LOGAN
HOMES

Logan Homes
Performance Guidelines
and 10-Year Limited Warranty

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LOGAN HOMES
Performance Guidelines and Warranty - How It Works

Welcome to the Logan Homes family.
We understand this can be a stressful time as you have been focused creating your dream home on the perfect lot, just right, just for you. To hopefully relieve some of the stress and anxiety that comes with this process, Logan offers this detailed and comprehensive warranty program to all of its homeowners.

How it works:
When you sign your contract to purchase a Logan Home, you will be presented with The Logan Homes Warranty Booklet. You will automatically be enrolled in the Logan Homes 10-Year Limited Warranty just after Final Settlement on your home.

Who do I contact with questions?
From Final Settlement through year ten, contact Logan Homes Warranty at (910) 332-3320, for homes in North Carolina email warranty@loganhomes.com, for homes in South Carolina email scwarranty@loganhomes.com.

First Year: The first year of the Logan Homes 10-Year Limited Warranty is guided by the Year One Limited Warranty Performance Guidelines. This comprehensive resource outlines measurable performances standards for most of the workmanship and materials in your new home as established by the National Association of Home Builders and industry best practices. This document will guide our actions during the 10 years of your warranty with Logan Homes. If a material or any workmanship in your home is not performing as described in the Performance Guidelines, we will address it, as noted in the applicable section. (Some equipment, appliances, etc. are covered by manufacturer's warranties and are not covered by the Logan Homes 10-Year Limited Warranty. These will be assigned to you at Final Settlement.)

- At Final Settlement – Logan Homes 10-Year Limited Warranty starts.
- 90 Days after final settlement – Logan Homes Warranty Department will initiate a meeting with you in your home to review any questions or concerns.
- 12 months after final settlement – First year of Logan Homes 10-Year Limited Warranty concludes.

Years 2-10: The second through tenth years of the Logan Homes 10-Year Limited Warranty are guided by the Years 2-10 Limited Warranty Performance Guidelines. This comprehensive resource outlines measurable performances standards for most of the workmanship and materials in your new home as established by the National Association of Home Builders and industry best practices. This document will guide our actions during the 10 years of your warranty with Logan Homes. If a material or any workmanship in your home is not performing as described in the Years 2-10 Limited Warranty Performance Guidelines, we will address it. Please note that years two through ten of the Logan Homes 10-Year Limited Warranty covers only those structural defects that are not performing as described in the 2-10 Year Performance Guidelines. Issues not described in the 2-10 Year Performance Guidelines are not covered by the Logan Homes 10-Year Limited Warranty.

How It Works (cont.)

What is covered under Years Two through Ten of the Logan Homes 10-Year Limited Warranty?

Years Two through Ten of the Limited Warranty covers only damage to major structural items (actual physical damage to load-bearing segments of the home) and only such damage caused by failure of such load-bearing segments which affect their load-bearing functions to the extent that the home becomes unsafe or unlivable. This includes actual physical damage to the following load-bearing segments where conditions fall outside the acceptable Years 2-10 Limited Warranty Performance Guidelines:

- Columns;
- Bearing walls and partitions; Floor systems (structural slabs, joists and trusses only);
- Roof framing members and systems (rafters and trusses only);
- Foundation systems and footings (which are an integral part of the home and structurally attached);
- Load-bearing beams;
- Girders;
- Lintels (other than lintels supporting veneers).

Examples of non-load-bearing elements which are not considered major structural segments include, but are not limited to:

- Brick, stucco, or stone veneer;
- Finish flooring material and floor coverings;
- Plaster, lathes, or drywall;
- Wall tile or paper and other wall coverings;
- Non-load-bearing partitions and walls;
- Doors, windows, trim, cabinets, hardware, insulation, paint, stains;
- Appliances, fixtures or items of equipment;
- Heating, cooling, ventilating, plumbing, electrical, and mechanical systems;
- Roof shingles, tar paper, all sheathing and other surfacing material;
- Any type of exterior siding;
- Concrete floors;
- Decks and porches;
- Water seepage in basement or crawl space after the first year of coverage.

Logan Homes' Reservation of Rights and Defenses Under the Applicable Law

Please review the Warranties section of your contract, which is incorporated herein by reference, for further information. The Logan Homes 10-Year Limited Warranty is in no way to be construed to expand or otherwise toll the applicable statute of limitations or statute of repose in North Carolina or South Carolina. Logan Homes reserves all rights and defenses under North Carolina and South Carolina law as it relates to any and all claims or lawsuits that may arise from its Projects, its Work, and the work of its contractors and subcontractors. Issues not described in the 2-10 Year Performance Guidelines are not covered by Logan Homes 10-Year Limited Warranty.

How It Works (cont.)

What is Excluded from Coverage by the Logan Homes 10-Year Limited Warranty?

• Damages or losses not caused or created by Logan Homes or its employees, agents, or subcontractors, but resulting from accidents, riots, civil commotion, acts of God or nature, including but not limited to, fire, explosion, smoke, water escape, changes in the underground water table (underground springs, etc.), wind storms, hail, lightning, fallen trees, aircraft, vehicles, floods, earthquakes, mudslides, wind driven water, reflection of the sun, or volcanic eruptions.

• Any deficiencies in or damage cause by material or work supplied by anyone other than Logan Homes or its employees, agents, or subcontractors.

• Loss or damage resulting from the purchaser's failure to minimize such loss or damage or to notify Logan Homes as provided herein.

• Normal deterioration or normal wear and tear.

• Losses or damages to or resulting from defects in improvements which are not part of the house, defects in outbuildings, such as detached garages and carports, swimming pools, detached recreational buildings and facilities, defects in driveways, walkways, streets, street creep, patios, decks, boundary and retaining walls, bulkheads, fences, lawn sprinkler/irrigation systems and landscaping of all types, including damage to trees, etc. during the course of construction, French drains, sink holes and dry rot.

• Soil movement, including subsidence, expansion or lateral movement of the soil, which is covered by any other insurance or for which compensation is granted by legislation or public funds. Any loss or damage caused by buried debris or other conditions, which were not reasonably foreseeable on a building site. Any damage resulting from any defect which is covered by any other insurance or for which recovery is granted by legislation or public funds.

• Following Year One, loss or damage resulting to or from concrete floors of basements, attached garages and chimneys and other structural elements of the home that are not part of the load-bearing structure of the home, also excluded after Year One are losses or damages resulting to or from all components of structurally attached decks, balconies, patios, porches, porch roofs and porticos.

• Any loss or defect, which arises when the home is used for nonresidential purposes.

• Losses resulting from damages to real property other than to the home itself.

• Damage caused by insects, squirrels or other animals or rodents.

• Loss or damage resulting from, or aggravated by changes to the real property, by anyone.

How It Works (cont.)

• Any claim reported to Logan Homes after an unreasonable delay or later than thirty (30) days after expiration of applicable warranty on that item.

• Loss or damage resulting from, or aggravated by, or occurring to modifications or additions to the home made after occupancy (other than those performed to meet the obligations of the applicable Limited Warranty).

• Personal property damage or bodily injury or punitive damages and/or legal fees.

• Loss or damage resulting from, or aggravated by, dampness or condensation caused by negligence of the purchaser not maintaining proper ventilation.

• All consequential damages, including but not limited to costs of shelter, transportation, food, moving, storage or other incidental expenses related to relocation during repair. Excluded consequential damages also include other incidental expenses related to relocation during repair. Excluded consequential damages also include damage resulting from non-covered or expired items, such as wood rot from water infiltration reported to Logan Homes after Year One.

• Any defect which does not result in actual physical damage to the home.

• Any defect, damage or loss which is caused or aggravated by failure of anyone other than the Builder, his agents, employees or subcontractors to comply with the manufacturers' warranty requirements concerning appliances, fixtures or equipment.

• Failure of Logan Homes to complete construction of the home or any part of the home on or before the effective date. An incomplete item is not considered a defect.

• Loss or damage resulting from toxic or carcinogenic or suspected carcinogenic fumes or substances, such as, but not limited to, acids in the soil, radon, radon gas, radon daughter, or mold.

• Water infiltration into a basement or crawl space after year one.

• Loss or damages resulting from, or aggravated by, negligent maintenance or operation.

• Any loss or damage resulting from the weight and/or performance of any type of waterbed or other furniture excessive in weight or other abnormal loading of floors.

• Any loss or damage resulting from a loss in the water supply, or potability or clarity of water supply.

• Solar panel systems or their installation or operation.

How It Works (cont.)

• Standing or ponding water on the property, which does not directly affect the immediate area surrounding the foundation of the home.

• Following Year One, any deficiencies in fixtures, appliances, and items of equipment, whether or not components of the cooling, ventilating, heating, electrical, plumbing or sprinkler systems. During Year One, coverage on fixtures, appliances, and items of equipment (including attachments and appurtenances) is for one year or the manufacturer's written warranty period, whichever is less. Damage caused by improper maintenance or operation, negligence, or improper service of such systems by the Purchaser or its agents will not be covered by this Limited Warranty.

• Loss or damage resulting from a condition not resulting in actual physical damage to the home, including un-inhabitability or health risk due to the presence or consequences of unacceptable levels of radon, formaldehyde, carcinogenic substances or other pollutants and contaminants; or the presence of hazardous or toxic materials.

• Loss or damage caused directly or indirectly by flood, surface water, waves, tidal water, overflow of a body of water or spray from any of these (whether or not driven by the wind), water which backs up from seers or drains, changes in the water table which were not reasonably foreseeable, or water below the surface f the ground (including water which exerts pressure on or seeps or leaks through a building, sidewalk, driveway, foundation, swimming pool, or other structure), wetlands, springs or aquifers.

• Violations of applicable building codes or ordinances, original dwelling plans and specification.

• Soil erosions and run-off caused by failure of the purchaser to maintain the property established grades, drainage structures and swales, stabilized soil, sodded, seeded, and landscaped area.

• Any defects caused by or resulting from improper design of the home.

• Any storm water or soil erosion/sedimentation control requirements that are approved previously by the local governing jurisdiction for development.

• Any glass breakage or failure of Logan Homes to perform any type of clean-up.

• Violations of local or National Building Codes and Ordinances.

• Loss or damage caused by or to roof sheathing after one year from the effective date of warranty.

• Since this warranty covers only those defects which occur following Final Settlement, any homeowner-acknowledged, pre-existing conditions, such as "walk through" or "punch list" items are not covered.

How It Works (cont.)

• All cosmetic issues, including but not limited to cuts, tears, holes, cracks, stains, scratches, dents, chips on ANY finished products including walls, ceilings, trim, painted surfaces, floors, carpet, vinyl, hardwood, tile, appliances, mirrors, shower doors, countertops, cabinets, windows, screens, doors, door hardware, sinks, tubs, showers, plumbing fixtures, fireplace, mantle, surround, and electrical fixtures.

• The removal and or replacement of items not originally installed by Logan Homes where removal and replacement are required to repair a defect.

Standards of Performance

Please note that for work that is covered under the Logan Homes 10-Year Limited Warranty the choice as to the scope of repair, the repair technique, or replacement versus the cost of repair is Logan Homes' choice alone. When we undertake to repair or replace subject to the Logan Homes 10-Year Limited Warranty, we try to match colors, dyes, patterns, materials, finishes, etc. Please note that fading, changes in color lots or discontinued patterns may prevent us from providing an exact match.

Cooperation

You must reasonably cooperate with Logan Homes, its employees, agents, and subcontractors in investigating, monitoring or correcting identified, issues covered by the Logan Homes 10-Year Limited Warranty. This includes providing Logan Homes, its employees, agents, and subcontractors with reasonable access to your home.

Self-Incurred Expenses/Voluntary Payments

Logan Homes is not responsible for any and all voluntary payments, obligations, or expenses you have incurred for the remedy of a condition you believe is covered under the Logan Homes 10-Year Limited Warranty. Logan Homes will not reimburse you for costs incurred where you did not obtain Logan Homes' prior written approval UNLESS repairs were made in response to an emergency condition (an event or situation that creates the imminent threat of damage to the home or the common elements related thereto, or results in an unsafe living condition that you become aware of at a point in time other than Logan Homes' normal business hours) for the sole protection of the home from further damage, provided you notify Logan Homes as soon as possible but no later than five (5) days after the repairs were undertaken, and provide Logan Homes with an accurate and itemized written record of the repair costs.

Repairs By Others without Notice to/Approval by Logan Homes

Should you elect to have repairs or other work performed on your home during the warranty period without first providing notice to Logan Homes, allowing Logan Homes an opportunity to inspect any alleged defect or other condition you contend requires repair or remediation and perform any related repair/remediation work deemed necessary and covered under the provisions of this warranty by Logan Homes, or obtaining Logan Homes' approval of the subcontractor performing the work and the scope of the work, this warranty shall not provide coverage for any future repair work related to the component(s) of the home upon which work was performed by others without notice to Logan Homes and Logan Homes' approval and shall void the warranty as to the component(s) of the home upon which the work was performed by others.

How It Works (cont.)

Please review the Warranties section of your contract, which is incorporated herein by reference, for further information.

Non-Transferable

The Logan Homes 10-Year Limited Warranty is not transferable and will automatically terminate if the home is vacated, or sold by the original homeowner.

Frequently Asked Questions

What if I need to reschedule my warranty walk-thru?
You may contact the warranty administrator to request an alternate date/time for your walk-thru up to 1 week from the original walk-thru date.

What if I am unable to attend my warranty walk-thru or if I cannot be present while warranty work is being performed?
Logan Homes requires that the home owner or an authorized representative be present during any Warranty Service and available to inspect and sign off when work is complete. We know some of our customers live out of town or have out of town obligations, and traveling back and forth for warranty service may be inconvenient. However, we believe there is great value in the 90 day warranty service visit, and Urgent Requests may arise unexpectedly and require prompt attention. While we strongly advise against assigning 3rd party representatives whereby miscommunications or confusion may occur, you as the home owner may assign an Authorized Warranty Representative to manage Warranty Service in your absence. Logan Homes cannot be held responsible for errors, omissions or delays in Warranty Service as a result of miscommunications when there is a 3rd party involved. Our goal is to provide quality warranty service that meets and exceeds your expectations. Every effort will be made to communicate thoroughly with all the parties involved.

Any time delay in the 90 day warranty service resulting from owners/representatives inability to attend will result in the forfeiture of your 90 day warranty service. Logan Developers, Inc. employees are not authorized to be your 3rd party representative at any time throughout your warranty period.

You may contact the warranty administrator to complete an Authorized Warranty Representative form.

What should I do if I discover a warranty issue after my 90 day walk-thru appointments?
You may report a warranty issue at any time. If the issue is deemed “Urgent” it will be addressed in a timely manner. If the issue is deemed “Non-Urgent” it will be noted in your records and addressed during the final month of your warranty.

What is considered an urgent request?
An urgent issue is defined by any condition that creates a safety or security risk and/or could result in further damage to the home, property or surrounding properties. The following are some examples of conditions that Logan Homes would consider urgent:

- Water leaks inside the house (roof, plumbing, etc.)
- Total stoppage of the plumbing drain system
- Total loss of water (contact your utility company first, then Logan Homes)
- Total loss of heating or air conditioning
- Exterior doors/windows not closing or locking
- Standing water in the yard (please see Section 1-0-2 for performance guideline)

Can I get a list of contractors to contact for warranty repairs?
Logan Homes does not provide a list of contractors for homeowners to contact directly. Homeowners are required to contact Logan Homes Warranty Department with warranty requests to ensure proper documentation, contractor accountability and follow up by Logan Homes warranty department to confirm the work has been completed.

SECTION 1: Site Work

1-0-1

Observation: The ground has settled around the foundation, over utility trenches, or in other areas.

Performance Guideline: Settling of ground around foundation walls, over the utility trenches, or in other filled areas shall not interfere with water drainage away from the home.

Builder Action: If the contractor provided final grading, one time only the contractor will fill areas that settle more than 6 inches and that affect proper drainage.

Homeowner Action: The homeowner will be responsible for removal and replacement of shrubs, grass, other landscaping, pavement, sidewalks, or other improvements affected by placement of such fill.

1-0-2

Observation: The site does not drain properly.

Performance Guideline: To ensure proper drainage in the immediate area around the home, the contractor shall establish the necessary grades and swales within the property if the work is included in the contract. Standing water or ponds of water shall not remain within 10 feet of the home for extended periods in the immediate area of the house after a rain (generally no more than 24 hours), except in swales that drain other areas, a longer period can be anticipated (generally no more than 48 hours). Water may stand longer during periods of heavy rains, especially when heavy rains occur on successive days. No grading determination shall be made while frost or snow is on the ground or while the ground is saturated.

Builder Action: If grading is part of the construction or purchase agreement, the contractor is responsible for initially establishing the proper grades and swales.

Homeowner Action: It is the homeowner's responsibility to maintain such grass and other landscaping and irrigation to help ensure proper functioning of the site drainage system. The homeowner is responsible for maintaining such grades and swales once the contractor has properly established them.

The homeowner is responsible for maintaining storm water drains, gutters and gutter downspouts as part of homeowner maintenance.

The homeowner is responsible for insuring established drainage patterns are not impeded by landscaping, decking,patios, pools, driveways, walls, etc. which the homeowner has installed. Homeowner is not to change the grade of the soil away form the foundation by building planters, raised beds, or other blocking construction. Damage caused by changes in drainage and grading is not covered.

Where a sump pit has been installed by the contractor but the sump pump was not contracted for or installed by us, the homeowner must first install a properly sized pump to determine whether this will correct the condition.

Discussion: Grass and other landscaping are integral components of the storm water management practice needed to minimize erosion from the site.

1-0-3

Observation: The site has soil erosion.

Performance Guideline: The contractor is not responsible for soil erosion due to acts of God, or other conditions beyond the contractor's control.

Builder Action: No action is required. The contractor is not responsible for soil erosion due to acts of God, exceptional weather conditions, site alterations by the homeowner, lack of maintenance by the homeowner, or other conditions beyond the contractor's control.

Homeowner Action: The homeowner may need to install erosion control measures.

1-0-4

Observation: Water from a nearby or adjacent property flows onto the homeowner's lot.

Performance Guideline: The contractor is responsible for providing a reasonable means of draining off the lot water that is created (rain, melting snow, or ice) on the lot, but is not responsible for water flowing from a nearby or adjacent property or on which no dwelling has been erected other than providing proper slopes around newly erected dwellings.

Builder Action: It is the contractor's responsibility to control water only in the immediate area of the new dwelling.

1-0-5

Observation: Existing trees, shrubs, or other vegetation may be damaged in the course of construction.

Performance Guideline: The contractor will review the existing condition of the landscape with the homeowner. The contractor will make a reasonable and cost-effective effort to preserve existing landscaping, but the survival of existing landscape cannot be guaranteed.

Builder Action: No contractor action is needed.

SECTION 2: Foundation

GENERAL

2-0-1

Observation: The foundation is out of square.

Performance Guideline: As measured at the top of the foundation wall, the diagonal of a triangle with sides of 12 feet and 16 feet shall be no more than 1 inch more or less than 20 feet.

Builder Action: The contractor will make necessary modifications to the foundation not complying with the performance guidelines for square-ness to provide a satisfactory appearance. The contractor may square the first-floor deck or walls by cantilevering over the foundation or locating the deck or walls inset from the outside face of the foundation.

Discussion: Square-ness is primarily an aesthetic consideration. The corrective measure emphasizes the primarily aesthetic nature of square-ness and makes the criterion for correction “a satisfactory appearance”. This allows the contractor to make either a structural change or some cosmetic modification as most appropriate.

There are many instances in which the square-ness of a foundation is not of consequence because subsequent construction provides an opportunity to make corrections.

2-0-2

Observation: The foundation is not level.

Performance Guideline: This guideline applies only when the levelness of the foundation adversely impacts subsequent construction. As measured at the top of the foundation wall, no point shall be more than ½ inch higher or lower than any point within 20 feet.

Builder Action: The contractor will make necessary modifications to any part of the foundation or to subsequent construction to meet the performance guideline for levelness. This can be affected by leveling the sills with shims, mortar, appropriate fillers, or other methods.

Discussion: There are many instances in which the levelness of a foundation is not of consequence because subsequent construction provides an opportunity to make corrections.

2-0-3

Observation: There is a crack in a concrete footing.

Performance Guideline: Cracks greater than ¼-inch in width are considered excessive.

Builder Action: The contractor shall repair any cracks in excess of the performance guideline.

INTERIOR CONCRETE SLAB

2-1-1

Observation: A concrete slab within the structure has separated or moved at control (expansion and contraction) joints.

Performance Guideline: Concrete slabs within the structure are designed to move at control joints.

Builder Action: Because this is normal, no corrective action is required.

Discussion: Control joints are placed in concrete for the very purpose of encouraging cracking to take place at the joints instead of in random places.

2-1-2

Observation: Effl orescence is present on the surface of the basement and/or garage floor or walls.

Performance Guideline: This is a typical condition caused by moisture reacting with the soluble salts in concrete and forming harmless carbonate compounds.

Builder Action: If the efflorescence is caused by water leakage (actual flow and accumulation), the contractor will eliminate the leaks into the structure.

Discussion: Effl orescence is evidenced by the presence of a white film on the surface of the concrete. It is a particularly common occurrence where masonry or concrete are in contact with high moisture levels as may be found in basements.

2-1-3

Observation: The concrete floor slab is uneven.

Performance Guideline: Except where the floor or portion of the floor has been designed for specific drainage purposes, concrete floors in living areas shall not have pits, depressions, or areas of unevenness exceeding 3/8-inch in 32 inches.

Builder Action: The contractor will correct or repair the floor to meet the performance guideline.

Discussion: A repair can be accomplished by leveling the surface with a material designed to repair uneven concrete.

2-1-4

Observation: The concrete floor is cracked.

Performance Guideline: Minor cracks in concrete sub-floor and garage floor slabs are normal. Cracks exceeding 3/16-inch in width or 3/16-inch in vertical displacement shall be repaired if the slab is in conditioned space or the crack interferes with the installation of finish flooring.

Builder Action: The contractor will repair cracks that do not meet the performance guideline.

Discussion: Repairs can be made by using a material designed to fill cracks in concrete.

2-1-5
Observation: Interior concrete work is pitting or spalling. Spalling is evidenced by concrete that has flaked or peeled from the outer surface. Pitting is evidenced by concrete that has chipped.

Performance Guideline: Interior concrete surfaces shall not pit or spall.

Builder Action: The contractor will repair defective concrete surfaces using material designed for this purpose.

2-1-6
Observation: The interior concrete slab has a loose, sandy surface. This is called “dusting”.

Performance Guideline: The surface shall not be so sandy as to cause a problem for the finish flooring to be applied.

Builder Action: The surface shall be corrected so as to be suitable for the finish flooring that the contractor had reason to anticipate would be applied.

GARAGE SLAB

2-2-1
Observation: The garage floor slab is cracked.

Performance Guideline: Cracks in a concrete garage floor greater than 3/16-inch in width or 3/16-inch in vertical disposition are considered excessive.

Builder Action: The contractor shall repair cracks in the slab to meet the performance guideline.

Discussion: The repaired area may not match the existing floor in color and texture.

2-2-2
Observation: A garage concrete floor has settled, heaved, or separated.

Performance Guideline: The garage floor shall not settle, heave, or separate in excess of 1 inch from the structure.

Builder Action: The contractor will make a reasonable and cost-effective effort to meet the performance guideline.

Discussion: The repaired area may not match the existing floor in color and texture.

GARAGE, BASEMENT AND CRAWL SPACE:

Concrete Block Walls

2-3-1
Observation: A concrete block garage, basement or crawl space wall is cracked.

Performance Guideline: Cracks in concrete block basement or crawl space and garage block walls shall not exceed ¼ -inch in width.

Builder Action: The contractor will repair cracks to meet the performance guideline.

Discussion: Shrinkage cracks are common in concrete block masonry and should be expected in crawl space and basement walls. Cracks may be vertical, diagonal, horizontal, or stepped-in masonry joints. Repairs can be made by using a material designed to fill cracks in concrete.

2-3-2
Observation: A concrete block wall is out of plumb.

Performance Guideline: Block concrete wall shall not be out of plumb greater than 1 inch in 8 feet when measured from the base to the top of the wall. : If tying into an existing foundation that is out of plumb, the contractor and homeowner will review the existing conditions and scope of work. The contractor will make a reasonable and cost-effective effort to meet performance guideline while complying with the existing building code.

Builder Action: The contractor shall repair any deficiencies in excess of the performance guideline. If the wall is to remain unfinished per contract, and the wall meets building codes as evidenced by passed inspections, then no corrective action is required.

2-3-3
Observation: A concrete block wall is bowed.

Performance Guideline: Concrete block walls shall not bow in excess of 1 inch in 8 feet.

Builder Action: The contractor shall repair any deficiencies in excess of the performance guideline. If the wall is to remain unfinished per contract, and the wall meets building codes as evidenced by passed inspections, then no corrective action is required.

2-3-4
Observation: Effl orescence is present on the surface of the basement or crawl space block.

Performance Guideline: If the effl orescence is caused by water leakage (actual flow and accumulation), the contractor will eliminate the leak into the structure.

Builder Action: The contractor will repair to meet the performance guideline.

Discussion: Effl orescence is a typical condition caused by moisture reacting with the soluble salts in concrete and forming harmless carbonate compounds. It is evidenced by the presence of a white film on the surface of the concrete. It is a particularly common occurrence where masonry or concrete are in contact with high moisture levels and may be found in basements or crawl spaces.

BASEMENT AND CRAWL SPACE:

Poured Walls

2-3-5

Observation: A poured concrete basement wall is out of plumb.

Performance Guideline: Finished concrete walls shall not be out of plumb greater than 1 inch in 8 feet when measured vertically.

Builder Action: The contractor shall repair any deficiencies in excess of the performance guideline. If the wall is to remain unfinished per contract, and the wall meets building codes as evidenced by passed inspections, then no corrective action is required.

2-3-6

Observation: An exposed concrete wall has pits, surface voids, or similar imperfections in it.

Performance Guideline: Surface imperfections larger than 1 inch in diameter or 1 inch in depth are considered excessive.

Builder Action: The contractor will repair holes that do not meet the performance guideline.

Discussion: Pits, surface voids, and similar imperfections are sometimes called “bug holes.” More technically, they are called “air surface voids” and are caused by air entrapped at the concrete and concrete form interface. The technical term for larger voids is “honeycomb” and must be dealt with in accordance with this guideline. One method of repair is to fill the hole or void with a suitable product. The repaired area is unlikely to match the color or texture of the surrounding concrete.

2-3-7

Observation: A poured concrete basement wall is bowed.

Performance Guideline: Concrete walls shall not bow in excess of 1 inch in 8 feet when measured from the base to the top of the wall.

Builder Action: The contractor shall repair any deficiencies in excess of the performance guideline. If the wall is to remain unfinished per contract, and the wall meets building codes as evidenced by passed inspections, then no corrective action is required.

2-3-8

Observation: A poured concrete basement or crawl space wall is cracked.

Performance Guideline: Cracks in poured walls shall not exceed ¼-inch in width.

Discussion: Shrinkage cracks and other cracks are common and are inherent in the drying process of poured concrete walls. They should be expected in these walls due to the nature of concrete. The only cracks considered under warranty claims are cracks that permit water penetration or horizontal cracks that cause a bow in the wall.

2-3-9 . . . . . .
Observation: A cold joint is visible on exposed poured concrete foundation walls.

Performance Guideline: A cold joint is a visible joint that indicates where the pour terminated and continued. Cold joints are normal and should be expected to be visible. Cold joints should not be an actual separation or crack that exceeds ¼-inch in width.

Builder Action: The contractor will cosmetically repair any cold joint that exceeds ¼-inch in width.

2-3-10. . . . . .
Observation: A cold joint is visible in exposed, poured concrete foundation walls.

Performance Guideline: A cold joint is a visible joint that indicates where the pour terminated and continued. Cold joints are normal and should be expected to be visible. Cold joints should not be an actual separation or a crack that exceeds 1/4" in width.

Builder Action: The contractor will cosmetically repair any cold joints to meet the performance guideline, using a material designed to fill cracks in concrete.

2-3-11. . . . . .
Observation: Efflorescence is present on the surface of the poured concrete basement wall.

Performance Guideline: If the efflorescence is caused by basement water leakage, (actual flow or accumulation), the contractor will eliminate the leak into the structure.

Builder Action: The contractor will repair to meet the performance guideline.

Discussion: Efflorescence is a typical condition caused by moisture reacting with the soluble salts in concrete and forming harmless carbonate compounds. It is evidenced by the presence of a white film on the surface of the concrete. It is a particularly common occurrence where masonry or concrete are in contact with high moisture levels as may be found in basements or crawl spaces.

MOISTURE AND LEAKS:

Garage and Basement Floors and Masonry Walls

2-4-1 . . . . . .
Observation: Dampness is evident on masonry walls or the floor.

Performance Guideline: Dampness caused by condensation of water vapor on cool walls and floors is not the responsibility of the contractor.

Homeowner Action: Dampness due to condensation is caused by high moisture content in the air. It is the homeowner's responsibility to control the humidity.

Discussion: The homeowner should maintain proper grade away from the dwelling.

2-4-2

Observation: The basement leaks.

Performance Guideline: Leaks resulting in actual trickling of water shall be repaired. Leaks caused by landscaping improperly installed by the homeowner, or by the homeowner's failure to maintain proper grades, are not the contractor's responsibility. New-construction walls and floors may become damp as concrete, mortar, and other materials dry. Dampness alone is not considered a deficiency.

Builder Action: The contractor will take such action as is necessary to correct basement leaks, except where the cause is determined to result from the homeowner's actions or negligence.

Crawl Spaces

2-4-3

Observation: Water accumulates in the interior crawl space.

Performance Guideline: Crawl space should be graded and proper exterior foundation drains be provided to prevent water from accumulating deeper than ¾-inch and greater than 9 square feet in the crawl space area.

Builder Action: The contractor will take corrective measures to meet the performance guideline. The contractor is not responsible if the exterior grading was provided by the homeowner or the homeowner failed to maintain grades established by the contractor.

2-4-4

Observation: Condensation is evident on the crawl space surface.

Performance Guideline: The contractor shall install the ventilation and vapor barrier as required by the prevailing building code.

Homeowner Action: If the crawl space is ventilated as required by applicable building codes, then the contractor needs to make no further corrective actions. Further reduction of condensation is a homeowner maintenance responsibility.

Discussion: Temporary conditions that cause condensation that cannot be eliminated by ventilation and a vapor barrier may include:

• Night air gradually cools the interior surfaces of the crawl space. In the morning, moisture picked up by sun-warmed air migrates into the crawl space and condenses on cool surfaces.

• At night, outside air may rapidly cool foundation walls and provide a cool surface on which moisture may condense.

• If the house is left unheated in the winter, floors and walls may provide cold surfaces on which moisture in the warmer crawl space air may condense.

• Excessive moisture inside a heated house may reach the dew point within or on the colder bottom surface of vapor-permeable floor insulation. Condensation can be reduced by placing a vapor barrier between the insulation and the floor sheathing. If condensation must be reduced substantially, the homeowner can do so by creating a closed crawl space and dehumidifying or tempering the crawl space, or by heating and dehumidifying the house.

STRUCTURAL COLUMNS, POSTS OR PIERS

2-5-1

Observation: An exposed wood column is bowed or is out of plumb.

Performance Guideline: Exposed wood columns shall not bow or be out of plumb more than ¾-inch in 8 feet at the substantial completion of the project.

Builder Action: The contractor shall repair any deficiencies in excess of the performance guideline.

Discussion: Wood columns may be distorted as part of the drying process. Bows and other imperfections that develop after installation cannot be prevented or controlled by the contractor.

2-5-2

Observation: An exposed concrete column is installed, bowed or out of plumb.

Performance Guideline: Exposed concrete columns shall not be installed with a bow in excess of 1 inch in 8 feet.

Builder Action: The contractor shall repair any deficiencies in excess of the performance guideline.

2-5-3

Observation: A masonry column is out of plumb.

Performance Guideline: Masonry columns should not be constructed out of plumb in excess of 1 inch in 8 feet.

Builder Action: The contractor shall repair any deficiencies in excess of the performance guideline.

2-5-4

Observation: A steel column is out of plumb.

Performance Guideline: Steel columns shall not be out of plumb in excess of 3/8- inch in 8 feet when measured vertically.

Builder Action: The contractor shall repair any deficiencies in excess of the performance guideline.

SECTION 3: Wood Floor Framing

FLOOR SYSTEM

3-0-1

Observation: Springiness, bounce, shaking, or visible sag is present in the floor system.

Performance Guideline: All beams, joists, headers, and other structural members shall be sized according to the manufacturers' specifications or local building codes.

Builder Action: The contractor will reinforce or modify, as necessary, any member of the floor system not meeting the performance guideline.

Discussion: Deflection may indicate insufficient stiffness in the lumber, or may reflect an aesthetic consideration independent of the strength and safety requirements of the lumber. Structural members are required to meet standards for both stiffness and strength.

BEAMS, COLUMNS, AND POSTS

3-1-1

Observation: An exposed wood column or post is split.

Performance Guideline: Sawn wood columns or posts shall meet the grading standard for the species used.

Builder Action: The contractor will repair or replace any beam or post that does not meet the guideline. Filling splits is acceptable to have structural members meet the guideline.

Discussion: Columns and posts will sometimes split as they dry after installation. Splitting is acceptable and is not a structural concern if columns or posts have been sized according to manufacturers' specifications or local building codes. Splitting is primarily an aesthetic rather than a structural concern.

3-1-2

Observation: An exposed wood beam is split.

Performance Guideline: Sawn wood columns or posts shall meet the grading standard for the species used.

Builder Action: The contractor will repair or replace any sawn beam that does not meet the guideline. Filling splits is acceptable to have structural members meet the guideline.

Discussion: Beams 2 ½ inches or greater in thickness (which normally are not kiln dried) will sometimes split as they dry after installation. Splitting is acceptable and is not a structural concern if the sawn lumber beams have been sized according to manufacturers' specifications or local building codes. Splitting is primarily an aesthetic rather than a structural concern.

3-1-3

Observation: An exposed wood beam or post is twisted or bowed.

Performance Guideline: Exposed wood posts and beams shall meet the grading standard for the species issued. Posts and beams with bows and twists exceeding ¾-inch in an 8 foot section shall not be installed, and those that develop bows and twists exceeding ¾-inch in an 8 foot section are considered excessive.

Builder Action: The contractor will repair or replace any beam or post that exceeds the guideline.

Discussion: Beams and posts, especially those 3/12-inches or greater thickness (which normally are not kiln dried), will sometimes twist or bow as they dry after milling or installation. Twisting or bowing is usually not a structural concern if posts and beams have been sized according to manufacturers' specifications or local building codes.

3-1-4

Observation: An exposed wood beam or post is cupped.

Performance Guideline: Cups exceeding ¼-inch in 5 ½ inches are considered excessive.

Builder Action: The contractor will repair or replace any beam or post with a defect that does not meet the guideline.

Discussion: Cupped lumber is lumber that has warped or cupped across the grain in a concave or convex shape. Beams and posts, especially those 3 ½ inches or greater in thickness (which normally are not kiln dried), will sometimes cup as they dry after milling or installation.

SUBFLOOR AND JOISTS

3-2-1

Observation: The wood floor squeaks or the subfloor appears loose.

Performance Guideline: Although a totally squeak-proof floor cannot be guaranteed, frequent, loud squeaks caused by improper installation or loose subflooring are deficiencies.

Builder Action: The contractor will refasten any loose subfloor with casing nails or snap-off screws or take other corrective action to attempt to reduce squeaking to the extent possible within reasonable repair capability without removing floor or ceiling finishes.

Discussion: There are many possible causes of floor squeaks. One of the common sources of squeaks is wood moving along the shank of a nail. Squeaking frequently occurs when lumber, plywood, or boards move slightly when someone walks over them. Boards and plywood may become loose due to shrinkage of the floor structure or sub floor as it dries after installation or seasonal changes in temperature and humidity. Nails used to fasten metal connectors (joist hangers, tie-down wraps, etc.) may cause squeaks. Because of the nature of wood and construction methods, it is practically impossible to eliminate all squeaks during all seasons. Clearly, some squeaks are more objectionable than others.

3-2-2

Observation: A wood sub floor is uneven.

Performance Guideline: Sub floors shall not have more than a ¼-inch ridge or depression within any 32-inch measurement. Measurements should not be made at imperfections that are characteristic of the code-approved material used. This guideline does not cover transition points between different materials.

Builder Action: The contractor will correct or repair the sub floor to meet the performance guideline.

3-2-3

Observation: A wood floor is out of square.

Performance Guideline: The diagonal of a triangle with sides of 12 feet and 16 feet along the edges of the floor shall be no more than ½-inch more nor less than 20 feet.

Corrective Measure: The contractor will make the necessary modifications to any floor not complying with the performance guideline for square-ness. The modification will produce a satisfactory appearance and may be either structural or cosmetic.

Discussion: Square-ness is primarily an aesthetic consideration. Regularly repeated geometric patterns in the floor and ceiling coverings show a gradually increasing or decreasing pattern along an out-of-square wall. The guideline tolerance of plus or minus ½-inch in the diagonal allows a maximum increasing or decreasing portion of about 3/8-inch in a 12 foot wall of a 12x16 foot room. However, a contractor and homeowner may agree to build an addition out of square in order to keep an existing wall of an out-of-square house.

The corrective measure permits the contractor to make the modification in the most practical manner as long as “a satisfactory appearance” results.

3-2-4

Observation: A wood floor is out of level.

Performance Guideline: The floor should not slope more than ½-inch in 20 feet. Crowns and other lumber characteristics that meet the standards of the applicable grading organization for the grade and species used are not defects. Deflection due to overloading by the homeowner is not the contractors’ responsibility.

Builder Action: The contractor will make a reasonable and cost-effective effort to modify the floor that does not comply with the performance guideline.

Discussion: Sloped floors have both an aesthetic and functional consideration. Measurements for slope should be made across the room, not in a small area.

3-2-5

Observation: Deflection is observed in a floor system constructed of wood I-joists, floor trusses, or similar products.

Performance Guideline: All wood I-joists and other manufactured structural components in the floor system shall be sized and installed as provided in the manufacturers' instructions and code requirements.

Builder Action: The contractor will reinforce or modify as necessary any floor component not meeting the performance guideline.

Discussion: Deflection may indicate an aesthetic consideration independent of the strength and safety requirements of the product. When a homeowner's preference is made known before construction, a higher standard may be agreed upon in writing at extra cost by the contractor and the homeowner.

SECTION 4: Exterior

WALL FRAMING

4-0-1

Observation: A framed wall is not plumb.

Performance Guideline: The interior face of wood-framed walls shall not be more than 3/8-inch out of plumb for any 32 inches in any vertical measurement.

Builder Action: The contractor will repair the wall to meet the performance guideline.

4-0-2

Observation: The wall is bowed.

Performance Guideline: Walls shall not bow more than ½-inch out of line within any 32-inch horizontal measurement, or ½-inch out of line within any 8-foot vertical measurement.

Builder Action: The contractor will repair the wall to meet the performance guideline.

Discussion: All interior and exterior walls have slight variances in their finished surface. On occasion, the underlying framing may warp, twist, or bow after installation.

MOISTURE BARRIERS AND FLASHING

4-1-1

Observation: An exterior wall leaks because of improper caulking installation or failure of the caulking material.

Performance Guideline: Joints and cracks in exterior wall surfaces and around openings shall be caulked to prevent entry of water.

Builder Action: One time only, the contractor will repair or caulk joints and cracks in exterior wall surfaces as required to correct deficiencies.

Discussion: Even when properly installed, caulking eventually will shrink and crack. Maintenance of caulking is the homeowner's responsibility.

WALL INSULATION

4-2-1

Observation: Wall insulation is insufficient.

Performance Guideline: The contractor shall install insulation according to R-values designated in the contract documents or local code, as applicable. Insulation shall be installed according to locally accepted practices.

Builder Action: The contractor will install insulation to meet the performance guideline.

WINDOWS AND GLASS

4-3-1

Observation: A window is difficult to open or close.

Performance Guideline: Windows should require no greater operating force than that described in the manufacturer's instructions.

Builder Action: The contractor will correct or repair the window as required to meet the performance guideline.

4-3-2

Observation: Window glass is broken and/or a screen is missing or damaged.

Performance Guideline: Glass should not be broken and screens should not be damaged at the time of substantial completion of the project. Screens required by the contract shall be installed.

Builder Action: Broken glass and/or missing or damaged screens reported to the contractor before closing will be installed or replaced.

Homeowner Action: Broken glass and/or screens not reported prior to substantial completion of the project are the homeowner's responsibility.

4-3-3

Observation: Mirror or glass surfaces are scratched.

Performance Guideline: See Appendix for ASTM Glass Standards.

Builder Action: The contractor shall replace any scratched glass or mirror surface if noted prior to substantial completion of the project.

4-3-4

Observation: During rains, water is observed on the interior corner of a glazed window unit.

Performance Guideline: Water leakage from improper installation is considered excessive. Leakage due to manufacturer's design specifications is acceptable.

Builder Action: The contractor shall repair any deficiencies attributable to improper installation.

Discussion: Leakage at the glazing interface is covered under the manufacturer's warranty.

4-3-5

Observation: Window grids (muntins) fall or become out of level.

Performance Guideline: Window grids shall not disconnect, fall, or become out of level.

Builder Action: Window grids will be repaired or replaced at the contractor's discretion one time only.

4-3-6

Observation: A mirror backing is deteriorating.

Performance Guideline: While looking at the mirror, there should be no noticeable imperfections in the mirror as a result of damage to the mirror backing at the time of substantial completion of the project.

Builder Action: The contractor will replace or repair the mirror.

4-3-7

Observation: Air infiltrates around exterior doors or windows.

Performance Guideline: Some infiltration is usually noticeable around doors and windows, especially during high winds. Remodeling Specific: See Note at beginning of chapter.

Builder Action: The contractor shall repair to meet performance guideline.

Discussion: Proper repair can be performed by adjusting or installing weather stripping around the doors and windows. In high wind areas, the homeowner may elect to have storm windows and doors installed to further reduce drafts. A small glimmer of light seen at the corners of the door unit is normal. Weather stripping should be kept clean and maintained by the homeowner.

4-3-8

Observation: Water, ice or frost is observed on a window.

Performance Guideline: Windows will be installed in accordance with the manufacturer's instructions and applicable building code. Remodeling Specific: See Note at beginning of chapter.

Builder Action: No action is required of the contractor unless the water, ice, or frost is directly attributed to faulty installation (i.e., that deviates from the manufacturer's instructions and/or applicable building code).

Homeowner Action: It is the homeowner's responsibility to maintain proper humidity by properly operating the heating and cooling systems and allowing moving air within the home to flow over the interior surface of the windows.

Discussion: Condensation usually results from conditions beyond the contractor's control. Moisture in the air can condense into water and collect on cold surfaces, particularly in the winter months when the temperature is low. Blinds and drapes can prevent air within the building envelope from moving across the cold surface and picking up the moisture. Occasional condensation (water) in the kitchen, bath, or laundry area is common.

EXTERIOR DOORS

4-4-1

Observation: An exterior door is warped.

Performance Guideline: Exterior doors shall not warp to the extent that they become inoperable or cease to be weather-resistant. A ½ -inch tolerance as measured diagonal from corner to corner or top to bottom is acceptable.

Corrective Measure: The contractor will correct or replace exterior doors that do not meet the performance guideline.

Discussion: Most exterior doors will warp to some degree due to the difference in the temperature and humidity between inside and outside surfaces; ½-inch across the plane of the door measured diagonally from corner to corner is an acceptable tolerance. Warping may also be caused by improper or incomplete finishing of the door including sides, top and bottom. The contractor is not responsible for warp-age if painting of doors is not within the contractor's scope of work.

4-4-2

Observation: Raw wood shows at the edges of an inset panel inserted into a wood exterior door during the manufacturing process.

Performance Guideline: This is a common occurrence in wood doors with panels.

Builder Action: Since this occurrence is common, no correction is required.

Discussion: Wood products expand and contract with changes in temperature and humidity. Wooden inserts are often loosely fitted into the rails to allow inserts to move; this minimizes splitting of the panel or other damage to the door. The homeowner is responsible for controlling temperature and humidity in the home to minimize these occurrences.

4-4-3

Observation: A wooden door panel is split.

Performance Guideline: A split in a panel shall not allow light to be visible through the door.

Builder Action: One time only, the contractor will repair, paint or stain the split panel that does not meet the performance guideline. Caulking and fillers are acceptable. The repainted area may not match the remainder of the door or other doors on the house.

4-4-4

Observation: An exterior door sticks.

Performance Guideline: Exterior doors shall operate smoothly, except that doors may stick during occasional periods of high humidity or with variations in temperature.

Builder Action: The contractor will adjust or replace the door to meet the performance guideline if the problem is caused by faulty workmanship or materials.

Discussion: Exterior doors may warp or bind to some degree because of the difference in temperature and/or humidity between inside and outside surfaces. The contractor is not responsible for warp-age if painting of doors is not within the contractor's scope of work.

4-4-5

Observation: An exterior door will not shut completely.

Performance Guideline: Exterior doors shall shut completely.

Builder Action: The contractor will adjust or replace the door to meet the performance guideline.

Discussion: Exterior doors may warp or bind to some degree because of the difference in temperature and/or humidity between inside and outside surfaces. The contractor is not responsible for warp-age if painting doors in not within the contractor's scope of work.

4-4-6

Observation: The plastic molding on the primary door behind the storm door melts from exposure to sunlight.

Performance Guideline: The plastic moldings behind storm doors should not melt if the storm panel is removed and reinstalled by the homeowner as a part of normal seasonal maintenance operations (i.e., removed in the spring and reinstalled in the fall).

Builder Action: No corrective action is required.

Discussion: Plastic moldings may melt or deform if the exterior door is covered by a storm door panel during a warm season, or if it faces the sun. This is not a defect of the door, but a problem caused by the trapping of heat between the storm panel and the door. The homeowner is also cautioned to follow manufacturer's recommendations on painting the moldings with a dark color, with or without the use of a storm panel. Dark colors should be avoided.

4-4-7

Observation: Caulking or glazing on the primary door behind the storm door cracks or peels.

Performance Guideline: Glazing or caulking behind storm doors should not crack or peel if the storm panel is removed and installed by homeowner as part of seasonal maintenance operations (i.e., removed in the spring and reinstalled in the fall).

Builder Action: No corrective measure is required.

Discussion: High temperatures may cause glazing and caulking to harden and/or fail prematurely if the door is covered by a storm panel during a warm season or if it faces the sun. This is not a defect of the door, caulking, or glazing, but a problem caused by the trapping of heat between the door and the storm panel. The homeowner is reminded that dark colors tend to accumulate heat and are more likely to cause problems.

4-4-8

Observation: A door swings open or closed by the force of gravity.

Performance Guideline: Exterior doors shall not swing open or closed by the force of gravity alone.

Builder Action: The contractor will adjust the door to prevent it from swinging open or closed by the force of gravity.

4-4-9

Observation: Gaps are visible around an exterior door edge, doorjamb, and/or threshold.

Performance Guideline: Gaps between adjacent components shall not vary by more than 3/16-inch.

Builder Action: The contractor will repair existing unit to meet performance guidelines.

Discussion: Doors must have gaps at their perimeter to accommodate expansion/contraction due to variations in temperature and/or humidity and to enable the door to operate over a wide range of environmental conditions.

4-4-10

Observation: Exterior door hardware or kick plate has tarnished.

Performance Guideline: Finishes on door hardware or kick plates installed by the contractor are covered by the manufacturer's warranty.

Homeowner Action: The homeowner should contact the manufacturer.

4-4-11

Observation: A sliding patio door or screen will not stay on track.

Performance Guideline: Sliding patio doors and screens shall slide properly on their tracks at the time of substantial completion of the project. The cleaning and maintenance necessary to preserve proper operation are the homeowner responsibilities.

Builder Action: The contractor shall repair the door or screen one time only.

Discussion: Proper operations should be verified by the homeowner and the contractor at the time of substantial completion of the project.

4-4-12

Observation: A sliding patio door does not roll smoothly.

Performance Guideline: Sliding patio doors shall roll smoothly at the time of substantial completion of the project. The cleaning and maintenance necessary to preserve proper operation are the homeowner's responsibility.

Builder Action: The contractor shall repair the door one time only.

Discussion: Proper operation should be verified by the homeowner and contractor at the time of substantial completion of the project.

4-4-13

Observation: A doorknob, deadbolt, or lockset does not operate smoothly.

Performance Guideline: A doorknob, deadbolt, or lockset should not stick or bind during operation.

Builder Action: One time only, the contractor will adjust, repair, or replace knobs that are not damaged by abuse.

4-4-14

Observation: Garage doors fail to operate properly under normal use.

Performance Guideline: Garage doors shall operate as designed.

Builder Action: The contractor will correct or adjust garage doors as required, unless the homeowner's actions or negligence caused the problem.

Discussion: The safety sensors can be easily knocked and misaligned so that the doors will not operate properly. The homeowner should avoid storing items near the sensors.

4-4-15

Observation: Garage doors allow the entry of snow or water.

Performance Guideline: Garage doors shall be installed as recommended by the manufacturer. Some snow or water can be expected to enter under normal conditions.

Builder Action: The contractor will adjust or correct the garage doors to meet the manufacturer's installation instructions.

EXTERIOR FINISH

General Note: The homeowner will protect all siding from damage, such as leaning heavy objects against siding, ball dents, and water from sprinklers striking the siding.

Wood and Hardboard Siding

4-5-1

Observation: Inadequate clearance exists between exterior siding and finished grade.

Builder Action: The contractor will insure there is a 6" clearance between siding and finished grade at the time of closing.

Homeowner Action: The homeowner will maintain a 6" clearance between siding and finished grade.

4-5-2

Observation: Siding is bowed.

Performance Guideline: Bows exceeding ½-inch in 32 inches are considered excessive.

Builder Action: The contractor will replace any wood lap siding with bows that does not meet the performance guideline, and will finish the replacement siding to match the existing siding as closely as practical.

Discussion: If the siding is fastened by nails driven into studs, expansion caused by changing relative temperature and/or humidity may cause bulges or waves. Even with proper installation, siding will tend to bow inward and outward in adjacent stud spaces.

4-5-3

Observation: An edge or gap is visible between adjacent pieces of siding or siding panels and other materials.

Performance Guideline: Gaps wider than 3/16-inch is considered excessive. This guideline does not apply to adjacent pieces or panels that have shiplap or similar joints. Gaps on end and side edges may occur due to normal expansion and contraction. The contractor cannot control wood and expansion and contraction.

Builder Action: The contractor will repair gaps that do not meet the performance guideline.

Discussion: Proper repair can be affected by providing joint covers or by caulking the gap. This is important if the gaps were intentionally made for expansion joints. If the siding is painted, the contractor will paint new caulking to match existing caulking as closely as practical, but an exact match cannot be ensured. Plywood siding, like al lwood products, will expand and contract in temperature and/or humidity.

Homeowner Action: The homeowner is responsible for sealing and/or recaulking siding annually.

4-5-4

Observation: Lap siding is not parallel with the course above or below.

Performance Guideline: A piece of lap siding may not be more than ½-inch off parallel with contiguous courses in any 20-foot measurement, unless the homeowner and the contractor have previously agreed to disregard the performance guideline to match a pre-existing condition.
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Builder Action: The contractor will reinstall siding to meet the performance guideline for straightness, and will replace with new siding any siding damaged during removal.

Discussion: For remodeling projects, if the contractor and the homeowner have agreed that the floor of an addition is to be on a different plane from an existing floor (e.g., out of level), the siding on the addition may not be parallel and in line with the existing siding.

4-5-5

Observation: Face nails are driven below the surface of the hardboard siding.

Performance Guideline: Siding nails should not be driven below the surface of hardboard siding such that visible fiber of the siding is exposed.

Builder Action: The contractor shall repair as necessary to meet performance guideline. The following repairs are appropriate in most instances: If visible fiber of hardboard siding is exposed, paint surface to coat fiber. If nail is 1/16-inch to 1/8-inch below the surface, fill or caulk and add an additional nail flush to the surface.

4-5-6

Observation: Siding boards have buckled.

Performance Guideline: Boards that project more than 3/16-inch from the face of adjacent boards are considered excessive.

Builder Action: The contractor will repair or replace any boards that do not meet the performance guideline.

Discussion: Buckling is caused by wood expanding as a result of increased temperature and/or relative humidity. It can be minimized by leaving space between the tongues and grooves to allow room for expansion and by storing the product outside for a few days to allow it to adjust to the ambient conditions prior to installation.

4-5-7

Observation: Cedar shakes or shingles have "bled" through paint or stain applied by the contractor.

Performance Guideline: Resins and extractives bleeding through paint or stain, or blackening of shakes or shingles is considered normal and will be even more apparent if "natural weathering" or semi-transparent stain is specified for the project.

Builder Action: No corrective action is required by contractor.

4-5-8

Observation: Siding has delaminated.

Performance Guideline: Siding shall not delaminate.

Builder Action: The contractor will replace delaminated siding that is not covered under the manufacturer's warranty, unless the delaminating was caused by the homeowner's actions or negligence. The repaired area may not precisely match the original siding.

4-5-9

Observation: Siding is bowed.

Performance Guideline: Some waviness in siding is to be expected because of bows in studs. Bows exceeding ½-inch in 32 inches are considered excessive.

Builder Action: The contractor will repair or replace the siding to meet the guideline.

Discussion: Additional nails or screws may be installed to remove this bow.

Vinyl Lap Siding

4-5-10

Observation: Vinyl siding is bowed or wavy.

Performance Guideline: Some waviness in vinyl lap siding is to be expected because of the bow in studs. Waves or similar distortions in vinyl siding are considered excessive if they exceed ½-inch in 32 inches.

Builder Action: The contractor will correct any waves or distortions to comply with the performance guideline by reinstalling or replacing siding as necessary.

Discussion: This problem can be caused by the siding being nailed too tightly to the house instead of loosely "hung" near the center of the nail slots, or by not allowing adequate room for the siding to expand. Siding fasteners should be installed in the center of the nail slot with a 1/32-inch spacing (thickness of a dime) between the siding and the fastener to allow expansion and contraction.

4-5-11

Observation: Nail stains are visible on siding or ceiling boards.

Performance Guideline: Stains exceeding ½-inch from the nail and readily visible from a distance in excess of 20 feet are considered excessive.

Builder Action: The contractor can choose to remove stains that do not meet the performance guideline.

Discussion: Stains can be caused by oxidation of nails or leaching of extractives from the wood. Use of galvanized nails (even double hot-dipped) will not necessarily prevent staining.

4-5-12

Observation: Siding is faded.

Performance Guideline: Any color siding, when exposed to the ultra-violet rays of the sun, will fade. Fading cannot be prevented by the contractor. However, panels installed on the same wall and under the same conditions should fade at the same rate.

Builder Action: No corrective action is required of the contractor. The homeowner should contact the siding manufacturer.

Discussion: Color warranties are provided by the siding manufacturer. The homeowner should contact the manufacturer with questions or claims regarding changes in color of vinyl siding. Color and fade imperfections beyond an expected degree may be covered by the manufacturer's warranty, except where siding is shaded differently from the rest of the wall, such as under shutters or behind vegetation.

4-5-13

Observation: Vinyl lap siding trim is loose.

Performance Guideline: Trim shall not separate from the house by more than ¼-inch.

Builder Action: The contractor will reinstall trim as necessary to comply with the performance guideline.

Discussion: Vinyl siding and accessories should not be caulked in most circumstances, as it could impact the products' contraction and expansion characteristics.

4-5-14

Observation: Vinyl siding courses are not parallel with eaves or wall openings.

Performance Guideline: Any piece of vinyl lap siding more than ½-inch off parallel in 20 feet with a break such as an eave or wall opening is considered excessive.

Builder Action: The contractor will reinstall siding to comply with the performance guideline and will replace with new siding any siding damaged during removal.

4-5-15

Observation: Nail heads show in vinyl lap siding.

Performance Guideline: No nail heads in the field of the siding shall be exposed.

Builder Action: The contractor will install trim as necessary to cover the nails. Contractor will install proper trim accessories to avoid face nailing.

Discussion: Vinyl siding generally should not be face nailed. However, there are appropriate and typical occasions when a single nail may be needed to reinforce a joint or fasten the siding to the wall when it is cut to fit around window frames, doors, roofs, or other obstructions on the wall. In most cases (the only exception would be the top piece on a gable end), vinyl siding should never need to be face nailed when proper accessory products are used. For example, under a window application the trim (J-channel) can be utilized in conjunction with utility trim and snap-punching the top of the modified vinyl siding. If face nailing is the only option, a 1/8-inch diameter hole should be pre-drilled to allow for expansion and contraction.

4-5-16

Observation: A vinyl lap siding trim accessory is loose from caulking at windows or other wall openings.

Performance Guideline: Siding trim accessories shall not separate from caulking at windows or other wall openings during the warranty period.

Builder Action: One time during the warranty period, the contractor will repair or re-caulk as necessary to eliminate the separation.

4-5-17

Observation: Vinyl lap siding is cut unevenly.

Performance Guideline: Gaps shall comply with the manufacturer's guidelines unless the existing building is out of square or plumb. Cut edges of vinyl siding should always be covered by trim or receiving channels and should not be visible. Cuts should be made so that when properly installed in trim, edges are not visible.

Builder Action: The contractor will ensure that the appropriate trim/accessory is installed to eliminate potentially revealing site cuts. If cuts in siding panels are so uneven that they are not concealed by trim, the panel shall be replaced.

Discussion: Cut edges of vinyl siding should never be visible when proper trim and accessories are used.

4-5-18

Observation: Vinyl lap siding is not correctly spaced from moldings.

Performance Guideline: Prescribed spacing between siding and accessory trim is typically ¼-inch, or should comply with the manufacturer's installation instructions.

Builder Action: The contractor will correct the spacing to meet the guideline.

Cement Board Siding

4-5-19

Observation: Cement board siding is cracked or chipped.

Performance Guideline: As a cement product, this siding is susceptible to the same characteristic limitations as other cement products. Cracks more than 2 inches in length and 1/8-inch in width are considered excessive. Chips or dents not reported at time of substantial completion of the project are not covered.

Builder Action: Cracked or chipped cement board will be repaired or replaced as necessary, as determined by the contractor.

4-5-20

Observation: Cement board siding is improperly fastened.

Performance Guideline: Siding shall be nailed flush and perpendicular per the manufacturer's instructions. Staples shall not be used.

Builder Action: Over driven nail heads or nails driven at an angle shall be filled with cementitious patching compound to match the existing area as closely as possible.

Masonry and Veneer

4-5-21

Observation: A masonry or veneer wall is cracked.

Performance Guideline: Cracks visible from distances in excess of 20 feet or larger than ¼-inch in width are not acceptable.

Builder Action: The contractor will repair cracks in excess of the performance guideline by tuck pointing, patching, or painting. The contractor will not be responsible for color variation between the original and new mortar.

Discussion: Hairline cracks resulting from shrinkage and cracks due to minor settlement are common in masonry or veneer and do not necessarily represent a defect.

4-5-22

Observation: Cut bricks below openings in masonry walls are of different thickness.

Performance Guideline: Cut bricks used in the course directly below an opening shall not vary from one another in thickness by more than ¼-inch. The smallest dimension of a cut brick should be greater than 1 inch.

Builder Action: The contractor will repair the wall to meet the performance guideline.

Discussion: Bricks are cut to achieve required dimensions at openings and ends of walls when it is not possible to match unit/mortar coursing.

4-5-23
Observation: A masonry or brick veneer course is not straight.

Performance Guideline: No point along the bottom of any course shall be more than ¼-inch higher or lower than any other point within 10 feet along the bottom of the same course, or ½-inch in any length.

Discussion: Dimensional variations of the courses depend upon the variations in the brick selected.

4-5-24
Observations: Brick Veneer is spalling (breaking apart).

Performance Guideline: Spalling of newly manufactured brick should not occur and is considered excessive. Spalling of used brick is acceptable.

Builder Action: The contractor will repair or replace newly manufactured bricks that have spalled. An exact match of brick and mortar cannot be assured.

4-5-25
Observation: Mortar stains are observed on exterior brick or stone.

Performance Guideline: Exterior brick and stone shall be free from mortar stains detracting from the appearance of the finished wall when viewed from a distance of 20 feet.

Builder Action: The contractor will clean the mortar stains to meet the performance guideline.

4-5-26
Observation: Efflorescence is present on the surface of masonry or mortar.

Performance Guideline: This is a common condition caused by moisture reacting with the soluble salts in the mortar.

Builder Action: No corrective actions are required of the contractor.

Discussion: Efflorescence is evidenced by the presence of a white film on the surface of masonry or mortar. It is a particularly common occurrence where masonry or concrete are in contact with high moisture levels as may be found in basements, foundations or garage block walls.

Stucco and Parge

4-5-27
Observation: An exterior stucco wall surface is cracked.

Performance Guideline: Cracks in exterior stucco wall surfaces shall not exceed 1/8-inch in width.

Builder Action: Not covered by warranty.

Discussion: “Stucco” includes cementitious coatings and similar synthetically based finishes.

4-5-28

Observation: The colors of exterior stucco walls are not uniform.

Performance Guideline: The colors of new exterior stucco walls may not perfectly match the colors of old exterior stucco walls, nor is it expected that exact matches will be attained for the same material that is applied on different days or under differing environmental conditions (e.g., temperature, humidity, etc.).

Builder Action: No corrective measure is required. Because of the unique nature of stucco finishes, exact match between stucco coatings applied at different times cannot be guaranteed.

Discussion: Coloring of stucco is affected by a number of variables. It is impractical to achieve a color match between stucco coatings applied at different times.

4-5-29

Observation: The colors of brick mortar are not uniform.

Performance Guideline: The colors of new brick mortar may not perfectly match the colors of old brick mortar, nor is it expected that exact matches will be attained for the same material that is applied on different days or under differing environmental conditions (e.g., temperature, humidity, etc.).

Builder Action: No corrective measure is required. Because of the unique nature of brick mortar, exact match between brick mortar applied at different times cannot be guaranteed.

Discussion: Coloring of brick mortar is affected by a number of variables. It is impractical to achieve a color match between brick mortar applied at different times.

4-5-30

Observation: The textures of exterior stucco wall finishes are not uniform.

Performance Guideline: Remodeling Specific: The texture of new exterior stucco walls may not perfectly match the textures of old exterior stucco walls.

Builder Action: No corrective measure is required. Because of the unique nature of stucco finishes, exact match of texture finish may not be possible.

Discussion: “Stucco” includes cementitious coatings and similar synthetically based finishes. Approved samples prior to installation can minimize misunderstandings about color and texture.

4-5-31

Observation: Coating has separated from the base on an exterior stucco wall.

Performance Guideline: The coating shall not separate from the base on an exterior stucco wall.

Builder Action: Not covered by warranty.

Discussion: Coloring of stucco is affected by a number of variables. It is impractical to achieve a color match between stucco coatings applied at different times.

4-5-32
Observation: Lath is visible through stucco.

Performance Guideline: Lath should not be visible through stucco, nor should the lath protrude through any portion of the stucco surface.

Builder Action: Not covered by warranty.

4-5-33
Observation: Rust marks are observed on the stucco finish coat.

Performance Guideline: Rust marks on the stucco surface are considered excessive if more than 5 marks measuring more than 1 inch long occur per 100 square feet.

Builder Action: Not covered by warranty.

EXTERIOR TRIM

4-6-1
Observation: Gaps show in exterior trim.

Performance Guideline: Joints between exterior trim elements, including siding and masonry, shall not result in joints opened wider than ¼-inch. In all cases, the exterior trim shall perform its function of excluding elements.

Builder Action: The contractor will repair open joints that do not meet the performance guideline. Caulking is acceptable.

4-6-2
Observation: Exterior trim board is split.

Performance Guideline: Splits wider than 1/8-inch is considered excessive.

Corrective Measure: The contractor will repair splits by filling with durable filler. Touch-up painting may not match the surrounding area.

4-6-3
Observation: Exterior trim board is bowed or twisted.

Performance Guideline: Bows and twist exceeding 3/8-inch in 8 feet are considered excessive.

Builder Action: The contractor will repair defects that do not meet the performance guideline by refastening or replacing deformed boards. Touch-up painting may not match the surrounding area.

4-6-4

Observation: Exterior trim board is cupped.

Performance Guideline: Cups exceeding 3/16-inch in 5 ½-inches are considered excessive.

Builder Action: The contractor will repair defects that do not meet the performance guideline by refastening or replacing deformed boards. Touch-up painting may not match the surrounding area.

PAINT, STAIN, AND VARNISH

4-7-1

Observation: Exterior painting, staining, or refinishing is required because of repair work.

Performance Guideline: Repairs required under these performance guidelines shall be finished to match the immediate surrounding areas as closely as practical when viewed under normal lighting conditions from a distance of 20 feet.

Builder Action: The contractor will finish repaired areas as indicated.

Discussion: Touch-up painting, staining, or refinishing may not match the surrounding area.

4-7-2

Observation: Exterior paint or stain has peeled, flaked, or physically deteriorated.

Performance Guideline: Exterior paints and stains shall not fail during the paint manufacturer's warranty period.

Builder Action: If the exterior paint or stain has peeled, developed an alligator pattern, or blistered, the contractor will properly prepare and refinish affected areas and match the color as closely as practical. Where deterioration of the finish affects more than 50% of the trim or wall area, the contractor will refinish the entire wall.

4-7-3

Observation: Exterior paint or stain has faded.

Performance Guideline: Fading of exterior paints and stains is common. The degree of fading depends on environmental conditions.

Builder Action: Because fading is a common occurrence in paint and stains, no corrective action is required.

4-7-4

Observation: Varnish or lacquer finishes have deteriorated.

Performance Guideline: Clear finishes used on exterior surfaces may deteriorate rapidly. This is beyond the contractor's control.

Builder Action: Heat and sunlight can cause rapid deterioration of clear finishes. Maintenance is the homeowner's responsibility. No corrective action is required of the contractor.

4-7-5

Observation: There is paint or stain overspray on surfaces not intended for paint or stain.

Performance Guideline: Paint or stain overspray on surfaces not intended for paint or stain that is visible at a distance of 6 feet under normal natural lighting conditions is not acceptable.

Builder Action: The contractor shall clean affected surfaces without damaging the surface.

4-7-6

Observation: Cabinet stain is uneven. Cabinet paint is not uniform or is mismatched.

Performance Guideline: Uneven stain color on wood cabinets is considered acceptable and is a result of the natural wood grain.

Painted cabinets should appear uniform under normal lighting conditions at a distance of 6 feet.

Builder Action: The contractor will stain or paint the area as required to meet the performance guideline.

4-7-7

Observation: Mildew or fungus is observed on painted surfaces.

Discussion: Mildew or fungus may form on painted surfaces over time because of warmth and moisture.

Builder Action: The contractor will remove mildew or fungus reported prior to closing.

CONCRETE

Concrete Stoops and Steps

4-8-1

Observation: Stoops or steps have settled, heaved, or separated from the house structure.

Performance Guideline: Stoops and steps shall not settle, heave, or separate in excess of 1 inch from the house structure.

Builder Action: The contractor will make a reasonable and cost-effective effort to meet the performance guideline.

4-8-2

Observation: Water remains on stoops or steps after rain has stopped.

Performance Guideline: Water shall drain off outdoor stoops and steps. Minor amounts of water can be expected to remain on stoops and steps for up to 24 hours after rain.

Builder Action: The contractor will take corrective action to ensure proper drainage of stoops and steps.

Driveways, Sidewalks, & Exterior Concrete Flatwork

4-8-3

Observation: Standing water is observed on a concrete pavement surface.

Performance Guideline: Standing water greater than 3/8-inch in depth shall not remain on the surface 24 hours after a rain.

Builder Action: The contractor shall repair or replace the affected area to meet the performance guideline.

Discussion: Patched concrete surfaces due to repairs may not match existing surface in color or texture.

4-8-4

Observation: A concrete driveway or sidewalk is cracked.

Performance Guideline: Cracks (outside of control joints) that exceed ¼-inch in width or ¼-inch in vertical displacement shall be repaired.

Builder Action: The contractor shall repair/replace affected areas to eliminate cracks that exceed the performance guidelines.

Discussion: Concrete products normally have some cracking and shrinkage. Minor cracking is normal. Cracking can be caused by elements outside the contractor's control. Control joints are placed in the concrete to help control cracks and provide a less visible area for them to occur. The repaired area may not match the existing area in color and texture.

4-8-5

Observation: Adjoining exterior concrete flatwork sections deviate in height from one section to another.

Performance Guideline: Adjoining concrete sections shall not differ in height by more than ½-inch.

Builder Action: The contractor shall repair deviations to meet the performance guideline.

Discussion: Some areas of the country experience lift or settlement at the junction of the garage floor and the driveway. The repaired area may not match the existing area in color and texture.

4-8-6

Observation: A sidewalk and other exterior concrete flatwork have settled.

Performance Guideline: Adjoining concrete sections shall not differ in height by more than ½-inch.

Builder Action: The contractor shall repair the affected area to meet the performance guideline.

Discussion: Some areas of the country experience lift or settlement at the junction of the garage floor and the driveway. The repaired area may not match the existing area in color and texture.

WOOD DECKS/PORCHES

4-9-1

Observation: A wood deck/porch is springy or shaky.

Performance Guideline: All structural members in a wood deck/porch shall be sized, and fasteners spaced, according to appropriate building codes and manufacturer's instructions.

Builder Action: The contractor will reinforce or modify, as necessary, any wood deck/porch not meeting the performance guidelines.

Discussion: Deflection may indicate insufficient stiffness in the lumber, or may reflect an aesthetic consideration independent of the strength and safety requirements of the lumber. Structural members are required to meet standards for both stiffness and strength. When a homeowner's preference is made known before construction, the contractor and the homeowner may agree upon a higher standard at additional cost.

4-9-2

Observation: The spaces between decking boards are not uniform.

Performance Guideline: The spaces on opposite sides of individual deck boards shall not differ in average width by more than 3/16-inch at the time of substantial completion of the project, unless otherwise agreed upon by the homeowner and the contractor.

Builder Action: One time only, the contractor will realign or replace decking boards to meet the performance guideline.

Discussion: The spaces will naturally tend to change over time because of shrinkage and expansion of individual boards. The contractor is only responsible for correct spacing at the time of substantial completion of the project.

4-9-3

Observation: The railings on wood decking contain slivers in exposed areas.

Performance Guideline: Railings on wood decks/porches shall not contain slivers longer than 1/8-inch in exposed areas at the time of substantial completion of the project.

Builder Action: One time only, the contractor will repair railings as necessary to remove slivers prior to substantial completion of the project. Repair of slivers after that time is a homeowner maintenance responsibility.

Discussion: Slivers can develop when unprotected wood weathers. The proper finishing of wood surfaces helps prevent slivers from forming.

4-9-4

Observation: A wood deck/porch is out of level.

Performance Guideline: No point on the deck surface shall be more than ½-inch higher or lower than any other deck surface point within 10 feet on a line parallel to the house, or in proportional multiples of the preceding dimensions (unless a slope is incorporated in the design).

Corrective Measure: The contractor will repair the deck/porch as necessary to meet the performance guideline.

Discussion: A slope of approximately 1/8-inch per foot is desirable in the perpendicular direction to shed water and prevent ice build-up.

4-9-5

Observation: Wood decking boards are split, warped, or cupped.

Performance Guideline: At the time of substantial completion of the project, splits, warps, and cups in wood decking boards shall not exceed the allowances established by the official grading rules issued by the agency responsible for the lumber species specified for the deck boards.

Corrective Measure: The contractor will replace decking boards as necessary to meet the performance guidelines.

4-9-6

Observation: A wood deck/porch has stain color variations.

Performance Guideline: Stain color variations are not acceptable if they result from improper stain application or failure to mix the stain properly. Stain color variations resulting from other causes such as weathering or varying porosity of the wood used to build the deck/porch-are common and are not covered by this guideline.

Corrective Measure: The contractor will re-stain the affected area to meet the performance guideline.

4-9-7

Observation: A nail head protrudes from a wood decking board.

Performance Guideline: Nail heads shall not protrude from the floor of the wood deck/porch at the time of substantial completion of the project.

Corrective Measure: One time, the contractor will refasten nails whose heads protrude from the floor of the deck/porch so that the heads are flush with the surface.

Discussion: Nails should be driven flush when the deck/porch is installed, but they may pop from the deck/porch over time as the wood shrinks and expands.

4-9-8

Observation: Nails on a wood deck/porch are “bleeding.”

Performance Guideline: Nail stains extending more than ½-inch from the nail and readily visible from a distance of more than 10 feet are not acceptable.

Corrective Measure: The contractor will eliminate nail stains to meet the performance guideline.

Discussion: This guideline does not apply if “natural weathering” or semi-transparent stains are specified. The repaired area may not match the existing deck/porch area in color and texture.

4-9-9

Observation: A wood deck/porch railing lacks rigidity.

Performance Guideline: Wood deck/porch railings shall be attached to structural members in accordance with applicable building codes.

Corrective Measure: The contractor will repair wood deck/porch railings as necessary to comply with applicable building codes.

4-9-10

Observation: Wood decking boards, railings and/or pickets are split, warped, or cupped.

Performance Guideline: At the time of substantial completion of the project, splits, warps and cups in wood decking boards, railings and/or pickets will not
exceed the allowances established by the official grading rules issued by the agency responsible for the lumber species specified for the decking boards.

Corrective Measure: The contractor will replace the decking boards, railings, and/or pickets to meet the performance guideline.

SECTION 5: Roofs

ROOF STRUCTURE

5-0-1
Observation: The roof ridge beam has deflected.

Performance Guideline: Roof ridge beam deflection greater than 1 inch in 8 feet is considered excessive.

Builder Action: The contractor shall repair affected ridge beams that do not meet the performance guideline.

5-0-2
Observation: A rafter or ceiling joist bows (up or down).

Performance Guideline: Bows greater than 1 inch in 8 feet are excessive.

Builder Action: The contractor shall repair affected rafters or joists that bow in excess of the performance guideline.

5-0-3
Observation: Roof trusses have lifted from the adjoining interior walls.

Performance Guideline: Moisture differences between the upper and lower chord (unheated versus adjacent interior heated spaces) may cause the lower chords to move. Deflection is a normal condition that is considered as part of the engineering design on the roof trusses.

Discussion: Truss uplift is an aesthetic consideration and is independent of the strength and safety requirement so the truss. This situation will be more prevalent in the winter due to the greater variance in temperature inside to out.

ROOF SHEATHING

5-1-1
Observation: Roof sheathing is wavy or appears bowed.

Performance Guideline: Roof sheathing shall not bow more than ½-inch in 2 feet.
Builder Action: The contractor will straighten bowed roof sheathing as necessary to meet performance guideline.

Discussion: In rare instances, the contractor might have to install blocking between the framing members to straighten the sheathing.

ROOF VENTS

5-2-1

Observation: An attic vent or louver leaks.

Performance Guideline: Attic vents and louvers shall not leak. However, infiltration or wind-driven rain and snow are not considered leaks and are beyond the control of the contractor.

Builder Action: The contractor shall repair or replace the roof vents as necessary to meet the performance guideline.

ROOF INSTALLATION AND LEAKS

Asphalt Shingles

5-3-1

Observation: The roof or flashing leaks.

Performance Guideline: Roofs and flashing shall not leak under normal conditions.

Builder Action: The contractor shall repair any verified roof or flashing leaks not caused by ice build-up, leaves, debris, abnormal conditions, or the homeowner's actions or negligence.

Homeowner Action: It is the homeowner's responsibility to keep the roof drain, gutters, and downspouts free of ice and debris.

5-3-2

Observation: Ice builds up on the roof.

Performance Guideline: During prolonged cold spells ice is likely to build up on a roof, especially at eaves. This condition naturally can occur when snow and ice accumulates.

Builder Action: No action is required of the contractor.

Homeowner Action: Prevention of ice build-up on the roof is a homeowner maintenance item.

5-3-3

Observation: Shingles have blown off.

Performance Guideline: Shingles shall not blow off in winds less than the manufacturer's warranty statement or applicable building codes.

Builder Action: If shingles were not installed properly, they will be repaired or replaced in the affected area.

5-3-4

Observation: Shingles slid off of the roof.

Performance Guideline: The contractor shall ensure that the shingles are installed in accordance with the manufacturer's instructions.

Builder Action: The contractor shall evaluate and replace shingles that slide off of the roof.

Discussion: Correctly installed shingles are covered by the manufacturer's warranty.

5-3-5

Observation: Shingles are not horizontally aligned.

Performance Guideline: Shingles should be installed according to the manufacturer's warranty.

Builder Action: The contractor will remove shingles that do not meet the performance guideline, and will repair or replace them with new shingles that are properly aligned.

5-3-6

Observation: New shingles do not match existing shingles.

Performance Guideline: Because of weathering and manufacturing variations, the color of new shingles will not exactly match the color of existing shingles.

Builder Action: The contractor is not responsible for precisely matching the color of existing shingles.

5-3-7

Observation: Asphalt shingle edges or corners are curled or cupped.

Performance Guideline: Asphalt shingle edges and corners shall not curl or cup more than ½-inch.

Builder Action: No corrective action is required of the contractor. Cupping in excess of ½-inch should be reported to the manufacturer.

5-3-8

Observation: Asphalt shingles do not overhang the edges of the roof, or hang too far over the edges of the roof.

Performance Guideline: Asphalt shingles shall overhang roof edges by not less than ¼-inch and not more than ¾-inch unless the manufacturer's instructions indicate otherwise.

Builder Action: The contractor will reposition or replace shingles as necessary to meet the performance guideline.

5-3-9

Observation: Shading or a shadowing pattern is observed on a new shingle roof.

Performance Guideline: Shading or shadowing differences may occur in a new shingle roof.

Builder Action: No corrective action required by contractor.

5-3-10
Observation: Asphalt shingles have developed surface buckling.

Performance Guideline: Asphalt shingle surfaces do not need to be perfectly flat. Buckling higher than ¼-inch is considered excessive.

Builder Action: The contractor will repair or replace affected shingles to meet the performance guideline.

5-3-11
Observation: Sheathing nails have loosened from framing and raised asphalt shingles.

Performance Guideline: Nails shall not loosen from roof sheathing to raise asphalt shingles from surface.

Builder Action: The contractor shall repair all areas as necessary to meet performance guideline.

Discussion: It is not uncommon for nails to "work themselves out" due to variations in temperature. The contractor can re-drive or remove and replace fasteners that withdraw from the framing. Any resulting holes should be sealed or the shingle should be replaced (a perfect color/shade match cannot be assured).

5-3-12
Observation: Roofing nails are exposed at the ridge or hip of a roof.

Performance Guideline: Nail heads shall be sealed.

Builder Action: The contractor shall repair areas to meet performance guideline.

5-3-13
Observation: Holes from construction activities are found in asphalt shingles.

Performance Guideline: Holes from construction activities shall be flashed or sealed below the asphalt shingle tab to prevent leakage. If the patch is visible from the ground, the shingle should be replaced.

Builder Action: The contractor will repair or replace the affected shingles to meet performance guideline.

5-3-14
Observation Remodeling Specific: Existing roof shingles are telegraphic through new asphalt shingles.

Performance Guideline Remodeling Specific: Some telegraphing is common when re-roofing over existing roofing.

Builder Action: Because this is a common occurrence, no corrective action is required.

Roll Roofing

5-3-15
Observation: Water is trapped under roll roofing.

Performance Guideline: Water shall not become trapped under roll roofing.

Builder Action: If water becomes trapped under roll roofing during the warranty period, the contractor will repair or replace the roofing as necessary to meet the performance guideline.

5-3-16
Observation: Roofing is blistered but does not leak.

Performance Guideline: Surface blistering of roll roofing is caused by unusual conditions of heat and humidity acting on the asphalt and is a common occurrence.

Builder Action: Because this is a common occurrence, no action is required.

5-3-17
Observation: Water is standing on a flat roof.

Performance Guideline: Water shall drain from a flat roof except for minor ponding within 24 hours of a rainfall. Minor ponding shall not exceed 3/8-inch in depth.

Builder Action: The contractor will take corrective action to ensure proper drainage of the roof.

CHIMNEY

5-4-1
Observation: A crack in a masonry chimney cap or crown causes leakage.

Performance Guideline: It is common for caps to crack due to expansion and contraction. As a result, leaks may occur.

Builder Action: If cracking causes leakage the contractor will repair the cap or crown. Caulking or other sealant is acceptable.

5-4-2
Observation: New chimney flashing leaks.

Performance Guideline: New chimney flashing shall not leak under normal conditions.

Builder Action: The contractor will repair leaks in new chimney flashing that are not caused by ice build-up, other common occurrences, or by the homeowner's actions or negligence.

Discussion: The accumulation of ice and snow on the roof is a natural occurrence and cannot be prevented by the contractor.

GUTTERS AND DOWNSPOUTS

5-5-1

Observation: The gutter or downspout leaks.

Performance Guideline: Gutters and downspouts shall not leak.

Builder Action: The contractor will repair leaks in gutters and downspouts. Sealants are acceptable.

5-5-2

Observation: The gutter overflows during a heavy rain.

Performance Guideline: Gutters may overflow during a heavy rain.

Builder Action: The contractor shall repair the gutter if it overflows during normal rains.

Homeowner Action: The homeowner is responsible for keeping gutters and downspouts free from debris that could cause overflow. The homeowner must not lean ladders against gutters and downspouts.

5-5-3

Observation: Water remains in the gutter after a rain.

Performance Guideline: The water level shall not exceed 1 inch depth if the gutter is unobstructed by ice, snow or debris.

Builder Action: The contractor will repair the gutter to meet the performance guideline.

Homeowner Action: The homeowner is responsible for maintaining gutters and downspouts and keeping them unobstructed.

Discussion: Contractors usually install residential gutters with minimal slope in order to maintain an attractive appearance. Installing gutters with 1/32-inch drop in 1 foot generally will prevent water from standing in the gutters. Even so, small amounts of water may remain in some sections of the gutter for a time after a rain. In areas with heavy rainfall and/or ice build-up, a steeper pitch or additional downspouts may be desirable.

SKYLIGHTS

5-6-1

Observation: A skylight leaks.

Performance Guideline: Skylights shall be installed in accordance with the manufacturer's instructions. Leaks resulting from improper installation are considered excessive. Condensation on interior surfaces is not a leak and is not considered a defect.

Builder Action: The contractor will repair any improperly installed skylight to meet the performance guideline.

Discussion: Condensation on interior surfaces is not a leak.

SECTION 6: Plumbing

WATER SUPPLY SYSTEM

6-0-1

Observation: A pipe or fitting leaks.

Performance Guideline: No leaks of any kind shall exist in any water pipe or fitting.

Builder Action: The contractor will make repairs to eliminate leakage.

6-0-2

Observation: Condensation is observed on pipes, fixtures, and plumbing supply lines.

Performance Guideline: Condensation on pipes, fixtures and plumbing supply lines may occur at certain combinations of temperature and indoor humidity.

Homeowner Action: The homeowner is responsible for controlling humidity in the home.

Discussion: The homeowner may insulate pipes and supply lines.

6-0-3

Observation: A faucet or valve leaks.

Performance Guideline: No faucet or valve shall leak as a result of defects in material or workmanship.

Corrective Measure: The contractor will repair or replace the leaking faucet or valve.

6-0-4

Observation: Water in a plumbing pipe freezes, and the pipe bursts.

Performance Guideline: Drain, waste, vent, and water pipes shall be adequately protected to reduce the possibility of freezing at the design temperatures and based on the applicable building or plumbing code.

Builder Action: The contractor will correct situations not meeting the applicable code.

Homeowner Action: The homeowner is responsible for draining or otherwise protecting pipes and exterior faucets exposed to freezing temperatures.

6-0-5

Observation: The water supply system fails to deliver water.

Performance Guideline: All on-site service connections to the municipal water main or private water supply are the responsibility of the contractor.

Builder Action: The contractor will repair the water supply system if the failure results from improper installation or failure of materials and if the connections are a part of the construction agreement. The contractor is responsible for making sure that an individual well on-site is installed to comply with all building and plumbing requirements. Conditions beyond the control of the contractor that disrupt or eliminate the water supply are not covered. The contractor is not responsible for water quality.

6-0-6

Observation: A water pipe is noisy.

Performance Guideline: Because of the flow of water and pipe expansion/contraction, the water piping system will emit some noise. However, the pipes should not make the pounding noise called “water hammer.”

Builder Action: The contractor cannot eliminate all noises caused by water flow and pipe expansion/contraction. However, the contractor will provide the “water hammer” protection required by the applicable plumbing code.

PLUMBING FIXTURES

6-1-1

Observation: The bathtub or shower leaks.

Performance Guideline: Bathtubs and showers shall not leak.

Builder Action: The contractor will repair bathtub or shower leaks as necessary to meet the performance guideline.

Discussion: Proper repair can be affected by sealing areas around tubs and showers. The homeowner is responsible for maintaining caulk seals from occupancy onward.

6-1-2

Observation: A plumbing fixture, appliance, or trim fitting is defective.

Performance Guideline: Plumbing fixtures, appliances, and trim fittings shall not be damaged at the time of substantial completion of the project.

Builder Action: Defective trim fittings, appliances, and fixtures are covered under the manufacturer’s warranty.

6-1-3

Observation: The surface of a plumbing fixture is cracked or chipped.

Performance Guideline: Cracks and chips in surfaces of bathtubs and sinks are considered excessive if they are visible from 3 feet in normal lighting conditions.

Builder Action: The contractor is not responsible for repairs unless the damage is reported to the contractor prior to substantial completion of the project. If the problem is the result of a manufacturing defect, the manufacturer’s warranty is in effect.

Discussion: Fiberglass and acrylic fixtures often can be repaired.

6-1-4

Observation: A fiberglass tub or shower enclosure base flexes.

Performance Guideline: The tub or showers are to be installed according to the manufacturer's instruction.

Builder Action: The contractor shall repair the base to meet the performance guideline.

6-1-5

Observation: A vanity top is cracked.

Performance Guideline: Vanity tops shall not have cracks when installed with proper sealants.

Builder Action: The contractor shall repair or replace the vanity top to meet performance guidelines. Cracks must be noted prior to substantial completion of the project.

SANITARY SEWER OR SEPTIC SYSTEM

6-2-1

Observation: A sewer, fixture, or drain is clogged.

Performance Guideline: Sewers, fixtures, and drains shall drain.

Builder Action: If defective installation is the cause, the contractor is responsible for correcting the problem.

Homeowner Action: The contractor is not responsible for sewers, fixtures, and drains that are clogged because of the homeowner's actions or negligence. If a problem occurs, the homeowner should consult the contractor for corrective action. If the homeowner's actions or negligence is the cause, the homeowner is responsible for correcting the problem.

Discussion: With respect to septic systems, homeowner actions that constitute negligence under this guideline include but are not limited to the following.

- Connection of sump pump, roof drains, or backwash from a water condition into the system.
- Placement of non-biodegradable items into the system.
- Use of a food waste disposal not supplied or approved by the contractor
- Placement of surfaces not permeable to water over the disposal area of the system.
- Allowing vehicles to drive or park over the disposal area of the system.
- Failure to pump out the septic tank periodically, as required.
- Use that exceeds the system's design standards.
- Allowing water to pond over the disposal area.

SECTION 7: Electrical

FUSES AND CIRCUIT BREAKERS

7-0-1

Observation: A fuse blows or a circuit breaker trips.

Performance Guideline: Fuses and circuit breakers shall not be tripped during normal usage.

Builder Action: The contractor will check wiring circuits and components for conformity with applicable electrical code requirements. The contractor will correct noncompliant elements.

Discussion: Blown fuses and tripped breakers are symptoms of a problem in some part of the electrical system in the home or some homeowner product connected to the system. Although defective components are possible, most electrical malfunctions are caused by homeowner-owned fixtures and appliances. The homeowner should unplug or disconnect fixtures and appliances on the circuit and then replace the fuse or reset the breaker. If the problem recurs, the contractor should be notified.

7-0-2

Observation: A ground fault circuit interrupter (GFCI) or arc fault circuit interrupter (AFCI) trips frequently.

Performance Guideline: Ground fault and arc fault circuit interrupters shall perform as designed.

Builder Action: The contractor will install ground fault and arc fault circuit interrupters in accordance with applicable electrical codes. Tripping is to be expected and is not covered unless it is caused by a component failure or incorrect installation.

Discussion: Both ground fault and arc fault circuit interrupters are very sensitive devices and are easily tripped. GFCIs protect outlets in wet areas (for example, bathrooms, kitchens, garages, exterior, etc.) Outlets protected by GFCIs may be connected in series; it may not be readily apparent that an inoperative convenience outlet is the result of a tripped GFCI in another room (and not necessarily in the electrical panel). AFCIs sometimes are installed to protect bedroom circuits. The most common cause of tripping AFCIs is damaged cords or plugs on homeowners' lamps, small appliances, or other devices. AFCIs are usually found in the electrical panel.

OUTLETS AND LIGHTS (1/2 HOTS AND GFI)

7-1-1

Observation: Electrical outlets, switches, or fixtures malfunction.

Performance Guideline: All electrical outlets, switches, and fixtures shall operate as designed.

Builder Action: The contractor will repair or replace malfunctioning electrical outlets, switches, and fixtures, if supplied and installed by the contractor.

7-1-2

Observation: Wiring fails to carry its design load.

Performance Guideline: Wiring shall be capable of carrying the designed load for normal residential use.

Builder Action: The contractor will verify that wiring conforms to applicable code requirements. The contractor will repair wiring not conforming to code.

7-1-3
Observation: A light fixture is tarnished.

Performance Guideline: Finishes on light fixtures may be covered under the manufacturer's warranty.

Builder Action: No action is required of the contractor. Homeowner should contact the manufacturer.

7-1-4
Observation: Receptacle or switch covers protrude from the wall.

Performance Guideline: Receptacle or switch covers should not be more than 1/16-inch from adjoining wall surface.

Builder Action: The contractor shall repair to meet performance guideline.

7-1-5
Observation: The homeowner's 220-volt appliance cord does not fit the outlet provided by the contractor.

Performance Guideline: The contractor shall install electrical outlets required by applicable electrical code.

Builder Action: No action is required of the contractor.

Homeowner Action:: The homeowner is responsible for obtaining an appliance cord that fits the outlets provided by the contractor.

7-1-6
Observation: A draft comes through an electrical outlet.

Performance Guideline: Electrical outlets and switch boxes on exterior walls may allow cold air to flow through or around an outlet into a room.

Builder Action: The contractor will repair one time after closing.

Homeowner Action: The homeowner may elect to install foam insulation pads under switch and outlet plates to help decrease drafts.

FANS

7-2-1

Observation: A ceiling fan vibrates excessively and/or is noisy.

Performance Guideline: The contractor shall install ceiling fans in accordance with the manufacturer's instructions.

Builder Action: The contractor shall correct any fan installation not in accordance with the performance guideline if the fan was supplied and installed by the contractor.

7-2-2

Observation: An exhaust fan discharges into attic or crawl space.

Performance Guideline: Fans shall discharge as required by applicable codes.

Builder Action: The contractor shall repair to meet performance guideline.

SMOKE DETECTORS

7-3-1

Observation: A smoke detector "chirps".

Performance Guideline: A smoke detector should not "chirp" at substantial completion of the project.

Builder Action: The contractor will repair or replace the smoke detector to eliminate chirping.

Discussion: Most smoke detectors are powered by both the homes electrical power and a backup battery. "Chirping" is an indication that the battery is weak or is not installed. If the chirping occurs on a new smoke detector, the homeowner will check the battery. If the issue is not related to the battery, the contractor will verify that the detector is wired correctly, and replace the device if necessary.

Homeowner Action: Safety officials recommend that homeowners change the batteries in smoke detectors semi-annually when daylight-savings time begins and ends.

SECTION 8: Mechanical

HUMIDITY CONTROL AND CONDENSATION

8-0-1

Observation: The ductwork makes noises.

Performance Guideline: Ductwork will be constructed and installed in accordance with applicable mechanical code requirements.

Builder Action: Unless the duct is not in compliance with the local code, no corrective action is required.

Discussion: Metal expands when it is heated and contracts when it cools. The “ticking” or “crackling” sounds caused by the metal’s movement are common.

8-0-2

Observation: The ductwork produces excessively loud noises commonly known as “oil canning.”

Performance Guideline: The stiffening of the ductwork and the thickness of the metal used shall be such that ducts do not “oil can.” The booming noise caused by “oil canning” is considered excessive.

Corrective Measure: The contractor will correct the ductwork to eliminate noise caused by “oil canning.”

8-0-3

Observation: There is airflow noise at a register.

Performance Guideline: The register should be correctly installed according to the manufacturer’s instructions.

Builder Action: No action is required unless registers are not installed in accordance with manufacturer’s instructions.

Discussion: Under certain conditions, some noise may be experienced with the normal flow of air, even when registers are installed correctly. See the manufacturer’s instructions.

8-0-4

Observation: The air handler or furnace vibrates.

Performance Guideline: These items shall be installed in accordance with the manufacturer’s instructions and applicable codes.

Builder Action: If installed incorrectly, the contractor will correct the items according to the manufacturer’s instructions and code requirements.

Discussion: Under certain conditions, some vibrating may be experienced with the normal flow of air, even when air handlers and furnaces are installed correctly. See the manufacturer’s instructions.

8-0-5

Observation: The ductwork is separated or detached.

Performance Guideline: Ductwork shall remain intact and securely fastened.

Builder Action: The contractor will reattach and secure all separated or unattached ductwork.

HEATING SYSTEM

8-1-1

Observation: The heating system is inadequate.

Performance Guideline: The heating system shall be capable of producing an inside temperature of 70 degrees Fahrenheit, as measured in the center of each room at a height of 5 feet above the floor under local, outdoor winter design conditions. National, state, or local energy codes shall supersede this performance guideline where such codes have been locally adopted.

Builder Action: The contractor will correct the heating system to provide the required temperature in accordance with the performance guideline or applicable code requirements.

Homeowner Action: The homeowner will be responsible for balancing dampers and registers and for making other necessary minor adjustments.

Discussion: Closed interior doors, closed registers and dirty v can restrict air flow and may affect the system's performance.

CENTRAL AIR-CONDITIONING SYSTEM

8-2-1

Observation: The cooling of rooms is inadequate.

Performance Guideline: If the air conditioning is installed by the contractor, the cooling system shall be capable of maintaining a temperature of 78 degrees Fahrenheit, as measured in the center of each room at a height of 5 feet above the floor under local outdoor summer design conditions. In the case of outside temperatures exceeding 91 degrees Fahrenheit, the system shall keep the inside temperature 20 degrees Fahrenheit cooler than the outside temperature. National, state, or local codes shall supersede this guideline where such codes have been locally adopted.

Builder Action: The contractor will correct the cooling system to provide the required temperature in accordance with the performance guideline or applicable code requirements.

Discussion: Closed interior doors, closed registers and dirty filters can restrict air flow and may affect the system's performance.

8-2-2

Observation: A condensation line is clogged.

Performance Guideline: Condensate line must be free of all clogs to operate properly.

Builder Action: Condensation lines will eventually clog under normal use. The contractor will provide unobstructed condensation lines at the time of substantial completion of the project.

Homeowner Action: The homeowner is responsible for maintaining condensation lines.

8-2-3

Observation: There is a refrigerant leak.

Performance Guideline: Refrigerant lines and fittings shall not leak during normal operation.

Builder Action: The contractor will repair leaking refrigerant lines and recharge the air-conditioning unit unless the damage was caused by the homeowner's actions or negligence.

8-2-4

Observation: There is condensation on the outside of air handlers and ducts.

Performance Guideline: Moisture may condense on the exterior surfaces of air handlers and ducts when exposed to some temperature differences and high humidity levels.

Builder Action: No action is required of the contractor, unless the condensation is directly under some temperature differences and high humidity levels

Discussion: Condensation usually results from conditions beyond the contractor's control. Moisture in the air can condense (to form water) and collect on cold surfaces, particularly in the summer months when the outside humidity is high.

8-2-5

Observation: Kitchen or bath fans allow air infiltration.

Performance Guideline: Bath and kitchen fans shall be installed in accordance with the manufacturer's instructions and code requirements.

Builder Action: No action is required of the contractor if fans meet guideline.

Discussion: It is possible for outside air to enter the house through a ventilation fan. The dampers in most fans do not seal tightly. It is possible for the damper to be lodged open due to animal activity (including nesting in the outside opening), or the accumulation of grease, lint, and other debris.

Homeowner Action: Maintenance of ventilating fans is the homeowner's responsibility.

8-2-6

Observation: HVAC vent or register covers protrude more than 1/16-inch from a smooth wall or ceiling surface.

Performance Guideline: Registers shall not protrude more than 1/16-inch from the wall surface at the time of substantial completion of the project.

Builder Action: The contractor shall comply with the performance guideline.

Discussion: Registers and grills may deflect over time. This can result in gaps occurring between the grill or register and the wall or ceiling. As long as the vent or register is securely attached, this is not a warranty item.

FIREPLACE AND WOOD STOVE

8-3-1

Observation: A fireplace or chimney does not consistently draw properly.

Performance Guideline: A properly designed and constructed fireplace and chimney shall function correctly. Some homes that have been constructed to meet stringent energy criteria may need to have a nearby window opened slightly to create an effective draft.

Builder Action: One time only, the contractor shall repair the chimney, based on the manufacturer's specifications or the design specifications, to draw correctly.

Homeowner Action: The homeowner to ensure there is fresh air makeup for the flue to draw properly.

Discussion: High winds can cause temporary negative or down drafts. Negative drafts can also be caused by obstructions such as tree branches, steep hillsides, adjoining homes, and interior furnaces.

8-3-2

Observation: The chimney is separated from the structure.

Performance Guideline: Newly built fireplaces will often incur slight amounts of separation. The amount of separation from the main structure shall not exceed ½-inch in any 10-foot vertical measurement.

Builder Action: The contractor will repair gaps that do not meet the performance guideline.

Discussion: Proper repair can be affected by caulking unless the cause of the separation is due to a structural failure of the chimney foundation itself. In that case, caulking is unacceptable.

8-3-3

Observation: The firebox paint is damaged by a fire in the fireplace.

Performance Guideline: Heat and discoloration is a common occurrence.

Builder Action: No action is required of the contractor.

Discussion: The homeowner should obtain the proper paint from the manufacturer if he or she chooses to touch up the interior of the firebox for aesthetic reasons.

8-3-4

Observation: A firebrick or mortar joint is cracked.

Performance Guideline: Heat and flames from normal fires can cause cracking.

Builder Action: No corrective action is required of the contractor.

8-3-5

Observation: A simulated firebrick panel has cracked.

Performance Guideline: This is a common condition.

Builder Action: No corrective action is required of the contractor.

8-3-6

Observation: Rust is observed on the fireplace damper.

Performance Guideline: This is a common condition.

Builder Action: No corrective action is required of the contractor.

SECTION 9: Interior

INTERIOR DOORS

9-0-1

Observation: An interior door is warped.

Performance Guideline: Interior doors (full openings) shall not warp in an excess of ¼-inch.

Builder Action: The contractor will correct or replace and refinish defective doors to match existing doors as nearly as practical.

Discussion: In bathroom or utility areas, exhaust fans or an open window must be used to minimize moisture to prevent warp-age of door units. If the homeowner is responsible for painting the door, the contractor is not responsible.

9-0-2

Observation: Bi-fold doors come off their tracks during normal operation.

Performance Guideline: Bi-fold doors shall slide properly on their tracks at the time of substantial completion of the project. Cleaning and maintenance necessary to preserve proper operation are the homeowner's responsibility.

Builder Action: One time only, the contractor will repair any bi-fold door that will not stay on its track during normal operation.

Discussion: Proper operation should be verified by the homeowner and the contractor at the time of substantial completion of the project. Customers should be aware that bi-fold, bi-pass and pocket doors are inherently more sensitive than swing doors and need to be treated accordingly..

9-0-3

Observation: A pocket door rubs in its pocket during normal operation.

Performance Guideline: Pocket doors shall not rub in their pockets during normal operation if they are installed according to the manufacturer's instructions.

Builder Action: One time only, the contractor will repair the pocket door to meet the performance guideline.

Discussion: Pocket doors commonly rub, stick or derail due to the inherent nature of the product. It is common, however, for the door to operate against the guides provided by the manufacturer.

9-0-4

Observation: A wooden door panel has shrunk or split.

Performance Guideline: Wooden door panels shall not split to the point that light is visible through the door.

Builder Action: One time only, the contractor will fill splits in the door panel with wood filler and will match the paint or stain as closely as practical.

9-0-5

Observation: A door rubs on jambs or contractor-installed floor covering.

Performance Guideline: Doors shall operate smoothly.

Builder Action: One time only, the contractor will repair the door as necessary to meet performance guideline.

9-0-6

Observation: A door edge is not parallel to the door jamb.

Performance Guideline: When the contractor installs the door frame and door, the door edge shall be within 3/16-inch of parallel to the door jamb.

Builder Action: The contractor will adjust the door as necessary to meet performance guideline one time.

9-0-7

Observation: A door swings open or closed by the force of gravity.

Performance Guideline: Doors shall not swing open or closed by the force of gravity alone.

Builder Action: The contractor will adjust the door as necessary to meet performance guideline one time.

9-0-8

Observation: Interior doors do not operate smoothly.

Performance Guideline: Doors shall move smoothly with limited resistance.

Builder Action: The contractor shall repair door operation to meet the performance guideline one time.

9-0-9

Observation: A door knob or latch does not operate smoothly.

Performance Guideline: A door knob or latch should not stick or bind during operation.

Builder Action: The contractor will adjust, repair or replace knobs or latches that are not damaged by abuse one time.

INTERIOR STAIRS

9-1-1

Observation: An interior stair tread deflects too much.

Performance Guideline: The maximum vertical deflection of an interior stair tread shall not exceed 1/8-inch at 200 pounds of force.

Builder Action: The contractor will repair the stair to meet performance guideline.

9-1-2

Observation: Gaps exist between interior stair risers, treads, and/or skirts.

Performance Guideline: Gaps between adjoining parts are designed to meet flush shall not exceed 1/8-inch in width.

Builder Action: The contractor will repair the gap with filler or will replace the parts as necessary to meet the performance guideline.

9-1-3

Observation: A stair riser or tread squeaks.

Performance Guideline: Loud squeaks caused by a loose stair riser or tread are considered excessive; however, totally squeak-proof stair risers or treads cannot be guaranteed.

Builder Action: The contractor will refasten any loose risers or treads or take other reasonable and cost-effective corrective action to eliminate squeaking without removing tread or ceiling finishes.

Discussion: Squeaks in risers or tread may occur when a riser has come loose from the tread, and is deflected by the weight of a person and rubs against the nails that hold it in place. Movement may occur between the riser and the tread or other stairway members when one tread is deflected while the other members remain stationary. Using trim screws to fasten the tread to the riser from above sometimes will reduce squeaking. If there is no ceiling below, gluing or re-nailing the riser to the tread or shimming will reduce squeaks but the complete elimination of squeaks is practically impossible.

9-1-4

Observation: Gaps exist between interior stair railing parts.

Performance Guideline: Gaps between interior stair railing parts shall not exceed 1/8-inch in width.

Builder Action: The contractor will ensure that individual parts of the railing are securely mounted. Any remaining gaps will be filled or the parts will be replaced to meet the performance guideline.

9-1-5

Observation: An interior stair railing lacks rigidity.

Performance Guideline: Interior stair railings shall be attached to structural members in accordance with applicable building codes.

Builder Action: The contractor will repair any stair railings as necessary to comply with applicable building codes.

Discussion: Stair railings are designed to protect an individual while stepping up and down a stairwell. Pulling, swinging, hanging, or sliding on railings may
loosen the rail system and are not covered under the contractor's warranty.

WALLS, CEILINGS, TRIM, AND PAINTED SURFACES

Trim and Molding

9-2-1
Observation: There are gaps at non-mitered trim and molding joints.

Performance Guideline: Openings at joints in trim and moldings, and at joints between moldings and adjacent surfaces, shall not exceed 1/8-inch in width at the time of installation.

Builder Action: None.

Discussion: Separation of trim and moldings in excess of the performance guidelines may be caused by lack of control of indoor relative humidity. Joints that separate under these conditions are not considered defective. It is the homeowner's responsibility to control temperature and humidity in the home.

9-2-2
Observation: Nails are not properly set or, where puttied, nail holes are not properly filled.

Performance Guideline: Setting nails and filling nail holes are considered part of painting and finishing. After finishing, nails and nail holes shall not be readily visible from a distance of 6 feet under normal lighting conditions. After painting or staining, putty colors will not exactly match variations in wood color.

Builder Action: Where the contractor is responsible for painting, the contractor shall take action necessary to meet the performance guideline.

Discussion: Puttying of nail holes in base and trim molding installed in unfinished rooms and areas not exposed to view (such as inside of closets) are not included in this guideline.

9-2-3
Observation: An inside corner is not coped or mitered.

Performance Guideline: Trim and molding edges at inside corners shall be coped or mitered. However, square-edge trim and molding may be butted.

Builder Action: Not covered by warranty.

9-2-4
Observation: Trim or molding mitered edges do not meet.

Performance Guideline: Gaps between mitered edges in trim and molding shall not exceed 1/8-inch at the time of installation.

Builder Action: Not covered by warranty.

9-2-5
Observation: Interior trim is split.

Performance Guideline: Splits, cracks, and checking greater than 1/8-inch in width are considered excessive.

Builder Action: Not covered by warranty.

9-2-6
Observation: Hammer marks are visible on interior trim.

Performance Guideline: Hammer marks on interior trim shall not be readily visible from a distance of 6 feet under normal lighting conditions.

Builder Action: Not covered by warranty.

Gypsum Wallboard

9-2-7
Observation: A nail pop, blister, or other blemish is visible on a finished wall or ceiling.

Performance Guideline: Any such blemishes that are readily visible from a distance of 6 feet under normal lighting conditions are considered excessive.

Builder Action: Not covered by warranty.

9-2-8
Observation: Cracked corner bead, excess joint compound, trowel marks, or blisters in tape joints are observed on the drywall surface.

Performance Guideline: Defects resulting in cracked corner bead, trowel marks, excess joint compound or blisters in tape are considered excessive. Remodeling Specific: See Note at beginning of chapter.

Builder Action: Not covered by warranty.

9-2-9
Observation: Joints protrude from the surface.

Performance Guideline: Any joints that are visible from a distance of 6 feet under normal lighting conditions are considered excessive. Remodeling Specific: See Note at beginning of chapter.

Builder Action: Not covered by warranty.

Discussion: Joints often occur in long walls, stairwells, and areas of two-story homes where framing members have shrunk and caused the drywall to protrude.

9-2-10
Observation: The texture of gypsum wallboard does not match.

Performance Guideline: Any variations that are readily visible from a distance of 6 feet under normal lighting conditions are considered excessive.

Builder Action: Not covered by warranty.

9-2-11
Observation: Angular gypsum wallboard joints are uneven.

Performance Guideline: This is a natural condition that occurs with randomly applied materials.

Builder Action: No action is required of the contractor. This is a common condition.

9-2-12
Observation: Drywall is cracked.

Performance Guideline: Drywall cracks greater than 1/16-inch in width are considered excessive. Remodeling Specific: See Note at beginning of chapter.

Builder Action: Not covered by warranty.

9-2-13
Observation: Blown or textured ceilings have uneven textures.

Performance Guideline: This is a common condition that occurs with randomly applied materials.

Builder Action: No action is required of the contractor. This is a common condition.

Paint, Stain and Varnish

(Color variation cannot be controlled by Builder)

9-2-14
Observation: Interior paint does not “cover” the underlying surface.

Performance Guideline: The surface being painted shall not show through new paint when viewed from a distance of 6 feet under normal lighting conditions.

Builder Action: Not covered by warranty.

9-2-15
Observation: An interior surface is spattered with paint.

Performance Guideline: Paint spatters shall not be readily visible on walls, woodwork, floors, or other interior surfaces when viewed from a distance of 6 feet under normal lighting conditions.

Builder Action: Not covered by warranty.

9-2-16
Observation: Brush marks show on interior painted or stained areas.

Performance Guideline: Brush marks shall not be readily visible on interior painted surfaces when viewed from a distance of 6 feet under normal lighting conditions.

Builder Action: Not covered by warranty.

9-2-17
Observation: Lap marks show on interior painted or stained areas.

Performance Guideline: Lap marks shall not be readily visible on interior painted or stained surfaces when viewed from a distance of 6 feet under normal lighting conditions.

Builder Action: Not covered by warranty.

9-2-18
Observation: Interior painting, staining or refinishing is required because of repair work.

Performance Guideline: A perfect match between original and new paint cannot be expected. Repairs required under these performance guidelines shall be finished to match immediate surrounding areas as closely as practical.

Builder Action: Where the majority of the wall or ceiling area is affected, the area will be painted from break line to break line. The contractor is not responsible to paint an entire room.

Discussion: The contractor is only responsible if he or she painted the home as part of the original contract.

9-2-19
Observation: Resin has bled through the paint on interior trim.

Performance Guideline: This is a common condition that can be expected to occur with natural materials such as wood. Remodeling Specific: See Note at beginning of chapter.

Builder Action: No action is required of the contractor. This is a common condition.

CABINETS

9-3-1

Observation: Cabinets do not meet the ceiling or walls.

Performance Guideline: Gaps greater than ¼-inch in width are considered excessive.

Builder Action: The contractor will repair the gap with caulk, putty, or scribe molding, or will reposition/reinstall to meet performance guideline.

Homeowner Action: The homeowner will not overload cabinets and drawers.

9-3-2

Observation: Cabinets do not line up with each other.

Performance Guideline: Cabinet faces more than 1/8-inch out of line, and cabinet corners more than 3/16-inch out of line, are considered excessive, unless the homeowner and the contractor agree to disregard the guideline in order to match or otherwise compensate for pre-existing conditions.

Builder Action: The contractor will make necessary adjustments to meet the performance guideline.

9-3-3

Observation: A cabinet is warped.

Performance Guideline: Cabinet warp-age shall not exceed 1/4-inch as measured from the face frame to the point of furthermost warp-age, with the door or drawer or drawer front in closed position.

Builder Action: The contractor will correct or replace doors and drawer fronts as necessary to meet performance guideline.

9-3-4

Observation: A cabinet door or drawer binds.

Performance Guideline: Cabinet doors and drawers shall open and close with reasonable ease.

Builder Action: Not covered by warranty.

9-3-5

Observation: A cabinet door will not stay closed.

Performance Guideline: The catches or closing hardware for cabinet doors shall be adequate to hold the doors in a closed position.

Builder Action: The contractor will adjust or replace the door catches or closing hardware as necessary to meet the performance guideline, unless due to homeowner misuse or negligence.

9-3-6
Observation: Cabinet doors or drawers are cracked.

Performance Guideline: Panels and drawer fronts shall not crack.

Builder Action: The contractor may replace or repair cracked panels and drawer fronts. No contractor action is required if the cracked drawer fronts or panels result from the homeowner's abuse.

Discussion: Paint or stain on the repaired or replaced panel or drawer front may not match the stain on the existing panels or drawer fronts.

9-3-7
Observation: Cabinet units are not level.

Performance Guideline: Individual cabinets should not have a deviation of more than 3/16-inch out of level.

Builder Action: The contractor will level cabinets to meet the performance guideline.

9-3-8
Observation: A cabinet door is warped.

Performance Guideline: Cabinet door warp-age shall not exceed 1/4-inch as measured diagonally from corner to corner.

Builder Action: The contractor may replace or repair warped doors to meet the performance guideline.

9-3-9
Observation: Cabinet doors do not align when closed.

Performance Guideline: Gaps between doors shall not be deviated by more than 1/8-inch top to bottom on the door.

Builder Action: Not covered by warranty.

COUNTERTOPS

9-4-1
Observation: High-pressure laminate on a countertop is delaminated.

Performance Guideline: Countertops fabricated with high-pressure laminate coverings shall not delaminate.

Builder Action: The contractor will repair or replace delaminated coverings, unless the delaminating was caused by the homeowner's misuse or negligence.

Discussion: Homeowners should refrain from leaving any liquids near the countertop seams or allowing the surface to become excessively hot.

9-4-2

Observation: The surface of high-pressure laminate on a countertop is cracked or chipped.

Performance Guideline: Cracks or chips greater than 1/16-inch in width are considered excessive.

Builder Action: The contractor will repair or replace cracked or chipped countertops to meet the performance guideline only if they are reported at the time of substantial completion of the project.

9-4-3

Observation: Solid surface countertops are visibly scratched.

Performance Guideline: At the time of substantial completion of the project, solid surfaces countertops shall be free of scratches visible from 6 feet under normal lighting conditions.

Builder Action: The contractor will repair scratches in the countertop to meet the performance guideline, only if they are reported at the time of substantial completion of project.

9-4-4

Observation: A countertop is not level.

Performance Guideline: Countertops shall be no more than 3/8-inch in 10 feet out of parallel with the floor. Remodeling Specific: For projects where the floor is out of level, the countertop may be installed proportionately out of level.

Builder Action: The contractor will make necessary adjustments to meet the performance guideline.

9-4-5

Observation: Granite, marble, stone, or solid surface countertop is cracked at the time of substantial completion of the project.

Performance Guideline: Cracks greater than 1/32-inch in width are considered excessive.

Builder Action: If the crack is found to be caused as a result of faulty installation or product, the contractor will repair or replace the countertop. Patching is an acceptable repair.

9-4-6

Observation: Granite, marble, stone, or solid surface countertop has texture or color variations.

Performance Guideline: Color variations in natural surface products are acceptable. Solid surface variations in texture and colors are covered by the manufacturer's warranty.

Builder Action: No action is required of the contractor.

9-4-7

Observation: Granite, marble, stone, or solid surface countertop is chipped at the time of substantial completion of the project.

Performance Guideline: Chips greater than 1/32-inch in width are considered excessive.

Builder Action: The contractor will repair or replace affected areas to meet the performance guidelines.

9-4-8

Observation: A solid surface or laminate countertop has a bubble, burn, stain, or other damage.

Performance Guideline: Solid surface or laminate products shall be free of bubbles, burns or stains at the time of substantial completion of the project.

Builder Action: The contractor will repair or replace the countertop to meet the performance guidelines.

Discussion: Solid surface and laminate products may be subject to damage by hot surfaces placed on or near the product. The homeowner is responsible for maintaining the countertop and protecting it from damage.

9-4-9

Observation: A granite, marble, stone, or solid-surface countertop has visible seams.

Performance Guideline: Seams may be visible and
especially noticeable with certain countertop materials and darker finishes.

Builder Action: No action is required by the contractor.

9-4-10

Observation: A granite, marble , or stone countertop has excessive lippage between sections.

Performance Guideline: Lippage greater than 1/32” is considered excessive.

Builder Action: The contractor will repair or replace the countertop to meet the performance guideline.

SECTION 10: Floor Finishes

CARPETING

10-0-1

Observation: Carpet does not meet at the seams.

Performance Guideline: It is not a defect for carpet seams to show. However, a visible gap at the seams is considered excessive.

Builder Action: If the carpet was installed by the contractor, the contractor will eliminate visible gaps at carpet seams.

10-0-2

Observation: Carpet stretches or loosens.

Performance Guideline: When stretched and secured properly, wall-to-wall carpeting installed as the primary floor covering shall not come up, loosen, or separate from the points of attachment.

Builder Action: Not covered by warranty.

10-0-3

Observation: Carpet is faded or discolored.

Performance Guideline: Fading or discoloration of carpet is a manufacturer's responsibility.

Builder Action: No action is required of the contractor.

Discussion: Fading or discoloration may result from the homeowner spilling liquids on the carpet, exposure to sunlight, or the homeowner's failure to properly maintain the carpet.

10-0-4

Observation: Dead spots are observed in padding areas below the carpet surface.

Performance Guideline: Carpeted areas shall have full coverage of padding consistently throughout the flooring area.

Builder Action: The contractor will repair/replace padding in the affected areas to meet the performance guidelines.

ROLL VINYL AND RESILIENT TILE FLOORING

10-1-1

Observation: Nail pops are observed on the surface of resilient flooring.

Performance Guideline: Readily visible nails pops on resilient flooring are considered excessive.

Builder Action: Not covered by warranty.

Discussion: The contractor will repair or replace, at the contractor's option, the resilient floor covering in the affected areas with similar materials. The contractor is not responsible for discontinued patterns or color variations when replacing the floor covering.

10-1-2

Observation: Depressions or ridges are observed in resilient flooring because of sub floor irregularities.

Performance Guideline: Readily apparent depressions or ridges exceeding 1/8-inch shall be repaired. The ridge or depression measurement is taken at the end of 6-inch straightedge held tightly to the floor on one side of the affected area. Measure under the straightedge to determine the depth of the depression or height of the ridge.

Builder Action: The contractor will take corrective action as necessary to bring the affected area within the acceptable tolerance so that the depression or ridge is not readily visible and is not more than 1/8-inch. The contractor will not be responsible for discontinued patterns or color variations when replacing the floor covering.

10-1-3

Observation: Resilient flooring has lost adhesion.

Performance Guideline: Resilient flooring shall not lift, bubble or detach.

Builder Action: At the contractor's option, (effected area being equal to or greater than 12" inches in size) the contractor will repair or replace the affected resilient flooring as necessary. The contractor will not be responsible for discontinued patterns or color variations when replacing the floor covering.

Discussion: The performance guideline does not apply to perimeter-attached vinyl floors.

10-1-4

Observation: Bubbles are observed on roll vinyl flooring.

Performance Guideline: Bubbles resulting from trapped air and that protrude higher than 1/16-inch from the floor is considered excessive.

Builder Action: Not covered by warranty.

Discussion: The performance guideline does not apply to perimeter attached vinyl floors.

10-1-5
Observation: The patterns on roll vinyl flooring are misaligned.

Performance Guideline: Patterns at seams between adjoining pieces shall be aligned to within 1/8-inch.

Builder Action: Not covered by warranty..

10-1-6
Observation: A resilient floor tile is loose.

Performance Guideline: Resilient floor tiles shall be securely attached to the floor.

Builder Action: The contractor will attach loose resilient floor tiles securely to the floor. The old adhesive will be removed if necessary to re-secure the tiles

10-1-7
Observation: The corners or patterns of resilient floor tiles are misaligned.

Performance Guideline: The corners of adjoining resilient floor tiles shall be aligned to within 1/8-inch. Misaligned patterns are not covered unless they result from improper orientation of the floor tiles.

Builder Action: Not covered by warranty.

10-1-8
Observation: Yellowing is observed on the surface of vinyl sheet goods.

Performance Guideline: The contractor shall install flooring per the manufacturer's instructions.

Builder Action: Yellowing resulting from a manufacturer's defect or from the homeowner's misuse or lack of maintenance is not covered by the contractor.

Discussion: Some chemical compounds, such as tar residue from a recently paved asphalt driveway, may cause a chemical reaction with the flooring material and result in permanent damage to the floor. The homeowner is responsible for the proper use and maintenance of the floor. Yellowing caused by the homeowner's improper use of, or inadequate maintenance of, the floor is not the contractor's or the manufacturer's responsibility.

10-1-9
Observation: Cuts and gouges exist in vinyl flooring.

Builder Action: The contractor will repair cuts and gouges reported prior to closing. Damage after closing is not covered by the contractor.

WOOD FLOORING

10-2-1

Observation: Gaps exist between strip hardwood floor boards.

Performance Guideline: Gaps between strip hardwood floor boards shall not exceed 1/8-inch in width at the time of installation.

Builder Action: The contractor will repair gaps that do not meet the performance guideline.

Discussion: Proper repair can be affected by filling the gap. Relative humidity in the home can cause noticeable fluctuations in gaps between floor boards. This is a common phenomenon in climates and areas of the home that experience significant shifts in humidity. The homeowner is responsible for maintaining proper humidity levels in the home.

10-2-2

Observation: Strip hardwood floor boards are cupped.

Performance Guideline: Cups in strip hardwood floor boards shall not exceed 1/16-inch in height in a 3-inch maximum span measured perpendicular to the long axis of the board. Cupping caused by exposure to moisture beyond the contractor's control is not covered.

Builder Action: The contractor will correct or repair cupped boards to meet the performance guideline.

Discussion: The homeowner is responsible for proper maintenance of the floor and for maintaining proper humidity levels in the home.

10-2-3

Observation: Excessive lippage is observed at the junction of pre-finished wood flooring products.

Performance Guideline: Lippage greater than 1/16-inch is considered excessive.

Builder Action: The contractor will repair lippage in the affected areas to meet the performance guideline.

10-2-4

Observation: Voids ("holidays") are observed in the floor finish.

Performance Guideline: Voids that are readily visible from a distance of 6 feet under normal lighting conditions are considered excessive.

Builder Action: The contractor will repair the floor finish in the affected area(s) to meet the performance guideline.

10-2-5

Observation: The top coating on hardwood flooring has peeled.

Performance Guideline: Pre-finished coatings are the manufacturer's responsibility.

Builder Action: No action is required of the contractor. Homeowner should contact Manufacturer.

Discussion: The homeowner should contact the manufacturer regarding factory-applied finishes that have peeled.

10-2-6

Observation: Strip flooring has crowned.

Performance Guidelines: Crowning in strip flooring shall not exceed 1/16-inch in depth in a 3-inch maximum span when measured perpendicular to the long axis of the board.

Builder Action: The contractor will repair the affected area to meet the performance guideline.

10-2-7

Observation: Hardwood flooring has buckled from the substrate.

Performance Guideline: Hardwood floor should not become loose from the substrate.

Builder Action: The contractor will repair the affected area to meet the performance guideline.

10-2-8

Observation: Excessive knots and color variations are observed in strip hardwood flooring.

Performance Guideline: The contractor will install the grade of hardwood specified for the project. All wood should be consistent with grading stamp as specified.

Builder Action: Not covered by warranty.

Discussion: Hardwood is a natural product and consequently can be expected to exhibit variations in color, grain, and stain acceptance.

10-2-9

Observation: Slivers or splinters are observed in strip flooring.

Performance Guideline: Slivers or splinters that occur during installation of the flooring are considered excessive.

Builder Action: Not covered by warranty.

Discussion: Slivers or splinters that occur during installation can be shaved and the area filled prior to sanding and finishing.

10-2-10

Observation: "Sticker burn" is observed on the surface of strip flooring.

Performance Guideline: Discoloration from stacking strips in hardwood flooring is considered excessive in certain grades of flooring.

Builder Action: Not covered by warranty.

10-2-11
Performance Guideline: At the time of substantial completion of the project, hardwood flooring will not have scratches and dents visible from a standing position.

Builder Action: Not covered by warranty.

Discussion: The wide varieties of hardwood flooring available to homeowners have varying hardness and wear resistance. The contractor is not responsible for the choice of a softer material that may be more susceptible to damage during or after construction.

TILE, BRICK, MARBLE & STONE FLOORING

10-3-1
Observation: Tile, brick, marble, or stone flooring is broken or loosened.
Performance Guideline: Tile, brick, marble, or stone flooring shall not be broken or loose.

Builder Action: The contractor will replace broken tiles, bricks, marble and stone flooring and re-secure loose tiles, bricks, marble and stone, unless the flooring was damaged by the homeowner's actions or negligence. The contractor is not responsible for discontinued patterns or color variations when replacing tile, brick, marble or stone flooring.

10-3-2
Observation: Cracks are observed in the grouting of tile joints or at the junctures with other materials, such as a bathtub.

Performance Guideline: Cracks in grouting or ceramic tile joints commonly result from normal shrinkage conditions. Cracks that result in loose tiles or gaps in excess of 1/16-inch shall be repaired.

Builder Action: The contractor will repair grouting, if necessary, one time only. The contractor is not responsible for color variations or discontinued colored grout.

Homeowner Action: The homeowner is responsible for re-grouting these joints after the contractor's one time repair.

Discussion: The use of an elastic substance at junctures between tile and other materials is often more effective than grout.

10-3-3
Observation: There is excessive lippage of adjoining marble or ceramic tile.

Performance Guideline: Lippage greater than 1/16-inch is considered excessive, except where the materials are designed with an irregular height (such as hand-made tile).

Builder Action: The contractor will repair lippage in the affected areas to meet the performance guideline.

10-3-4

Observation: A grout or mortar joint is not a uniform color.

Performance Guideline: After the grout has cured, any color variation that is readily visible from a distance of 6 feet under normal lighting conditions is considered excessive.

Builder Action: One time only, the contractor will repair the joint to meet the performance guideline.

SECTION 11: Landscaping

11-0-1

Observation: Sod, shrubs, plants, trees, or any other living elements that have been planted in a disturbed area of the property as part of the contract have died.

Performance Guideline: Any shrub, plant, tree, or sod planted by the contractor as part of the contract are to be alive at the time of substantial completion of the project.

Builder Action: Any shrub, plant, tree, or sod planted by the contractor as part of the contract and reported prior to final settlement shall be replaced to meet the performance guideline. The builder will not replace any shrub, plant, tree, sod, or any other living element reported after final settlement.

11-0-2

Observation: Grass seed does not germinate.

Performance Guideline: Germination is dependent on certain climatic conditions, which are beyond the contractor's control.

Builder Action: The contractor is only responsible for seeding per the manufacturer's instructions.

Discussion: After installation, proper lawn and landscape care are the homeowner's responsibility.

11-0-3

Observation: Existing trees located on property prior to construction are dead.

Performance Guideline: Even with the best efforts, trees in the area of construction activity may not survive due to damage to underground root systems or changes in environmental conditions.

Builder Action: Not covered by warranty.

Homeowner Action: It is the homeowner's responsibility to provide a water source to any that they wish to survive construction.

Homeowner Maintenance Schedule

FALL/SPRING MAINTENANCE:

- ☐ Inspect Caulking & Exterior Paint
- ☐ Inspect Weather Stripping
- ☐ Tighten any and all loose nuts and bolts.
- ☐ Maintain tile grout
- ☐ Adjust registers for heating/cooling
- ☐ Clean cabinets
- ☐ Lubricate garage door rollers
- ☐ Inspect fireplace
- ☐ Lubricate locks, hinges & latches
- ☐ Adjust & maintain irrigation system for the season
- ☐ Replace return air filters

SUMMER MAINTENANCE:

- ☐ Verify HVAC condensation drain is flowing freely while a/c is running
- ☐ Inspect and maintain exposed aggregate driveways diligently during the rainy season.
- ☐ If second floor air-handling unit is equipped with an overflow pan, verify that it's clear of obstructions.
- ☐ Adjust & maintain irrigation system for the season
- ☐ Replace return air filters

WINTER MAINTENANCE:

- ☐ Disconnect exterior hoses to prevent freeze breaks
- ☐ Close crawl space vents during extreme cold weather (if app)
- ☐ Adjust & maintain irrigation system for the season and Winterize Backflow Preventer
- ☐ Replace return air filters

EXTENDED TRIPS AWAY

- ☐ Turn off water
- ☐ Set Heat & A/C to conserve power but also to protect home from freezing in winter, and keep humidity down in the summer.
- ☐ Have a friend or neighbor check your home once a week.
- ☐ Contact the post office and any newspaper subscriptions to forward or hold all mail & newspapers.
- ☐ Inspect your home immediately after any major weather event.
- ☐ If leaving during the cold season, have your irrigation system serviced & drained so it doesn't freeze and break.
- ☐ Replace return air filters

ANNUAL MAINTENANCE:

- ☐ Pressure wash entire exterior-siding, brick, etc.
- ☐ Have a qualified expert inspect irrigation system each year.
- ☐ Test and clean smoke detectors
- ☐ Check safety switches (motion detectors) on garage doors.
- ☐ Oil all moving parts on garage door tracks.
- ☐ Tighten all nuts and bolts in garage door tracks.

This Maintenance Schedule/Checklist is not intended to be an all-inclusive list of all maintenance that your home will ever need nor is it intended for you to use as a substitute for handling all of your home maintenance and repair needs; your larger home maintenance repairs; or manufacturer's requirements and guidelines. Rather, this Maintenance Schedule/Checklist is simply intended as a point of reference and to provide easy-to-follow tips to help you keep your home healthy, safe and well maintained in the years to come

Appendix

ASTM Glass Standards for General Contractors

The BIG Question: When is a Defect NOT a Defect?

Quick Answer:

1. Move away from the glass
2. Stand back 10 feet
3. Face the glass straight-on at 90 degrees
4. Inspect the central 80% portion of the glass

Under these conditions, if you can't see it from 10 feet – it isn't a defect. Anyone can find imperfections in glass if they look close enough and hard enough. Glass is meant to be looked through, not at.

ASTM International is the basis for understanding glass and coating quality, allowable defects, and visual inspection criteria. ASTM has many different specifications and classifications depending on the type of glass being analyzed or quality controlled. Some examples of coating quality criteria are:

1. ASTM C 1036-16 (standard specification for flat glass) Q/3 / Glazing selection specifications or better
2. ASTM C 1048-92 (Standard specification for heat-treated glass – kind HS, kind FT coated and uncoated glass) specifications using Q3 quality or better
3. ASTM C 1376-97 (Standard specification for Pyrolytic and vacuum deposition coatings on glass) kind CV specifications or better.

Before pointing out defects and imperfections, understanding ASTM inspection criteria is very important. It outlines things such as inspection distance, lighting requirements, inspections times, etc.

Examples of Visual Inspection Criteria

- Glass shall be inspected in the central (see illustration) area in transmission at a distance of 5 feet from the observer, and in reflection distance of 10 feet from the observer.
- Glass shall be inspected in the border area in transmission and reflection at a distance of 10 feet from the observer.

Appendix (cont.)

- Glass must be inspected using a viewing angle of 90 degrees from the glass with suitable background light (daylight without direct sunlight or a range of 500 – 1000 foot lamberts). If a lighting box is used as a light source, the diffusing plate shall be parallel to and at a distance of 10 feet from the glass.
- Inspection should not exceed viewing of more than 5 seconds for lites up to 6 square feet, 10 seconds for lites up to 35 square feet, at 20 seconds for lites larger than 35 square feet, either in transmission or reflection.
- If defects are visible beyond what is allowable as listed by sizes (square feet) below using the inspection criteria, the glass may be rejected.

ALLOWABLE DEFECTS

A) Single (individual) lites up to 6 square feet

1. Scratches – Viewable as stated above must be 1” or less. No more than 1 is allowed per lite
2. Debris, Dirt, Spots – Viewable as stated above, must be 1/16” or less. No more than 1 is allowed per lite.
3. Seeds, Bubbles, Knots, Stones – Viewable as stated above, must be 1/16” or less. No more than 1 is allowed per lite.
4. No more than 1 total viewable defect as described above is allowed per lite.
5. Shells – No more than ¼” from edge less than ½ the thickness of the lite. No more than 1 per side.
6. Chips – No more than 1/8” from the edge. No more than 1 per side. (See illustration for chips)
7. Coating – must be uniform on the lite inspected when viewed in transmission using the inspection criteria previously stated above.
8. The border area is comprised of 2 inches plus ½” from each edge of the lite. All other area is the central area.

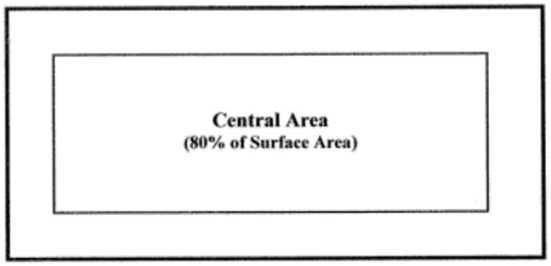
B) Single (individual) lites up to 6 to 35 square feet

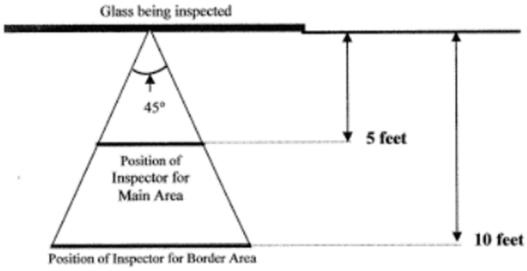
1. Scratches – Viewable as stated above must be 1” or less. No more than 2 are allowed per lite and must be separated by a minimum of 24 inches.
2. Debris, Dirt, Spots – Viewable as stated above, must be 1/16” or less. No more than 2 are allowed per lite and must be separated by a minimum of 24 inches.
3. Seeds, Bubbles, Knots, Stones – Viewable as stated above, must be 1/16” or less. No more than 2 are allowed per lite and must be separated by a minimum of 24 inches.
4. No more than 2 total viewable defects as described above are allowed per lite.
5. Shells – No more than ¼” from edge less than ½ the thickness of the lite. No more than 1 per side.

Appendix (cont.)

6. Chips – No more than 1/8” from the edge. No more than 1 per side. (See illustration for chips)
7. Coating – must be uniform on the lite inspected when viewed in transmission using the inspection criteria previously stated above.
8. The border area is comprised of 4 inches plus ½” from each edge of the lite. All other area is the central area

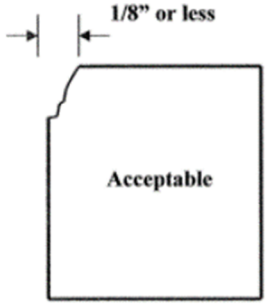
VISUAL INSPECTION CRITERIA VISUAL AID

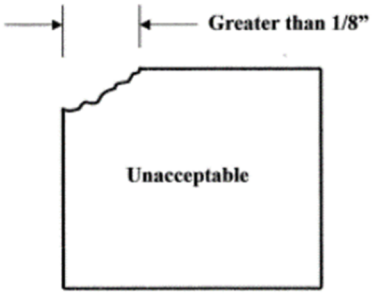




UNDERSTANDING GLASS CHIPS AND SHELLS

Glass Chips





Glass Shells