

SPINELL HOMES INC. LIMITED WARRANTY AGREEMENT

I. INTRODUCTION: WAIVER OF IMPLIED WARRANTIES AND RELINQUISHMENT OF CLAIMS

ALASKA LAW IMPOSES CERTAIN WARRANTY OBLIGATIONS ON BUILDERS IN THIS STATE BY IMPLICATION. THESE WARRANTIES ARE SOMETIMES CALLED "IMPLIED WARRANTIES" BECAUSE THEY ARE NOT SPECIFICALLY SET FORTH IN ANY STATUTE, BUT EXIST ONLY IN COMMON LAW WHICH IS THE LAW AS STATED IN THE APPELLATE COURT DECISIONS OF THE STATE. IMPLIED WARRANTIES WHICH THE COURTS OF THIS STATE MAY INDICATE APPLY TO THE SALE OF NEWLY CONSTRUCTED RESIDENTIAL PROPERTY MAY INCLUDE BUT MAY NOT NECESSARILY BE LIMITED TO, THE IMPLIED WARRANTY OF HABITABILITY, THE IMPLIED WARRANTY OF WORKMANLIKE CONSTRUCTION, THE IMPLIED WARRANTY FITNESS FOR A PARTICULAR PURPOSE, AND THE IMPLIED WARRANTY OF MERCHANTABILITY. THE COURT MAY HOLD THAT ONE OR MORE OF THESE IMPLIED WARRANTIES ALSO APPLY TO RESIDENTIAL REMODELING WORK IN ADDITION TO NEW RESIDENTIAL BUILDING CONSTRUCTION.

UNDER CERTAIN CIRCUMSTANCES A PURCHASER MAY WAIVE IMPLIED WARRANTIES AND RELINQUISH CLAIMS THAT HE OR SHE MAY HAVE IF THE WAIVER AND RELINQUISHMENT ARE ACCOMPLISHED VOLUNTARILY AND WITH THE KNOWLEDGE OF THE PERSON WAIVING THE WARRANTIES AND RELINQUISHING THE CLAIMS. SPINELL HOMES INC. IS NOT REQUIRED TO PROVIDE PURCHASERS AN EXPRESS WARRANTY CONCERNING WORKMANSHIP AND MATERIAL AND AGAINST DEFECTS AND DEFICIENCIES, BUT AGREES TO PROVIDE THIS EXPRESS NEW CONSTRUCTION LIMITED WARRANTY IN THE PLACE OF ALL OTHER WARRANTIES IMPLIED BY LAW OR CONTRACT, AND ONLY IN EXCHANGE FOR PURCHASERS' VOLUNTARY WAIVER OF ALL SUCH IMPLIED WARRANTIES AND RELINQUISHMENT OF ALL CLAIMS AGAINST SPINELL HOMES INC. FOR CONSEQUENTIAL

DAMAGES, PERSONAL INJURY OR DEATH ARISING AFTER THE DATE OF CLOSING EXCEPTING ONLY CLAIMS FOR REPAIRS AND MODIFICATIONS SPECIFICALLY COVERED BY THIS NEW CONSTRUCTION LIMITED WARRANTY. THIS WAIVER AND RELINQUISHMENT SHALL BE BINDING UPON THE PURCHASER(S), AND THEIR HEIRS, SUCCESSORS, ASSIGNS, GRANTEEES, GUESTS AND INVITEES. PURCHASER(S) ACKNOWLEDGE THAT SPINELL HOMES INC. SHALL BE ENTITLED TO RELY UPON THIS WAIVER AS A COMPLETE BAR AND DEFENSE AGAINST ANY CLAIM ASSERTED BY PURCHASER(S) OR ANYONE CLAIMING THROUGH PURCHASER(S) EXCEPT FOR CLAIMS COVERED BY THIS NEW CONSTRUCTION LIMITED WARRANTY. THE DEED CONVEYING THE PROPERTY TO PURCHASERS SHALL CONTAIN A REFERENCE TO THIS WAIVER AND RELINQUISHMENT.

AS USED HEREIN "PURCHASERS" AND "HOMEOWNERS" SHALL INCLUDE PURCHASERS OF REMODELING SERVICES, AND "NEW CONSTRUCTION" SHALL INCLUDE REMODELING WORK PERFORMED ON EXISTING RESIDENTIAL BUILDINGS WHEN THIS NEW CONSTRUCTION LIMITED WARRANTY IS PROVIDED BY "BUILDER" IN CONNECTION WITH SUCH REMODELING WORK.

II. SPINELL HOMES INC. LIMITED WARRANTY AGREEMENT

This Spinell Homes Inc. Limited Warranty Agreement (hereinafter "Agreement"), together with the Approved Standards (referenced in part and attached in part in Appendix A hereto and incorporated herein) define the obligations of Spinell Homes Inc. (hereinafter referred to as "Builder") to repair or replace anything covered by this Agreement during the warranty period for construction defects or deficiencies. Under this Agreement, the home is covered against faulty workmanship and materials, defects in wiring, piping and duct work, electrical, plumbing and heating systems for one year. "Major structural defects" as defined hereafter are covered for a period of 10 years.

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To help define a "defect" or "faulty workmanship and materials," this agreement relies both upon the Building Codes adopted by the State of Alaska or local jurisdiction which were in effect on the date the building permit for the subject construction was issued, and upon a set of national building standards issued by the National Association of Home Builders (NAHB) called "Residential Construction Performance Guidelines". Together with the adopted Building Codes, the NAHB Performance Guidelines constitute the Approved Standards.

Although the NAHB Performance Guidelines rest on published codes, they establish performance standards that sometimes exceed the local building codes. The purpose of Approved Standards is:

1. To state minimum performance standards for specific items.
2. To state the Builder's responsibility to correct specific defects.
3. To outline the corrective action required.

Because the Approved Standards explain what performance standards the Homeowner should expect and what the Builder's responsibilities are, it is a useful document for both the Homeowner and Builder.

The Approved Standards (Appendix A) are divided into two parts: "Part I: Codes" which references the Building Codes adopted by the State of Alaska or local governing body on the date the building permit for the subject construction was issued, and "Part II: Performance Guidelines" which are the NAHB industry practices with regard to specific defects. If there is any conflict between these standards, the higher standard shall govern.

III. CODE STANDARDS FOR STRUCTURAL, MECHANICAL-PLUMBING and ELECTRICAL SYSTEMS

The structural, mechanical-plumbing and electrical standards are contained in one of several code manuals adopted by the State of Alaska or local governing body and are amended from time to time. The International Building Code, International Mechanical Code, Uniform Plumbing Code and National Electrical Code establish minimal acceptable

standards for home construction within the State of Alaska. (For a listing of such Codes, see Appendix A Part I: Codes). The state or local jurisdiction regularly inspects home construction to ensure that applicable codes are adhered to during the building process.

IV. PERFORMANCE GUIDELINES

This Agreement covers workmanship and materials for one year from the date of occupancy. The Performance Guidelines (see Appendix A, Part II) list defects that may be found in new homes and outline the extent of a Builder's responsibility for each of the defects.

These guidelines are intended to specify performance criteria for home construction and to determine the validity of Homeowner complaints related to defective workmanship and materials during the warranty period.

If a specific defect has not been listed in the Performance Guidelines, this indicates that a performance criterion or specific tolerance for such a defect has not been created.

When minimum performance guidelines of specific tolerances of construction have not been given in these Performance Guidelines, homes shall be constructed in accordance with **accepted industry practice** in this locality which will assure quality of materials and workmanship. The validity of any Homeowner complaint for defects for which a Performance Guideline has been listed shall be determined on the basis of the listed performance criteria and Corrective Measure set forth in the Performance Guidelines which assure quality of materials and workmanship. Any conciliation or arbitration of Homeowner's complaints shall also be conducted using the Performance Guidelines and the "Corrective Measures" set forth therein to determine the validity of any complaint and the Builder's responsibility to correct alleged defects or deficiencies. Complaints of defects not addressed in the Performance Guidelines shall be resolved based on evidence of the custom and trade practice of the homebuilding industry as it exists in Anchorage, Alaska. To the extent an applicable building code section adopted in Anchorage, Alaska provides a higher standard than either the Performance

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Guidelines or local customs and trade practices, it will control.

V. DEFINITIONS:

Within this Agreement certain terms have clearly defined meanings.

These include but are not limited to the following:

A. APPLIANCES, FIXTURES & EQUIPMENT:

The term, "Appliances, Fixtures and Equipment" (including their fittings, attachments, controls, appurtenances) shall include, but not be limited to: Furnaces, air handling equipment, ventilating fans, water heaters and pumps, stoves, garbage disposals, compactors, dishwashers, automatic door openers, bathtubs, sinks, toilets, faucets and fittings, light switches, convenience outlets, circuit breakers, thermostats and controls.

The warranty period for appliances, fixtures and equipment (including their fittings, attachments, controls and appurtenances) is one year, or the term of the manufacturer's written warranty, whichever is less.

Builder hereby assigns to Purchaser all manufacturers' written warranties for appliances, fixtures and equipment. Purchaser is authorized and agrees to deal directly with the supplier or manufacturer regarding any problems or defects with appliances, fixtures and equipment, excepting problems or defects with furnaces, water heaters and pumps which Builder shall address during the warranty period.

B. SYSTEMS:

The term "systems" (exclusive of appliances, fixtures and equipment as specified above) means the following:

1. Plumbing Systems - all supply, waste and vent pipes and their fittings; water service piping; and their extensions to the tie-in of a public utility connection.
2. Electrical Systems - all wiring, electrical boxes, and connections up to the public utility connection.

3. Heating and Cooling Systems - all ductwork, steam and water pipes, refrigerant lines, registers, convectors and dampers.

The warranty period for systems (excluding appliances, fixtures and equipment) is one year.

C. MAJOR STRUCTURAL DEFECTS:

"Major structural defect" as defined by this Agreement means actual damage to the load-bearing function of the home which vitally affects or is imminently likely to vitally affect the use of the home for residential purposes and not be the result of earthquake, flood, other acts of God, prolonged exposure to the elements causing deterioration, or any cause unrelated to faulty design, materials or workmanship.

1. The Load Bearing:

Load bearing as used in this Agreement means the load-bearing portion of the home defined as the framing members and other structural elements that transmit the dead and live loads to the supporting ground. Examples of load-bearing elements:

- a. Roof rafters and trusses
- b. Ceiling and floor joists
- c. Structural floor systems and slabs in the living area of the home
- d. Load-bearing partitions and walls
- e. Supporting beams and headers
- f. Columns
- g. Foundation systems and footings

Examples of non load-bearing elements:

- a. Roof shingles and sheathing
- b. Drywall and plaster
- c. Exterior siding
- d. Brick or stone veneer
- e. Subfloor and flooring materials
- f. Wall tile or other wall coverings
- g. Non load-bearing partitions
- h. Non-structural concrete floors in attached garages, utility and laundry areas or other areas not finished by the Builder as living space
- i. Electrical, heating, cooling and plumbing systems, appliances, equipment, fixtures, paint, doors, windows, trim, cabinets, hardware and insulation.

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2. "Actual Damage" in Section V.C. of this Agreement means that the defect must represent a structural failure of some part of the load-bearing system. The actual damage must affect the ability of the home to remain stable and to maintain its capacity to transmit the imposed live and dead load to the ground. It must endanger the above-referenced capacity.

3. "Vitality affects the use of the home for residential purposes" as used in Section V.C. of this Agreement means that the defect in the load-bearing portion of the home must be of such serious nature that it would potentially affect the health and safety of occupants during normal use of the home. Examples of conditions which meet the above criteria include damage to the structural capacity of the load transmission system of the home which brings into question its ability to withstand vertical snow loads or lateral wind loads; or a condition which will cause substantial further detrimental movement of the load bearing system. Examples of conditions which do not meet the foregoing criteria include minor damage to load bearing portions of the home which have occurred and are not likely to worsen, but do not affect the stability of the home; or damage which has affected the value of the home but is not of such serious nature that the use of the home for residential purposes has been vitally affected.

VI. EXCLUSIONS:

The following are excluded from this Agreement:

A. Defects in outbuildings (except that outbuildings which contain the plumbing, electrical, heating, or cooling systems serving the homes are covered); recreational parking and other recreational facilities; driveways, walkways; decks except to the extent that specific defects and corrective measures are listed in Appendix A Part II Section 11; privacy screens; retaining walls which are not necessary for the home's structural stability; fences; landscaping (including sodding, seeding, shrubs, trees, and other plantings) except to the extent that specific defects and corrective measures are listed in Appendix A Part II Section 12; offsite improvements; or any other improvements not a part of the home itself.

B. Damage to personal property, or damage to real property which was not part of the premises purchased with the home.

C. Any damage to the extent it is caused or made worse by:

1. Negligence, improper maintenance or improper operation by anyone other than the Builder or his employees, agents or subcontractors; or,

2. Failure of anyone other than the Builder or his employees, agents, or subcontractors to comply with the warranty requirements of manufacturers of appliances, equipment or fixtures; or

3. **Changes in grading of the ground by anyone other than the Builder, or his employees, agents or subcontractors.**

4. Failure of Purchaser to maintain a positive grade around the perimeter of the home to insure drainage of surface water away from foundation.

D. Any defect in, or caused by, materials or work (including, but not limited to, items which may be shown on any attached "Addendum to Home Warranty Agreement") supplied by anyone other than the Builder, or his employees, agents or subcontractors.

E. Normal wear and tear or normal deterioration.

F. Loss or damage not caused by a defect in the construction of the home by the Builder, or his employees, agents or subcontractors, but resulting from accidents or acts of God including but not limited to: fire, explosion, smoke, water escape, changes which are not reasonably foreseeable in the level of the underground water table, glass breakage, wind storm, hail, lightning, falling trees, aircraft, vehicles, flood and earthquake.

G. Any defect caused by soil movement for which compensation is approved by legislation or which is covered by other insurance.

H. Loss caused by pets, pests or insect damage, exclusive of members treated or designed to resist insect attack, including the foundation system. Members of the foundation system are specifically warranted for structural durability as specified herein.

I. Any loss or damage which arises while the home is being used primarily for non-residential purposes.

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J. Any defect which does not result in actual loss or damage.

K. DEATH, DISABILITY, ILLNESS, OR BODILY INJURY, EMOTIONAL DISTRESS, LOSS OF CONSORTIUM, LOSS OF INCOME AND ALL OTHER CONSEQUENTIAL DAMAGES ALLEGEDLY CAUSED BY OR CONTRIBUTED TO BY ANY DEFECT OR FAULTY WORKMANSHIP OR MATERIALS, WHETHER OR NOT THE ALLEGED DEFECT, FAULTY WORKMANSHIP OR MATERIALS FAILED TO MEET AN APPROVED STANDARD.

L. MOLD, MILDEW, FUNGUS, AND ANY RESULTING DAMAGE, CONSEQUENTIAL DAMAGES, OR EFFECT PROXIMATELY CAUSED BY MOLD, MILDEW OR FUNGUS INCLUDING BUT NOT LIMITED TO PROPERTY DAMAGE, PERSONAL INJURY, LOSS OF INCOME, EMOTIONAL DISTRESS, DEATH, LOSS OF USE, LOSS OF VALUE, ADVERSE HEALTH AFFECTS OR ANY OTHER AFFECTS.

M. This Agreement may have an "Addendum to Spinell Homes Inc. Limited Warranty Agreement" attached hereto to indicate all items supplied by others and therefore excluded from this Agreement. (See VI.D. above). For example, work performed by the Homeowner or persons hired by Homeowner other than the Builder for such items as interior or exterior painting, floor coverings, finishing a recreation room, grading and landscaping and other similar items, are not covered.

VII. WALK-THROUGH and DECLARATION OF ACCEPTANCE:

A walk-through will be made prior to closing and a "walk-through list" prepared mutually by the Builder and the Purchaser, and signed by both parties. This walk-through list should list and describe all items which remain to be corrected. Items identified on the walk-through list will be corrected within the next 15 days. Following this a Declaration of Acceptance (D.O.A.) will be completed and signed by the Builder and Purchaser, declaring the acceptance of the home by the Purchaser and describing any items left to be corrected within a reasonable time. All other items for which warranty work is requested must be submitted in writing to the Builder as described herein.

VIII. HOMEOWNER RESPONSIBILITY:

New homes require an active Homeowner maintenance effort to reduce the likelihood of damage due to neglect, improper maintenance, or abnormal use. One of the more typical problems encountered by new Homeowners is water damage to exterior walls and basements. Damage of this sort may be caused by the location and type of Homeowner or Homeowner's Association installed trees and shrubbery or the build-up of snow and ice causing water damming resulting in the failure or need of the Homeowner to maintain the proper drainage away from the house.

It is the responsibility of the Homeowner to maintain, in this instance, a proper grade around the home that will ensure the continued movement of water away from the house. Excessive entrance of water around the foundation can cause soil movement and serious damage. Such damage caused by the Homeowner or Homeowner's association changing the grade, not properly maintaining it, or cultivating and landscaping areas near the foundation which result in excessive water entrance, are excluded from this agreement under Section VI.C. hereof.

It is the responsibility of the Homeowner to take positive steps to reduce or eliminate the occurrence of mold, mildew or fungus growth in the home, and thereby minimize possible adverse effects that may be caused by mold, mildew or fungus. These steps include the following:

- A. Do not bring items with mold, mildew or fungus into the home. Before bringing items into the home, check for signs of mold. Potted plants (roots and soil), furnishings, or stored clothing and bedding material, as well as many other household goods, could readily contain mold growth.
- B. Regularly vacuuming and cleaning will help reduce mold levels. Mild bleach solutions and most tile cleaners are effective in the eliminating or preventing mold.
- C. Keeping the humidity in the home low. Venting clothes dryers to the outdoors. Ventilating kitchens and bathrooms by opening windows and using exhaust fans, or by running the air

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conditioning (if provided) to remove excess moisture in the air, and to facilitate evaporation of water from wet surfaces. If you have a humidifier, correctly adjust it for temperature changes (see operation manual).

- D. Promptly clean up spills, condensation and other sources of moisture. Thoroughly dry any wet surfaces or material. Do not let water pool or stand in your home. Promptly replace any materials that cannot be thoroughly dried, such as drywall or insulation.
- E. Inspect for leaks on a regular basis. Look for discolorations or wet spots. Repair any leaks promptly. Inspect condensation pans (refrigerators and air conditioners) for mold growth. Take notice of musty odors, and any visible signs of mold.
- F. Should mold develop, thoroughly clean the affected area with a mild solution of bleach. First test to see if the affected material or surface is colorsafe. Porous material such as fabric, upholstery or carpet should be discarded. Should the mold growth be severe, call on the services of a qualified professional cleaner.

Various regional areas of the country have local maintenance problems. Homeowners are encouraged to discuss specific maintenance responsibilities with the Builder.

NOTE: THIS AGREEMENT MAY BE RENDERED NULL AND VOID BY HOMEOWNER NEGLIGENCE, IMPROPER MAINTENANCE AND/OR OPERATION.

IX. SERVICE PROCEDURES:

A. Routine Service:

Except for items noted on the walk-through list, all other requests for warranty work should be made with a letter to the address given for the Builder at the end of this agreement. Written notice must be received by the Builder within two weeks of the expiration of the applicable warranty period. It is the Homeowner's responsibility to arrange for a service representative of the Builder to have access to the home during normal working hours, Monday through Friday 8:30 a.m. to

5:00 p.m.

Not later than ten days after receipt of written notice of a defect, the Builder will cause the problem to be investigated and will promptly advise the Homeowner of the corrective measure which is the Builder's responsibility. If the Builder and Homeowner agree, the company shall discharge its warranty obligation by promptly undertaking and completing the agreed corrective measure.

B. Emergency Service:

Water, sewer and heat supply may require emergency service. In an emergency please contact the Builder or, if known, the applicable subcontractor by phone. If after hours the applicable subcontractor may have made provisions for emergency service. If the Builder or subcontractor cannot be reached it is recommended that the owner call an available contractor to correct the emergency only and notify the Builder the next working day for further instructions. In the event the corrective measure requested is not covered under this Agreement, the Homeowner must pay the responding contractor.

C. Warranty Claim Dispute

Should the Homeowner and the Builder be unable to agree to Builder's responsibility under this Agreement, for any alleged defect or deficiency, or disagree as to the meaning, interpretation, and/or enforcement of this Agreement, the parties may, by mutual agreement, submit the dispute to informal but binding arbitration before an agreed person or group such as the Better Business Bureau or other similar service. If the Homeowner and Builder cannot agree to such informal resolution of any warranty claim dispute, then the same shall be formally submitted for mandatory arbitration under the Construction Industry Arbitration Rules of the American Arbitration Association. Either the Homeowner or the Builder may enforce this mandatory arbitration provision under AS 9.43.300 et seq.

Prior to any demand for arbitration by Homeowner, Homeowner shall provide to Builder the Notice of Claim in the manner required under AS 09.45.881 and the Builder and Homeowner shall follow the procedures set forth in AS 09.45.881-899, the full text of which is attached as Appendix B.

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ALASKA LAW AT AS 09.45.881 - 09.45.899 CONTAINS IMPORTANT REQUIREMENTS THAT YOU MUST FOLLOW BEFORE YOU MAY DEMAND ARBITRATION OR FILE A COURT ACTION TO COMPEL ARBITRATION FOR DEFECTIVE DESIGN, CONSTRUCTION, OR REMODELING AGAINST THE BUILDER OF YOUR HOME. WITHIN ONE YEAR OF THE DISCOVERY OF A DESIGN, CONSTRUCTION OR REMODELING DEFECT, BEFORE YOU DEMAND ARBITRATION OR FILE A COURT ACTION TO COMPEL ARBITRATION, YOU MUST DELIVER TO THE BUILDER A WRITTEN NOTICE OF ANY DESIGN, CONSTRUCTION, OR REMODELING CONDITIONS YOU ALLEGE ARE DEFECTIVE IN ORDER TO PROVIDE YOUR BUILDER WITH THE OPPORTUNITY TO MAKE AN OFFER TO REPAIR OR PAY FOR THE DEFECTS. YOU ARE NOT OBLIGATED TO ACCEPT ANY OFFER MADE BY THE BUILDER. THERE ARE STRICT DEADLINES AND PROCEDURES UNDER STATE LAW, AND FAILURE TO FOLLOW THEM MAY AFFECT YOUR RIGHT TO DEMAND ARBITRATION OR FILE A COURT ACTION TO COMPEL ARBITRATION.

X. SEVERABILITY:

Should any provision of this Agreement be deemed by a court of competent jurisdiction to be unenforceable, that determination will not affect the enforceability of the remaining provisions. This Agreement is to be construed in accordance with the laws of the State of Alaska.

XI. TRANSFERABILITY:

The warranty obligations of this Agreement extend only to the first Purchaser to occupy the new home and to that Homeowner's family, but the Waiver of Implied Warranty and Relinquishment of Claims extends to the heirs, successors, assigns, grantees, guests and invitees.

XII. PURCHASE CONTRACT INDEPENDENT:

This Agreement is independent of the purchase contract between the Builder and the Homeowner for the construction of the home and its sale to Homeowners. Contract disputes which are not warranty disputes shall not be governed by the provisions of this Agreement. Nothing contained in that purchase contract or any other contract between the Homeowner and the Builder will restrict or override the provisions of this Agreement.

XIII. CONSIDERATION/WAIVER OF WARRANTIES IMPLIED BY LAW AND RELINQUISHMENT OF CLAIMS:

IN CONSIDERATION OF THIS EXPRESS NEW CONSTRUCTION LIMITED WARRANTY AGREEMENT, THE HOMEOWNER HEREBY WAIVES, TO THE MAXIMUM EXTENT PERMITTED BY LAW, ANY AND ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED BY CONTRACT OR LAW, INCLUDING BUT NOT LIMITED TO THE WARRANTY OF HABITABILITY, THE WARRANTY OF WORKMANLIKE CONSTRUCTION, THE WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, THE WARRANTY OF MERCHANTABILITY AND FURTHER AGREES THAT THE SAME ARE SUPERCEDED BY THE TERMS OF THIS WARRANTY AGREEMENT. HOMEOWNER FURTHER AGREES TO WAIVE AND RELINQUISH ANY AND ALL CLAIMS AGAINST BUILDER FOR CONSEQUENTIAL DAMAGES, PERSONAL INJURY OR DEATH ALLEGEDLY ARISING OUT OF THE WORKMANSHIP AND MATERIALS PROVIDED BY BUILDER AND/OR DEFECTS AND/OR DEFICIENCIES CAUSED BY BUILDER.

APPENDIX A
PART II - NAHB RESIDENTIAL CONSTRUCTION PERFORMANCE GUIDELINES

1

SITE WORK

1-1. Observation: The ground has settled around the foundation, over utility trenches, or in other areas.

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

Corrective Measure: If the contractor has provided final grading, upon request by the owner, the contractor will fill settled areas affecting proper drainage in excess of 6 inches, one time only during the warranty period. The owner will be responsible for removal and replacement of shrubs and other landscaping affected by placement of such fill.

1-2. Observation: The site does not drain properly.

Performance Guideline: The necessary grades and swales shall have been established by the contractor to ensure proper drainage away from the home. Standing or ponding water shall not remain 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 or in areas where sump pumps discharge. In these areas a longer period can be anticipated (generally no more than 48 hours). The possibility of standing water after an unusually heavy rainfall should be anticipated by the owner. No grading determination shall be made while frost or snow is on the ground or while the ground is saturated.

Corrective Measure: The contractor is responsible only for initially establishing the proper grades and swales. The owner is responsible for maintaining such grades and swales once they have been properly established by the contractor.

1-3. Observation: The site has soil erosion.

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

Corrective Measure: No action required.

2

FOUNDATION

General

2-1. 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, unless the owner or contractor agree to intentionally build an addition to an existing structure out of square in order to match or compensate for inaccuracies in the existing structure.

Corrective Measure: The contractor will make necessary modifications to any foundation not complying with the performance guidelines for squareness to provide a satisfactory appearance. The contractor may square the first floor deck by cantilevering over the foundation where out of square.

Discussion: Squareness is primarily an aesthetic consideration. Regularly repeated geometric patterns in floor and ceiling coverings show a gradually increasing or decreasing pattern along an out of square wall. The guideline tolerance of plus or minus 1 inch in the diagonal allows a maximum increasing or decreasing portion of about 3/8 inch in a 12-foot wall of a 12 x 16-foot room. However, a contractor and client may agree to build an addition out of square in order to keep a new exterior wall on line with an existing wall of an out of square house. The corrective measure emphasizes the primarily aesthetic nature of squareness and makes the criteria for correction "a satisfactory appearance." This criteria allows the contractor to make either a structural change, if the defect is discovered in time, or some cosmetic change to hide the defect, if the construction is in the finishing stages when the defect is discovered.

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2-2. Observation: The foundation is out of level.

Performance Guideline: 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, unless the owner and contractor agree to intentionally build an addition to an existing structure out of level in order to match or compensate for inaccuracies in the existing structure.

Corrective Measure: The contractor will make necessary modifications to any foundation not complying with the performance guidelines for levelness to comply with the performance guideline. This can be affected by leveling the sills with shims, mortar, or appropriate fillers.

Discussion: Levelness is both an aesthetic and functional consideration. Out of level floors can cause “stair stepping” of 4 x 8-foot sheathing, siding, paneling and cabinets, and square walls must be “racked” into parallelograms when plumbing is installed. Liquids can run off counter tops, and, in extreme cases, people will perceive that they are walking uphill or downhill. The contractor and the owner may agree to build an addition out of level in order to keep the floor of an addition on the same plane, and the roof ridge on the same line, as those of an existing, out of level structure.

2-3. Observation: Efflorescence is present on surface of basement floor.

Performance Guideline: This is a normal condition.

Corrective Measure: None.

2-4. Observation: Crack in concrete footing.

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

Corrective Measure: The contractor shall repair any cracks in excess of the performance guideline.

Concrete Slab

2-5. Observation: Concrete slab within the structure has separated or moved at expansion and contraction joints.

Performance Guideline: Concrete slabs within the structure are designed to move at expansion and contraction joints.

Corrective Measure: None.

2-6. Observation: Concrete floor or slab is uneven.

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

Corrective Measure: The contractor will correct or repair the floor to meet the performance guideline.

Discussion: Proper repair can be affected by thoroughly cleaning, filling, and troweling the surface using a latex-fortified cement mixture or other materials designed to fill cracks and bond concrete.

2-7. Observation: The concrete floor slab is cracked.

Performance Guideline: Minor cracks in concrete basement floors 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.

Corrective Measure: The contractor will repair cracks that do not meet the performance guideline.

Discussion: Proper repair can be affected by thoroughly cleaning, filling and troweling the surface using a latex-fortified cement mixture or other materials designed to fill cracks and bond concrete.

2-8. Observation: Interior concrete work is pitting, scaling or spalling.

Performance Guideline: Interior concrete surfaces shall not disintegrate. Aggregate pops are normal; minor scaling is not controllable at all. Exterior surfaces may not be warranted.

Corrective Measure: The contractor will take whatever corrective measures are necessary to repair or replace defective concrete surfaces. The contractor is not responsible for deterioration caused by salt, chemicals, mechanical implements, or other factors beyond the contractor’s control.

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Basement Wall

Concrete Block

2-9. Observation: Concrete block basement wall is cracked.

Performance Guideline: Cracks in concrete block basement walls shall not exceed ¼ inch in width.

Corrective Measure: The contractor will repair cracks to meet the performance guideline.

Discussion: Proper repair can be affected by thoroughly cleaning, filling, and troweling the surface using a latex-fortified cement mixture or other materials designed to fill cracks and bond concrete.

2-10. Observation: Concrete block basement wall is out of plumb.

Performance Guideline: Block concrete walls shall not be out of plumb greater than 1-1/2 inches in 8 feet when measured from the base to the top of the wall.

Corrective Measure: 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.

2-11. Observation: Concrete block basement wall is bowed.

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

Corrective Measure: 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.

Poured Concrete

2-12. Observation: Exposed concrete wall has holes in it.

Performance Guideline: Holes larger than 1 inch in diameter or 1 inch in depth are unacceptable.

Corrective Measure: The contractor will repair holes that do not meet the performance guideline.

Discussion: Proper repair can be affected by thoroughly filling the hole. The repaired area will not match the color of the surrounding concrete.

2-13. Observation: Poured concrete basement wall is out of plumb.

Performance Guideline: Concrete walls shall not be out of plumb greater than 1-1/2 inches in 8 feet when measured from the base to the top of the wall.

Corrective Measure: 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.

2-14. Observation: 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.

Corrective Measure: 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.

2-15. Observation: The basement wall is cracked (horizontal or vertical separation).

Performance Guideline: Cracks in basement walls shall not allow exterior water to leak into the basement.

Corrective Measure: The contractor will repair cracks that do not meet the performance guideline when leaks are present.

Discussion: Shrinkage cracks are not unusual and are inherent in the drying process. They should be expected in

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basement walls due to the nature of masonry blocks and concrete. Cracks may be vertical, diagonal, horizontal, or stepped in masonry joints. The only cracks considered under warranty claims are cracks that permit water penetration or horizontal cracks that cause a bow in the wall.

Basement Floor and Walls

Moisture and Leaks

2-16. Observation: Dampness is evident on basement wall or floor.

Performance Guideline: Dampness caused by wicking through the basement walls or floor and condensation of water vapor on cool walls and floor are not the responsibility of the contractor.

Corrective Measure: None. Dampness prevention is the responsibility of the owner.

Discussion: The owner's failure to maintain a proper grade away from the house can contribute to dampness. Condensation also contributes to dampness.

2-17. Observation: The basement leaks.

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

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

Crawl Space

2-18. Observation: Flowing or trickling water appears on interior crawl space surfaces.

Performance Guideline: Crawl spaces should be graded and drained properly to prevent water from accumulating deeper than ¾ inch and larger than 36 inch in diameter in the crawl space area.

Corrective Measure: The contractor will take the necessary corrective measures to create positive flow within the crawl space to discharge to the exterior of the structure.

2-19. Observation: Condensation is evident on the walls, earth, or floor insulation in the crawl space.

Performance Guideline: Condensation in the crawl space shall not result from lack of adequate ventilation as required by code. Condensation resulting from other causes is not the responsibility of the contractor.

Corrective Measure: The contractor will ensure that ventilation meets the appropriate code requirements. Further reduction of condensation is an owner maintenance responsibility.

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

- Night air gradually cools the interior surfaces of the crawl space. In the morning, moisture picked up by sun-warmed air is carried 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, the 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 hit the dew point within or on the colder bottom surface of vapor-permeable floor insulation. The condensation can be reduced by placing a vapor barrier between the insulation and the floor sheathing. If condensation must be entirely eliminated, the owner can do so by sealing and dehumidifying or heating the crawl space.

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Columns

2-20. Observation: Wood column is bowed or out of plumb.

Performance Guideline: Wood columns shall not bow in excess of ½ inch in 8 feet or be out of plumb in excess of 1/8 inch in 12 inches when measured from the base to the top of the column, not to exceed ¾ inch in 8 feet.

Corrective Measure: The contractor shall repair any deficiencies in excess of the performance guideline.

2-21. Observation: Concrete column is installed bowed or out of plumb.

Performance Guideline: Concrete columns shall not be installed with a bow in excess of 1 inch in 8 feet. They should not be installed out of plumb in excess of ¼ inch in 12 inches when measured from the base to the top of the column, not to exceed 1-1/2 inches in 8 feet.

Corrective Measure: The contractor shall repair any deficiencies in excess of the performance guideline.

2-22. Observation: Masonry column is out of plumb.

Performance Guideline: Masonry should not be out of plumb in excess of ¼ inch in 12 inches when measured from the base to the top of the column, not to exceed 1-1/2 inches in 8 feet.

Corrective Measure: The contractor shall repair any deficiencies in excess of the performance guideline.

2-23. Observation: Steel column is out of plumb.

Performance Guideline: Steel columns shall not be out of plumb in excess of 1/8 inch in 12 inches when measured from the base to the top of the column.

Corrective Measure: The contractor shall repair any deficiencies in excess of the performance guideline.

3

WOOD FLOOR FRAMING

Beams

3-1. Observation: Springiness, bounce, shaking, or visible sag is observed in floor or roof.

Performance Guideline: All beams, joists, rafters, headers, and other structural members shall be sized, and fasteners spaced, according to the National Forest Products Association span tables, or local building codes.

Corrective Measure: The contractor will reinforce or modify, as necessary, any floor, wall, ceiling, or roof 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. Joists and rafters are required to meet standards for both stiffness and strength. The span tables allow, under full design loading, a maximum deflection equal to 1/360 of the span for floor and ceiling joists (3/8 inch in 12 feet), 1/240 for rafters up to 3/12 in pitch (1/2 inch in 12 feet), and 1/180 for rafters over 3/12 in pitch (3/4 inch in 12 feet). Individual clients may not be satisfied with the deflection limits built into the tables. When a customer's preference is made known before construction, a higher standard may be agreed upon by the contractor and the owner.

3-2. Observation: Wood beam or post is split.

Performance Guideline: Beams and posts, especially those 2-1/2 inches or greater in thickness (which normally are not kiln dried) will sometimes split as they dry subsequent to construction. Such splitting is usually not a structural concern if posts and beams have been sized according to National Forest and Paper Association span tables. Unfilled splits exceeding ¼ inch in width and all splits exceeding 3/8 inch in width are unacceptable.

Corrective Measure: The contractor will repair or replace any beam or post with a defect that does not meet the guideline. Filling splits is acceptable for widths up to 3/8 inch.

Discussion: Some characteristics of drying wood are beyond the control of the contractor and cannot be prevented. Compensation is made in span tables for the probable reduction in strength resulting from splitting caused by drying.

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Therefore, splitting is primarily an aesthetic concern rather than a structural problem. Checks and splits that occur during the drying of lumber have the effect of reducing the area in the plane of shear resistance. Consequently, laboratory data developed for shear parallel to grain are reduced substantially for design purposes in order to accommodate the probability of the occurrence.

3-3. Observation: Wood beam or post is twisted or bowed.

Performance Guideline: Beams and posts, especially those 3-1/2 inches or greater in thickness (which normally are not kiln dried) will sometimes twist or bow as they dry subsequent to construction. Twisting or bowing are usually not a structural concern if posts and beams have been sized according to National Forest and Paper Association span tables. Bows and twists exceeding 3/4 inch in an 8-foot section are unacceptable.

Corrective Measure: The contractor will repair or replace any beam or post with a defect that exceeds the guideline.

3-4. Observation: Wood beam or post is cupped.

Performance Guideline: Beams and posts, especially those 3-1/2 inches or greater in thickness (which normally are not kiln dried) will sometimes cup as they dry subsequent to construction. Cupping is usually not a structural concern if posts and beams have been sized according to National Forest and Paper Association span tables. Cups exceeding 1/4 inch in 5-1/2 inches are unacceptable.

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

Plywood and Joists

3-5. Observation: Floor squeaks or the subfloor appears loose.

Performance Guideline: Squeaks caused by a loose subfloor are unacceptable, but totally squeak-proof floors cannot be guaranteed.

Corrective Measure: The contractor will refasten any loose subfloor or take other corrective action to eliminate squeaking to the extent possible within reasonable repair capability without removing floor and ceiling finishes.

Discussion: Floor squeaks may occur when a subfloor that has come loose from the joists is deflected by the weight of a person and rubs against the nails that hold it in place. The subfloor or joists may be bowed, and the nails also may be expelled from the wood during drying. Movement may occur between the joist and bridging or other floor members when one joist is deflected while the other members remain stationary. Gluing the subfloor is an acceptable method of code compliance in certain jurisdictions. Renailing floor joists with ring-shank nails will also substantially reduce severe floor squeaks. Because the performance guideline requires the contractor to make a reasonable attempt to eliminate squeaks without requiring removal of floor and ceiling finishes, nailing loose subflooring with casing nails into the carpet surface and countersinking the head is an acceptable practice.

3-6. Observation: Wood floor is uneven.

Performance Guideline: Floors shall not have more than a 1/4 inch ridge or depression within any 32-inch measurement. Allowable floor and ceiling joist deflections are governed by the local approved building codes.

Corrective Measure: The contractor will correct or repair to meet the performance guideline.

3-7. Observation: 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 1/2 inch more nor less than 20 feet. For remodeling projects, the owner and the contractor may agree to build a wood floor out of square in order to match or otherwise compensate for pre-existing conditions.

Corrective Measure: The contractor will make necessary modifications to any floor not complying with the performance guideline for squareness.

Discussion: Squareness is primarily an aesthetic consideration. Regularly repeated geometric patterns in floor ceiling coverings show a gradually increasing or decreasing pattern along an out of square wall. The guideline

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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 12 x 16-foot room. However, a contractor and client may agree to build an addition out of square in order to keep a new exterior wall on line with an existing wall of an out of square house.

3-8. Observation: Wood floor is out of level.

Performance Guideline: No point on the surface of a wood floor shall be more than ½ inch higher or lower than any other point on the surface within 20 feet, or proportional multiples of the preceding dimensions. For remodeling projects, the owner and the contractor may agree to build a wood floor out of level in order to match or otherwise compensate for pre-existing conditions.

Corrective Measure: The contractor will make the necessary modifications to any floor not complying with the performance guideline for levelness. Allowances should be allowed for shrinkage, cantilevers, and concentrated loads.

Discussion: Levelness is both an aesthetic and functional consideration. Out of level floors can cause “stair stepping” of 4 x 8 foot sheathing, siding, paneling and cabinets, and square walls must be “racked” into parallelograms when plumbing is installed. Liquids can run off counter tops, and, in extreme cases, people will perceive that they are walking uphill or downhill. The contractor and the owner may agree to build an addition out of level in order to keep the floor of an addition on the same plane, and the roof on the same line, as those of an existing, out of level structure.

3-9. Observation: Excessive deflection observed in floor or roof constructed of wood I-joists.

Performance Guideline: All beams, joists, rafters, headers, and other structural members constructed of wood I-joists shall be sized, and fasteners spaced, according to manufacturer’s specifications for size, length, and spacing.

Corrective Measure: The contractor will reinforce or modify, as necessary, any floor, wall, ceiling, or roof not meeting the performance guideline.

Discussion: Deflection may indicate an aesthetic consideration independent of the strength and safety requirements of the lumber. When a customer’s preference is made known before construction, a higher standard may be agreed upon in writing by the contractor and the owner.

Remodeling Projects Only

3-10. Observation: Wood flooring is unlevel at transition from existing floor to room addition floor.

Performance Guideline: Flooring at transition area shall not slope more than 1/8 inch over 6 inches unless a threshold is added. Overall step down, unless previously agreed upon with the contractor shall not exceed 1-1/8 inches. Variations caused by seasonal changes are not a defect.

Corrective Measure: The contractor will add threshold or transition material, or pull up the flooring and reduce the high spot, or if possible, shim under new framing to bring floor within guideline.

Discussion: All floor joists shrink both seasonally and when aging. After installation, 2 x 12’s can shrink up to ½ inch. If the flooring, subfloor, or underlayment was not purposely overlapped onto the existing floor, such a gap is not a defect but a natural result of the aging process of wood. The drier the house the more the shrinkage. Floors will slope along the floor joist span which according to some codes can sag up to ½ inch over 15-foot spans when under load and more in older homes due to sag plus loading. This will cause a hump at the juncture of the old to new. Also if old and new flooring joists meet perpendicularly to each other, the first new floor joist running parallel to the old outside wall can fall that ½ inch out to the first parallel joist (14-1/2 inches into the new floor). If the addition also has parallel joists, the hump can appear as a 1-inch gap at the end of a yardstick when held centered at the old house line.

WALLS

Structural

4-1. Observation: Wood framed wall is out of plumb.

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

Corrective Measure: The contractor will repair to meet the performance guideline.

4-2. Observation: The wall is bowed.

Performance Guideline: All interior and exterior walls have slight variances in their finished surface. Walls shall not bow more than 1/2 inch out of line within any 32 inch horizontal measurement, or 1/2 inch within any 8 foot vertical measurement.

Corrective Measure: The contractor will repair to meet the performance guideline.

4-3. Observation: Exterior wall leaks because of inadequate caulking.

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

Corrective Measure: The contractor will repair or caulk joints and cracks in exterior wall surfaces, as required to correct deficiencies, one time only during the warranty period. Even when properly installed, caulking will shrink and must be maintained by the owner.

Insulation

4-4. Observation: Insulation is insufficient.

Performance Guideline: The contractor shall install insulation according to R-Values designated in the contract documents.

Corrective Measure: The contractor will install insulation to meet the performance guideline.

Discussion: Proper installation shall include correct placement behind electrical boxes, backing studs, corner framing, and wiring.

Windows

4-5. Observation: Window is difficult to open or close.

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

Corrective Measure: The contractor will correct or repair as required to meet the performance guideline.

4-6. Observation: Window glass is broken and/or screen is damaged.

Performance Guideline: None.

Corrective Measure: Broken glass or screens reported to the contractor before closing will be replaced. Broken glass or screens not reported to the contractor prior to acceptance of the job are the owner's responsibility.

4-7. Observation: Scratches appear on surface of glass and mirror.

Performance Guideline: Glass or mirror surfaces shall not have scratches visible from 10 feet under normal lighting conditions.

Corrective Measure: The contractor shall replace any scratched glass or mirror surface if noted at or before the acceptance of the project.

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4-8. Observation: During rains, water appears on interior corner of glazed window unit.

Performance Guideline: Water leakage from improper installation is unacceptable.

Corrective Measure: The contractor shall repair any deficiencies attributable to improper installation.

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

Exterior Doors

4-9. Observation: Exterior door is warped.

Performance Guideline: Exterior doors shall not warp to the extent that they become inoperable, cease to be weather-resistant, or exceed National Wood Window and Door Association Standards of ¼ inch measured diagonally from corner to corner.

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

Discussion: Exterior doors will warp to some degree because of the difference in the temperature between inside and outside surfaces. Warping may also be caused by improper or incomplete finishing of the door including sides, top, and bottom. The contractor is not responsible for warpage if painting of doors is not within contractor's scope of work.

4-10. Observation: Raw wood shows at the edges of inset panel on exterior door.

Performance Guideline: Wooden panels will shrink and expand because of temperature and/or humidity changes, and may expose unpainted surfaces. This does not constitute a defect.

Corrective Measure: None.

4-11. Observation: Door panel is split.

Performance Guideline: Split panels shall not allow light to be visible through the door.

Corrective Measure: The contractor will repair, paint, or stain the split panel that does not meet the performance guideline once during the warranty period.

4-12. Observation: Exterior door sticks.

Performance Guideline: Exterior doors shall operate smoothly, except that wooden exterior doors may stick during occasional periods of high humidity.

Corrective Measure: The contractor will adjust or replace the door to meet the performance guideline.

Discussion: Exterior doors will warp to some degree because of the difference in the temperature between inside and outside surfaces. Warping may also be caused by improper or incomplete finishing of the door including sides, top, and bottom. The contractor is not responsible for warpage if painting of doors is not within contractor's scope of work.

4-13. Observation: Exterior door will not shut completely.

Performance Guideline: Exterior doors shall shut completely.

Corrective Measure: The contractor will adjust or replace the door to meet the performance guideline.

Discussion: Exterior doors will warp to some degree because of the difference in the temperature between inside and outside surfaces. Warping may also be caused by improper or incomplete finishing of the door including sides, top, and bottom. The contractor is not responsible for warpage if painting of doors is not within contractor's scope of work.

4-14. Observation: Plastic molding behind storm door melts from exposure to sunlight.

Performance Guideline: The plastic moldings behind the storm doors should not melt if the storm panel is removed and reinstalled by the owner during normal maintenance operations.

Corrective Measure: None.

Discussion: Plastic moldings may melt if the prime 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 addition of the storm panels. The

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owner is also cautioned to follow manufacturer's recommendations on painting on the moldings with a dark color, with or without the use of a storm panel. Dark color molding is likely to sag and should be avoided.

4-15. Observation: 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. For remodeling projects, this guideline does not apply where a new door is installed in an existing wall that is out of plumb.

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

4-16. Observation: Gaps are visible around exterior door edge, door jamb, and threshold.

Performance Guideline: Gaps shall not vary greater than 3/16 inch.

Corrective Measure: The contractor will repair existing unit to meet performance guideline.

4-17. Observation: Exterior door hardware or kickplate has tarnished.

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

Corrective Measure: None. Owner to contact manufacturer.

4-18. Observation: 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 the job is accepted. The cleaning and maintenance necessary to preserve proper operation are an owner responsibility.

Corrective Measure: The contractor shall repair once during the warranty period.

Discussion: Proper operation should be verified by the owner and the contractor at the time the job is accepted.

4-19. Observation: Sliding patio door does not roll smoothly.

Performance Guideline: Sliding patio doors shall roll smoothly at the time the job is accepted. The cleaning and maintenance necessary to preserve proper operation are an owner responsibility.

Corrective Measure: The contractor shall repair once during the warranty period.

Discussion: Proper operation should be verified by the owner and the contractor at the time the job is accepted.

Exterior Finish

Wood and Hardboard Lap Siding

4-20. Observation: Siding is bowed.

Performance Guideline: Bows exceeding ½ inch in 32 inches are unacceptable.

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

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

4-21. Observation: Siding end gap is visible.

Performance Guideline: End gaps wider than 3/16 inch are unacceptable.

Corrective Measure: The contractor will repair end 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 the new caulking to match existing as close as possible.

4-22. Observation: Siding is not installed on a straight line.

Performance Guideline: Any piece of lap siding more than ½ inch off parallel in 20 feet with contiguous courses is

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unacceptable, unless the owner and the contractor have previously agreed to disregard the performance guideline to match a pre-existing structural condition.

Corrective Measure: The contractor will reinstall siding to meet the performance guideline for straightness, and replace any siding damaged during removal with new siding.

Discussion: For remodeling projects, if the contractor and the owner 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.

4-23. Observation: Face nails are excessively countersunk into hardboard surface.

Performance Guideline: Siding nails should not be countersunk to expose visible fiber of hardboard siding.

Corrective Measure: The contractor shall repair as necessary to meet performance guideline.

Discussion: If visible fiber of hardboard siding is exposed, paint surface to coat fiber; if nail is countersunk 1/16 to 1/8 inch, caulk and touch-up paint; if countersunk in excess of 1/8 inch, caulk and add an additional nail flush to the surface.

Tongue and Groove Wood Siding

4-24. Observation: Siding is buckled.

Performance Guideline: Siding that projects more than 3/16 inch from the face of adjacent siding is unacceptable.

Corrective Measure: The contractor will repair or replace any siding not meeting the performance guideline.

Discussion: Buckling is caused by increasing relative humidity, which causes the siding to expand. It can be prevented by leaving space between the tongues and grooves for siding to expand, and by leaving the siding outside for a few days to allow it to adjust to the ambient humidity prior to installation.

4-25. Observation: Nail has stained siding.

Performance Guideline: Stains exceeding more than 1/2 inch from the nail and readily visible from a distance of more than 20 feet are unacceptable. This performance guideline does not apply if “natural weathering” or semi-transparent stain is specified for the job.

Corrective Measure: The contractor can choose either to remove stains that do not meet the performance guideline, or to touch-up, paint, or stain the affected area.

Discussion: Stains may be from oxidation of nails or leaching of extractives from the wood. Use of galvanized nails (even double hot-dipped) will not necessarily prevent staining. Clear water-repellant sealer applied immediately after installation of siding will retard leaching and rusting.

Wood Shake Siding

4-26. Observation: Cedar shakes or shingles have “bled” through paint or stain applied by contractor.

Performance Guideline: Resins and extractives bleeding through paint or stain, or blackening of shakes or shingles is unacceptable. This performance guideline does not apply if “natural weathering” or semi-transparent stain is specified for the job.

Corrective Measure: One time during the warranty period the contractor will clean and treat shakes to provide a reasonable appearance and prevent further bleeding.

Plywood or Other Veneer Siding

4-27. Observation: Siding has delaminated.

Performance Guideline: Siding shall not delaminate.

Corrective Measure: The contractor will replace delaminated siding that is not covered under manufacturer’s warranty, unless the delamination was caused by the owner’s actions or negligence. The repaired area may not precisely match the original siding.

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4-28. Observation: Joints between siding have separated.

Performance Guideline: Joint separations exceeding 3/16 inch are unacceptable.

Corrective Measure: The contractor will caulk or repair siding as necessary to fill the joint. The repaired area may not match the original siding precisely.

4-29. Observation: Siding is bowed.

Performance Guideline: Bows exceeding ½ inch in 32 inches are unacceptable.

Corrective Measure: The contractor will install additional nails in siding to meet acceptable nailing schedules and will replace any siding that does not meet the guideline because of bows.

Discussion: Some waviness in siding is to be expected because of bows in studs. However, proper nailing of siding will straighten most bows.

Aluminum or Vinyl Lap Siding

4-30. Observation: Siding is bowed or wavy.

Performance Guideline: Some waviness in lap siding is to be expected because of bows in studs. Thermal expansion waves or distortions in aluminum or vinyl lap siding, sometimes called oil canning, are unacceptable if they exceed ¼ inch in 16 inches.

Corrective Measure: The contractor will correct any thermal expansion waves or distortions to comply with the performance guideline by reinstalling or replacing siding as necessary.

Discussion: This problem is caused by the siding being nailed too tightly to the house instead of loosely “hung” in the center of the nail slots, or by not allowing adequate room for the siding to expand at the ends.

4-31. Observation: Siding color is faded.

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

Corrective Measure: None.

4-32. Observation: Aluminum or vinyl lap siding trim is loose from house.

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

Corrective Measure: The contractor will reinstall trim or caulk separations as necessary to comply with the performance guideline.

4-33. Observation: Aluminum or vinyl lap siding courses are not parallel with eaves or wall openings.

Performance Guideline: Any piece of aluminum or vinyl lap siding more than ½ inch off parallel in 20 feet with contiguous courses, or contiguous break such as a soffit line, is unacceptable, unless the owner and the contractor have previously agreed to disregard the performance guideline to match a pre-existing structural condition.

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

Discussion: For remodeling projects, if the contractor and the owner agree that the floor of an addition is to be on a different plane from the existing floor (for example, a pre-existing out of level condition), the siding on the addition may not be parallel and in line with existing siding.

4-34. Observation: Aluminum or vinyl lap siding nail shows under window, door, or eave.

Performance Guideline: All facing nails shall be of a color to match the trim they affix. No nail heads in the field of the siding shall be exposed.

Corrective Measure: The contractor will install trim as necessary to cover the nails.

Discussion: Vinyl siding generally should not be face nailed. However, there are appropriate and typical occasions when a single face nail may be needed to reinforce a joint or hold the siding to the wall when it is cut to fit around window frames, doors, roofs, or other obstructions on the wall.

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4-35. Observation: Aluminum or 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.

Corrective Measure: The contractor will repair or recaulk as necessary to eliminate the separation.

4-36. Observation: Aluminum or vinyl lap siding is cut crooked.

Performance Guideline: Visible cuts in siding shall be straight, plumb, and neat. Crooked cuts greater than 1/8 inch from true are not acceptable.

Corrective Measure: The contractor will repair or replace siding with visible crooked cuts.

Discussion: Crooked cuts may cause the panel to have insufficient dimension for expansion with temperature change.

4-37. Observation: Aluminum or vinyl lap siding is not cut tight to moldings.

Performance Guideline: Gaps between siding and moldings shall not exceed ¼ inch.

Corrective Measure: The contractor will correct to meet the guideline.

Masonry and Veneer

4-38. Observation: Masonry or veneer wall is cracked.

Performance Guideline: Cracks visible from 20 feet or larger than ¼ inch are not acceptable.

Corrective Measure: 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 original and new mortar.

Discussion: Small hairline cracks resulting from shrinkage are common to mortar joints in masonry construction.

4-39. Observation: Exterior cut bricks are of different thickness below openings.

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 cut brick should be greater than 1 inch.

Corrective Measure: 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.

4-40. Observation: 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, except that the owner and the contractor may agree to match or otherwise compensate for pre-existing conditions.

Corrective Measure: The contractor will rebuild the wall as necessary to meet the performance guideline.

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

4-41. Observation: Mortar stain 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.

Corrective Measure: The contractor will clean the mortar stains to meet the performance guideline.

4-42. Observation: Efflorescence is present on masonry or mortar surface.

Performance Guideline: This sometimes occurs on new construction and is a normal condition beyond the contractor's control.

Corrective Measure: None.

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Stucco and Parge

4-43. Observation: Exterior stucco wall surface is cracked.

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

Corrective Measure: The contractor will repair cracks exceeding 1/8 inch in width once during the warranty period.

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

4-44. Observation: Colors of exterior stucco walls do not match.

Performance Guideline: The colors of new exterior stucco walls may not perfectly match the colors of old exterior stucco walls.

Corrective Measure: None.

Discussion: Coloring of stucco is unique to field variables and it is impractical to achieve a color match between stucco coatings applied at different times.

4-45. Observation: Textures of finishes of exterior stucco walls do not match.

Performance Guideline: Texture of new exterior stucco walls may not perfectly match the textures of old exterior stucco walls.

Corrective Measure: None.

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

4-46. Observation: Separation of coating from base on exterior stucco wall.

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

Corrective Measure: The contractor will repair areas where the coating has separated from the base.

Discussion: Coloring of stucco is unique to field variables and it is impractical to expect to achieve a color match between stucco coatings applied at different times.

Exterior Trim

4-47. 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 the elements.

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

4-48. Observation: Exterior trim board is split.

Performance Guideline: Splits wider than 1/8 inch are unacceptable.

Corrective Measure: The contractor will repair splits by filling with a permanent filler.

4-49. Observation: Exterior trim board is bowed or twisted.

Performance Guideline: Bows and twists exceeding 3/8 inch in 8 feet are unacceptable.

Corrective Measure: The contractor will repair defects that do not meet the performance guideline by refastening or replacing deformed boards.

4-50. Observation: Exterior trim board is cupped.

Performance Guideline: Cups exceeding 3/16 inch in 5-1/2 inches are unacceptable.

Corrective Measure: The contractor will repair defects that do not meet the performance guideline by refastening or replacing deformed boards.

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Paint, Stain, and Varnish

4-51. 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.

Corrective Measure: The contractor will finish repaired areas as indicated.

4-52. Observation: Exterior paint or stain has peeled or physically deteriorated.

Performance Guideline: Exterior paints and stains shall not fail during the warranty period.

Corrective Measure: If 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 percent of the wall area, the contractor will refinish the entire wall.

4-53. Observation: Exterior paint or stain has faded.

Performance Guideline: Fading of exterior paints and stains is normal and the degree of fading depends on climatic conditions.

Corrective Measure: None.

4-54. Observation: Mildew or fungus is visible on exterior painted surfaces.

Performance Guideline: Painted or finished surfaces shall be free of observable mildew and fungus at the time the job is completed. However, mildew or fungus may form on painted surfaces over time because of warmth and moisture.

Corrective Measure: The contractor will remove mildew and fungus before completion of the job. Subsequent mildew or fungus formation is a condition the contractor cannot control. The owner is responsible for future cleaning of the painted item as necessary to prevent or remove mildew and fungus.

4-55. Observation: Varnish or lacquer finishes have deteriorated.

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

Corrective Measure: None.

5 ROOFS

Roof Structure

5-1. Observation: Roof ridge beam deflects.

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

Corrective Measure: The contractor shall repair any deficiencies that do not meet the performance guideline.

5-2. Observation: Roof or ceiling rafter bows.

Performance Guideline: Rafters that bow greater than 1 inch in 8 feet are considered excessive.

Corrective Measure: The contractor shall repair any deficiencies that do not meet the performance guideline.

Roof Sheathing

5-3. Observation: Roof sheathing is wavy or appears bowed.

Performance Guideline: Roof sheathing shall not bow more than ½ inch in 2 feet.

Corrective Measure: The contractor will straighten bowed roof sheathing or correct swollen joints as necessary to

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meet the performance guideline.

Discussion: The contractor usually can meet this performance guideline by using thicker plywood sheathing (either ½ inch or 15/32 inch span-rated, not 3/8 inch) with more plies (4 or 5, rather than 3) or oriented strand board and plywood clips (a) to align adjacent sheets between trusses or rafters and (b) to ensure room for expansion of sheets. In rare instances the contractor might have to install blocking between the trusses to straighten the sheathing.

Roof Vents

5-4. Observation: An attic vent or louver leaks.

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

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

Roof Installation and Leaks

Asphalt Shingles

5-5. Observation: The roof or flashing leaks.

Performance Guideline: Roofs and flashing shall not leak under normal conditions, except where the cause is determined to result from ice build-up or the owner's actions or negligence.

Corrective Measure: The contractor will repair any verified roof or flashing leaks not caused by ice build-up, leaves, debris, or the owner's actions or negligence. It is the owner's responsibility to keep the roof drains, gutters, and downspouts free of debris.

5-6. Observation: Ice builds up on the roof.

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

Corrective Measure: None. Prevention of ice build-up on the roof is an owner maintenance item.

5-7. Observation: Shingles have blown off.

Performance Guideline: Shingles shall not blow off in winds less than the manufacturer's standards/specifications.

Corrective Measure: If shingles blow off in winds less than the manufacturer's standards/specifications, see manufacturer's warranty.

5-8. Observation: Shingles are not horizontally aligned.

Performance Guideline: Shingles should be installed according to the manufacturer's standards/specifications.

Corrective Measure: The contractor will remove shingles that do not meet the performance guideline, and replace them with new shingles that are properly aligned.

Discussion: For remodeling only: the owner and the contractor may agree prior to installation that the horizontal line of shingles on the roof of an addition need not line up with those of the existing structure if the floors (and hence, the eaves and ridge) are not to be built on the same plane.

5-9. 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.

Corrective Measure: The contractor is not responsible for precisely matching the color of existing shingles.

5-10. Observation: Asphalt shingle edges or corners are curled or cupped.

Performance Guideline: Asphalt shingle edges and corners need not be perfectly flat. Appearance of shingles

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should be within manufacturer's standards/specifications.

Corrective Measure: None. The owner should contact the manufacturer of the roofing shingle.

5-11. Observation: Asphalt shingles do not overhang edges of roof, or hang too far over edges of roof.

Performance Guideline: Asphalt shingles shall overhang roof edges by not less than $\frac{1}{4}$ inch, and not more than $\frac{3}{4}$ inch unless the manufacturer's standards/specifications indicate otherwise.

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

5-12. Observation: Shading or shadowing pattern appears on new shingle roof.

Performance Guideline: Shading or shadowing is a defect only if it results from failure to use shingles of the type specified in the contract.

Corrective Measure: The contractor will replace shingles not conforming to contractual requirements.

5-13. Observation: Asphalt shingles have developed surface buckling.

Performance Guideline: Asphalt shingle surfaces need not be perfectly flat. Buckling higher than $\frac{1}{4}$ inch is considered excessive.

Corrective Measure: The contractor will fix the affected shingles to meet the performance guideline.

5-14. 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.

Corrective Measure: The contractor shall repair all areas as necessary to meet the performance guideline.

5-15. Observation: Roofing nails are exposed at ridge of roof.

Performance Guideline: Nail heads shall be sealed to prevent leakage.

Corrective Measure: The contractor shall repair areas to meet performance guideline.

5-16. Observation: Holes from walk boards are visible in asphalt shingles.

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

Corrective Measure: The contractor shall repair to meet the performance guideline.

5-17. Observation: Existing roof shingles telegraphing through new asphalt shingles.

Performance Guideline: Some telegraphing is normal when re-roofing over existing roofing.

Corrective Measure: None.

Roll Roofing

5-18. Observation: Water is trapped under roll roofing.

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

Corrective Measure: 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.

5-19. Observation: Roofing is blistered but does not admit water.

Performance Guideline: Surface blistering of roll roofing is caused by unusual conditions of heat and humidity acting on the asphalt and cannot be controlled by the contractor.

Corrective Measure: None.

5-20. 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.

Corrective Measure: The contractor will take corrective action to assure proper drainage of the roof.

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Chimney

5-21. Observation: Crack in masonry chimney cap or crown causes leakage.

Performance Guideline: It is normal for caps to crack due to expansion and contraction, however unacceptable leaks may occur with cracking.

Corrective Measure: If cracking causes leakage the contractor will repair.

5-22. Observation: Brick veneer spalling from chimney surface.

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

Corrective Measure: Contractor will repair newly manufactured brick when spalling occurs.

Chimney Flashing

5-23. Observation: New chimney flashing leaks.

Performance Guideline: New chimney flashing shall not leak under normal conditions except where the cause is determined to result from ice build-up or the owner's actions or negligence.

Corrective Measure: The contractor will repair leaks in new chimney flashing not caused by ice build-up or the owner's actions or negligence.

Gutters and Downspouts

5-24. Observation: Gutter or downspout leaks.

Performance Guideline: Gutters and downspouts shall not leak.

Corrective Measure: The contractor will repair leaks in gutters and downspouts.

5-25. Observation: Gutter overflows during a heavy rain.

Performance Guideline: Gutters may overflow during a heavy rain.

Corrective Measure: The contractor shall repair if gutters overflow during normal rains.

Discussion: The owner is responsible for keeping gutters and downspouts free from debris that could cause overflow.

5-26. Observation: Water remains in the gutter after a rain.

Performance Guideline: When a gutter is unobstructed by debris, the water level shall not exceed ½ inch in depth.

Corrective Measure: The contractor will repair the gutter to meet the performance guideline.

Discussion: Installing gutters with a minimum 1/32 inch drop in 1 foot will generally prevent water from standing in the gutters. Even so, small amounts of water may remain in some sections of gutter for a short time after a rain. In areas with heavy rainfall and/or ice build-up the contractor may consider increasing pitch/fall or adding additional downspouts.

Skylights

5-27. Observation: Skylight leaks.

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

Corrective Measure: The contractor will repair any improperly installed skylights to meet the performance guideline.

PLUMBING

Water Supply System

6-1. Observation: Pipe leaks.

Performance Guideline: No leaks of any kind shall exist in any soil, waste, vent, or water pipe.

Corrective Measure: The contractor will make repairs to eliminate leakage.

6-2. Observation: Condensation appears on pipes, toilets, and plumbing supply lines.

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

Corrective Measure: None.

6-3. Observation: A faucet or valve leaks.

Performance Guideline: No faucet or valve shall leak because of defects in material or workmanship.

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

6-4. Observation: Water in plumbing pipe freezes, and the pipe bursts.

Performance Guideline: Drain, waste, vent, and water pipes shall be adequately protected to prevent freezing as required by the applicable plumbing code for normally anticipated cold weather and in accordance with the design temperatures established by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers.

Corrective Measure: The contractor will correct situations not meeting the applicable code. The owner is responsible for draining or otherwise protecting pipes and exterior faucets exposed to freezing temperatures.

6-5. 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.

Corrective Measure: The contractor will repair the water supply system if the failure results from defective installation or materials. Conditions beyond the control of the contractor that disrupt or eliminate the water supply are not covered.

6-6. Observation: Water pipe is noisy.

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

Corrective Measure: The contractor cannot remove all noises caused by water flow and pipe expansion. However, the contractor will correct the system to eliminate “water hammer.”

Plumbing Fixtures

6-7. Observation: The bathtub or shower leaks.

Performance Guideline: Bathtubs and showers shall not leak.

Corrective Measure: 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. Maintenance of caulk seals is an owner responsibility.

6-8. Observation: Plumbing fixture, appliance, or trim fitting is defective.

Performance Guideline: Plumbing fixtures, appliances, and trim fittings shall comply with their manufacturer’s guidelines.

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Corrective Measure: None. Defective trim fittings, appliances, and fixtures are covered under manufacturer's warranty.

6-9. Observation: The surface of a porcelain or fiberglass plumbing fixture is cracked or chipped.

Performance Guideline: Cracks and chips in surfaces of bathtubs and sinks are unacceptable if visible from 3 feet in normal light.

Corrective Measure: The contractor will not be responsible for repairs unless the damage is reported to the contractor prior to acceptance of the job. If the problem resulted from improper manufacture, then the manufacturer's warranty will take precedence over the contractor's responsibility.

6-10. Observation: Fiberglass tub or shower enclosure base flexes.

Performance Guideline: To be installed according to manufacturer's specifications.

Corrective Measure: Contractor shall repair to meet performance guideline.

6-11. Observation: Manufactured marble vanity top cracks at drain.

Performance Guideline: Vanity tops shall not crack when installed with proper sealants at drain connection.

Corrective Measure: The contractor shall repair any deficiencies to meet the performance guideline within warranty period.

Sanitary Sewer or Septic System

6-12. Observation: Sewer, fixture, or drain is clogged.

Performance Guideline: Sewers, fixtures, and drains shall operate properly.

Corrective Measure: The contractor will not be responsible for sewers, fixtures, and drains that are clogged because of the owner's actions or negligence. If a problem occurs, the owner should consult the contractor for corrective action. If defective installation is the cause, the contractor is responsible for correcting the problem. If the owner's actions or negligence is the cause, the owner is responsible for correcting the problem. With respect to septic systems, owner 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 conditioner into the system.
- Placement of nonbiodegradable items into the system.
- Use of a food waste disposer 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.

6-13. Observation: Smell of sewer gas inside the home.

Performance Guideline: Sewer vents to relieve this smell can be covered with snow or ice, or traps may be dry.

Corrective Measure: The contractor is responsible to remove pressure testing caps from exterior vents. It is the homeowner's responsibility to keep vents clear of snow and ice and keep water in traps by occasional use.

7

ELECTRICAL

Fuses and Circuit Breakers

7-1. Observation: Fuse blows or circuit breaker trips.

Performance Guideline: Fuses and circuit breakers shall not be triggered by normal usage.

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Corrective Measure: The contractor will check wiring circuits for conformity with applicable national, state, or local electrical code requirements. The contractor will correct circuitry not conforming to applicable code specifications.

7-2. Observation: Ground fault interrupter trips frequently.

Performance Guideline: Ground fault interrupters are safety devices installed as part of the electrical system to provide protection against electrical shock. These sensitive devices can be tripped very easily.

Corrective Measure: The contractor will install ground fault interrupters in accordance with approved electrical codes. Tripping is to be expected and is not covered unless it is caused by defective installation.

Outlets and Lights

7-3. Observation: Electrical outlets, switches, or fixtures malfunction.

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

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

7-4. Observation: Wiring fails to carry its designed load.

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

Corrective Measure: The contractor will check the wiring for conformity to applicable local, state, or approved national electrical code requirements. The contractor will repair wiring not conforming to code specifications.

7-5. Observation: Ceiling fan vibrates excessively and is noisy.

Performance Guideline: The contractor shall install fans per the manufacturer's specifications including blade balances.

Corrective Measure: The contractor shall repair any fan installation not in accordance with performance guideline if supplied and installed by the contractor.

7-6. Observation: Exhaust fan is ducted to attic or crawl space.

Performance Guideline: Fans shall be ducted as per applicable codes.

Corrective Measure: The contractor shall repair to meet performance guideline.

7-7. Observation: Interior light fixture tarnishes.

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

Corrective Measure: None.

7-8. Observation: Receptacle/switch too far off wall.

Performance Guideline: Receptacle/switch should not be more than 1/8 inch from the adjoining wall surface.

Corrective Measure: Contractor will repair to meet performance guideline.

8

INTERIOR CLIMATE CONTROL

Air Infiltration and Drafts

8-1. Observation: Air infiltrates around door or window.

Performance Guideline: Some infiltration is usually noticeable around doors and windows especially during high winds. No daylight shall be visible around frame when door or window is closed.

Corrective Measure: The contractor shall repair to meet the performance guideline.

Discussion: Proper repair can be affected by adjusting or installing weatherstripping around doors and windows. In

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high-wind areas, the owner may need to have storm windows and doors installed to eliminate drafts.

8-2. Observation: Draft comes through electrical outlet.

Performance Guideline: Electrical junction boxes on exterior walls may allow cold air to flow through or around an outlet into a room. It may not be possible to eliminate this completely.

Corrective Measure: None.

Discussion: The owner may need to install foam insulation pads under switch and outlet plates to help decrease drafts.

Ventilation

8-3. Observation: The attic or crawl space is inadequately ventilated.

Performance Guideline: The attic and crawl space shall be ventilated as required by the applicable building code.

Corrective Measure: The contractor will provide for adequate ventilation. The contractor is not responsible for actions by the owner that interfere with the ventilation system.

Humidity Control and Condensation

8-4. Observation: Condensation or frost appears on window.

Performance Guideline: Windows will collect condensation on their interior surfaces when extreme temperature differences and high humidity levels occur. Condensation usually results from humid conditions within the home that are created by the owner or during the curing process in a new space.

Corrective Measure: Unless the window condensation or frost is directly attributed to faulty installation, it usually results from conditions beyond the control of the contractor. No corrective action is required.

Discussion: Occasional condensation in the kitchen, bath or laundry area is common and is therefore not a defect. It is the homeowner's responsibility to maintain proper humidity.

Air-Distribution System

8-5. Observation: The ductwork makes noises.

Performance Guideline: When metal is heated, it expands, and when cooled, it contracts. The resulting "ticking" or "crackling" sounds generally are to be expected and do not constitute a defect.

Corrective Measure: None.

8-6. Observation: The ductwork produces excessively loud noises commonly known as oil canning.

Performance Guideline: The stiffening of the ductwork and the gauge of the metal used shall be such that ducts do not "oil can." The booming noise caused by oil canning is not acceptable.

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

8-7. Observation: Noise can be heard at the register.

Performance Guideline: Product should be correctly installed according to manufacturer's specifications.

Corrective Measure: None, if installed correctly. If installed incorrectly, contractor will correct according to manufacturer's specifications.

Discussion: Under certain conditions, some noise may be experienced with the normal flow of air even when product is installed correctly. See manufacturer's specifications.

8-8. Observation: The air handler vibrates.

Performance Guideline: Product should be correctly installed.

Corrective Measure: none, if installed correctly. If installed incorrectly, contractor will correct according to manufacturer's specifications.

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Discussion: Under certain conditions, some noise may be experienced with the normal flow of air when product is installed correctly. See manufacturer's specifications.

8-9. Observation: The ductwork separates or detaches.

Performance Guideline: Ductwork shall remain intact and securely fastened.

Corrective Measure: The contractor will reattach and resecure all separated or unattached ductwork.

Heating System

8-10. 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 as specified in the ASHRAE Handbook: Fundamentals. National, state, or local energy codes shall supersede this performance guideline where such codes have been locally adopted.

Corrective Measure: The contractor will correct the heating system to provide the required temperature in accordance with the performance guideline or applicable code specifications. However, the owner will be responsible for balancing dampers and registers and for making other necessary minor adjustments.

Discussion: For new living spaces created by remodeling jobs, heating guidelines may not apply to areas where living space has been created without resizing the HVAC system.

Central Air-Conditioning System

8-11. Observation: Cooling of rooms is inadequate.

Performance Guideline: If 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 as specified in the ASHRAE Handbook: Fundamentals. In the case of outside temperatures exceeding 95 degrees Fahrenheit, the system shall keep the inside temperature 15 degrees Fahrenheit cooler than the outside temperature. National, state, or local codes shall supersede this guideline where such codes have been locally adopted.

Corrective Measure: The contractor will correct the cooling system to provide the required temperature in accordance with the performance guideline or applicable code specifications.

Discussion: For new living spaces created by remodeling jobs, cooling guidelines may not apply to areas where living space has been created without resizing the HVAC system.

8-12. Observation: Condensation line clogs.

Performance Guideline: None.

Corrective Measure: Condensation lines will eventually clog under normal use. The contractor will provide unobstructed condensation lines at the time the job is accepted. The owner is responsible for maintaining them in that condition.

8-13. Observation: Refrigerant line leaks.

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

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

8-14. Observation: There is condensation on the outside of air handlers and ducts.

Performance Guideline: Air handlers and ducts will collect condensation on their exterior surfaces when extreme temperature differences and high humidity levels occur. Condensation usually results from humid conditions within the home that are created by the owner or during the curing process in a new space.

Corrective Measure: Unless the condensation or frost is directly attributed to faulty installation, it usually results

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from conditions beyond the control of the contractor. No corrective action is required.

8-15. Observation: Kitchen or bath fans allow cold air infiltration.

Performance Guideline: This is a normal condition beyond the contractor's control.

Corrective Measure: None.

Discussion: It is possible for cold air to leak into the house through a vent fan. By their very nature, vent fans are somewhat open to outside air. It is possible for the damper to be lodged open due to animal activity, including nesting in the outside opening. Cleanup for this condition is an owner's maintenance item.

8-16. Observation: There are gaps between HVAC vent or register covers and the wall or ceiling.

Performance Guideline: This is a normal condition beyond the contractor's control.

Corrective Measure: None.

Discussion: It is the inherent nature of the heating and cooling system to cause vents and registers to bend over time. This can result in gaps occurring between the vent or register cover and the wall. As long as the vent or register is securely attached, this is not a maintenance item.

9 **INTERIOR**

Interior Doors

9-1. Observation: Interior door is warped.

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

Corrective Measure: The contractor will correct or replace and refinish defective doors to match existing doors as nearly as practical during the warranty period.

Discussion: In bathroom or utility areas, exhaust fans or an open window must be used to remove moisture to prevent warpage of door units. If customer is responsible for painting the door, the builder is not responsible if the door is not painted to manufacturer's specifications.

9-2. Observation: Bifold doors come off tracks during normal operation.

Performance Guideline: Bifold doors shall slide properly on their tracks at the time the job is accepted. Cleaning and maintenance necessary to preserve proper operation are the owner's responsibility.

Corrective Measure: The contractor will repair any bifold door that will not stay on its track during normal operation, one time during the warranty period.

Discussion: Proper operation should be verified by the owner and the contractor at the time the job is accepted.

9-3. Observation: Pocket door rubs in pocket during normal operation.

Performance Guideline: Pocket doors shall not rub in their pockets during normal operation.

Corrective Measure: The contractor will repair the pocket door to meet the performance guideline, one time during the warranty period.

9-4. Observation: Wooden door panel shrinks and splits.

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

Corrective Measure: The contractor will fill splits in the door panel with wood filler and match paint or stain as closely as practical.

9-5. Observation: Door rubs on jambs or contractor-installed floor covering, or latch does not work.

Performance Guideline: Doors shall operate smoothly and door latches shall operate correctly.

Corrective Measure: The contractor will repair the door and the door latch as necessary to meet the performance guideline.

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9-6. Observation: Door drags on carpet.

Performance Guideline: Doors shall not drag on carpet.

Corrective Measure: The contractor will repair the door to meet the performance guideline if the contractor installed the carpet as part of the contract.

Discussion: If the contractor installs the door over pre-existing carpeting, the contractor is responsible for meeting the performance guideline.

9-7. Observation: Door edge is not parallel to door jamb.

Performance Guideline: Where the contractor installs the door frame and door, the door edge shall be within 3/16 inch of parallel to the door jamb. Where the contractor installs the door in an existing frame that is out of square, the guideline does not apply.

Corrective Measure: The contractor will adjust the door as necessary to meet the guideline.

9-8. Observation: 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. For remodeling projects, this guideline does not apply where a door is installed in an existing wall that is out of plumb.

Corrective Measure: The contractor will adjust the door as necessary to meet the guideline.

9-9. Observation: Interior pre-hung doors are hinge-bound.

Performance Guideline: Doors shall move smoothly with limited resistance.

Corrective Measure: The contractor shall repair door operation to match performance guideline.

Interior Stairs

9-10. Observation: 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 force.

Corrective Measure: The contractor will repair the stair to meet the performance guideline.

9-11. Observation: Gaps exist between interior stair risers, treads, and/or skirts.

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

Corrective Measure: The contractor will fix the gap with filler or replace parts as necessary to meet the performance guideline.

9-12. Observation: Squeaking stair riser or tread.

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

Corrective Measure: The contractor will refasten any loose risers or treads or take other corrective action to eliminate squeaking to the extent possible within reasonable repair capability without removing treads or ceiling finishes.

Discussion: Squeaks in risers or treads 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 will sometimes reduce squeaking. If there is no ceiling below, gluing or re-nailing the riser to the tread or shimming will reduce squeaks but the total elimination of squeaks is practically impossible. The performance guideline requires the contractor to make a reasonable attempt to eliminate squeaks without requiring removal of treads or ceiling finishes.

9-13. Observation: Gaps exist between interior stair railing parts.

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

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

9-14. Observation: Interior stair railing lacks rigidity.

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

Corrective Measure: The contractor will repair any stair railings as necessary to comply with applicable codes.

Trim and Moldings

9-15. Observation: Gaps at non-mitered joints of trim and moldings.

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 time of installation.

Corrective Measure: The contractor will repair defective joints to meet performance guideline.

Discussion: Separation of trim and moldings can be caused by lack of control of indoor relative humidity by the owner and in such cases will therefore be excluded.

9-16. 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 painting or finishing, nails and nail holes shall not be readily visible from a distance of 6 feet under normal lighting conditions.

Corrective Measure: 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.

9-17. Observation: Inside corner is not coped or mitered.

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

Corrective Measure: The contractor will finish inside corners to meet the performance guideline.

9-18. Observation: Trim or molding miter edges do not meet.

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

Corrective Measure: The contractor will repair gaps that do not meet the performance guideline. Caulking or puttying with materials compatible to the finish is acceptable.

9-19. Observation: Interior trim is split.

Performance Guideline: Splits, cracks, and checking are inherent characteristics of all wood products, and are not a defect.

Corrective Measure: None.

9-20. 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.

Corrective Measure: The contractor will fill hammer marks and refinish or replace affected trim to meet the performance guideline. Refinished or replaced areas may not match surrounding surfaces exactly.

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Cabinets and Counter Tops

9-21. Observation: Cabinets do not meet ceiling or walls.

Performance Guideline: Gaps in excess of ¼ inch are unacceptable.

Corrective Measure: The contractor will repair the gap with caulk, putty, or scribe molding, or he will reposition/reinstall cabinets to meet the performance guideline.

Discussion: When remodeling in rooms with out of plumb walls or out of level floors and ceilings, “square” cabinets cannot be installed parallel to walls and ceilings and still keep the cabinets on line. For example, if the floor is not level and the installer measures up from it, “snaps” a line on which to place the tops of the wall cabinets, then plumbs the first cabinet, one corner of the cabinet will leave the line, and the bottom corners of successive cabinets will not be in line. Similarly, cabinets will not line up with each other if they are installed on a level line, starting against an out of plumb wall instead of being plumbed. The contractor should explain the aesthetic options and let the owner decide which one is preferred.

9-22. 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 unacceptable, unless the owner and the contractor agree to disregard the guideline in order to match or otherwise compensate for preexisting conditions.

Corrective Measure: The contractor will make necessary adjustments to meet the performance guideline.

Discussion: In rooms with out of plumb walls or out of level floors and ceilings, “square” cabinets cannot be installed parallel to walls and ceilings and still keep the cabinets on line. For example, if the floor is not level and the installer measures up from it, “snaps” a line on which to place the tops of the wall cabinet, then plumbs the first cabinet, one corner of the cabinet will leave the line, and the bottom corners of successive cabinets will not be in line. Similarly, cabinets will not line up with each other if they are installed on a level line, starting against an out of plumb wall instead of being plumbed. The contractor should explain the aesthetic options and let the owner decide which one is preferred.

9-23. Observation: Cabinet is warped.

Performance Guideline: Cabinet warpage shall not exceed ¼ inch as measured from the face frame to the point of furthest warpage, with the door or drawer front in closed position.

Corrective Measure: The contractor will correct or replace doors and drawer fronts as necessary to meet the performance guideline.

9-24. Observation: Cabinet door or drawer binds.

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

Corrective Measure: The contractor will adjust or replace doors and drawers as necessary to meet the performance guideline.

9-25. Observation: Cabinet door will not stay closed.

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

Corrective Measure: The contractor will adjust or replace the door catches or closing mechanisms as necessary to meet the performance guideline.

9-26. Observation: The joints of high pressure laminate on countertop is delaminated.

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

Corrective Measure: The contractor will repair or replace delaminated coverings.

9-27. Observation: The surface of high pressure laminate on countertop is cracked or chipped.

Performance Guideline: Countertops shall be free of cracks and chips at the time the job is accepted. Cracks or chips occurring after acceptance of the job are the owner’s responsibility.

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Corrective Measure: The contractor will repair or replace cracked or chipped countertops only if they are reported prior to acceptance of the job.

9-28. Observation: Scratches on solid surface countertops.

Performance Guideline: Solid surface countertops shall be free of scratches at time of acceptance of the project.

Corrective Measure: The contractor shall repair to meet the performance guideline.

9-29. Observation: Countertop is not level.

Performance Guideline: Countertops shall be no more than $\frac{3}{4}$ inch in 10 feet out of parallel with the floor. For remodeling projects where the floor is out of level, the countertop may be installed proportionately out of level.

Corrective Measure: The contractor will make necessary adjustments to meet the performance guideline.

Discussion: For remodeling projects, countertops are almost always on a plane parallel to the floor and ceiling because the cabinets supporting the top are exactly the same height. Shimming and leveling the tops when the floor is out of level may be aesthetically unacceptable to the owner. Prior to construction, the contractor should explain the problem and allow the owner to decide between tops that are out of level or not parallel to the floor.

Interior Wall Finish

Lath and Plaster

9-30. Observation: Cracks are visible on finished wall ceiling.

Performance Guideline: Cracks shall not exceed 1/16 inch in width.

Corrective Measure: The contractor will repair cracks exceeding 1/16 inch in width only once during the warranty period. The contractor will touch up paint repaired areas if the contractor was responsible for the original interior painting. A perfect match between original and new paint cannot be expected and the contractor is not required to paint an entire wall or room.

Gypsum Wallboard

9-31. Observation: Nail pop, blister, or other blemish is visible on finished wall or ceiling.

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

Corrective Measure: The contractor will repair such blemishes only once during the warranty period. The contractor will touch up paint repaired areas if the contractor was responsible for the original interior painting. A perfect match between original and new paint cannot be expected, and the contractor is not required to paint an entire wall or room. The contractor is not required to repair defects that are covered by wallpaper and therefore, not visible.

9-32. Observation: Cracked corner bead, excess joint compound, trowel marks or blisters in tape joints on drywall surface.

Performance Guideline: Defects resulting in cracked corner bead, trowel marks, excess joint compound or blisters in tape are unacceptable.

Corrective Measure: The contractor shall repair to meet the performance guideline one time within warranty period.

9-33. Observation: Texture of gypsum wallboard does not match.

Performance Guideline: Slight variations in texture are normal and will occur randomly.

Corrective Measure: None.

9-34. Observation: Angular gypsum wallboard joints are uneven.

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

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Corrective Measure: None.

Paint, Stain, and Varnish

9-35. Observation: Mildew or fungus is visible on interior painted surfaces.

Performance Guideline: Painted and finished surfaces shall be free of observable mildew and fungus at the time the job is completed. However, mildew or fungus may form on painted surfaces over time because of heat and moisture.

Corrective Measure: The contractor will remove mildew and fungus before completion of the job. Subsequent mildew or fungus formation is a condition the contractor cannot control. The owner is responsible for future cleaning of the painted item as necessary to prevent mildew and fungus.

9-36. Observation: Varnish or lacquer finishes have deteriorated.

Performance Guideline: Clear finishes on interior woodwork shall not deteriorate during the warranty period.

Corrective Measure: The contractor will retouch affected areas of clear-finish interior woodwork and match the original finish as closely as practical.

Discussion: Finishes on window sills with south facing exposure may deteriorate due to climatic conditions.

9-37. 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.

Corrective Measure: The contractor will recoat as necessary to meet the guideline and match surrounding areas as closely as practical.

9-38. Observation: Interior surface is paint spattered.

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.

Corrective Measure: The contractor will remove paint spatters to meet the guideline.

9-39. Observation: Brush marks show on interior painted surface.

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.

Corrective Measure: The contractor will refinish as necessary to meet the guideline and match surrounding areas as closely as practical.

9-40. Observation: Lap marks show on interior paint or stain.

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

Corrective Measure: The contractor will refinish as necessary to meet the guideline and match surrounding areas as closely as practical.

9-41. 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 the immediate surrounding areas as closely as practical.

Corrective Measure: The contractor is only responsible for painting if it was part of the original contract. Where the majority of the wall or ceiling area is affected the area will be painted from breakline to breakline. The contractor is not required to paint an entire room. The contractor is only responsible if they painted the home in the original contract.

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9-42. Observation: Texture on blown or textured ceilings is uneven.

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

Corrective Measure: None.

9-43. Observation: Resin bleeds through on interior trim.

Performance Guideline: This is a normal condition that can be expected to occur with natural materials such as wood.

Corrective Measure: None.

Wallpaper and Vinyl Wall Coverings

9-44. Observation: The wall covering is peeling.

Performance Guideline: The wall covering shall not peel off the walls. Note: Wallpaper applied in high moisture areas is exempted from this guideline because the problem results from conditions beyond the contractor's control.

Corrective Measure: The contractor will reattach or replace the loose wall covering if the contractor installed the covering.

9-45. Observation: Patterns in wall covering are mismatched at the edges.

Performance Guideline: Patterns in wall coverings shall match unless installed on existing (remodeling jobs only) out of plumb walls or where trim is not square with corners. Defects in the patterns themselves are the manufacturer's responsibility.

Corrective Measure: None.

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FLOOR FINISHES

Carpeting

10-1. Observation: Carpet does not meet at the seams.

Performance Guideline: It is not unusual for carpet seams to show. However, a visible gap at the seams is not acceptable.

Corrective Measure: If the carpet was installed by the contractor, the contractor will eliminate visible gaps at carpet seams.

10-2. Observation: Carpeting loosens, or the carpet stretches.

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.

Corrective Measure: If the carpeting was installed by the contractor, the contractor will restretch or resecure the carpeting as necessary to meet the guideline.

10-3. Observation: Spots or minor fading are visible on the carpet.

Performance Guideline: Exposure to natural light may cause spots on and minor fading of the carpet.

Corrective Measure: None.

10-4. Observation: Dead spots appear in padding areas below carpet surface.

Performance Guideline: Carpeted areas shall have full coverage of pad consistent throughout the flooring area.

Corrective Measure: The contractor will repair any deficiencies to meet performance guideline.

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Roll Vinyl and Resilient Tile Flooring

10-5. Observation: Nail pops appear on the surface of resilient flooring.

Performance Guideline: Readily visible nail pops on resilient flooring are not acceptable.

Corrective Measure: The contractor will repair the nail pops that are readily visible.

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.

10-6. Observation: Depressions or ridges appear in resilient flooring because of subfloor irregularities.

Performance Guideline: Readily apparent depressions or ridges exceeding 1/8 inch shall be repaired. The ridge or depression measurement is taken with the gap at one end of a 6-inch straightedge centered over the depression or ridge within 3 inches of the straightedge held tightly to the floor on one side of the defect.

Corrective Measure: The contractor will take corrective action as necessary to bring the defect 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.

Discussion: Ridges or depressions may be caused by subfloor irregularities, use of improper trowel, or the floor was not rolled.

10-7. Observation: Resilient flooring loses adhesion.

Performance Guideline: Resilient flooring shall not lift, bubble, or detach.

Corrective Measure: At the contractor's option, the contractor will repair or replace the affected resilient flooring as necessary. The contractor is not responsible for discontinued patterns or color variations when replacing the floor covering.

10-8. Observation: Seams or shrinkage gaps show at resilient sheet flooring joints.

Performance Guideline: Gaps at joints in resilient sheet flooring shall not exceed 1/16 inch in width. Where dissimilar materials abut, the gap shall not exceed 1/8 inch.

Corrective Measure: At the contractor's option, the contractor will repair or replace the resilient flooring as necessary to meet the performance guideline. The contractor will not be responsible for discontinued patterns or color variations when replacing the floor covering.

Discussion: Proper repair can be affected by sealing gap with seam sealer.

10-9. Observation: Bubbles appear on roll vinyl flooring.

Performance Guideline: Bubbles resulting from trapped air that protrude higher than 1/16 inch from the floor are not acceptable.

Corrective Measure: The contractor will repair the floor to meet the guideline.

Discussion: The performance guideline does not apply to perimeter attached vinyl floors.

10-10. Observation: Patterns on roll vinyl flooring are misaligned.

Performance Guideline: Patterns at seams between adjoining pieces shall be aligned to within 1/8 inch.

Corrective Measure: The contractor will correct the flooring to meet the performance guideline.

10-11. Observation: Resilient floor tile is loose.

Performance Guideline: Resilient floor tiles shall be securely attached to the floor.

Corrective Measure: The contractor will attach loose resilient floor tiles securely to the floor. The old adhesive will be removed if necessary to resecure the tiles.

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10-12. Observation: Corners or patterns of resilient floor tile 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.

Corrective Measure: The contractor will correct resilient floor tiles with misaligned corners to meet the performance guideline.

10-13. Observation: Yellowing appears on surface of vinyl sheet goods.

Performance Guideline: The contractor shall install vinyl flooring per manufacturer's specifications.

Corrective Measure: Yellowing from a manufacturer's defect 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 should be familiar with the proper use and care of their floors. Defects traced to owner's inappropriate use or care are not the contractor's or manufacturer's responsibility.

Wood Flooring

10-14. 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 time of installation.

Corrective Measure: The contractor will repair gaps that do not meet the performance guideline.

Discussion: Proper repair can be affected by filling the gap. Relative humidity of the home can cause noticeable fluctuations in gaps between floor boards. This is a normal phenomenon in spaces that experience significant shifts in humidity. The owner is responsible for maintaining proper humidity levels in the home.

10-15. Observation: Strip hardwood floor board is 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 control of the contractor is not covered.

Corrective Measure: The contractor will correct or repair to meet the guideline.

10-16. Observation: Excessive lippage is located at junction of prefinished wood flooring products.

Performance Guideline: Lippage greater than 1/16 inch is considered excessive.

Corrective Measure: The contractor will repair to meet performance guideline.

Discussion: Lippage is the vertical distance between two floor types at the point where they meet.

10-17. Observation: Voids in the floor finish.

Performance Guideline: Voids or "holidays" that are readily visible from a distance of 6 feet under normal lighting conditions are unacceptable.

Corrective Measure: The contractor will repair to meet performance guideline.

10-18. Observation: Top coating on hardwood flooring has peeled.

Performance Guideline: Field applied coating shall not peel during normal usage. Prefinished coatings are the manufacturer's responsibility.

Corrective Measure: The contractor shall refinish any field applied finishes that have peeled.

10-19. Observation: Crowning of strip flooring has occurred.

Performance Guideline: 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.

Corrective Measure: The contractor will repair to meet performance guideline.

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10-20. Observation: Hardwood flooring buckles from substrate.

Performance Guideline: Hardwood floor will not become loose from substrate.

Corrective Measure: The contractor will repair to meet guideline.

10-21. Observation: Excessive knots and color variation of strip hardwood flooring.

Performance Guideline: The contractor will install the grade of hardwood as specified by the project. All wood should be consistent with grading stamp as specified.

Corrective Measure: The contractor shall replace any improperly graded wood.

10-22. Observation: Splinters or splinters appear in strip flooring.

Performance Guideline: Splinters or splinters that occur during the installation of the flooring are unacceptable.

Corrective Measure: The contractor will repair to meet guideline.

Discussion: The imperfections that occur during installation can be shaved and the area filled prior to sanding and finishing.

10-23. Observation: “Sticker burn” appears on surface of strip flooring.

Performance Guideline: Discoloration from stacking strips in hardwood flooring is unacceptable in certain grades of flooring.

Corrective Measure: The contractor shall repair or replace areas with sticker burn if not permitted in grade of wood specified.

Tile, Brick, Marble, and Stone Flooring

10-24. Observation: Tile, brick, marble, or stone flooring is broken and loose.

Performance Guideline: Tile, brick, marble, and stone flooring shall not break or loosen.

Corrective Measure: The contractor will replace broken tiles, bricks, marble, and stone flooring, and resecure loose tiles, bricks, marble, and stone, unless the defects were caused by the owner’s actions or negligence. The contractor is not responsible for discontinued patterns or color variations when replacing tile, brick, marble, or stone flooring.

10-25. Observation: Cracks appear in grouting of tile joints or at junctures with other material such as a bathtub.

Performance Guideline: Cracks in grouting of ceramic tile joints commonly result from normal shrinkage conditions.

Corrective Measure: The contractor will repair grouting, if necessary, one time only during the warranty period. The owner is responsible for regrouting these joints during the life of the home.

Discussion: Use of an elastic substance at junctures between tile and other materials is often more effective than grout.

10-26. 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).

Corrective Measure: The contractor will repair to meet performance guideline.

Discussion: Lippage is the vertical distance between two floor types at the point where they meet.

10-27. Observation: Grout or mortar joint is not a uniform color.

Performance Guideline: Any color variation that is readily visible from a distance of 6 feet under normal lighting conditions is acceptable.

Corrective Measure: The contractor will repair to meet the performance guideline.

Fireplace and Wood Stove

11-1. Observation: Fireplace or chimney does not consistently draw properly.

Performance Guideline: A properly designed and constructed fireplace and chimney shall function correctly. 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. 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.

Corrective Measure: The contractor shall correct as necessary if the problem is caused by a design or construction flaw.

11-2. Observation: The chimney is separated from the structure.

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

Corrective Measure: 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.

11-3. Observation: Firebox paint is damaged by a fire in the fireplace.

Performance Guideline: None. Heat and flames may cause discoloration.

Corrective Measure: None.

11-4. Observation: Firebrick or mortar joint is cracked.

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

Corrective Measure: None.

11-5. Observation: Simulated firebrick panel develops cracks.

Performance Guideline: This is a normal condition.

Corrective Measure: None.

11-6. Observation: Rust appears on the fireplace damper.

Performance Guideline: This is a normal condition.

Corrective Measure: None.

Concrete Stoops and Steps

11-7. 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.

Corrective Measure: The contractor will take whatever corrective action is required to meet the performance guideline.

11-8. 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.

Corrective Measure: The contractor will take corrective action to assure proper drainage of stoops and steps.

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Garage

11-9. Observation: The garage floor slab is cracked.

Performance Guideline: Cracks in concrete garage floor greater than 3/16 inch in width or 1/8 inch in vertical displacement are excessive.

Corrective Measure: The contractor shall repair to meet the performance guideline.

Discussion: Proper repair can be affected by thoroughly cleaning, filling, and troweling the surface using latex-fortified cement mixture or other materials designed to fill cracks and bond concrete.

11-10. Observation: 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.

Corrective Measure: The contractor shall take whatever corrective action is required to meet the performance guideline.

11-11. Observation: Garage doors fail to operate properly under normal use.

Performance Guideline: Garage doors shall operate properly.

Corrective Measure: The contractor will correct or adjust garage doors as required, except where the owner's actions or negligence caused the problem.

Discussion: The contractor is not responsible for the door operation if the owner has installed a garage door opener.

11-12. Observation: Garage doors allow 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 unusual conditions.

Corrective Measure: The contractor will adjust or correct garage doors to meet the manufacturer's recommendations.

Driveways

11-13. Observation: Asphalt driveway develops cracks.

Performance Guideline: This is a normal condition.

Corrective Measure: None.

Wood Decks

11-14. Observation: Wood deck is springy or shaky.

Performance Guideline: All structural members in a wood deck shall be sized, and fasteners spaced, according to appropriate building codes, National Forest and Paper Association span table, or a higher guideline agreed upon before construction by the owner and the contractor.

Corrective Measure: The contractor will reinforce or modify, as necessary, any wood deck not meeting the 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. Joists and rafters are required to meet standards for both stiffness and strength. The span tables allow, under full design loading, a maximum deflection equal to 1/360 of the span for floor and ceiling joists (3/8 inch in 12 feet), 1/240 for rafters up to 3/12 in pitch (1/2 inch in 12 feet), and 1/180 for rafters over 3/12 in pitch (3/4 inch in 12 feet). Individual clients may not be satisfied with the deflection limits built into the tables. When a customer's preference is made known before construction, a higher standard may be agreed upon by the contractor and the owner.

11-15. Observation: Spaces between decking are not uniform.

Performance Guideline: The spaces on opposite sides of individual deck boards shall not differ in average width by

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more than 3/16 inch at the time the project is accepted unless otherwise specified by owner.

Corrective Measure: The contractor will realign or replace decking boards to meet the 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 installation.

11-16. Observation: Railings on wood decking contain slivers in exposed areas.

Performance Guideline: Railings on wood decks shall not contain slivers longer than 1/8 inch in exposed areas at the time the job is accepted.

Corrective Measure: The contractor will repair railings as necessary to remove slivers prior to acceptance of the job. Repair of slivers after acceptance of the job is an owner maintenance responsibility.

Discussion: Slivers can develop from weathering of unprotected wood. Proper finishing of wood surfaces helps prevent slivers from forming.

11-17. Observation: Wood deck is out of level.

Performance Guideline: No point on the deck surface shall be more than 1/2 inch higher or lower than any other deck surface point within 10 feet on a line parallel to the house, or proportional multiples of the preceding dimensions, unless the owner and contractor agree to intentionally build a wood deck out of level in order to match or compensate for inaccuracies in the existing structure.

Corrective Measure: The contractor will repair the deck 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.

11-18. Observation: Wood decking boards are split, warped, or cupped.

Performance Guideline: At the time the job is accepted, 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 used for the deck boards, including but not limited to Southern Pine Inspection Bureau, Western Wood Products Association, West Coast Lumber Inspection Bureau, Redwood Inspection Service, and Northeastern Lumber Manufacturers Association.

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

11-19. Observation: Stain color variations are on wood deck.

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 – are normal and are not covered by this guideline.

Corrective Measure: The contractor will restrain to meet the performance guideline.

11-20. Observation: Wood decking board has nail head protruding.

Performance Guideline: Nail heads shall not protrude from the floor of the wood deck during the warranty period.

Corrective Measure: The contractor will refasten nails with heads protruding from the floor of the deck so that the heads are flush with the surface.

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

11-21. Observation: Nails on wood deck are “bleeding.”

Performance Guideline: Nail stains extending more than 1/2 inch from the nail and readily visible from a distance of more than 3 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.

11-22. Observation: Wood deck railing lacks rigidity.

Performance Guideline: Wood deck railings shall be attached to structural members in accordance with applicable

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codes.

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

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LANDSCAPING

12-1. Observation: Tree stumps have been left in disturbed area of property.

Performance Guideline: If tree stumps were on the property in the disturbed area prior to the acceptance of the project, the contractor is responsible.

Corrective Measure: The contractor will remove the stump from the area.

12-2. Observation: Dead shrubs, plants, trees, or sod planted in disturbed area of property.

Performance Guideline: Any shrub, plant, tree, or sod planted by the contractor as part of the landscape package that are alive as of the acceptance of the project and die after that acceptance are not the responsibility of the contractor.

Corrective Measure: None.

12-3. Observation: Grass seed does not germinate within 30 days of the acceptance of the project.

Performance Guideline: Grass seed not germinating within 30 days is unacceptable.

Corrective Measure: The contractor will reseed affected areas unless specifically excluded in contract.

12-4. Observation: Outdoor plants moved during work die after project is completed.

Performance Guideline: Plants that must be physically transported during the work shall be moved, maintained, and replanted by owner.

Corrective Measure: None.

Discussion: The contractor shall not be responsible for delays in the schedule when plants are moved by the owner.

COMMON WARRANTY QUESTIONS & CONCERNS

Q: What do I do about sink stains?

A: Any stains noted on the walk-through or D.O.A. forms will be repaired by the builder. All stains occurring after the D.O.A. are the homeowner's responsibility.

Q: My driveway isn't smooth.

A: Asphalt will not remain totally flat due to changes in sub-surface soil conditions related to ground settlement and frost heaving.

Q: Light has burned out

A: Burned out light bulbs are the homeowner's responsibility.

Q: I have a bird nest/bee hive on or around the house.

A: This is an act of nature and therefore the homeowner's responsibility.

Q: Backsplash is pulling away from wall

A: This is a normal occurrence in cold climates due to drying and shrinkage of wall studs. See contractor for more information.

Q: My front/back decks are uneven.

A: Due to settlement the decks may need periodic adjustment.

Q: Vents for bath fans (or dryer) don't close completely and/or make noise on windy days.

A: This is typical. They are built to industry standard.

Q: My door sweep is coming apart.

A: It is a homeowner responsibility to adjust the threshold between seasons and keep objects out of the path of the door swing.

Q: Poor seal under door

A: It is a homeowner responsibility to adjust the threshold up or down.

Q: Why do I have cracks where walls and ceiling meet?

A: Truss uplift is a common occurrence in cold climates. See contractor for more information.

Q: Why do I have exposed foundation walls?

A: Code requires a separation between the dirt and siding. In cases where the elevation changes, there may be more.

Q: Why doesn't my hot water heater get as hot as in older homes?

A: Recent code changes have required hot water heaters to be set to maximum temperatures to protect younger children from being burned. Shower valves are also equipped with a temperature regulating device.

Q: Smell of sewer gas inside or outside

A: Inside: see Section 6 for possible deficiency.

Outside: the waste system is designed to vent these gas smells to the roof where they can dissipate. Occasionally, atmospheric conditions allow this smell to be sensed at ground level. This cannot be corrected or anticipated.