your expectations.

HOW RIVERWAY HOMES WORKS WITH YOU

As you go through the home buying and building processes, you will discover that we continually support you with a team of dedicated professionals.

Your Sales Representative will be your personal contact through all phases of the buying, building, and settlement processes. Should you have any questions, please contact your Sales Representative first.

The Construction Manager will oversee the construction of your home, monitor the quality of workmanship and materials, endeavor to keep it on schedule, and meet with local building inspectors to secure inspection approvals. He will handle your Follow-Up Inspection and service requests.

THE RIVERWAY HOMES HOMEOWNER'S INFORMATION PROCESS

This book contains four important documents that provide easy-to-find answers to many questions that you may have as a Riverway Homes home buyer. These include the Riverway Home Buyer's Guide that you are currently reading, the Riverway Homeowner's Manual, and the Riverway Builders LP Warranty Program. Together they provide a comprehensive overview of the home buying, home maintenance, and warranty processes.

THE RIVERWAY HOMES HOMEBUYER'S GUIDE

The Home Buyer's Guide outlines what happens after you sign the Agreement of Sale. It begins with the customer selection process, and the estimated delivery date. It then provides you an overview of the construction process and explains the Pre-Settlement and Settlement procedures. Next, it introduces Riverway Builders' customer service program and *Your Riverway Builders LP Warranty Program*. Finally, it offers a convenient timetable check list that highlights the important actions you can take to make the home buying process run as smoothly as possible.

Please review this document and if you have any questions, bring them to the attention of your Riverway Sales Representative. It is our hope that the following pages will help you to fully participate in the process of buying your own Riverway home.

BEYOND THE AGREEMENT OF SALE

The Agreement of Sale defines the first steps that Riverway will take toward building your new home and also outlines your responsibilities necessary to complete the home buying process.

FINANCING YOUR RIVERWAY HOME

With the Agreement of Sale complete, the next important step is to meet with a mortgage lender to secure mortgage financing by the date specified in the Agreement. Riverway generally will not begin construction until you receive written mortgage approval. Thus, the earlier you apply for and obtain mortgage financing, the sooner your home will be completed.

THE CUSTOMER SELECTION PROCESS

THE CUSTOMER SELECTION SHEET

To expedite the building of your home, Riverway orders all the materials and features you have selected on your Customer Selection Sheet. As a result, changes in your selections will not be accepted once construction begins.

SUBSTITUTIONS

Riverway continually evaluates all home plans and makes changes to improve them or to meet changing environmental building codes and requirements.

It is not uncommon for the tile, countertops, vanity coverings, paint, electrical fixtures, or other items you have selected to be unavailable when we need to them. There are also some products, including paint and tile, that have the same identification number, and yet vary in color or composition. These variations cannot always be controlled since different production runs may have small differences. Because of our desire to avoid delays in completing your home, we may make minor substitutions when such a shortage or variation occurs. In that event, we will make a selection as close to the original choice as is possible.

Major substitutions, including floor tiles and siding color will not be made without first conferring with you. In every case, the substituted items will be of equal quality, style, and value.

ESTIMATED COMPLETION DATE

Your Sales Representative will inform you of the projected completion date for your home and this date is noted on the Agreement of Sale. Keep in mind, however, that this is an estimate, and the actual Settlement date of your home will depend upon a variety of factors, including receipt of the balance of your down payment, timely completion of mortgage financing, weather conditions, and other situations beyond our control. Your Riverway Sales Representative will endeavor to keep you advised of the building progress and the projected Settlement date of your home.

BUILDING YOUR RIVERWAY HOME

THE CONSTRUCTION PROCESS

The following is a brief outline of how your Riverway home will be constructed. By having a general understanding of the construction process, you'll know what to look forward to during the exciting weeks ahead.

The time frame from signing the Agreement of Sale to the start of construction is normally 30 to 60 days and is subject to variables, including local government approvals, mortgage approval, and construction backlogs.

Normal construction time, again subject to variables such as the size of your home, construction volume, and weather conditions, usually ranges from 5 to 7 months from when construction begins.

HOME SITE PREPARATION AND PERMITS

A surveyor or engineer will determine the position of the home on the home site before ground-breaking occurs, taking into consideration a variety of factors, including terrain, drainage, utility easements, and municipal requirements for setback and side yards. The contour of the home site, the location of utility easements, and the driveway approach will determine if your home is built "standard plan" or "reverse plan," with one being the mirror image of the other. As a result of numerous technical requirements, Riverway assumes sole discretion for the setting of the home.

Next, we secure the appropriate local building authority approvals and permits for the home plan and home site improvements.

Home site preparation comes next. At this stage, the home site is surveyed and marked with stakes to show the final positioning of your home. The land is then cleared of trees and obstructions and the soil is graded for the construction process. Please note that some trees may be removed to establish swales for proper drainage and that Riverway reserves the right to remove existing trees from the home site, as necessary, subject to state and local laws. The foundation is then excavated, unless your home is being built on a concrete slab.

FOOTINGS AND FOUNDATIONS

The footings, made of poured concrete, are then put into place to form a base of support for the foundation walls. Depending on the area, local building inspections of the footing trenches or footings are conducted either before or after the footings are poured.

The foundation walls are then built using either poured concrete or concrete block. The completed foundation wall may extend at least eight inches above the finished soil level or grade.

The soil under the basement floor is prepared with plumbing pipes and underground utilities and then checked by the Building Inspector. The basement concrete slab is poured and the water supply and electrical hookups to the public utility services are then connected.

FRAMING AND CARPENTRY

The structure is now ready for the framing and carpentry process, where wood studs, beams, floor joists, and roof rafters are used to create the skeletal structure of the home. The entire framing process will generally be completed within two to three weeks.

To frame the floors, a horizontal wood or steel center beam is set in the top of the foundation walls, supported between the walls by vertical wood or steel column piers. This creates the base for the floor, walls, and roof. Sill plates are secured to the top of the foundation walls. Then the floor joists, floor rafters, or parallel wood beams that support the floors are nailed to the sills, perpendicular to the center beam. Subflooring is then glued and nailed to the floor joists, forming a base for the finished flooring material.

For wall framing, Riverway practices conventional framing methods.

With the wall structure complete, the ceiling and roof are then framed. Ceiling framing ties together opposite walls, supports the finished ceiling, and provides a base for a second story or attic. A pre-engineered rafter system supports the weight of the roof. In some cases, these rafters are used in combination with conventional roof framing.

The rafters are covered with roof sheathing, which is then covered with roofing felt, followed by fiberglass shingles. Roof flashings are installed around roof openings to channel water onto the shingles or off the roof. Ridge vents are installed at the peak or top ridge of the roof, or gable vents are installed, and work with the soffit vents to circulate air and remove condensation and heat from the attic.

EXTERIOR FINISHING

With your home now "under roof," the construction effort will focus on finishing the home's exterior and the beginning of the interior construction.

With the framing complete and the drywall stored within the home, the exterior finish team goes to work, applying wood, vinyl, or aluminum siding, brick or stone veneer, stucco, or a combination of these materials to the exterior. The soffit vents, located under the roof overhang and porch ceilings, are installed, and exterior trim is applied to the rough edges around windows and doors, cornices or eaves, gable ends, and porches.

MECHANICAL SYSTEMS

Riverway conducts a thorough framing check of the inside of the home and proceeds with the "rough-in" installation of all mechanical systems. Mechanical systems include plumbing lines, heating and air conditioning ducts, electrical wiring, and gas lines. These components are installed while the interior walls are open and accessible, and may require from 5 to 10 days, the time period being subject to normal construction variables.

INTERIOR FINISHING

Once the mechanical systems are installed and inspected, the insulation is placed in the floors, ceilings, foundation walls, and above-ground exterior walls. Following a building inspection of the insulation, the walls and ceiling surfaces of the home are finished by screwing and/or nailing drywall to the studs, joists, and trusses. With the drywall installation complete, the attic insulation is then installed.

The interior finish work continues with the installation of interior doors, moldings, and trim. The interior of the home is painted and any fireplaces are finished with the appropriate facing material. The plumbing, heating, and electrical finish detail is then begun, including the installation of a hot-water heater, furnace, major electrical appliances, and lighting fixtures. All cabinet and countertop work is then completed.

GRADING AND LANDSCAPING

Your Riverway home is nearing completion and the excitement builds. Once the interior is complete, it's time to begin final grading, landscaping, the installation of the sidewalk, driveway, and a deck or patio as selected.

Your Riverway home is now ready for the Pre-Settlement Orientation, the final inspection by the local building inspectors, Settlement, move-in, and many years of enjoyment.

EASEMENTS, COVENANTS, AND ZONING

The local municipalities, utility companies, and, if applicable, the community Homeowner's Association, may have been granted easements on or adjacent to your home site. These may be shown on the subdivision plat or in recorded documents. Easements may, among other things, include right-of-way areas for streets and sidewalks, drainage areas to channel water run-off, plus access for electric, telephone, sewer, water, gas utility lines, and in some cases, cable TV. Homeowners should not install any permanent structures in nor change the grade of the easements. After Settlement, any other easements on your home site will require your approval.

Many Riverway communities have covenants, which prohibit certain activities and often restrict construction on and modification to the home and home site. Covenants vary from community to community and your Sales Representative can provide you with a copy of applicable covenants. In some neighborhoods, you will also receive any required Homeowner's Association disclosure statements.

Zoning regulations that apply to your community may control building setback lines and side-yard requirements. These and Homeowner's Association documents may also govern the extent and type of alterations you can make to your property. If you plan to alter your home or landscaping, check first with your local governmental authorities and Homeowner's Association.

VISITING THE HOME SITE DURING CONSTRUCTION

If you wish to visit your home while it's under construction, please contact your Sales Representative who will coordinate a visit for you during normal working hours.

Prior to closing a construction site is a dangerous place and you are prohibited from entering the property before closing without our written permission. If you receive our permission to enter the property, you must be accompanied by a Riverway representative and wear a hard hat. You agree that you will be responsible for and hereby release us from any claims for any injury or damage to persons or property caused by or related to any entry on the property by you or your invitees prior to closing. You agree that control of the construction process and control of the work force, including subcontractors, rest exclusively with us. You agree not to issue any instructions to, or otherwise interfere with construction process or the work force. You further agree not to contract for additional work with our subcontractors or to engage other builders or subcontractors to do any work on the property whatsoever, including wiring, installation of appliances, water softeners, or any other products or services not covered by this agreement. Under no circumstance may you bring any children under age 18 onto the property.

PRE-SETTLEMENT & SETTLEMENT

PRE-SETTLEMENT & SETTLEMENT ANNOUNCEMENT

As the construction of your home nears completion, Riverway's Sales Person will contact you to schedule the Pre-Settlement Orientation and Settlement dates. This notification will occur approximately 30 days prior to the completion of your home.

Please remember that Riverway will not move you into a partially completed home, that you cannot move into your home until Settlement occurs, and that we cannot assume responsibility to provide you with alternative living arrangements. As a result, please do not make final arrangements to leave your present residence until you have received this notification.

While Riverway will make every effort to keep the estimated Settlement schedule, please bear in mind that delays can occur and that unforeseen circumstances may necessitate a change in the proposed Settlement date. We will do our best, however, to keep you thoroughly informed and to assure the smoothest possible transition into your new home.

PRE-SETTLEMENT ORIENTATION

The Pre-Settlement Orientation is conducted by Riverway's Construction Manager after your home is built and three to seven days prior to Settlement. The purpose of this meeting is to thoroughly acquaint you with your new home's many features, to familiarize you with the proper operation of the home's equipment, and to review the maintenance requirements of your new home. The Riverway Builders, LLC. Warranty Program and manufacturer's warranties will also be discussed.

The information you receive at this orientation also is contained in the Homeowner's Manual. The Manual thoroughly explains routine home maintenance, clarifying your maintenance responsibilities. We strongly recommend that you review your Homeowner's Manual prior to your Pre-Settlement Orientation and bring it with you so that we may answer your questions.

This orientation also provides you with the opportunity to make a general inspection of the home's condition to ascertain that all items meet appropriate workmanship standards and specifications. Please utilize this meeting to carefully inspect the home and then list items not yet complete on the Pre-Settlement Orientation Check List.

It's important that you carefully inspect specific components of your home, since certain items, if not listed for correction at the orientation, will not be repaired after occupancy. On the interior of your home, these items include kitchen cabinets, countertops, floor coverings, all glass, windows and window screens, paint finishes, plumbing fixtures, and lighting fixtures. On the exterior of your home, pay particular attention to scratches, dents, and stains on aluminum siding and the condition of the lawn and landscaping.

Be aware that the repair of certain items may be delayed due to weather conditions. In many cases, winter weather will delay completion of exterior painting, final lot grading, landscaping, exterior concrete, and asphalt driveways.

Riverway requires that all Pre-Settlement items (with the exception of items prevented by winter weather conditions) be completed prior to closing. We will not escrow funds at Settlement (except for items prevented by winter weather conditions) unless required by FHA, VA, or the Conventional lender.

You are responsible for activating telephone connections and transferring drainage, electric, gas, and water services into your name. Deposits will often be required from you by the utility companies. To assure uninterrupted service, contact the utility companies ahead of time so that the transfer begins immediately on the day of Settlement. The final utility reading will occur on the closing date. If the transfer does not occur, you may be in jeopardy of the utility being disconnected.

The Pre-Settlement and Settlement Notification Letter will advise you of many issues that need to be resolved in time for Settlement. Follow the instructions in this letter to obtain your final closing costs, fees, and instructions for insurance prepayments. Final figures are available from the closing agent 24 to 48 hours before the scheduled settlement.

SETTLEMENT DAY

On this important day, you'll meet with a Settlement Agent to execute the Settlement documents and present your certified check for all monies due from you, as described in your Agreement of Sale and as specifically identified by your lender. It is the job of the Settlement Agent to disburse all monies to the appropriate parties, such as Riverway, and to record the necessary documents to protect the interests of you and your lender. When Settlement is completed, the ownership of the home is transferred to you.

In some areas, Deed delivery is contingent upon Deed recordation, at which point the Deed will be forwarded to you by mail.

WELCOME TO YOUR NEW HOME!

The Settlement process is complete. You have the keys. And you are now ready for the most exciting step of all-moving into and enjoying your new Riverway home.

CUSTOMER SERVICE PROGRAM

POST MOVE-IN SERVICE

Two-Year Coverage: - Our Mechanical Contractors warrant the electrical, plumbing, heating, cooling, and ventilating systems of your home (exclusive of appliances and fixtures) will be free from defects, as outlined in the performance standards. If a system does not operate as specified in the standards, Riverway will correct it. All service requests must be submitted in written form.

Ten-Year Coverage: - StrucSure warrants your home against major structural defects (as defined in the warranty document) that exist in a load-bearing part of your home (e.g., roof and floor framing members, foundation systems and footings and bearing walls). All service requests must be submitted in written form.

EMERGENCIES AND REQUESTS FOR ADDITIONAL SERVICE

For emergency situations, please refer to the instructions contained in your Riverway Homeowner's Manual.

If additional warranty work is required, please email Accounting@riverwayproperties.com. Riverway will acknowledge your request and set an appointment time for the warranted repair.

WARRANTY PROTECTION

You can count on Riverway for long-term peace of mind, since every Riverway home is backed with the *Riverway Builders LP Warranty Program*, product manufacturer warranties, plus any additional coverage required by applicable law.

Riverway Builders LP Warranty Program warrants workmanship and materials for one year; certain portions of the plumbing, electrical, and ductwork systems for two years; and structural systems for ten years. The *Riverway Builders LP Warranty Program* explains both workmanship and materials covered. State and local laws may provide other protection.

A majority of builders do not offer an independent warranty on their homes. That does not mean that their homes are of a lesser quality, but it does mean that the buyer has little recourse if something goes wrong with the home and the builder doesn't agree to repair it. And if the Builder goes out of business, the buyer has no recourse at all. In contrast, a *Riverway Builders LP Warranty Program* thru StrucSure protected home offers homeowners an independent warranty company with independent arbitration to handle disputes.

Finally, Riverway homeowners are protected by product warranties from the name brand manufacturers that supply products used in your home.

RIVERWAY'S COMMITMENT TO YOU

Rest assured that the people of Riverway will provide you with quality service after you've moved into your new home. We're available to answer your questions and will make a special effort to ensure your continued satisfaction.

We're confident that your Riverway Homeowner's Manual will continue to provide a wealth of information and guidance over the years.

Thank you for making a Riverway home your home.

RIVERWAY HOME BUYER' S GUIDE

HOME BUYER' S CHECK LIST

INTRODUCTION

The following provides a convenient place to keep important names and telephone numbers which you'll find useful throughout the home buying process. More importantly, the Check List can serve as a time-sensitive reminder of the significant actions to be taken by you to ensure that the process occurs as smoothly as possible.

IMPORTANT NAMES AND TELEPHONE NUMBERS

	NAME	TELEPHONE
Your Riverway Sales Representative	_____	_____
Your Riverway Production Supervisor	_____	_____
Your Riverway Service Representative	_____	_____

MORTGAGE FINANCING

	NAME	TELEPHONE
<input type="checkbox"/> Immediately make an appointment with a mortgage lender to apply for mortgage financing.		
Your Mortgage Company	_____	_____
Your Service Representative	_____	_____
Address, City, Zip Code	_____	_____

THE CONSTRUCTION OF YOUR NEW HOME

- Review *The Construction Process Section* of this Guide to get an overview of how your home is built.
- Enjoy the process. And please contact your Sales Representative for an appointment should you wish to visit the construction site.

30 DAYS PRIOR TO SETTLEMENT

- You will receive the Pre-Settlement and Settlement Announcement approximately 30 days prior to the completion of your home. Now is a good time to begin discussions with a mover, but try to keep the specific move-in date flexible.

TWO WEEKS PRIOR TO SETTLEMENT

- Contact your Insurance Agent to secure homeowner's insurance policy.
- Contact your Mortgage Lender to determine if any additional documentation is necessary to satisfy Settlement requirements.
- Begin to carefully review your Homeowner's Manual in preparation for the Pre-Settlement Orientation.

ONE WEEK PRIOR TO SETTLEMENT

- Send Change of Address cards to the Post Office, magazine publishers, family, and friends.
- Contact all local utility companies to start service in your name. Service must begin on the day that Settlement occurs.

TELEPHONE

Gas & Electric Company _____

Water & Sanitation Department _____

Telephone Company _____

24 TO 48 HOURS BEFORE SETTLEMENT

- Contact your Mortgage Lender to determine the exact amounts that will be due at Settlement.
- Secure and bring to Settlement a Certified Check for all amounts due from you to Riverway or to the Title Company.

PRE-SETTLEMENT ORIENTATION

- Bring your Homeowner's Manual with you to this important orientation. Please feel free to ask any questions regarding the correct operation, maintenance requirements, or warranty coverage of any subjects discussed at the orientation or in the Manual.

RIVERWAY HOME OWNER'S MANUAL

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RIVERWAY HOME OWNER'S MANUAL

INTRODUCTION

THE EXCITEMENT IS BUILDING!

Your brand new Riverway home is, or will soon be, under construction. And as a future Riverway homeowner, you will soon want to know how to properly maintain and care for your home properly.

Our feeling is that the more you know about your home, the better you will be able to take care of it, and that means you'll enjoy it more.

To acquaint you with the variety of maintenance aspects common to homeownership, Riverway is providing you with this Homeowner's Manual. Here you'll discover a tremendous variety of useful information that will guide and help you to effectively handle most maintenance and service requirements.

THE HOMEOWNER'S MANUAL CONTAINS THE FOLLOWING SECTIONS:

Riverway's Warranty Policy: Provides instructions to request warranty work and explains what to do in case of electrical, plumbing, or heating emergencies.

Warranty Directory: Provides a convenient list of all major contractors involved with the construction of your home. Includes the address and telephone number of Riverway Office and the name of your Sales Representative.

Homeowner's Maintenance Check List: Provides a condensed listing of important preventative maintenance procedures and establishes a time schedule for when specific maintenance items should be performed.

Maintenance Guide: During the first year, keeping your home in tip-top condition is a shared responsibility between Riverway Homes and you, the new homeowner. This section will acquaint you with the major mechanical systems and components of your home: from air conditioning and heating to the plumbing and electrical systems; from the exterior construction of roof, attics, and finishes to the interior construction of kitchens and bathrooms. The Maintenance Guide presents a range of subjects, all listed alphabetically for quick reference. Further, the guide explains your maintenance responsibilities as the homeowner.

Each section is then broken down into three main parts:

1. The introduction to each section provides general information specific to each topic.
2. The Homeowner's Maintenance Guidelines provide you with maintenance and operating procedures, tips, and ideas to keep your home and its components operating properly.
3. *Solutions to Common Problems* is a handy reference chart in each section that can save you time, money, and many unnecessary service calls.

A Glossary that defines building industry terms used throughout the *Maintenance Guide*.

We urge you to review this material thoroughly and to keep it readily available for future use.

Again, we want to thank you for choosing Riverway Homes to build your new home. We are proud of our homes and dedication to customer service. And we are hopeful that you will tell your friends about us.

We wish you happiness in your new Riverway home.

RIVERWAY HOME OWNER'S MANUAL

WARRANTY POLICY

Riverway's Warranty Policy is driven by our total company commitment to deliver outstanding customer service and to satisfy your home-buying expectations.

Routine maintenance questions are also addressed in the following pages of this Manual, in both the individual subject sections and in the *Solutions to Common Problem* sections.

TO REQUEST ADDITIONAL SERVICE

Should you require warranty work, please fill out the "Warranty Request Form" found at the end of the warranty document and return it to Accounting@riverwayproperties.com. Riverway will acknowledge your request and set up an appointment time for the warranted repairs.

In some instances, you will need to contact our contractors directly, and their numbers are included in the Riverway Warranty Directory. Many appliances and other products are also protected with manufacturers' warranties. Their toll-free hotline numbers, if available, are in the manufacturers' warranty.

EMERGENCIES

Most emergencies are either electrical-, plumbing-, or heating-related and are normally handled by the appropriate contractor or utility company. The names and service telephone numbers of both are listed in the Riverway Warranty Directory.

Before calling for help with an emergency, please review the appropriate electrical, heating, or plumbing section in this Manual to determine if something very simple can resolve the problem. Unnecessary use of our emergency service may delay a necessary response to a genuinely critical situation.

VALID EMERGENCIES INCLUDE:

Electrical Emergencies: An emergency exists when there is a malfunction in the electrical system. Please do not call unless you have checked to ensure that all circuit breakers in the main electrical panel are in the "ON" position and that there are no power outages elsewhere than in your home.

Plumbing Emergencies: An emergency exists if your home is completely without water or if all toilets are stopped up. If there is some water, and at least one working toilet, your service call will be handled during regular business hours.

Heating Emergencies: An emergency exists if there is no heat anywhere in the home. Please note that air conditioning failure is not considered an emergency unless there is a health threat to someone in the home. Otherwise, such problems will be handled during regular business hours.

ACCESS TO YOUR HOME

When warranty work is necessary, Riverway service personnel and our contractors will need to access your home during normal working hours. If you or an adult family member cannot be available, we ask that you authorize in writing, a neighbor or friend to provide the necessary access. As an alternative, please fill out and provide the "Permission to Enter and Key Receipt" to your Riverway Service Representative.

PERMISSION TO ENTER AND KEY RECEIPT

I hereby authorize and give permission to Riverway Homes Service Personnel and their Contractors to enter my home while I am absent during normal working hours for the purpose of performing agreed-upon repairs.

In addition, I hereby release my house key to Riverway Homes with the understanding that the key will be secure when not in use and that it will be returned to me when the agreed-upon repairs are completed.

PERMISSION TO ENTER

Date: _____

Homeowner Signature: _____

Address: _____

Work Telephone: _____

Home Telephone: _____

Key Receipt

DATE KEY RETURNED TO HOMEOWNER: _____

HOMEOWNER SIGNATURE: _____

RIVERWAY HOME OWNER'S MANUAL WARRANTY DIRECTORY

RIVERWAY HOMES OFFICE

Address: 1027 Yale, Houston, TX 77008
Telephone: (713)-621-6111

YOUR RIVERWAY SALES REPRESENTATIVE

MAJOR RIVERWAY CONTRACTORS

	NAME	TELEPHONE
Heating & Air Conditioning	_____	_____
Electrical	_____	_____
Plumbing	_____	_____

List the names and telephone numbers of product manufacturers and appropriate contractors for parts and service.

	CONTRACTOR/ MANUFACTURER	PHONE
Appliances	<u>Manna Distributors</u>	<u>713-988-3318</u>
Cabinets	<u>Builder's Choice, Inc.</u>	<u>281-820-6771</u>
Carpeting	_____	_____
Ceramic Tile	_____	_____
Fireplace	_____	_____
Garage Door	<u>Stewart Door, Ltd</u>	<u>281-859-9339</u>
Landscaping	_____	_____
Paint	_____	_____
Resilient Floors	_____	_____
Roofing	<u>Punum Roofing Houston, Inc</u>	<u>713-466-4447</u>
Security System	_____	_____
Siding	_____	_____
Trees & Shrubs	_____	_____
Windows	_____	_____
Wood Floors	_____	_____
Other Contractors	_____	_____

RIVERWAY HOME OWNER'S MANUAL

MAINTENANCE CHECKLIST

INTRODUCTION

The importance of maintaining your new home on a regular basis is directly comparable to maintaining a brand new car. If you never change the oil or get the car tuned up, little problems will eventually become big problems.

Similarly, your new Riverway home is designed and built to last for many years, and yet it has numerous components and equipment that require periodic maintenance. By implementing the following preventative maintenance guidelines, you can help keep the components of your home functioning properly with as few problems as possible.

To help you pinpoint when specific maintenance items should be performed, this check list is divided into distinct time periods: After Move-In, Every Month, Every Six Months, Annual, plus Spring and Fall. For additional information regarding the subjects presented here, please refer to the appropriate Manufacturer's Operating Instructions and/or the specific subject discussions contained in this Manual.

Please note that this section is intended to provide you, the homeowner, with maintenance guidelines that you can perform and does not indicate the services that Riverway will perform. Also be aware that you will be charged directly by the contractor who provides any of these services.

AFTER MOVE-IN CHECK LIST

BATHROOMS

- Apply silicone-based grout sealer to ceramic tile grout.

DECK

- Apply preservative sealer to wood surfaces following manufacturers.

ELECTRIC

- Locate and label the main circuit breaker in the electric panel box and show family members how to turn it off in case of emergency.

FIRE EXTINGUISHER

- Purchase a general-purpose fire extinguisher for each floor of the home plus one small kitchen extinguisher for grease fires. Demonstrate proper usage to family members in case of an emergency.

FIREPLACE

- Locate gas shut-off valve for fireplace, show all family members how to turn off.

FIRST-AID KIT

- Keep first-aid materials and a book on first-aid procedures in an accessible location.

FLOORING

- Attach furniture protectors underneath furniture legs to protect hardwood, resilient, and ceramic tile floors.

HOUSEHOLD TOOLS

- Acquire basic tools to help you with normal home maintenance chores, to include: pliers, adjustable wrench, flat-blade and Phillips-head screwdrivers, claw hammer, hand saw, tape measure, caulk and caulking gun, putty knife, paint roller and brush, power drill and drill bits, assorted nails, brads, screws, nuts, bolts, sandpaper, utility knife, toilet plunger, and flashlight.

PLUMBING

- Locate and label the main water line shut-off valve and show all family members how to close it in case of a plumbing emergency.

WATER EROSION

- After the first heavy rain, check foundation for erosion and fill eroded areas. Ensure that splash blocks are correctly positioned to divert rain water away from the home. Thereafter, always be on the alert for erosion and take immediate action to fill eroded areas.

EVERY MONTH CHECK LIST

AIR CONDITIONING AND HEATING

- Check air filters and clean or replace as necessary.
- Vacuum air-supply and air-return registers to remove dust and lint.

GARBAGE DISPOSAL

- Clean disposal blades by grinding up ice cubes.
- Freshen disposal with baking soda and by grinding up citrus fruit rinds.

INTERIOR CAULKING

- Check for cracks or separations in caulking around sinks, bathtubs, toilets, faucets, countertops and backsplashes, ceramic walls, resilient and ceramic floors, window sills, and any other areas originally caulked by Riverway. To repair these areas, use an appropriate caulking compound and follow the caulking instructions in the *Plumbing Fixtures* section.

RANGE HOOD FAN

- Clean or replace dirty filter.

SMOKE DETECTOR

- Test smoke detectors.
- Clean and/or vacuum detector openings as necessary.

EVERY SIX MONTHS CHECKLIST

BATHS

- Check all the grout for cracking. Re-grout, if necessary. Seal all grout lines.

CABINETS

- Per manufacture's instruction.

DOORS

- Check screws on door lockset and hardware and tighten as necessary.
- Lubricate bi-fold and by-pass doors as necessary.
- Clean sliding door track and apply silicone spray to tracks as necessary.

ELECTRIC

- Test and reset all GFCI (Ground Fault Circuit Interrupter) receptacles.
- Check electrical extension and appliance cords. Replace frayed or split cords.

EXTERIOR FINISHES

- Check for cracks and voids in exterior caulking and re-caulk as necessary.
- Inspect aluminum siding and clean as necessary, per manufacturer's instructions.
- Check exterior painted surfaces for damage and weathering. To repair, follow the maintenance instructions contained in the *Painting* section.

PLUMBING

- Check water supply lines and valves to sinks and toilets. Tighten if loose or leaking.
- Clean out faucet aerators, spray nozzles, and drains.
- Check pipes and drains for water leakage.
- Remove water heater residue following instructions in the *Plumbing Fixtures* section.

ROOFS

- Check all ridge vents, B-vents, and plumbing stacks.

WATER INFILTRATION AND CONDENSATION

- Check basement and foundation for moisture. Review *Water Infiltration and Condensation* section.

WINDOWS

- Check sills for caulking cracks or separations and re-caulk as necessary.
- Check weather stripping around windows and repair or replace as necessary.
- Check windows for smooth opening and closing operation. Clean tracks and lubricate as necessary.
- Inspect window screens and repair or replace as necessary.

ANNUAL CHECKLIST

CABINETS

- Check drawers and hinges for proper alignment. Tighten and adjust as necessary.

CONCRETE

- Clean and apply a quality sealer to all concrete.

DECK

- Check and tighten all deck bolts.
- Replace damaged pickets, rails, and boards. Replace warped boards that create a trip hazard.
- Re-seal wood surfaces with a preservative as necessary, following manufacturer's instructions.

DOORS

- Check and repair or replace weather-stripping on exterior doors as necessary.
- Check and tighten door hardware and lubricate as necessary.
- Tighten all bolts on garage door.
- Oil moving parts of garage door.

SPRING CHECK LIST

AIR CONDITIONING SYSTEM

- Have HVAC Contractor perform seasonal maintenance check-up for summer.
- Ensure that air supply registers are not blocked by rugs, draperies, and furniture.

EXTERIOR HOSE BIBS

- Turn exterior faucets on by reversing the winterizing process described in the section of this Manual.

ROOFING

- Visually inspect roof from the ground for loose, warped, tom, or missing shingles. Contact roofing Contractor should repairs be required.
- Have a Contractor check and clean gutters and downspouts, inspect for ice or winter damage, and repair gaps in flashing and soffits.

FALL CHECK LIST

EXTERIOR HOSE BIBS

- To prevent exterior pipe freezing, review and implement the winterizing instructions in the *Plumbing Fixtures* section of this Manual.

FIREPLACE

- Check to make sure pilot is lit.

HEATING SYSTEM

- Have HVAC Contractor perform seasonal maintenance check-up for winter.

ROOFING

- Have a Contractor clean and check gutters for leakage.
- Check alignment of gutters, downspouts, and splash blocks to ensure that water is properly diverted away from the home.

RIVERWAY HOME OWNER'S MANUAL

MAINTENANCE GUIDE

AIR CONDITIONING & HEATING

INTRODUCTION

Your home is equipped with a top-quality heating system, which depending on the area, may be gas, electric, or electric heat pump. You also may have purchased a home with a central air-conditioning system.

All systems consist of a thermostat to control temperature, a basic furnace unit to heat the air, a filter to cleanse the air, plus a fan unit to distribute and circulate air throughout the home via ducts and registers. Heat pumps and air conditioners have an outdoor unit that transfers heat into or out of the home.

It is important to read the manufacturers' service manuals, operating instructions, maintenance guidelines, warranties, and energy-saving recommendations. Where appropriate, fill out and return the Warranty Registration Cards to the manufacturer to ensure proper warranty registration.

Note: As equipment technology frequently changes, the manufacturers' service manuals will supersede all recommendations and procedures contained in this guide.

The air conditioning system shall be capable of maintaining a temperature of 78°F, as measured in the center of each room at a height of 5.0 feet. Should outside temperatures exceed 95°F; a differential of 15°F from the exterior temperature will be maintained.

Unless served by a separate unit, rooms on second floors or on finished lower levels may vary by 5 degrees from rooms on the floor where the thermostat is located.

Warranty Caution: Any addition, alteration, or modification to the original heating, venting, or air conditioning system installation, unless performed by an HVAC contractor, may void all applicable warranties.

Manufacturer Warranties: The air conditioning, gas heating, and heat-pump equipment installed in your home is protected by manufacturer warranties that may extend beyond Riverway's First- or Second-Year Coverage. Should you experience problems covered by the manufacturers' warranties beyond the first year of occupancy, please contact the HVAC contractor listed in Riverway's Homeowner Warranty Directory. The length of warranties for the heating and air-conditioning systems will be longer where required by applicable law.

HOMEOWNER MAINTENANCE GUIDELINES

Service Contract: An extended annual service contract may be available from an HVAC contractor that provides seasonal check-ups of the heating and cooling components, plus periodic cleaning. The advantage is that scheduled service may reduce system failure by preventing problems before they occur.

BEFORE CALLING FOR SERVICE:

1. Ensure that the thermostat is properly set.
2. For an electric furnace or heat pump:

Check the circuit breaker in the panel box. If tripped, reset by switching the breaker to full OFF, then fully back to the ON position. If the circuit breaker will not reset, contact the HVAC contractor. See Circuit Breakers in the *Electrical System* section.
3. Check the electrical disconnect switch, located on or near the furnace, and reset.
4. For a gas furnace:

Check the circuit breaker and switch at the furnace to be certain they are set to the ON position.
5. If the gas furnace is equipped with an automatic pilotless ignition, please call for service and do not attempt self-repair.
6. Check to ensure that the door on the front of the gas furnace, which has a safety switch, is securely closed.

AIR FILTER

The air filter, located adjacent to the furnace fan unit, helps reduce the flow of dust into the air. As the filter collects dust, it reduces the system's efficiency and must be replaced.

Riverway has installed one air filter in each filter location unit and will, at the Pre-Settlement Orientation, demonstrate proper filter installation and replacement procedures. After that, the replacement and maintenance of air filters is the homeowner's responsibility.

HOMEOWNER MAINTENANCE GUIDELINES

Monthly filter cleaning or replacement will provide cleaner air, improve air flow, and help reduce utility costs. To remove and clean or replace filters, turn the furnace and fan off using the thermostat control, then pull out the old filter and insert a new one. Replacement filters are available through hardware stores.

THERMOSTAT

The thermostat controls the entire heating and cooling system. Air conditioning and heat pump thermostats provide a switch to control operation of the indoor fan. If this switch is placed in the ON position, the indoor fan will circulate air continuously. This may be desirable during periods when neither heating nor cooling is required. The ON position will not affect the normal operation of the furnace, heat pump, or cooling unit, as these units will still cycle on and off as needed to maintain the temperature selected at the thermostat.

In the AUTO position, the indoor fan will only operate during operation of the furnace, heat pump, or air conditioner, as required, at the temperature selected.

Manufacturer Warranty: The thermostat installed in your home is protected by a manufacturer warranty that may extend beyond Riverway's First Year Coverage. Should you experience problems that the manufacturer warrants beyond the first year of occupancy, please contact the HVAC contractor listed in Riverway's Homeowner Warranty Directory.

HOMEOWNER MAINTENANCE GUIDELINES

To maximize energy efficiency and minimize utility bills, set the thermostat to a comfortable level, normally between 68°F to 71°F for heating and between 76°F to 78°F for cooling, and leave it there. Then set the fan switch to either the ON or AUTO position, as recommended by the manufacturer's service manual. Manual set-back or set-up of temperature settings in heat-pump systems can result in higher operating costs. In all cases, frequent or abrupt changes can result in greater wear and tear on the equipment. Setting heat controls too high does not make the furnace heat faster, nor does setting the temperature very low result in faster cooling.

AIR DISTRIBUTION SYSTEM

The heating and cooling system can be adjusted and balanced to meet individual temperature preferences.

Duct Work and Dampers: Ducts carry and distribute heated or air conditioned air to each room. Some air ducts are fitted with adjustable dampers that open and increase or close to restrain air flow to major parts of the home. Please consult the HVAC contractor for correct positioning or adjustment of dampers.

Registers: Two kinds of registers are used: air-supply registers located on the floor or ceiling that deliver warm or cooled air into the room; and air-return registers located on walls that return air from the room back into the air handler fan to be re-heated or re-cooled.

To regulate temperatures on different floors or rooms during different seasons, adjust the air-supply registers by partially opening or closing them, thus restricting or moving additional air into each room.

If your lower level is too cool in the winter, start closing upper level registers until the desired results are obtained. If your upper level is too warm in summer, close lower level registers until the desired results are obtained.

Interior doors in each room are undercut to allow return air to circulate throughout each room when the doors are closed.

HOMEOWNER MAINTENANCE GUIDELINES

Vacuum supply and return registers to ensure they remain dust-free. Check that registers are not blocked by draperies, furniture, or other obstructions that restrict normal air flow.

GAS HEATING EQUIPMENT

In communities where natural gas is available, the home may be equipped with a gas-fired, forced-air heating system. Operation and maintenance instructions are provided by the manufacturer and should be carefully reviewed. The local utility company is a good resource for additional gas energy information and energy-saving tips.

HOMEOWNER MAINTENANCE GUIDELINES

Do not store combustible items such as clothing, brooms, dust mops, or oily rags near a gas furnace or flue, as this presents a fire hazard.

Flue: A gas furnace has a flue that vents exhaust fumes to the outside of the home. A ticking sound resulting from the flue expansion and contraction is normal.

AIR CONDITIONER

Your home may be equipped with an air-conditioning compressor located outside the home. The system provides cool air by removing heat and humidity.

HOMEOWNER MAINTENANCE GUIDELINES

Keep the air conditioning compressor level and keep the area surrounding the unit clear to allow unimpaired air flow. Do not plant bushes near the unit and be careful that dirt, leaves, and grass clippings are cleared away. For a thorough cleaning, contact an HVAC contractor.

Do not build a deck around or over the air conditioner unless there is an 18.0-inch clearance on the sides and a 6.0-foot minimum clearance on top.

SOLUTIONS TO COMMON HEATING & AIR CONDITIONING PROBLEMS		
Problem	Likely Cause	Solution
Air temperature in different rooms or floors is uneven.	Air distribution unbalanced. Registers are obstructed.	Adjust air registers. Clear obstructions away from registers.
Reduced air flow or excessive dust on vents and registers.	Dirty air filter.	Clean or replace air filter as necessary.
Registers rattle.	Loose register louvers.	Contact HVAC contractor to replace register.
Home takes a long time to heat up or cool down.	Improper use of thermostat.	Set thermostat temperature at one setting and leave it.
Thermostat cannot be set higher than 86° F.	Thermostat manufactured to stop at 86° F.	No action, though the thermostat may show higher temperature.
Furnace or heat pump shuts off but house is cold.	Lamp, TV, or other heat source affecting thermostat operation.	Relocate heat source away from thermostat.
Gas furnace runs but does not reach desired temperature.	Dirty air filter.	Replace air filter as necessary.
Gas furnace does not operate.	Fan switch off. Circuit breaker tripped.	Turn on fan switch. Reset circuit breaker.
Gas furnace does not operate.	Furnace cover not closed tightly.	Close and latch cover securely.
HVAC system does not operate.	Thermostat improperly set.	Reset thermostat.
Heat pump, fan, or air conditioner not operating.	Circuit breaker or fuse tripped.	Reset circuit breaker at panel box or unit.
Air conditioner or heat pump not operating properly.	Outside unit obstructed by snow, bushes, leaves, etc.	Clear obstructions from top and sides of unit.
Inside air handler is leaking water.	Condensate pumps, if applicable, not working.	Check circuit breaker. Ensure that pump is plugged in.

SOLUTIONS TO COMMON HEATING & AIR CONDITIONING PROBLEMS		
Problem	Likely Cause	Solution
Inside air handler is leaking water.	Condensate drain clogged or inside coil is frozen.	Call HVAC contractor.
Inside or outside coil is frozen.	Low refrigerant or dirty air filter.	Call HVAC contractor. Clean or replace filter.
Air inside home is dry and has excess static electricity.	Lack of moisture in air.	Install humidifier.
Excess water on window panes.	Excess humidity in home.	Lower humidifier setting. Use exhaust fans while cooking or bathing.
Burning smell when winter or auxiliary heat first turned on.	Accumulated dust on electrical coils.	Normal. Happens once each year.
Circuit breaker trips repeatedly.	Numerous possible causes.	Call HVAC contractor.

APPLIANCES

INTRODUCTION

Your Riverway home comes equipped with a variety of appliances and may include an electric oven and cook top or a gas oven and cook top, microwave oven, countertop broiler, convection oven, range hood, dishwasher, refrigerator, garbage disposal, washer, or dryer.

At move-in time, test all appliances for proper operation. Fill out and mail in warranty cards to ensure proper warranty registration. Review the manufacturers' service manuals for operation and maintenance instructions. Then file manuals in a convenient location for future reference.

Many manufacturers offer a toll-free service telephone number to answer questions about appliance problems and operation. For future reference, record these numbers in Riverway's Homeowner Warranty Directory.

For appliance repair protection that extends beyond the manufacturer's warranty period, you may want to consider a service contract available through an appropriate contractor.

If you purchase your own appliances, carefully measure existing appliance openings to ensure proper fit. Check that doorway widths leading to the final appliance location are wide enough to move the appliance through.

Warranty Caution: Any addition, alteration, or modification to the original appliance installations may void all applicable warranties.

Manufacturer Warranties: The appliances installed in your home are protected by manufacturer warranties that may extend beyond Riverway's First Year Coverage. Should you experience problems covered by manufacturers' warranties beyond the first year of occupancy, please contact the appliance manufacturer listed in Riverway's Homeowner Warranty Directory.

HOMEOWNER MAINTENANCE GUIDELINES

Range Hoods and Fan Filters: Range hood fans keep kitchen air fresh and clean. The unit contains a filtering system which must be cleaned or replaced as needed. Replacement filters are available at local hardware stores.

Before Calling for Service: If an electrical appliance fails to work, implement the following check list before calling the appropriate appliance manufacturer. Otherwise, you may be charged for a service call.

1. Check that the appliance is plugged in.
2. If the appliance is plugged into a wall-switched electrical outlet, make sure the switch is on.
3. The circuit breaker in the panel box controlling the appliance should be in the ON position. See Circuit Breakers in the Electrical Systems section.
4. Some appliances come with their own separate fuses or circuit breakers. Review the manufacturer's service manual for exact location, then check for proper setting.
5. Some appliance manuals contain solutions to common appliance problems. Refer to the manuals before calling for service.

Warning: If your home is equipped with gas appliances and you suspect a gas leak, shut off the gas valve and immediately notify the appropriate utility company.

SOLUTIONS TO COMMON APPLIANCE PROBLEMS		
Problem	Likely Cause	Solution
Electric appliance not working.	Check circuit breaker.	Reset breaker or call appliance service department.
Gas appliance not working.	Gas valve turned off.	Check gas valve for proper position.
Garbage disposal not working.	Clogged.	Reset breaker on disposal. Manually turn disposal blades with disposal
Garbage disposal blades dull or dirty.	Normal.	Run ice cubes through garbage disposal.
Garbage disposal odor.	Normal.	Pour baking soda or grind citrus peelings into disposal.
Range hood not filtering properly.	Dirty filter.	Clean or replace filter.
Dishwasher not cleaning properly.	Obstructed water flow.	Check for proper loading of dishwasher.
Water spots on dishes/glasses after using dishwasher.	Dishwasher water not hot enough.	Run kitchen sink faucet to "draw" hot water to dishwasher.
Water spots on dishes/glasses after using dishwasher.	Not using rinse agent.	Use rinse agent recommended by manufacturer.
Water spots on dishes/glasses after using dishwasher.	Opening dishwasher door too soon after cycle.	Keep door closed a minimum of one hour after cycle.
Clothes dryer not drying properly.	Lint build- up.	Check dryer filter. Make sure dryer vent is clear.

CONCRETE/PAVERS DRIVEWAY

REPAIR GUIDELINES: ONE-YEAR WARRANTY COVERAGE

A concrete/pavers driveway crack that exceeds 1/4 inch in width will be repaired by filling the crack with an asphalt-patching compound.

A concrete/pavers driveway that permanently settles, heaves, or separates in excess of 1 inch from any adjoining slab or apron, or that settles more than 2 inches in the field, and is not caused by homeowner negligence, will be repaired by surface capping of the affected area or sectional patching.

HOMEOWNER MAINTENANCE GUIDELINES

Concrete Cracks and Surface Sealing: Homeowner maintenance will prolong the life of the driveway. Holes and cracks can be filled with a pre-mixed patching compound. Surface sealers protect the surface from water penetration and are available for homeowner application.

Concrete/Pavers Driveway Precautions:

1. Remove weeds, roots and other unwanted plant growth that may deteriorate the soil supporting the asphalt. Before installing plants near the driveway, check with a local nursery to determine the root characteristics of each tree or shrub.
2. Do not park or store heavy vehicles such as automobiles or trailers in one spot on the driveway for extended periods of time, especially during the summer, as it may cause depressions in the asphalt surface. Keep firewood, lumber, sand, dirt, moving vans, and large delivery trucks off the driveway.

Repair Note: Riverway cannot ensure that repairs requiring new material will match the color and texture of the existing material. Color variations are normal.

ATTIC

INTRODUCTION

The attic space, located immediately below the roof, is constructed with a truss or rafter system.

Warranty Caution: Roof trusses should not be cut to install attic stairs. This can structurally damage the integrity of the roof and will void the major structural defect warranty.

HOMEOWNER MAINTENANCE GUIDELINES

Typically, an attic access panel is installed for access to the attic. The access is to remain sealed. Should you have any questions, it is best to contact a trained professional.

The attic truss system is not engineered to support additional weight and should not be used for any storage purpose.

Riverway installs a variety of attic vents to remove excessive heat and moisture from the attic space. These may include ridge vents, gable louvers, roof louvers, soffit vents, and baffles where the roof meets the wall. Do not cover these vents with insulation or any other material.

Insulation in the attic protects the rooms below it. The attic access is to remain sealed as not to disturb attic insulation.

BATHROOMS

CERAMIC TILE WALLS

The ceramic tile walls in your bathroom are easy to maintain and impervious to water. The seams, joints, and sealers are not waterproof and require proper maintenance to prevent water seepage and damage of materials adjacent to and underneath the tile.

Cracks in the caulking joints between tile and tub, in the shower stall comers, and at the floor are caused by the high degree of moisture present in every bathroom. Cracks in caulk are also caused by the normal shrinkage of caulking material. Separation between the tub and wall tile is caused by home settlement and by the weight of the tub when filled with water.

Pre-Settlement Orientation Check List: Carefully examine all ceramic wall tile during the Pre-Settlement Orientation. Scratches, chips, and cracks will not be repaired after occupancy unless specifically noted on the Pre-Settlement Check List.

Ceramic Tile Wall Repair Note: Riverway cannot ensure that ceramic tile wall repairs requiring new material will match the color of the existing tile material or colored grouting. Color variations are normal.

HOMEOWNER MAINTENANCE GUIDELINES

Clean wall tiles with a damp cloth and remove accumulated film with a soapless, non-abrasive detergent or tile cleaner. Keep white tile seams clean by brushing with diluted bleach in a well-ventilated room.

Caulk cracks and separations of seams adjacent to tile with a silicone caulk, taking care to wipe the tile clean once caulking is complete. Do not use clear silicone caulk, since it yellows with age and stains easily. See Re-Caulking of Tubs and Showers in the *Plumbing Fixtures* section.

MIRRORS

HOMEOWNER MAINTENANCE GUIDELINES

Clean bathroom mirrors with a spray glass cleaner and a soft cloth, wiping several times to remove all glass cleaner residue. Do not use abrasive cleansers, which will permanently scratch and mar mirror surfaces.

BATHROOM MAINTENANCE

HOMEOWNER MAINTENANCE GUIDELINES

Mildew: Moisture and mildew problems can occur in any room where water vapor is present.

To reduce mildew, turn on the exhaust fan or slightly open a window when bathing.

Wipe off wet tiles when done, and then hang up towels and washcloths to dry. To clean mildewed surfaces and reduce mildew odors, apply a liquid mildew agent in a well-ventilated room, followed by a disinfectant and thorough rinsing with clear water.

Soap Scum: In some geographic areas, "hard water" or water that is high in mineral content can contribute to soap scum buildup. To clean and remove this residue, wash the affected surfaces with a mild vinegar-and-water solution or use a non-abrasive cleanser with a nylon scrubbing pad.

Rust Stains: The contact of wet metal on sink surfaces (for example, the bottom of a shaving can) may produce rust stains. To remove them, apply a powdered rust remover following the manufacturer's instructions.

SOLUTIONS TO COMMON BATHROOM PROBLEMS		
Problem	Likely Cause	Solution
Grout cracks between tiles.	Settlement.	Re-caulk cracks with silicone-based caulk.
Grout stains.	Moisture and soap build-up.	Wipe down wet tile after bathing. Use exhaust fan.
Caulk coming loose where tub or shower pan meets tile.	Settlement.	Remove old caulk and re-caulk with white silicone caulk.
Shower door track not draining properly.	Weep holes clogged.	Clean weep holes.
Shower rod will not stay up.	Loose shower rod.	Adjust rod tension by rotating rod.
Towel bars on soap dish loose.	Accident or too much weight.	Re-install with adhesive caulk.
Water leak around shower doors.	Doors out of alignment.	Adjust door rollers.
Soap build-up on shower door.	Normal.	Squeegee or dry shower door after use.

CABINETS

INTRODUCTION

Kitchen and laundry room cabinets, bathroom vanity bases, and medicine cabinets are selected for their attractive appearance, durability, and ease of care. With proper maintenance, the cabinets will remain serviceable and attractive.

Pre-Settlement Orientation Check List: Carefully examine all cabinets during the Pre-Settlement Orientation. Scratches, chips, and cracks will not be repaired after occupancy unless specifically noted on the Pre-Settlement Check List.

HOMEOWNER MAINTENANCE GUIDELINES

Wood Cabinets: Wood cabinet tone, grain, and color variations are normal and reflect the natural characteristics of real wood.

Clean the exterior of wood cabinets with the same gentle care you would give any fine wood furniture. See Manufacture Care Instruction.

Cabinet-mounted coffee makers are not recommended, since the rising steam will damage solid wood and wood veneer, causing fading or delamination. For the same reason, position regular coffee makers out from underneath the upper cabinets and near the front of the counter.

Laminate Cabinets: Clean laminate cabinets with soapy cloth or sponge, or use a non-abrasive liquid household cleanser for more stubborn stains. There are one-step cleaning products available for laminates that clean, reduce streaking, and leave surfaces polished. As with all cleaning products, carefully follow the manufacturer's instructions.

Shelves and Lazy-Susan Cabinets: Flat and carousel shelves are not designed to hold weight that exceeds 20 pounds per square foot. Keep canned goods, flour, sugar, and heavier products on the bottom shelf of the base cabinets. If desired, apply contact paper to shelves to protect against scratches and water stains.

Drawer and Hinge Care: Check the hinges at least once a year for proper alignment and tightness, using a screwdriver to make necessary adjustments. Check drawers for easy movement and apply a silicone spray to the drawer guides, should sticking occur.

Repairing Nicks and Scratches: Hardware stores offer color-matching putty, stains, and polymer fillers to cover and repair cabinet nicks and scratches.

SOLUTIONS TO COMMON CABINET PROBLEMS

Problem	Likely Cause	Solution
Cabinet door doesn't close properly.	Door hinge is out of adjustment.	Adjust hinges.
Cabinet door bangs when closing.	Missing cabinet door bumper pads.	Install new bumper pads.
Cabinet door not level.	Screw attaching hinge to frame is loose.	Loosen screw, align door, and tighten screw.
Adjustable shelves not at desired height.	Shelf clips in wrong position.	Remove shelf one side at a time. Move slips to desired position. Replace shelf one side at a time.
Cabinet drawer sticks.	Drawer glides out of alignment or debris in track.	Realign track. Check for debris. Spray with silicone.
Carousel not swinging freely.	Out of adjustment.	Loosen black set screw at bottom. Turn dial on shaft counterclockwise to raise, clockwise to lower.
Scratch or dent in cabinet.	Normal use.	Fill crack or dent with colored putty.
Cabinet finish is dull.	Cabinet is dirty.	Clean with soap and water. Do not use lemon oil.

CONCRETE

FOUNDATION

Two types of foundations, concrete block or poured-in-place concrete, are used to build the foundation and basement of Riverway homes.

It is important to understand that concrete is a porous, brittle material that will expand, contract, and crack as the result of temperature changes, shrinkage, and stress. Hairline cracks that may appear on foundation walls are usually cosmetic, as opposed to structural. Foundation cracks are common and are caused by shrinkage or stress.

Shrinking results from the normal curing process of concrete that varies with time of year and the moisture conditions that exist when the concrete is poured. Stress is caused by soil placed up against the wall, plus the full weight of the home that rests upon the walls. The weight from these forces can create a variety of stresses which, in combination with seasonal temperature variations, can cause concrete and masonry foundations to expand and contract.

The exterior of basement foundations is treated with a material that is water-resistant but not waterproof.

HOMEOWNER MAINTENANCE GUIDELINES

Drainage: Proper water drainage around the foundation will help keep the basement dry and eliminate unnecessary stress on the foundation wall. In many locations, drain tile and a sump pump are used to drain water away from the foundation. Familiarize yourself with the system installed in your home. Check periodically to ensure that all drains are clear of debris, that pumps are operating, window wells are clean, and that the soil around the foundation properly slopes away from the home. See Controlling Foundation Water Penetration in the *Water Infiltration and Condensation* section.

Moisture Control: Slight moisture condensation on basement walls and floor is normal during the first year, since hundreds of gallons of water are used to make the concrete, drywall mud, and paint. As this water evaporates, it naturally raises the moisture content. Proper ventilation will reduce this condensation. Open basement windows during clear, dry weather and then close them during damp, humid weather. If excessive humidity develops, consider using a dehumidifier to remove unwanted moisture from the air. The improper use of a humidifier can greatly increase the moisture level in your home and could create moisture control problems. See *Water Infiltration and Condensation* section.

Efflorescence: A white, powdery substance that may appear on block walls or stucco is called efflorescence. It is composed of water-soluble salts, originally present in masonry materials, that are brought to and deposited on the surface when water evaporates. Most efflorescence can be removed with a stiff scrub brush and water.

BASEMENT AND GARAGE SLABS

Due to the large size of concrete basement and garage slabs, hairline cracks are common and are caused by slight home settlement or expansion and contraction. These cracks are normal and it is best to leave them alone, since attempts to fill the cracks will not stop the expansion and contraction.

HOMEOWNER MAINTENANCE GUIDELINES

Clean concrete floors with a solution of five tablespoons of baking soda to a gallon of water. Before using the cleaning solution, wet the floor with clear water and loosen the dirt with a steel brush or scraping blade.

A concrete sealer may be applied to the floor, following manufacturer's directions, approximately six months after you move in. This will make it easier to clean and will reduce concrete dusting.

PORCHES, STEPS, STOOPS, DRIVEWAYS, PATIOS AND SIDEWALKS

In most cases, exterior concrete cracks are due to the freeze-and-thaw cycle, slight home settlement, or shrinkage that occurs during the concrete curing process.

Driveways are subjected to heavy use and severe weather conditions. You may experience slight cracking and movement in the driveway slab due to the freeze-thaw cycle, vehicular traffic, and soil settlement. It is not uncommon for exterior poured concrete to rise and fall due to the freezing and thawing of the soil on which it is poured.

Caution: Concrete surfaces, under normal usage and weather conditions, should not disintegrate to the extent that the aggregate is exposed. Even during the First Year Warranty Coverage, Riverway is not responsible for concrete deterioration caused by homeowner abuse or negligence, salt, chemicals, heavy vehicles, or other factors beyond our control.

Concrete Repair Note: Riverway cannot ensure that concrete or masonry repairs requiring new material will match the color of the existing material. Color variations are normal.

HOMEOWNER MAINTENANCE GUIDELINES

Remove snow and ice promptly from porches, steps, stoops, driveways, patios and sidewalks. If a thin layer of ice cannot be removed, cat litter or clean sand offer safe traction.

Do not apply de-icing salts or chemicals to any concrete surface. Repeated thawing and freezing caused by the use of salt and chemicals can damage brick, concrete, and mortar, as well as kill grass, shrubs and trees.

Salt Damage: Salt and other de-icing chemicals will cause severe damage to exterior concrete surfaces. Even when you do not use salt, salt can be tracked in from the street on feet or tires, or accumulated under the fenders of your vehicle. This highly concentrated salt can cause pitting, spalling, and possibly the exposure of aggregate. You may apply a concrete sealant which may assist in reducing the effect of these chemicals on the concrete.

Salt Precaution: Park your vehicle on the street during inclement weather conditions to reduce surface deterioration.

Weight Precautions: Keep excessive weight, such as firewood, sand, lumber, and moving vans off the driveway to prevent cracking. Pay close attention to ground settlement or soil erosion along the edges of your driveway or walks. Gaps and erosion under the asphalt base can result in unnecessary surface cracking.

SOLUTIONS TO COMMON CONCRETE PROBLEMS		
Problem	Likely Cause	Solution
Cracks in concrete slab.	Shrinkage, settling, or heaving.	Caulk if cracks are large enough to accept caulk.
Stair step cracks on exterior block walls.	Home settlement.	Fill with a flexible masonry caulk.
Excess moisture on basement walls.	High humidity in house.	Use dehumidifier. Open basement HVAC vents.

COUNTERTOPS AND VANITY TOPS

HOMEOWNER MAINTENANCE GUIDELINES

Laminate Countertops: Clean laminate countertops with a soapy cloth or sponge, or use a non-abrasive liquid household cleanser for more stubborn stains. There are one-step cleaning products available for laminates that clean, reduce streaking, and leave surfaces polished. As with all cleaning products, carefully follow the manufacturer's instructions.

Keep standing water away from the back splash, seams, and the seal around the sink. These areas are prone to water damage, since excessive moisture will eventually break down the seal and cause swelling or delamination. Check seams periodically and re-caulk as necessary. See *Re-Caulking of Tubs and Showers* in the *Plumbing Fixtures* section.

Cultured Marble Vanity Tops: Clean cultured marble tops with a damp sponge or soft cloth and a non-abrasive cleanser. The occasional application of a self-polishing automotive wax will guard against lime and rust build-up.

Avoid prolonged contact with ammonia, bleaches, extremely hot water or excess heat from hair dryers or curling irons, as they will damage the surface. Small scratches can be removed with a fine automotive rubbing compound and a buffer.

Caulk cracks and separations of seams adjacent to walls with a silicone caulk, taking care to wipe the cultured marble clean once caulking is complete. Do not use clear silicone caulk, as it yellows with age and stains easily. See *Re-Caulking of Tubs and Showers* in the *Plumbing Fixtures* section.

Countertop Precautions:

1. Keep countertop dry at all times.
2. Excessive heat can cause charring, burning, lifting, or blistering. Do not place hot pans, coffee pots, baking dishes, hot irons, or burning cigarettes directly on laminate countertop surfaces. Use protective hot pads or trivets under countertop electrical appliances.
3. Always use a cutting board, since knives will gouge and mar the surface. Do not forcibly strike items against the countertop, as this may cause chipping or damage.
4. Steam from an open dishwasher may cause swelling and delamination. Allow time for the dishwasher to cool (at least one hour) before opening the door. To further reduce moisture damage, apply a silicone spray to the underside of countertops, directly over the dishwasher, and two feet left and right of the dishwasher.
5. Periodic application of a self-cleaning wax will help minimize staining.
6. Do not use abrasive cleaners.

Cultured Marble Precautions:

1. Do not use abrasive cleaners.
2. Household bleaches should not be allowed to remain on the surface.
3. Do not use the surface as an ashtray or cutting board.
4. Do not place hot objects or appliances directly on the surface.

SOLUTION TO COMMON COUNTERTOP AND VANITY TOP PROBLEMS		
Problem	Likely Cause	Solution
Countertop separating from wall	Settlement	Re-caulk gap between countertop and wall
Countertop chipped or damaged.	Accidents.	Contact porcelain or countertop repair company.
Minor scratches in cultured marble tops.	Accidents.	Use automotive polish to buff out scratches.
Scratches/chips in cultured marble or Formica countertops.	Accidents.	Call for professional repair.
Rust stains.	Marks from metal cans or steel wood.	Apply rust remover, per manufacturer's instructions.
Stubborn ink stains.	Accidents.	Apply full-strength liquid cleanser. Allow it to draw out stain. Blot away excess and rinse.

DECKS

INTRODUCTION

A deck is constructed with pressure-treated wood to resist rot, decay, and termites. Decking materials are acceptable within certain tolerances. Deck posts may warp or twist up to 1 inch over an 8-foot length. Deck board should not develop cracks at knots that are across the grain in excess of 1/4 inch.

Deck Repair Note: Riverway cannot ensure that deck repairs requiring new material will match the color of the existing material. Color variations between new wood and existing wood are normal. If the deck has not been stained or sealed, the new wood will naturally weather to a uniform color. If the deck has been stained, it is the homeowner's responsibility to apply stain or other finishes to the new boards.

HOMEOWNER MAINTENANCE GUIDELINES

To prolong the life and beauty of the deck, treat it periodically with a water repellent or wood preservative. A local hardware store can help you select the right product.

To replace a warped deck board, rail, or picket, remove all nails and take board or a section of board to a lumberyard for the closest possible match.

Check nuts and bolts of deck and deck supports annually to ensure tightness.

Excessive weight may cause structural damage to decks. Do not put children's swimming pools or hot tubs on decks.

SOLUTIONS TO COMMON DECK PROBLEMS		
Problem	Likely Cause	Solution
Nails coming loose.	Normal.	Re-nail with deck nail.
Loose deck board.	Normal.	Re-nail and/or add additional nails.
Wood splintering.	Normal due to weathering.	Sand or plane edges smooth.
Cracking, drying, or change of wood color.	Low moisture or excessive sunlight.	Apply penetrating oil finish.
Dark discoloration of deck	Mildew.	Periodically use deck cleaner or bleach solution.

DOORS

INTRODUCTION

Your Riverway home comes with a variety of doors, including interior passage doors, French doors, and louver doors, bi-fold doors, sliding glass doors, by-pass doors, exterior doors, storm doors and garage doors.

INTERIOR DOORS

Interior doors expand and contract in reaction to temperature and moisture changes and will be wider in humid summer periods and narrower during dryer winter months.

HOMEOWNER MAINTENANCE GUIDELINES

Sticking Doors: Home settlement or damp weather may cause that puts the door out of alignment. In some cases, this may only be temporary due to seasonal variations and the sticking will tend to correct itself without any adjustment. If adjustment is required, check the hinge screws and tighten as necessary.

Door Precautions: Interior doors are hollow-core and are not designed to support attachments and hanging accessories. Hanging heavy items on door knobs, or at the top of a door, can damage hardware, hinges, or the door itself

BI-FOLD DOORS

HOMEOWNER MAINTENANCE GUIDELINES

Keep the door tracks free of paint and dirt and apply a small amount of wax or silicone spray to the guide edges of the tracks.

EXTERIOR DOORS

An exterior door that is properly aligned, fitted, weather-stripped, and maintained will help control energy costs. Exterior doors are steel-clad or fiberglass to prevent warpage and maximize insulation

Pre-Settlement Orientation Check List: Carefully examine all doors during Pre-Settlement Orientation. Damage to doors will not be repaired unless specifically noted on the Pre-Settlement Check List.

HOMEOWNER MAINTENANCE GUIDELINES

Painting: Fiberglass or steel-clad doors are maintenance-free and require little attention except for painting and upkeep from dents and scratches.

Weather stripping: Weather stripping on exterior doors helps maintain the home's energy efficiency, preventing the loss of conditioned air and reducing the infiltration of outside air. Weather stripping must remain in place to operate effectively.

1. Replace weather stripping that becomes loose or damaged.
2. Prolong the life of vinyl and rubber weather stripping by applying a silicone spray.
3. The sweep weather stripping at the bottom of the door may require replacement. To replace, remove the sweep and match with a replacement available at hardware stores.
4. To raise the threshold, adjust the screws on the wood portion of the threshold.

GARAGE DOORS

Caution: The installation of a garage door opener, not installed as an option by Riverway, will void any applicable garage door warranty. Garage doors are warranted for proper mechanical operation as installed. The installation of a garage door opener alters the operation of the door, and Riverway cannot be responsible for altered mechanical operation.

HOMEOWNER MAINTENANCE GUIDELINES

Do not leave garage doors open for long periods of time, as this can cause inward warping. Wood shrinks as it ages, which loosens the screws that fasten the hardware to the garage door. Check and tighten these once a year and oil the moving parts of garage doors every six months.

Caution: Garage doors use high-tension springs that make homeowner repair dangerous. Please contact a garage door company for spring repairs.

DOOR LOCKS

HOMEOWNER MAINTENANCE GUIDELINES

Occasionally check screws on lockset and on keeper plate for tightness and adjust accordingly. Spraying white graphite into key lock holes keeps them operating smoothly

DOOR HARDWARE

HOMEOWNER MAINTENANCE GUIDELINES

The brass door knockers, door locks, door handles, kick plates, and hinges used throughout the home are exposed to both outside elements and common everyday use, and this may cause them to discolor. Clean these with a damp cloth and do not use abrasive cleansers or solvents.

Periodic polishing following manufacturer's recommendations will help maintain their original luster and appearance. Do not use brass polish on lacquered brass parts or fixtures.

SOLUTIONS TO COMMON DOOR PROBLEMS		
Problem	Likely Cause	Solution
Interior door does not stay closed.	Keeper out of adjustment.	Adjust keeper.
Door sticks or binds.	Settlement or swelling from moisture.	Adjust hinges, keeper, or jambs.
Door knob loose or rattles.	Loose screws.	Tighten screws.
Hinges on door squeak.	Metal rubbing.	Apply silicone spray to hinges.
Bi-fold doors do not close flush.	Door keepers unadjusted.	Adjust keepers on back side of door.
Entry door does not latch properly.	Tight weather-strip or slight door movement.	Adjust weather-strip or door keeper.
Hot or cold air coming in around exterior door.	Threshold out of adjustment.	Adjust threshold.
Water infiltration at door.	Threshold not snugs to bottom of door.	Adjust threshold.
Garage door not opening properly.	Tight weather-strip or slight door movement.	Adjust weather-strip or door keeper.
Entry door losing glossy finish.	Out of adjustment.	Call authorized repair person.
Overhead garage door difficult to open or close.	Tension spring too loose or too tight.	Contact authorized repair person to adjust tension. DO NOT attempt self-repair.
Garage door does not stay up.	Tension spring not properly adjusted.	Contact authorized repair person to adjust tension. DO NOT attempt self-repair.
Garage door does not latch.	Debris under door.	Remove debris.
Can see light around entry door or garage service door.	Loose weather-strip or sweep.	Adjust weather-strip or sweep to ensure tighter fit.

ELECTRICAL SYSTEM

INTRODUCTION

The electrical system in your Riverway home is designed for safe, trouble-free service and meets both local and national electric code requirements. Electrical wiring, switches, outlets, and circuit breakers were installed by the licensed Electrical Contractor listed in Riverway's Homeowner Warranty Directory.

Warranty Caution: Any addition, alteration, or modification to the original electrical system installation may void all applicable warranties.

Warranty Note: The length of warranties for the electrical system will be longer where required by applicable law.

HOMEOWNER MAINTENANCE GUIDELINES

Electrical Safety Cautions: Do-it-yourself electrical wiring is dangerous. Improper electrical repairs can endanger the lives of your family and jeopardize your homeowner's insurance in the event of fire or electrical injury. Always use a licensed electrician to make electrical repairs, adjustments, and additions.

Power Failure: If the electric power goes out, check first to determine if neighbors are also without power and, if so, contact the utility company. Before attempting to reset circuit breakers, check that power has been restored to the area. If neighbors have power, check the main circuit breaker in the panel box. See Circuit Breakers, this section

Be aware that not every electrical power problem is due to problems within the home's electrical system. Utility companies experience a variety of situations that affect power supplies, including power surges and interruptions, peak overload periods, and even total shutdowns.

ELECTRIC METER BOX

The utility company installed an electric meter box to measure your electric usage for billing purposes. Their invoice is based on kilowatt-hours used over a given time period with a kilowatt-hour being the energy expended by 1000 watts for one hour. Should you have questions about meter box functions, please contact the Customer Service Department at the utility company.

CIRCUIT BREAKERS

Electrical wiring and appliances are protected by circuit breakers to stop circuit overloading. The main circuit breaker is located in the electrical panel box and if tripped for any reason, entirely cuts off all electricity. The smaller circuit breakers within the same panel box control appliances, wall switches, lighting, and the heating system, and each switch is clearly marked as to what it controls.

Do not tamper with the electrical service entrance cable that provides power to the service panel.

HOMEOWNER MAINTENANCE GUIDELINES

Circuit Tripping Causes and Remedies: Thunderstorms, lightning, and power failures can cause circuit breakers to trip. If only your home is affected, try to reset by switching the breaker to full OFF, then fully back to the ON position. If this does not reset the breaker or if the breaker continues to trip, do not continue resetting the breaker, as this can damage the panel box, wiring, or appliance that it controls. Call the electrical contractor for service inspection

Overloaded circuits can also cause tripping. This occurs when too many small or large appliances are used on one circuit. To reduce the load, unplug the appliances that may cause the overloading, and then reset the breaker as described above. Worn or defective plugs or defects in the appliances themselves may also cause tripping of the circuit breaker.

If you install a microwave or other appliance that requires large electrical loads, you may need a licensed electrical contractor to add additional wiring to accommodate the load.

OUTLETS AND WALL SWITCHES

If an electrical outlet does not work, check first to make sure the outlet is not controlled by a wall switch that is turned off or a circuit breaker that is not on. In some cases, only half of the outlet will be controlled by a wall switch. If the outlet still does not operate, contact the electrical contractor.

An electrical outlet or light switch on an exterior wall may produce a slight draft, allowing cold air to be drawn into the room. Riverway makes a special effort to reduce these drafts; however, some cold air is normal. Draft protection pads that help reduce cool air drafts can be installed by a qualified electrician or are available at hardware stores.

GROUND FAULT CIRCUIT INTERRUPTERS (GFCI)

GFCI electric outlets prevent electrical shock and are installed in kitchens, bathrooms, garages, basements and exterior areas where water may be present. GFCI receptacles are sensitive to power surges and interrupt power under certain conditions to prevent injury.

HOMEOWNER MAINTENANCE GUIDELINES

GFCI outlets are often wired in a series. For example, the bathroom GFCI outlet controls the bathroom and possibly other outlets throughout the home. Taking this example further, if the electrical outlet in the garage is not functioning, check the GFCI in the bathroom. Also be aware that some Riverway homes have multiple GFCI's, so be certain to inspect and reset the affected outlets.

When a GFCI controls more than one outlet, an overloaded outlet will also shut down all connected outlets. For this reason, do not plug refrigerators, freezers, or electric garage door power cords into GFCI outlets.

If a GFCI receptacle is not functioning, press the Reset button on the wall plate to restore proper operation. If that does not work, check and reset the circuit breaker in the panel box first, then press the GFCI Reset button. If the outlet still fails, it may indicate a short in the appliance. If other appliances will not operate, an electrician should be contacted and the GFCI replaced.

To test GFCI's, press the Test button on the receptacle. The outlet should not perform. To reset, press the Reset button.

PRE-WIRED TELEPHONES, TV ANTENNA AND CABLE TV

Riverway homes are pre-wired for telephone and, in some communities, for TV antenna or Cable TV. If you experience problems with phone connections or cable TV reception, contact the phone company or local cable company.

If the telephone company states that there is trouble in the house wiring please call the electrical contractor who installed the wiring as listed in Riverway's Homeowner Warranty Directory. Neither Riverway nor the electrical contractor will pay for wiring repairs done by the telephone company.

LIGHT FIXTURES AND POST LAMP

HOMEOWNER MAINTENANCE GUIDELINES

Interior and exterior lighting fixtures require periodic homeowner maintenance to preserve the finish. Carefully review and follow the instructions provided for these fixtures.

Do not use indoor bulbs in exterior lighting fixtures. Do not use light bulbs with a higher wattage than the maximum wattage stated on the light fixture.

SMOKE DETECTORS

The smoke detectors in your home are pre-wired, per electrical code requirements, into the main electrical system and include a built-in battery backup as well.

HOMEOWNER MAINTENANCE GUIDELINES

Test the detectors weekly and clean and vacuum the openings of the smoke detector once a month. Visually inspect the clear button of the test switch to see that the indicator light is glowing. To test the alarm, press the Test button for about ten seconds, or until the horn sounds loudly. Do not use an open flame to test the detector.

The battery unit will emit a low- frequency beeping noise if a malfunction occurs. In this case, replace the battery.

SOLUTIONS TO COMMON ELECTRICAL PROBLEMS		
Problem	Likely Cause	Solution
Complete power failure.	Main breaker tripped. Electrical outage.	Reset main breaker. Call power company.
Electrical outlets not working.	Outlet switch is off or circuit breaker is tripped.	Turn on switch. Check and reset breaker.
GFCI switches not operating.	GFCI receptacle or circuit breaker is tripped.	Reset GFCI. Check and reset circuit breaker.
Light fixture not working.	Switch is off or bulb is burned out.	Turn on switch. Turn off power to replace bulb.
Appliance does not work.	Circuit breaker tripped or appliance broken.	Reset circuit breaker. If problem persists, see appliance manual.

EXTERIOR FINISHES

INTRODUCTION

Exterior finishes are applied once the exterior framing is complete and the drywall is placed within the home. The exterior is finished with wood siding, a brick or stone veneer, or a combination of these materials.

SIDING AND FASCIA

Siding has a paint coat. It is not uncommon for siding to make creaking sounds due to the normal expansion and contraction of the material.

Note: These items are warranted by the manufacturers. For specifics, please review the product literature appropriate to your installation. The manufacturers do not provide warranty coverage should panels come loose or be detached by winds in excess of 54 miles per hour. Winds this powerful are considered "Acts of God" and repairs may be covered by homeowner's insurance.

Siding Repair Note: Riverway cannot ensure that siding repairs requiring new material will match the color of the existing material. Color variations caused by weathering effects are normal.

Pre-Settlement Orientation Check List: Carefully examine all siding for dents and damage. No repairs will be made unless specifically noted on the Pre-Settlement Check List.

HOMEOWNER MAINTENANCE GUIDELINES

Cleaning: For specific cleaning instructions, please refer to the appropriate manufacturer's service manual.

EXTERIOR WOOD TRIM AND WOOD SIDING

Wood Trim and Wood Siding Repair Note: Where surfaces are repaired that require staining or painting, Riverway will paint or stain new material; however, Riverway cannot ensure that trim and siding repairs requiring new material will match the color of the existing material. Color variations caused by weathering effects are normal.

HOMEOWNER MAINTENANCE GUIDELINES

Keep garden sprinklers away from the home and do not plant shrubbery too close to the walls. Moisture in wood sidings, from whatever source, contributes to exterior paint or stain failures. If excessive moisture reaches the back of the paint film, peeling and blistering will occur.

Periodically inspect the exterior to be sure that wood siding and trim joints and seams are tightly caulked. Loss of seal can result in water damage.

BRICK VENEER

Slight variations in size, color, and placement create the textural interest that contributes to the look of a brick exterior. Variations in mortar color are also common to brick work. Surface chips and cracks add a weathered appeal, while small hairline cracks in the mortar are caused by shrinkage. Minor brick chipping, cracking, and mortar shrinkage are normal.

Cracks in the mortar joints may be 1/8 inch in width, and mortar joints may vary up to 5/8 inch in width.

Brick Distortion: Bricks may have dips or bulges up to 1/2 inch, as measured vertically or horizontally.

Brick Veneer Repair Note: Riverway cannot ensure that brick or mortar repairs requiring new material will match the color of the existing material. Color variations are normal. New mortar will weather and blend more closely with existing mortar as time passes.

HOMEOWNER MAINTENANCE GUIDELINES

Bricks can be cleaned with a soap-and-water solution. Gentle scrubbing with a non-abrasive household cleaner and a stiff brush will remove most stubborn discolorations.

A white, powdery substance that may appear on masonry walls is called efflorescence. It is composed of water-soluble salts, originally present in masonry material, that are brought to the surface when water evaporates. Efflorescence can usually be removed with a stiff scrub brush and water.

STONE VENEER

Slight variations in size, color and placement create the textural interest that contributes to the look of a stone exterior. Minor stone chipping, cracking, and cement shrinkage are normal. A crack in the cement joint of stone veneer may be up to 1/8 inch in width.

Stone Veneer Repair Note: Riverway cannot ensure that stone or cement repair requiring new material will match the color of the existing material. Color variations are normal. New cement will weather and blend more closely with existing cement as time passes.

SOLUTIONS TO COMMON EXTERIOR FINISH PROBLEMS		
Problem	Likely Cause	Solution
Dents in aluminum/vinyl siding.	Abuse or accidents.	Replace panel.
Dirty siding.	Adverse weather conditions and soiling.	Periodic hosing. See manufacturer's recommendations.
Siding blows off.	Strong winds less than 54 miles per hour.	Call Riverway for inspection.
Siding blows off.	Strong winds over 54 miles per hour.	Act of God. Review homeowner's insurance policy.
Siding has dirty, streaked appearance.	Mildew or fungus growth.	Apply commercial mildew cleaner following manufacturer's directions.
Cracking/peeling of painted surfaces.	Normal aging and weathering.	Clean and sand surface, then prime and repaint.
Gaps at joints in wood trim.	Normal caulk and filler shrinkage.	Re-caulk or fill.
Sap on exterior trim.	Wood drying out.	Sand, prime, and paint.
Efflorescence on masonry finishes.	Crystallized soluble salts.	Scrub with water and stiff brush.
Cracks or stair step cracks in masonry finish.	Normal home settlement.	Seal cracks with a flexible masonry caulk.
Vinyl siding makes noise.	Normal expansion of siding due to temperature changes.	Normal occurrence; no action required.

FIREPLACE

INTRODUCTION

Riverway uses pre- fabricated fireplaces. Pre- fabricated fireplaces are factory-built of sheet metal and then delivered to the home site.

Any alteration or modification to the original fireplace installation, to include insert, may void all applicable warranties.

HOMEOWNER MAINTENANCE GUIDELINES

Your fireplace is equipped according to code requirements and includes a fresh air intake into the flue box. As a result, some cold air may be felt in the area of the fireplace. If the fireplace is not equipped with glass doors, installing them will further reduce cold air and/or odor from entering your home.

In metal fireplaces, the heat from the fire may alter the finish of the firebox and surrounding area and will eventually require repainting.

The chimney flue is open at the top and when it rains, there is the possibility that water may come down the flue into the fireplace.

Fireplace Inspections: A clean, unobstructed fireplace and chimney are important for safe fireplace operation. Have a fireplace cleaning company inspect the fireplace. Also make sure that the fresh-air intake remains clean and free of obstruction.

SOLUTIONS TO COMMON FIREPLACE PROBLEMS		
Problem	Likely Cause	Solution
Water inside fireplace.	Rain coming down from chimney.	Install chimney cap.

FLOORING AND FINISHES

INTRODUCTION

Your home is finished with a variety of flooring materials, including carpet, engineer flooring, hardwoods and ceramic tiles.

CARPETING

The carpet is durable and requires minimal care. Color variations and shading may be noticeable and depend upon the surface texture and pile fiber of the carpet. A carpet seam should not have visible gaps.

Spots or discoloration suddenly appearing on carpet is not a new problem. The homeowner assumes that the carpet is defective, but in many cases the problem is a chemical reaction that takes place in the home. The chemicals involved lay dormant in the carpet until a change in humidity, temperature, or light level activates the various chemicals to show spots or discoloration.

Carpet damage not protected by the Manufacturer's Warranty is caused by:

Acne Medications: Many medications on the market contain Benzyl peroxide, a very strong oxidizing agent capable of destroying most dyestuffs used in carpet. Products containing this active ingredient have been responsible for many mysterious yellow spots where no apparent spill has taken place. These spots seem to appear spontaneously since the time between contact and the appearance of the spot could be several days or weeks and because high humidity is necessary for the bleaching action to begin. Many spots have been brushed rather than spilled onto the carpet by hands and faces.

The spots begin as orange to yellow as the dye is bleached and progress to lighter yellow as the oxidation proceeds. Different colors start as one shade and progress to various shades, depending on the original color involved. Research has proven that 45 percent of all chemical spots have been related to Benzyl peroxide. Please keep in mind that this ingredient can also be found in some pet shampoos and mange remedies.

Bleaches: Chlorine bleach is used in almost every home and the possibility of drops or spills is common. Fabric-type bleaches can also cause bleaching and dye bleeding, but at a slower pace. Pool chemicals and mildew killers contain bleach and can affect carpet if used indoors. Spots caused by chlorine will be yellow.

Insecticides: A few indoor insecticides can cause carpet color changes. Exterminators are cautioned to apply insecticides in a fan-shaped mist to the baseboard, not the carpet. Most complaints have shown his application was in a stream directly on the carpet.

Plant Foods: Spills of liquid plant foods or leakage from flower pots may cause oxidation sots. These develop at the backing, progress upward to the surface, and usually are dark yellow or brown in color.

Strong Alkali: Drain cleaners contain sodium hydroxide or sodium hydrochloride and can cause bleaching. Oven cleaners are gelled sodium hydroxide (lye). Some toilet bowl cleaners contain hydrochloric acid, which can dissolve nylon.

Urine: These spots also begin at the backing and progress upward over a period of time. They may be dull yellow or even red. An ammonia-like odor will be present for only a few hours, but is replaced by a musty odor. Urine glows faintly under ultraviolet (black) light. They hydrochloric acid in both human and animal vomit has been known to cause spots if not cleaned up quickly or neutralized with baking soda.

Furniture Polish: This usually occurs around the base of a piece of furniture. This type of problem can often be identified by pile crush in the center of the discolored area. Stains of this type are usually noticed after furniture is removed.

Carpet Repair Note: Riverway cannot ensure that carpet repairs requiring new material will match the color of the existing material. Riverway is not responsible for manufacturer dye lot variations or for discontinued carpet patterns.

Pre-Settlement Orientation Check List: Carefully examine all carpeting during the Pre-Settlement Orientation. Carpet damage or stains will not be repaired after occupancy unless specifically noted on the Pre-Settlement Check List.

HOMEOWNER MAINTENANCE GUIDELINES

Frequent vacuuming and immediate stain removal are primary carpet care steps. For complete instructions, please refer to the manufacturer's cleaning recommendations.

While normal vacuuming will only remove loose fibers from carpet yarns, an occasional tuft may be lifted above the surface. Do not pull out the tuft; just snip it off to the length of the other tufts using scissors.

Color fading caused by sunlight can be minimized by closing the draperies during the day, or by using sheer draperies to reduce incoming sunlight.

HARDWOOD FLOORS

Wood flooring is a natural product that has limitations due to certain environmental conditions such as humidity and temperature.

Individual boards, as well as the entire floor, will expand and contract with changes in relative humidity and temperature. Gapping is not uncommon in wood floors and will happen more so in the cooling months as each piece of wood has different milling tolerances and moisture content. Higher and lower boards are commonplace with changing conditions and may also occur, as one board accepts moisture differently from another.

Wood floor tone, grain, and color variations are normal and reflect the natural characteristics of real hardwood. Some squeaking of hardwood floors is normal and is caused by seasonal weather and humidity changes.

Pre-Settlement Orientation Check List: Carefully examine all hardwood floors during the Pre-Settlement Orientation. Scratches, gouges, dents, and other damage will not be repaired after occupancy unless specifically noted on the Pre-Settlement Check List.

Hardwood Flooring Repair Notes: Riverway cannot ensure that hardwood flooring repairs requiring new material will match the color of the existing material. It is normal to expect surface nailing to occur around the perimeter area of pre-finished hardwood floors and around any repaired areas, as well.

HOMEOWNER MAINTENANCE GUIDELINES

For hardwood floor cleaning and maintenance guidelines, please refer to the manufacturer's instructions.

Use entrance rugs or mats to protect wood flooring from dirt and water spots. Mop up water spills immediately. Do not set potted plants directly on a hardwood floor, as moisture can leak through and cause permanent staining and warpage.

Attach furniture protectors to the bottom of furniture legs to protect the hardwood flooring from scuffing and surface damage. Be aware that high-heeled shoes will damage hardwood floors.

CERAMIC TILE FLOORS

Ceramic tile is easy to maintain and impervious to water. The seams and joints are not waterproof and require special attention to prevent water seepage.

Ceramic Tile Floor Repair Note: Riverway cannot ensure that ceramic tile floor repairs requiring new material will match the color of the existing tile material or colored grouting. Color variations are normal.

HOMEOWNER MAINTENANCE GUIDELINES

Grout Sealing: Water can penetrate grout seams and joints and will damage materials adjacent to and underneath the tile. This occurs when excessive amounts of water are used during floor washing, or in the bathroom from splashes and spills from showers, tubs and sinks. The homeowner can apply a silicone-based grout sealer at move-in time to reduce staining, mildew, and water penetration. Grout sealers are available at hardware stores and should be used following manufacturer's guidelines.

Floor Protection: Chipping, scratching, and cracking of floor tiles can be caused by putting heavy furniture directly onto the surface. Minimize this damage and reduce skidding by placing flat furniture protectors underneath furniture wheels and legs.

SOLUTIONS TO COMMON FLOORING AND FINISH PROBLEMS		
Problem	Likely Cause	Solution
Carpet seams noticeable.	Fibers separate from vacuuming and normal traffic.	Vacuum carpet in same direction as seams.
Carpet fades near windows and doors.	Excessive sunlight.	Close window coverings to reduce excessive sun.
Carpet stains.	Spills, pets.	Follow manufacturer's guidelines.
Carpet looks matted on stairs and high-traffic areas.	Dirty carpet or insufficient vacuuming.	Steam-clean carpet. Vacuum more frequently.
Carpet fuzzing.	Normal when new.	Vacuum.
Resilient or vinyl floor finish looks dull.	High-traffic areas or furniture rubbing against floor.	Follow manufacturer's guidelines.
Resilient or vinyl floor seams are apparent.	Normal.	No repair required.
Yellow or purple areas in resilient floors.	Moisture problem or rubber backed floor mats.	Investigate moisture problem. Do not use rubber-backed mats.
Nail or staple pops up under vinyl or resilient floor.	Settlement.	Gently re-set nail or staple.
Dents in vinyl, resilient, or hardwood floors.	Objects dropped heavy furniture, or high-heeled shoes.	Follow manufacturer's guidelines.
Fine scratches, white splotches, or stains on hardwood floor.	Normal wear, furniture scratches, and spills.	Follow manufacturer's guidelines.
Grout staining.	Liquid spills and grease from food.	Follow manufacturer's guidelines.

FRAMING AND CARPENTRY

INTRODUCTION

Framing and carpentry with wood studs, beams, and joists creates the skeletal structure of the home.

Floor Framing: A horizontal wood or steel center beam is set into the top of the framed or foundation walls. It is often supported between the walls by vertical wood or steel column piers. This creates the base for the floor, walls and roof. Sill plates are secured to the top of the foundation walls. Then the floor joists, floor trusses, or parallel wood beams that support the floors and ceilings are nailed to the sills, perpendicular to the center beam. Sub flooring is then glued and nailed to the floor joists, forming the sub floor for the hardwood, carpet, vinyl, or tile floor.

Wall Framing: Assembled wall panels with framed openings for doors and windows are then positioned on the sub floor of each level.

Exterior Wall Sheathing: Structural-grade sheathing is applied to reinforce the studs and to improve the insulation of the wall system.

Ceiling and Roof Framing: The underside of joists or floor trusses form the framing for the basement and first- floor ceilings. Rafters or roof trusses form both the roof and the ceiling for the top floor.

Ceiling framing ties together opposite walls, supports the finished ceiling, and provides a base for a second story or attic. A horizontal series of joists frames the ceiling.

Roof framing uses a pre-engineered truss system that supports the weight of the roof and can be used in combination with conventional ceiling and roof framing.

Warranty Caution: Attic access must be installed parallel to and in between the trusses. Roof trusses should not be cut to install attic stairs. This will structurally damage the integrity of the roof and will void the Your Riverway Home Warranty and any other structural-defect warranties.

Roof Sheathing: Roof sheathing that covers the rafters provides structural integrity and serves as a base for the roofing materials.

Note: A squeak-proof floor cannot be assured. Floor squeaks and loose sub-flooring are often temporary and passing conditions, caused by lumber shrinkage or temperature changes. An isolated floor squeak is not a defect, unless caused by a defective floor joist in the system. A large area of floor squeak which is noticeable, loud and objectionable -is a defect. For large areas of floor squeaks or floor squeaks caused by a defective floor joist, Riverway will correct within reasonable repair capability. Where a finished ceiling exists under the floor, the corrective work may be attempted from the floor side. Where necessary, remove the finish floor material to make the repair and reinstall.

INTERIOR WALLS AND CEILINGS

INTRODUCTION

Your Riverway home features two types of walls: load-bearing and non-load-bearing.

Warranty Caution: Any alteration of bearing walls may undermine the structure by reducing its load-bearing or support capacity and may void all structural defect warranties.

Wall construction begins with the placement of wood studs set vertically at 16- or 24-inch intervals. Insulation is installed and then the drywall is attached to the studs.

INSULATION

Insulation is placed in the floors, above unconditioned areas in ceilings (e.g., crawl spaces), foundation walls, above-ground exterior walls, and in the attic. Flexible insulation, in the form of fiberglass blankets, is commonly used in walls, floors, ceilings, and around ducts. Blown insulation of loose fiberglass can be used in flat-ceiling areas. Plastic foam may be used for spot insulation around windows and doors, pipe openings, and other air-leakage points.

R-Value: This is an insulation measurement. The higher a material's "R-value" number, the more effective it is as an insulator. Different parts of the home have different insulation standards, and Riverway meets or exceeds both local and national code requirements.

DRYWALL

Drywall is screwed or nailed to the studs to create both ceiling and wall surfaces. The seams where sheets of drywall come together are taped, spackled with a joint compound, allowed to dry, and then sanded to prepare them for painting.

DRYWALL REPAIR PROCEDURES

Riverway will provide, upon request, one-time drywall repair service for all nail pops, cracks, or visible seams. It is the homeowner's responsibility to call Riverway to schedule. Repairs usually require about one hour of work for each of three to four days, since overnight drying is required for drywall spackling. This service is done at the one-year anniversary walk through.

Drywall Repair Notes: Visible, minor drywall imperfections are normal. Please do not write on walls or make other marks where drywall is to be repaired. No repairs will be made to wallpapered areas. The homeowner is responsible for repainting repaired areas, and it should be noted that touch-up painting will not blend perfectly with the original paint. Any repairs to textured ceilings will have slight color and texture variations, which are normal.

HOMEOWNER MAINTENANCE GUIDELINES

Nail Pops and Drywall Repairs: Minor drywall cracks and nail pops on the interior wall and ceiling surfaces are caused by home settlement and the normal drying of stud framing and drywall materials. Nail pops are nails that come loose from the studs, pushing the drywall joint compound up to produce a bump on the drywall surface. Both nail pops and small drywall cracks are simple to repair.

Drywall Nail Pop and Crack Repair Instructions:

1. Reset the protruding nail slightly into the gypsum board surface or remove it entirely. Place another drywall nail two inches above or below the popped nail and gently hammer it slightly below the paper surface. Then cover the area with spackling compound, allow to dry, sand smooth, and re-paint the surface.
2. For drywall joint cracks, press a small V-shaped indentation using the back of a putty knife along the length of the crack, about 1/8 inch deep and 1/8 inch wide. Spackle, sand, and repaint as with nail pops.
3. To prevent cracks wider than 1/4 inch from reopening, first apply the spackling compound, cover the crack with a strip of drywall tape, add another top layer of spackle, feathering the edges well. Sand to a smooth finish, then re-paints.
4. Deep scrapes and indentations on drywall surfaces can be filled with two or three applications of spackling compound. Allow it to dry thoroughly, and sand between each application.

Wall Fasteners and Anchors: There are a variety of specially designed wall fasteners for drywall available from a hardware store. They offer strength in supporting an object, such as a large, framed picture, and yet create little damage should you move the picture later.

PLANT LEDGES

Plant ledges are architectural design features and should be used strictly to hold plants and other decorative objects. They are not constructed to support the weight of an adult or child. When watering plants, check to ensure that water does not spill out of the plant dish and damage the plant ledge.

INTERIOR TRIMS AND MOLDINGS

Riverway homes are built with kiln-dried ceiling moldings, floor moldings, door casings, and other wood trims. Some separation of wood trims and moldings is normal and is caused by home settlement, plus shrinkage or expansion due to extremes of dryness or humidity.

Interior Trim and Molding Repair Note: Riverway will paint or stain only the new material when repairing interior wood trim and molding. It is normal that the new material may not exactly match the color of existing material.

HOMEOWNER MAINTENANCE GUIDELINES

Should the baseboard trim come loose, simply re-nail the baseboard back into proper position. For moldings, it is better to wait for several months to see if settlement will bring the pieces back together naturally. If not, a separation at corners or seams can be patched with a wood filler or caulk and then stained or painted to match the existing molding.

SOLUTIONS TO COMMON INTERIOR WALL AND CEILING PROBLEMS

Problem	Likely Cause	Solution
Nail pops, holes, or cracks in drywall.	Settlement or accidents	See "Drywall Repairs," this section.
Base molding separates from wall.	Normal caulk shrinkage.	Re-caulk gap.
Wallpaper loosens or peels.	Moisture and lack of proper ventilation.	Re-glue wallpaper. Improve ventilation
Drapes or pictures falling off wall.	Improper anchor used.	Consult hardware store for proper anchor.
Separation at door casing.	Normal caulk shrinkage or settlement.	Re-caulk gap.
Drafts at electrical outlets.	Temperature inversion due to thickness of electric box vs. wall.	Install thermal covers under plug and switch covers.
Moisture on plant ledges.	Over-watering of plants.	Move plants off ledge for watering.
Flapping noise in attic.	Insulation baffles loose.	Re-secure insulation baffles.

LANDSCAPING AND GRADING

GRADING

The soil around each home site is graded to channel storm water away from the home.

HOMEOWNER MAINTENANCE GUIDELINES

The best way to keep the basement dry is to maintain positive drainage away from the foundation. Proper grading ensures that surface water will flow away from the home, rather than accumulating and soaking into the ground immediately around foundation walls.

Over time, the grade around the house can settle. If this occurs, spread additional soil in the depressions to raise and re-establish the grade.

To prevent erosion and ponding of water:

1. Do not alter the soil grade.
2. Keep water ditches or swales open and free of leaves and debris. Do not build sheds, hot tubs, decks, fences, pools, or gardens in the swales. Otherwise, water may not flow properly through the swale.
3. Direct water run-off away from the home to prevent washouts. Reposition splash blocks if they are moved. Do not allow sprinklers to wet the house or form puddles near or against the foundation

LAWN

After the yard is graded, the landscape contractor removes debris and rakes the ground surface prior to installing grass seed or sod.

The use of grass seed or sod will vary by community. Seed or sod may be installed at Settlement or after move-in, should winter weather delay lawn installation.

Sod will be alive and green at Settlement or when installed, whichever occurs last. Sod that is not alive and green at Settlement or when installed will be replaced. Gaps between sections of sod that exceed 1 inch in width will be repaired by filling the gaps with cut sod or by filling the gap with soil then reseeding.

The seeded area is a starter lawn that will require additional seeding and fertilizer to become an established lawn.

Warranty Caution: Sod is a perishable item and must be watered properly.

HOMEOWNER MAINTENANCE GUIDELINES

The future beauty of your yard depends on the care and attention you provide. Riverway cannot be responsible for homeowner neglect or improper landscaping maintenance. We offer the following suggestions to make the job easier.

Seeding: Proper watering, reseeding, and fertilizing are the homeowner's responsibility after the original seed application. Approximately 80 percent of the new grass seed will germinate. This is normal and it is reasonable to expect that you will have to reseed your yard a minimum of two times within the first year. It may take several growing seasons before the lawn is fully established.

Seeded areas should be kept damp only. Excessive watering will wash away seed and cause erosion.

Where grass seed is used, a layer of straw or hydro mulch is placed on top of the seed. Do not rake the straw away, as this will disturb the germination of underlying grasses. Gently redistribute the straw if it is heavily matted. The straw will eventually decompose and provide the soil with additional nutrients.

Watering: Both sod and grass seed require constant moisture throughout the first full growing season. If allowed to dry out, the grass seed will not germinate and the sod will shrink, causing gaps to appear between the sections. If this occurs, the homeowner will need to repair these areas.

Water each section of the lawn for 30 minutes twice each day, once in the morning and once in the late afternoon. When moving the sprinkler, check to see if you are leaving foot prints. If so, the area has been over watered. Watering may be reduced after the second mowing.

Be aware that sod, when initially installed, will occasionally go into "shock" and turn brown. The sod is not dead and you should continue to water it.

Extremely hot weather or above-average rainfall will affect these instructions.

Mowing: Mow the new grass when it attains a height of 3 to 4 inches. Do not rake the newly seeded areas, as the grass is still young and fragile. Do not mow if the ground is soggy. Set the mower at the highest height setting and be sure the mower blades are sharp.

Fertilizing, Weeding, and Liming: For proper fertilizer, weeding and liming guidelines, please contact a lawn care specialist.

Fertilizer is applied to the initial seeding to help the lawn through its early growth period.

Do not spray immature grass with chemicals to kill weeds. The best approach is to use pre-emergent weed control beginning the following spring, when grass is stronger and more mature.

Certain communities have highly acidic soil and lime should be applied as necessary, following manufacturer's directions.

NEW SHRUB AND TREE CARE

All trees and shrubs are nursery grown and initially planted by a landscape contractor. The homeowner is responsible for maintaining the new plantings with proper maintenance, care and water. The first six to nine months are the most crucial for new plantings. The type of tree or shrub will dictate the specific care needed.

Any new tree, shrub, or ground cover that is dead will be replaced one time during the first year of homeownership, unless damage is caused by homeowner transplanting, under- or over-watering, or by insects.

PRE-EXISTING TREES

The removal of trees on the home site is done at Riverway's sole discretion and Riverway is not responsible for trees that die after Settlement. Trees in areas undisturbed by construction will be left in a natural state.

Pre-existing trees within 15 feet of the home will be removed if they die within the first year of occupancy. The stump will not be removed; however, it will be cut as close to the ground as possible.

Caution: Do not remove or transplant trees and shrubs from their original location, as this will void the landscape contractor's warranty. Should a tree or shrub die, leave it in the ground and let the landscape contractor remove it.

HOMEOWNER MAINTENANCE GUIDELINES

Watering: It is extremely important that new plants and trees be watered twice a week for the first month and once a week for the next three months. Weather conditions may affect watering frequency. Watering should be done with an opened garden hose: approximately one minute on shrubs and three to four minutes on trees. For best results, contact a lawn care specialist for proper maintenance guidelines.

Fertilizing: Plants should be fertilized on a regular basis. Contact a lawn care specialist for proper maintenance guidelines.

SOLUTION TO COMMON LANDSCAPING AND GRADING PROBLEMS		
Problem	Likely Cause	Solution
Wetness around foundation.	Settlement of soil around home.	Fill settled areas and re-mulch or re-seed as necessary.
Yard not draining.	Erosion of swales.	Re-grade swale and plant grass.
Tips of grass blades frayed or turning tan.	Dull mower blades.	Sharpen blades.
Weeds growing in lawn	Improper weed control.	Use pre-emergent weed control.
Gaps or holes in sod.	Insufficient watering.	Fill gaps with sod or seed and soil. Water lawn properly.
Grass turning yellow.	Lack of fertilizer.	Fertilize following manufacturer's directions.
Brown patches in grass.	Fungus or insect disease.	Contact lawn specialist.
Grass does not maintain a lush, green appearance.	Lack of fertilizer.	Fertilize following manufacturer's directions.
Lawn thinning out after several mowings.	Thatch build-up.	Lawn needs aeration or dethatching.
Grass, trees, or shrubs turning yellow.	Lack of fertilizer	Fertilize following manufacturer's directions.
Trees and shrubs wilting	Too much or too little water	Check soil around base of plant and water accordingly
Newly planted tree or shrub drops all leaves	Shock resulting from transplanting	Normal. Continue to water as necessary.

PAINTING

INTERIOR AND EXTERIOR PAINT

Pre-Settlement Orientation Check List: Carefully examine all painted surfaces during the Pre-Settlement Orientation. Paint with scuffs and dirt marks will not be repaired after occupancy unless specifically noted on the Pre-Settlement Check List.

Painting Repair Note: Riverway cannot ensure that painting repairs requiring new material will match the color of the existing material. Paint repairs may show slight variations in color as a result of weathering, aging, or pigment variations in different paint manufacturing runs. Color variations are normal.

HOMEOWNER MAINTENANCE GUIDELINES

Cleaning Flat Latex-Painted Surfaces: Off-white, lead-free latex paint is applied to the interior walls of the home. This is not scrubbable paint and will smudge if cleaned. Riverway does not recommend washing these surfaces, but instead suggests using the supplied touch-up paint to cover paint scuffs and marks.

Cleaning Semi-Gloss Latex-Painted Surfaces: An off- white, lead-free semi-gloss latex paint is applied to interior wood trim and doors. These surfaces may be cleaned with a sponge and lukewarm water. The less moisture on the sponge, the better. Wipe quickly with a gentle washing pressure from top to bottom without allowing the solution to run down the door or trim. If the water does not work, try the same procedure using a small amount of mild detergent mixed with water. Once complete, lightly rinse the washed area with plain water and allow to dry.

SOLUTIONS TO COMMON PAINTING PROBLEMS		
Problem	Likely Cause	Solution
Exterior paint peeling.	Surface not cleaned. Moisture/solvents under paint surfaces.	Scrape, paint, prime, and repaint.
Blisters in paint.	Poor adhesion caused by water or solvent trapped under paint.	Scrape, fill resulting depression, sand, prime, and repaint.
Wrinkling runs and/or drips.	Paint applied too thick.	Sand smooth and repaint.
Interior and/or exterior caulking cracks or shrinks.	Normal drying, settlement, expansion and contraction.	Remove old caulking only if unsightly. Caulk open gaps.
Bleeding wood knots.	Wood resin seeping out.	Sand, apply stain killer, repaint.
Mildew on painted surfaces.	Fungus from moisture and little sunlight.	Carefully wash with water-diluted chlorine bleach.

PLUMBING SYSTEM

INTRODUCTION

A licensed plumbing contractor installed all plumbing lines and systems in your Riverway home and these have been tested and inspected.

In most cases, minimum homeowner maintenance is all that the plumbing system requires. Attending to small problems as they occur keeps them from becoming larger, more costly ones.

Caution: It is important to immediately notify Riverway should a leak occur, since leak damage resulting from homeowner delay is considered negligence and may void any warranty protection.

Warranty Caution: Any addition, alteration, or modification to the original plumbing system installation may void all applicable warranties. The length of warranty for the plumbing system will be longer where required by applicable law.

WATER LINES

Your home is connected to a municipal water system. The pipes that carry water into the home are designed to resist rust and corrosion.

HOMEOWNER MAINTENANCE GUIDELINES

Noisy Pipes: Noisy water pipes should be corrected immediately since the resulting vibrations can damage plumbing line fittings and cause them to leak. There is one exception: Exterior hose faucets often produce a high-pitched noise caused by an attached vacuum breaker or back-flow preventer. This noise is normal and is not cause for concern.

Noisy pipe problems can be identified and corrected as follows:

1. The water heater temperature may be set too high, producing steam in the pipes. To resolve, gradually reduce the water heater temperature setting until the steam is reduced.
2. Abruptly turning off a faucet in areas with high water pressure can produce a pounding or knocking sound. To resolve, slightly close the main shut-off valve.
3. Air can get into the pipes. To resolve, open all interior and exterior faucets and run for a few minutes, allowing all air to pass through the system. It is not necessary to open exterior faucets if they have been winterized.

Frozen Pipes: Prevention is the best cure.

1. Winterizing Pipes: At the beginning of each winter, turn off the outside faucets and then bleed out excess water from the lines. See winterizing instructions under Exterior Hose bibs in the Plumbing Fixtures section.
2. During extremely cold weather conditions, keep pipes from freezing by allowing the faucets to drip slightly. Also, leave the sink cabinet doors open to allow heat inside to the pipes.
3. Do not leave the home or any room without heat during cold weather.

Safe Defrosting of Pipes: Freezing is more likely to occur near an outer wall that is exposed to winter winds.

1. Begin by restoring heat to the affected area.
2. Open all faucets connected to the pipe line so steam can escape during thawing.
3. Begin thawing slowly at the frozen point nearest the faucet. Thaw slowly to prevent formation of steam which can cause pipes to rupture or burst. A heat lamp set at least six inches from plasterboard or wall panel will thaw the pipes behind it. For exposed pipes, use a hair dryer or rent a heat cable to wrap around the pipe.
4. As the pipe thaws, move the source of the heat to the next frozen area until all piping has been defrosted.
5. If drain traps have been affected, pour hot water into the drain until thawed. Do not use boiling water, since pipes can crack from such a drastic temperature change.

MAIN SHUT-OFF VALVE

This is the center of the plumbing system, the point at which the main water line comes into the home. If a major plumbing problem occurs, turn off the main shut-off valve to prevent flooding. It is a good idea to show every family member where the shut-off valve is, explain how to close it in case of an emergency, and to mark it with an easy-to-locate name tag.

WATER SUPPLY VALVES

Most plumbing fixtures in the home have water supply valves to individually shut off the water supply to that fixture for minor repairs and emergencies. Show family members how to operate them and where they are located on sinks, toilets, water heater, washing machine, and laundry tub. Toilet valves are behind the toilet and sink valves are under the sink.

DRAIN TRAPS

Every plumbing fixture in the home is equipped with a drain trap: an S-shaped pipe that holds water and acts as a barrier to keep airborne bacteria and sewer gas fumes from coming back into the home. If a sink or bathtub fixture is not used frequently, turn it on periodically to replace evaporating water and to keep the water trap barrier intact.

HOMEOWNER MAINTENANCE GUIDELINES

Drain traps can be cleaned by putting 3 tablespoons of ordinary washing soda (not baking soda) into the drain. Add a little hot water, let stand for 15 minutes, then flush with hot water. Use a rubber plunger to unclog blocked toilet.

Cautions: Do not pour grease into drains or toilets, or use caustic sodas to open plugged drains. Do not use a plunger when using any drain-cleaning chemicals. When using a chemical drain cleaner, carefully follow the manufacturer's safety precautions and product directions and provide ample ventilation.

SANITARY SEWER LINES

In the final stages of preparing your home for move-in, Riverway tested and flushed the sewer lines to ensure they were clear and working properly.

HOMEOWNER MAINTENANCE GUIDELINES

Do not put hair, grease, lint, garbage, heavy tissue, disposable diapers, or sanitary materials into the sewer system.

When operating the garbage disposal always use a generous amount of cold water to keep the sink drain clear and the disposal motor cool.

SOLUTIONS TO COMMON PLUMBING SYSTEM PROBLEMS		
Problem	Likely Cause	Solution
Main sewer line clogged.	Blockage in pipe	Call plumbing contractor.
Water leaks at drain pipes	Loose fittings	Tighten fittings.

PLUMBING FIXTURES

INTRODUCTION

The plumbing fixtures in your Riverway home include the water heater, sump pump, bathtubs, showers, toilets, and sinks.

Note: As equipment technology changes frequently, the manufacturer's service manuals will supersede all recommendations and procedures contained in this Manual.

Warranty Caution: Any addition, alteration, or modification to the water heater, or plumbing fixture installation, unless performed by a licensed plumbing contractor, may void all applicable warranties.

Manufacturer Warranties: The water heater in your home is protected by manufacturer warranties that may extend beyond Riverway's First Year Warranty Coverage. Should you experience problems that the manufacturer warrants beyond the first year of occupancy, please contact the plumbing contractor listed in Riverway's Homeowner Warranty Directory.

Pre-Settlement Orientation Check List: Carefully examine all bathtubs, showers, toilets, and sinks during the Pre-Settlement Orientation. Scratches, chips, and cracks will not be repaired after occupancy unless specifically noted on the Pre-Settlement Check List.

WATER HEATER

The electric or gas water heater is equipped with an automatic temperature and pressure-relief valve, a safety feature that opens and releases excessive pressure or heat build-up. Should this occur, water will flow from the tank until both temperature and pressure are reduced to safe levels.

HOMEOWNER MAINTENANCE GUIDELINES

Hot Water Temperature: Water temperatures ranging from 125°F to 145°F are pre-set at the factory, as specified in the manufacturer's service manual. While lower settings reduce utility operating costs, bear in mind that dishwashers do not operate properly with settings below 125°F. Most gas water heaters feature a "vacation setting" switch to reduce costs while you are away, without completely shutting the water heater off.

Do not store combustible items, oily rags, clothing, brooms, or dust mops near the water heater, since this obstructs air flow and presents a potential fire hazard.

Scale: Small amounts of scale deposits will collect and settle to the bottom of the water tank. Remove this residue by periodically draining 5 to 10 gallons of water from the tank. For electric water heaters, shut off the power first using the appropriate circuit breaker in the electrical panel box. Then open the valve at the bottom of the water heater, allowing a quart or two of residue to drain out until the water runs clear. For gas water heaters, drain out one gallon.

If you live in a hard-water region, a water softener will reduce the need for more frequent draining.

Do not completely drain an electric water tank without first shutting off the water heater circuit breaker. Otherwise, the heating element will burn out.

SUMP PUMP

The sump pump, if your Riverway home has one, is part of a drainage system designed to carry moisture away from the underside of the home. The pump pit is located in a trench area just beneath the foundation. As water accumulates in the pit, the pump automatically turns on and pumps the water out and away from the house. Always disconnect the sump pump electrical connection before doing any work or repairs.

PORCELAIN FIXTURES

Toilets and porcelain-on-steel bathtubs are made with vitreous china or finished with porcelain.

HOMEOWNER MAINTENANCE GUIDELINES

To clean, use a non-abrasive spray cleanser and sponge. Dropping heavy objects onto porcelain can chip or crack the surface and may produce permanent staining. Do not leave steel wool pads on sink surfaces, as they will rust and stain the finish.

Be aware that continuous-action toilet bowl cleansers placed in the toilet water tank can prematurely wear out the rubber tank flapper and discolor the bowl.

KITCHEN SINK

HOMEOWNER MAINTENANCE GUIDELINES

For routine cleaning, use a non-abrasive household cleanser with warm water and a sponge. Do not scrape the surface with utensils, pots or pans. Do not leave leftovers in sink or drainer, particularly tea bags, which contain harmful acids. Washing soda, not baking soda, should be added to the drain to keep it grease- and soap- free.

Do not clean stainless steel sinks with steel wool or metal brushes, and do not leave rubber mats in the sink, since they trap water and produce surface discoloration. To restore luster to stainless steel, apply a small amount of mineral oil with a soft cloth, then wipe dry.

BATHROOM SINKS

HOMEOWNER MAINTENANCE GUIDELINES

Sink surfaces can be easily chipped and stained, so treat accordingly. Prevent hair accumulation clogs by periodically removing the stopper for cleaning. Avoid setting lit cigarettes on the edge of the sink, as they will burn and permanently damage the surface.

BATHTUBS AND TUB-SHOWER COMBINATIONS

HOMEOWNER MAINTENANCE GUIDELINES

Cleaning: Clean porcelain-on-steel bathtubs, fiberglass tub-shower combinations, and shower stall floors with warm water and a non-abrasive cleanser. Clean glass shower doors with a commercial glass cleaner. Check bathtub stoppers and shower floor drain grates for hair accumulation.

Do not step into a bathtub or tub-shower with shoes on. Gritty particles adhere to shoe soles and will scratch the enamel.

Re-Caulking of Tubs and Showers: Over time, cracks and separations between tub or shower stall and wall surfaces or bathroom floors will appear. Maintaining these areas is critical, since excessive moisture can severely damage underlying materials.

It will be necessary to re-apply a tub-and-tile caulk when the previous caulking has dried out or eroded. To re-caulk the area, use a tub-and-tile caulk available in local hardware stores. Do not use a clear silicone caulk. Begin by removing the old caulk and cleaning the area. Once the area is dry, apply fresh caulking to fill the vacant space, and then smooth out the finish with a wet finger.

INTERIOR FAUCETS

Interior faucets are either single-lever faucets or washer faucets.

HOMEOWNER MAINTENANCE GUIDELINES

Single-Lever Faucets: The single-lever kitchen and bath faucets are low-maintenance, washer-less faucets. Should the cartridge ever need to be replaced, turn off the water supply at the main shutoff unless individual valves are provided at the fixture. Then remove the handle assembly and unscrew the cartridge. Take the cartridge to a local plumbing supplier and match accordingly, being sure to follow installation instructions.

Washer Faucets: A washer faucet has a shut-off feature that requires light closing pressure to stop the flow of water. Do not apply too much pressure, since washers can be damaged.

Faucet Aerators: Screened aerators screw into the spout of a faucet to add air to the flowing water and to reduce splashing and water consumption. Aerators are easy to remove for periodic cleaning, and this should be done every three to four months.

Washer Replacement: Dripping faucets can dramatically increase water bills and represent the loss of a valuable natural resource. Over time, all washers will wear out and must be replaced. Neglecting to change washers may cause damage to the valve seat or to the entire faucet. Many homeowners prefer to do this simple replacement procedure themselves.

1. Turn off the water supply at the main shutoff, unless individual valves are provided at the fixture.
2. Using a wide-jaw wrench, remove the hexagonal cap from the top of the faucet assembly. This may take a turn or two.
3. Remove the inside part, turn it upside down, and you'll see a fiber washer held by a screw through its center. This is the source of the leak. The screw will remove easily, but the washer itself may take a little prying to remove.
4. Match the new washer to the worn-out washer and replace it. Re-use the same screw if it is in good condition. Then re-assemble the faucet.

EXTERIOR HOSEBIBS

All Riverway homes equipped with exterior faucets will require winterizing.

1. Open all exterior faucets and allow water to run.
2. Close shutoff valve for each exterior faucet.
3. Open bleeder(s) on side of shut-off valve(s).
4. Verify that water flow has stopped at all exterior faucets.
5. Trip vacuum breaker (if present) on each exterior faucet.
6. Close bleeder(s).

Water Back-Flow Prevention: Some Riverway homes have a vacuum breaker installed on the exterior hose faucet. This device prevents back flow and stops contaminated water from flowing back into the home water supply system via the garden hose. These devices are plumbing code requirements and may not be removed.

With a vacuum breaker installed, it is normal to hear a humming or vibrating noise throughout the home when the exterior faucet is in use. This is caused by the array of washers built into the back-flow preventer and is not cause for concern.

SOLUTIONS TO COMMON PLUMBING FIXTURES PROBLEMS		
Problem	Likely Cause	Solution
No hot water from electric water heater.	Tripped circuit breaker.	Check and reset circuit breaker.
No hot water from gas water heater.	Temperature setting too low. Pilot light is out.	Adjust temperature setting. Re- light pilot light.
Hot water runs out quickly.	Temperature adjustment on water heater set too low.	Call plumbing contractor for adjustment.
Hot water recovery is slow.	Burnt-out heating element.	Call plumbing contractor.
Toilet runs constantly.	Water level in tank is too high.	Adjust float arm stem in toilet water tank downward.
Toilet makes loud noise when flushed.	Ball cock in water tank is not working properly.	Replace ball cock in toilet water tank.
Toilet backing up and/or overflowing.	Obstruction in line.	Turn toilet intake valve off and plunge toilet.
Slow-draining sink or bathtub.	Blockage, such as hair, at drain.	Remove hair or blockage.
Water flow from faucet is reduced.	Aerator at tip of faucet is clogged.	Unscrew aerator screen and rinse thoroughly.
Water splatters out of faucet.	Air in water supply line.	Open all faucets in home for five minutes.
Water leaking from under sink.	Loose plumbing fitting(s).	Hands tighten coupling(s) on drain pipes.
Water dripping from shut-off valves.	Loose packing unit.	Open valve all the way, then gently tighten nut.
Garbage disposal clogged.	Obstruction in disposal.	Use disposal wrench in bottom of disposal.
Garbage disposal will not operate.	Tripped circuit breaker.	Check reset button on the bottom of disposal unit.

ROOFING, GUTTERS AND DOWNSPOUTS

INTRODUCTION

The roof of your Riverway home is constructed with roofing felt, shingles, flashing, ridge vents, gutters and downspouts. These materials are installed following manufacturer's guidelines and product specifications.

It is impossible for manufacturers to avoid differences in color shades, even with the same factory run of the same color of shingle. Color variations are usually imperceptible, do not affect durability, and are not Riverway's responsibility.

The appearance of the roof sheathing and the finished product will show cosmetic imperfections during certain times of the day and during different weather conditions. This is caused by the expansion and contraction of the wood materials, producing depressions between trusses and a waving pattern among the singles. These conditions do not interfere with structural integrity and will not be repaired or replaced.

Shingle Repair Note: Riverway cannot ensure that shingle repairs requiring new material will match the color of the existing material. Color variations caused by weathering effects are normal.

Manufacturer Warranties: Shingles are protected by manufacturer warranties that may extend beyond Riverway's First Year Warranty Coverage. Should you experience problems that the manufacturer warrants beyond the first year of occupancy, please contact the manufacturer directly. Neither the shingle manufacturer nor the roofing contractor provides warranty coverage should the shingles come loose or detached by winds in excess of 54 miles per hour. Winds this powerful are considered "Acts of God" and repairs may be covered by homeowner's insurance.

SHINGLES

Roofing felt is attached to the roof sheathing and shingles are laid over the felt. A fiberglass or asphalt shingle has a mastic or glue applied to it that, when warmed by the sun, automatically seals the upper shingle to the one beneath it.

HOMEOWNER MAINTENANCE GUIDELINES

Shingle Inspections: Severe winds may cause some shingles to lift slightly; however, they will settle back into position during warmer weather. Visually check the roof (from the ground) after bad storms to determine if shingles are torn, broken, or missing, and have a roofing contractor immediately replace them to prevent water penetration and damage.

Antenna Precautions: Do not walk on the roof except when absolutely necessary. Do not nail objects to the roof or face-nail loose shingles. Seal fasteners holding television antennas with caulk.

FLASHINGS

Roof flashings are sheet metal trims used around roof openings on chimneys, vents, valleys, and skylights. Their purpose is to channel water onto the shingles.

ROOF VENTS

The roof vent is located at the peak or top ridge of the roof and serves to ventilate the heat that builds up in the attic. As the hot air rises out of the roof vent, cooler air is drawn into the attic through the soffit vents. Keep obstructions away from the vent openings.

SKYLIGHTS

See Skylights in *Window* section

GUTTERS AND DOWNSPOUTS

Gutters prevent water from seeping into the interior wall of the home, channeling rain water run-off from the roof to downspouts that guide the water to ground-level drainage areas. Some standing water is to be expected in gutters, but should not exceed 1/2 inch in depth. Splash blocks or drain lines located at the downspouts divert water away from the foundation. See *Water Infiltration and Condensation* section.

HOMEOWNER MAINTENANCE GUIDELINES

Gutters and downspouts should be inspected and cleaned annually by a gutter cleaning service. They will check for holes and leakage, make necessary repairs, and clear the gutters of accumulated debris such as leaves, twigs, branches, balls, and other objects. Using gutter screens will also help reduce accumulated gutter debris.

Gutters need to slope slightly downward to channel water to the downspout. Splash blocks should be properly positioned at the bottom of the downspout to direct water away from the foundation. Finally, the soil grade must slope away from the home. See Grading in the *Landscaping and Grading* section.

The best time to inspect and clean the gutters is in the fall, since the most serious damage can occur during winter. Ice build-up at gutters can pull gutters loose from the home and may also cause water to back up under the shingles and leak into the home.

Warranty Caution: Riverway is not responsible for roof, gutter, downspout, or related damages caused by ice or snow build-up, high winds, or severe storms. You may wish to discuss coverage for weather-related damage with your insurance agent when selecting a homeowner's policy.

CONDUCTORS

In some areas, downspouts drain into conductor pipes that penetrate the ground. Ground settlement may separate the conductor from the downspout and must be reconnected to prevent improper drainage and a wet basement. If gutters are connected to conductors that drain through to the street curb, keep the outlet open and free of ice, snow, and debris.

SOLUTIONS TO COMMON ROOFING, GUTTER & DOWNSPOUT PROBLEMS

Problem	Likely Cause	Solution
Roof leakage.	Gutters plugged up.	Clean gutters and downspouts.
Roof leakage.	Loose flashing. Loose pipe collars.	Secure and re-seal flashing and pipe collars.
Roof leakage.	Loose or missing shingles and/or ridge vents.	Secure and/or replace loose or missing shingles/ridge vents.
Roof leakage.	Hole in gutter or downspout.	Inspect, locate, and repair.
Roof leakage.	Rain blowing into vents.	Normal during severe storms.
Skylight leakage.	Loose flashing. Caulking deteriorated.	Secure flashing. Inspect and re-caulk.
Shingles not laying flat.	Fastener loose.	Re-nail and re-seal shingle.

WATER INFILTRATION AND CONDENSATION

WATER INFILTRATION

HOMEOWNER MAINTENANCE GUIDELINES

Controlling Foundation Water Infiltration: The following guidelines, when implemented, will help control and prevent water infiltration problems.

1. Keep gutters and downspouts free of blockage from leaves or other debris. If gutter seams leak, apply a gutter sealant available at hardware stores.
2. Keep splash blocks directly beneath downspout openings and position them so that run-off water is channeled away from the foundation
3. Ensure that downspouts which drain into a conductor are connected.
4. Water infiltration problems caused by improper grade should be immediately corrected by the homeowner. Immediately fill soil depressions that form close to the foundation with dry dirt. Do not change the established drainage pattern when landscaping. Ensure that drainage away from the foundation is definite, yet gradual.
5. Do not spray the foundation directly with lawn sprinklers. Make certain that hose fittings are firmly secured and not leaking at the hose bib connection.
6. Do not plant trees and shrubs too close to the foundation. Check with a landscape contractor or nursery to determine the root characteristics of plantings so that root growth will not undermine the foundation or driveway surfaces. Be aware that new plantings require substantial amounts of water and those plants too close to the foundation will place additional moisture against the walls.

Window Wells: If water collects in a window well, damp spots on basement walls may appear or basement windows may leak. For proper drainage, keep the bottom of the window well clear of leaves and debris. See Grading in the Landscaping and Grading section.

CONDENSATION

Condensation or the appearance of moisture that occurs when warm, moist air comes into contact with a colder surface is most prevalent in new homes, especially during the first year. This is caused by the large quantities of water used to build the home, from the concrete foundations to the paint on the walls. As this water evaporates and the drying-out process occurs, the moisture takes the form of condensation on interior windows, basement walls, and plumbing pipes.

For homes built during winter, the exterior frozen ground will hold moisture longer than dry or wet ground. As the ground thaws, this moisture can raise the level of humidity in the surrounding basement air, causing even more condensation

Another source of indoor humidity is everyday water usage. For example, a family of four doing the laundry, bathing, and running the dishwasher puts approximately two to five gallons of moisture into the air every day.

Window condensation is produced by conditions beyond Riverway's control and is not covered. See Bathroom Maintenance in the *Bathroom* section and Moisture Control in the *Concrete* section.

HOMEOWNER MAINTENANCE GUIDELINES

Ventilation: Proper ventilation is the safe and steady way to reduce indoor humidity and condensation

1. Open basement windows during warm, dry weather and close them when outside humidity is high.
2. Ensure that the clothes dryer is properly vented to the outside and that the vent is clear of obstructions and lint.
3. Kitchen, bath, and utility exhaust fans can be used to carry moist air outside. Use the fans when cooking or bathing.
4. Adjust the registers to maintain even temperatures throughout the home.
5. If your home is equipped with a humidifier, make the proper adjustments.
6. Do not use kerosene space heaters or any other type of un-vented gas heater. These devices add significant amounts of moisture to the air.
7. Do not try to speed up the evaporation process by creating extremely high temperatures in the winter. This will cause the house to dry out unevenly, creating cracks and other problems.

Humidity: Watch your humidity level closely. It is a non-warranted item! Because new energy codes require a house to be built tighter, there is more chance of condensation build-up and damage to your home. The following is the professionally recommended proper humidity levels by the University of Minnesota:

<u>Outside air temperature</u>	<u>Inside relative humidity for 70F indoor air temperature</u>
-20 degrees F or below	Not over 15 percent
-20 degrees F to -10	Not over 20 percent
-10 degrees F to 0	Not over 25 percent
0 degrees F to 10	Not over 30 percent
10 degrees F to 20	Not over 35 percent
20 degrees F to 40	Not over 40 percent

SOLUTION TO COMMON WATER INFILTRATION & CONDENSATION PROBLEM		
Problem	Likely Cause	Solution
Water enters at window well.	Debris in well. Heavy rains.	Clean debris out. Check pitch of splash block and grade.
Water drips behind insulation around basement perimeter.	Condensation	Open heating vents in winter. In summer, use a dehumidifier.
Wet basement floor or walls.	Altered grade. Clogged areaway drain or gutters.	Correct grade. Clear debris from drains and gutters.
Water is present around furnace unit.	Condensation line is clogged or misaligned to drain.	Snake out and clear line. Realign pipe to floor drain.
Frost build-up on windows.	High humidity inside combined with cold outside temperatures.	Open heat registers near windows. Turn down humidifier.

WINDOWS

INTRODUCTION

The windows in your Riverway home are made of double-pane, insulated glass to minimize energy loss and are framed in aluminum or vinyl-clad wood.

Pre-Settlement Orientation Check List: Carefully examine all windows and glass during the Pre-Settlement Orientation. Glass that is broken, scratched, or chipped will not be repaired after occupancy unless specifically noted on the Pre-Settlement Check List.

Be aware that high indoor humidity, in combination with extremely cold weather, can turn window condensation into ice. Do not forcefully open windows or patio glass doors that freeze shut, as this will bend the frames and tracks.

Window Screens: Window screens are provided with every Riverway home and their sole purpose is to help prevent insects from coming inside when the windows are open. Window screens may be washed and rinsed using a mild household detergent.

SAFETY CAUTION: Window screens will not prevent children from falling through open windows to the ground below. The screen is not a barrier, and the fastening system for the screen will not support any weight beyond the screen itself. Riverway strongly advises that homeowners never allow children near an open screened window, or place any weight on, or push against a window screen. Similarly, do not place furniture near windows so that children have easy access to the window.

SOLUTION TO COMMON WINDOW PROBLEMS

Problem	Likely Cause	Solution
Aluminum window binds or is difficult to open.	Broken window balance.	Replace balancer.
Aluminum window will not stay open.	Weak window balancer.	Replace balancer or adjust tension rod.
Aluminum window will not slide up or down.	Tension rod jammed.	Call Riverway for inspection.
Aluminum window sash comes out when fully opened.	Tension rod clips on side jambs left in open position.	Position clips in closed position before opening.
Aluminum or vinyl-clad window will not lock properly.	Window not square.	Call Riverway for inspection.
Vinyl-clad window binds or is difficult to open.	Paint or dirt on vinyl jambs.	Clean jambs and spray with silicone.
Condensation between insulated glass surfaces.	Insulated glass seal is broken.	Replace glass panel or sash.
Condensation on inside surface of window.	High humidity inside home.	Reduce humidity with exhaust fans and dehumidifier.