

LIMITED WARRANTY AGREEMENT

Builder: CHAD E. DAVIS CONSTRUCTION, LLC
2420 Pacific Ave
Forest Grove, OR 97116

Buyer: _____

House address: _____

As part of the sale agreement between Builder and Buyer, Builder provides to Buyer a limited warranty regarding construction of the house. The terms of the Limited Warranty are set forth in the following agreement between Builder and Buyer. Buyer may consult an attorney before signing this agreement.

1. Term of Limited Warranty: The term of this Limited Warranty begins on the date of closing of sale of the house to Buyer. This Limited Warranty has a duration of one year.
2. Coverage of Limited Warranty. Builder warrants that by the relevant standards of construction for Portland, Oregon:
 - a. For a period of one year, the floors, ceilings, walls, and other internal structural components of the home not covered by other portions of this Limited Warranty will be free of defects in materials or workmanship but will not include the painting over of such work.
 - b. For a period of one year, the plumbing, heating and electrical wiring systems and the septic tank (if installed by Builder) will be free of defects in materials or workmanship.
 - c. For a period of one year, the roof will be free of leaks caused by defects in materials or workmanship.
 - d. For a period of one year, the doors, hardware, windows, electric switches, receptacles, light fixtures, plumbing fixtures, and cabinet work will be free of defects.

3. **Manufacturer's Warranties Assigned to Buyer.** Builder assigns and passes through to Buyer, to the extent they are assignable, the manufacturer's warranties on all appliances and equipment. The following are examples of such appliances and equipment though not every home includes all of these items and some homes may include appliances or equipment not on this list:

Refrigerator, range, dishwasher, garbage disposal, ventilating fan, heating and cooling equipment, water heater and light fixtures.

Builder provides no warranty of its own regarding appliances, equipment, and any other consumer products (as defined under the Magnuson-Moss Warranty Act).

4. Exclusions from Coverage under the Limited Warranty. Builder does not assume responsibility for any of the following, all of which are excluded from the coverage of this Limited Warranty:
- a. Consequential or incidental damages.
 - b. Defects in appliances and equipment covered by manufacturers' warranties. (Builder has assigned these manufacturers' warranties to Buyer, to the extent they are assignable, and Buyer should follow the procedures in these warranties if defects appear in these items).
 - c. Damage due to ordinary wear and tear, abusive use, or lack of proper maintenance. Such things as siding maintenance, ceramic tile grout maintenance, caulking maintenance, painting maintenance, rain gutter clean-outs and maintenance, roofing maintenance and other maintenance items are the responsibility of Buyer. Builder does not seal ceramic tile grout, and it is suggested to the homeowner that the grout maintenance efforts are improved by the homeowners' application of sealer prior to use of grouted ceramic tile surfaces.
 - d. Defects that are the results of characteristics common to the materials used, such as (but not limited to) warping and deflections of wood (except for a one time minor sheetrock repair due to shrinkage of framing lumber); cedar bleed through; fading chalking, and cracking of paint due to sunlight; cracks due to drying and curing of concrete, stucco, plaster, bricks and masonry; drying, shrinking and cracking of caulking and weather-stripping.
 - e. Damage, loss or injury due to the elements.
 - f. Any defects in the house or land not described in Section 2 above.
 - g. Any conditions in the house or land described in Section 12 below.

h. Problems caused by modifications, substitutions, repairs or other work done by the Buyer or caused to be performed by the Buyer.

- 5(A) No other Express Warranties: This Limited Warranty is the only express warranty given by Builder. There are no other express warranties relating to construction of the house and land.
- 5(8) Implied Warranties Limited to One Year: Implied warranties of merchantability, fitness for a particular purpose, habitability, and workmanship are limited to the warranty term of one year.
- 6(A) Claims procedure: If a defect appears that Buyer believes is covered by this Limited Warranty or any applicable implied warranty, Buyer must notify the Builder in writing on Service Request during the term of the Limited Warranty. Buyer will describe the claim in writing and mail the letter to: Chad E. Davis Construction, LLC, 2420 Pacific Ave, Forest Grove, OR 97116.
- 6(8) Written notice of Claims is Required. Buyer must specify in the letter what times during the day Buyer will be at home so that service calls can be scheduled appropriately. Buyer will provide their home and work telephone numbers, as well as the lot number and address. If delay will cause extra damage (e.g., if a pipe has burst), Buyer will immediately report by telephone to 1-800-436-8548. Only emergency reports will be taken by telephone. It is the responsibility of Buyer to minimize damage caused by such incidents such as leaking pipes. Builder will schedule the dates for repairs. Builder will schedule most repairs in the 12th month of the warranty term.
7. Repairs or Replacement as Exclusive Remedy. Upon receipt of Buyer's written report of a defect, if the defective item is covered by this Limited Warranty, Builder will repair or replace it at no charge within sixty (60) days (longer if weather conditions, labor problems or material shortages cause delay). The work will be done by Builder or subcontractors chosen by Builder. The choice between repair and replacement will be made by Builder. This is the exclusive remedy to Buyer for breach of this Limited Warranty. All other remedies are excluded.
8. Limitation of Time to Sue. Any legal proceedings by Buyer to enforce the terms of this Limited Warranty or any implied warranty must be commenced within one (1) year after date when this Limited Warranty commences.
9. Time is of the Essence. Time is of the essence in regard to notifying Builder by letter and filing legal proceedings. If Buyer does not provide written notice of a claim within the one-year term of the Limited Warranty, the claim will be barred. If Buyer does not file legal proceedings to enforce a claim under the express warranty or any implied warranty within one year after the date the Limited Warranty commences, then the claim will be barred.

10. Not Transferable. This Limited Warranty applies only to Buyer. This Limited Warranty may not be transferred to subsequent purchasers of the home.
11. Severability if any part of this agreement is held by a court to be unenforceable, the remainder of this agreement shall remain in effect.
12. Conditions that are Excluded from this Limited Warranty. The following are some of the conditions that are excluded from this Limited Warranty:
 - a. Concrete. Concrete foundations, walks, drives and patios can develop hairline cracks not affecting the structural integrity of the building. There is no known method of elimination of this condition, which is caused by characteristics of expansion and contraction. It does not affect the strength of the building and is not a condition covered by any warranty.
 - b. Masonry. Masonry and mortar can develop cracks due to shrinkage in either the mortar or brick. This is normal and should not be considered a defect. It is not covered by any warranty.
 - c. Wooden Components: Wood will sometimes crack or "spread apart" as a result of the drying process. This is most often caused by the heat inside the house or the exposure to the sun on the outside. This is normal and considered a maintenance item to be cared for by the homeowner. Likewise, caulking at the corners and interior seams of exterior wood siding may need renewal due to weather exposure. This is also normal and considered a maintenance item to be cared for by the homeowner. It is not covered by any warranty.
 - d. Drywall. Drywall (sheetrock) will sometimes develop nail pops or settlement cracks. This is a normal part of the drying out process. Builder will make a one-time sheetrock repair as you near the end of your one-year warranty period if you advise Builder in writing well enough in advance. These repairs will not include paint touch- up.
 - e. Floor Squeaks: Floor squeaks are not covered by the Builder's warranties. Squeaks will sometimes appear and disappear over time with changes in weather, but in no event will such occurrences be Builder's responsibility.
 - f. Flooring. Your floors are not warranted for damage caused by neglect or the incidents of use. Wood, tile and carpet all require maintenance. Floor casters are recommended to prevent scratching or chipping of wood or tile. Stains on carpets, wood or tile must be cleaned immediately to prevent discoloration. Carpet has tendency to loosen up in damp weather and will generally stretch tight again in drier weather, but in any event such incidents will not be Builder's responsibility.
 - g. Caulking and Grout. Exterior caulking and interior caulking or grouting in bathtubs, shower stalls, and ceramic tile surfaces will crack or bleed somewhat in the months after installation. Such occurrences are normal and should not be considered a constructional problem. Separations or cracking in grouting are homeowner's maintenance items and are not covered by Builder's warranty.

- h. Brick Discoloration. Most bricks may discolor due to the elements, rain run-off, weathering, or bleaching. Thus, the color of the bricks is not a warranty item.
- l. Broken Glass. Any broken glass or mirrors, which are not noted on the Builder's walk-thru, are not covered by any warranty.
- j. Frozen Pipes. Buyer must take precautions to prevent freezing during severe cold weather, such as removing outside hoses from sillcocks, leaving faucets with a slight drip, and turning off the water system if the house is to be left for extended periods during cold weather. No frozen pipes or sillcocks will be considered for warranty.
- k. Stained Wood. All items that are stained will normally have a variation of colors, due to the different textures of woods. Doors that have panels will sometimes dry out and leave a small crack of bare wood. This is due to weather changes. None of these is a warrantable condition.
- l. Paint. Good quality painting has been used internally and externally on your home. Nevertheless, exterior paint can sometimes crack or chip. This is not a defect of the paint but is most often caused by other circumstances. Buyer should avoid allowing lawn sprinklers to hit painted areas or washing walls and be aware of the newly painted walls as you are moving furniture. The best paint will be stained or chipped if it is not cared for properly. Any defects in painting that are not noticed at the time of the Buyer's walk-thru are non-warrantable conditions.
- m. Cosmetic Items. The upkeep of cosmetic aspects of the house is the responsibility of Buyer. You have not contracted with the Builder to cover ordinary wear and tear or other occurrences subsequent to construction that affect the appearance condition of features in your home. Chips, scratches, or mars in such things as tile, woodwork, walls, porcelain, brick, mirrors, plumbing fixtures, marble and Formica tops, lighting fixtures, kitchen and other appliances, door paneling, siding, screens, windows, carpet, vinyl floors, and cabinets, which are not recognized and noted at the time of the Buyer's walk-thru are non-warrantable conditions.
- n. Plumbing. Dripping faucets, toilet adjustments, and toilet seats are covered by the Builder's warranty for a 30-day period only. After that, they are the responsibility of Buyer. If the plumbing is "stopped up" during the warranty period and the person servicing the plumbing finds foreign materials in the line, Buyer will be billed for the call.
- o. Alteration to Grading. The lot has been graded to insure proper drainage away from your home. Should Buyer wish to change the drainage pattern for landscaping, installation of patio or service walks, or other reasons, Buyer should be sure to inquire at the City or County office whether your plans are appropriate and ensure that a proper drainage slope is retained. Builder assumes no responsibility for the grading or subsequent flooding or stagnant pool formation if the pattern established by the Builder is altered.

- p. Lawn and Shrubs. Builder accepts no responsibility for the growth of grass or shrubs. Once Builder grades, seeds and/or sod and fertilizes, it is the responsibility of Buyer to water and spread ground cover to enhance growth and prevent erosion. Builder will not regrade a yard and will not remove or replace any shrubs or trees, except for those which are noted as diseased at the time of the Buyer's walk-thru.
- q. Roof Drainage. The manufacturer's warranty on a composition roof is for material only and is prorated over the period of the lifetime use of the roof. The Buyer will handle warranty claims for any defects in materials exclusively with the manufacturer, with our assistance. The Builder will not be responsible for any damages caused by walking on the roof or by installing a TV antenna or other items on a roof. The Builder does not warrant the roofing materials in any respect except as noted in Paragraph 2.c, above.
- r. Mold. Builder and Buyer agree that it may be difficult to determine when any leak or other condition may develop that causes environmental conditions conducive to growth of mold. Therefore, Buyer assumes responsibility to be vigilant for any symptom of moisture or mold, such as smells, discoloration, humidity, dampness, etc. Buyer further agrees that if there is any such symptom of water, moisture, or similar intrusion or damage to Buyer's residence, Buyer will remove the mold, mildew or fungus.
13. Warranty Standards. The standards by which all warranty claims and repair work will be evaluated are set out in the attached document. The terms of that document are incorporated herein.
14. **Notice to Owner. OREGON LAW CONTAINS IMPORTANT REQUIREMENTS YOU MUST FOLLOW BEFORE YOU MAY COMMENCE ARBITRATION OR A COURT ACTION AGAINST ANY CONTRACTOR, SUBCONTRACTOR, OR SUPPLIER FOR CONSTRUCTION DEFECTS. BEFORE YOU COMMENCE ARBITRATION OR A COURT ACTION YOU MUST DELIVER A WRITTEN NOTICE OF ANY CONDITIONS YOU ALLEGE ARE DEFECTIVE TO THE CONTRACTOR, SUBCONTRACTOR OR SUPPLIER YOU BELIEVE IS RESPONSIBLE FOR THE ALLEGED DEFECT AND PROVIDE THE CONTRACTOR, SUBCONTRACTOR OR SUPPLIER THE OPPORTUNITY TO MAKE AN OFFER TO REPAIR OR PAY FOR THE DEFECTS. YOU ARE NOT OBLIGATED TO ACCEPT ANY OFFER MADE BY THE CONTRACTOR, SUBCONTRACTOR OR SUPPLIER. THERE ARE STRICT DEADLINES AND PROCEDURE UNDER STATE LAW. FAILURE TO MEET THOSE DEADLINES OR FOLLOW THOSE PROCEDURES WILL AFFECT YOUR ABILITY TO COMMENCE ARBITRATION OR A COURT ACTION.**

WE ACKNOWLEDGE HAVING RECEIVED A COPY AND HAVING READ THE ABOVE LIMITED WARRANTY AGREEMENT. BY SIGNING BELOW, WE AGREE TO ALL TERMS OF THE LIMITED WARRANTY AGREEMENT.

Date of Closing/Final Settlement: _____

This is the date that the Limited Warranty commences.

Chad E. Davis Construction, LLC.

An Oregon Limited Liability Company

By: Chad E. Davis, Member

“Builder”

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CHAPTER 1 APPLICABLE TIME LIMITS

State law or local ordinances will control the time frame for inspections of code classifications of construction to be performed. In no event should the regulatory authority require or perform construction inspections beyond the time periods otherwise required by law. It is also likely that different states and local jurisdictions will have differing time periods, but that is, again, an issue controlled by local or state law.

The regulatory authority, under normal conditions, will inspect for code violations during the time limits shown below. Contractor responsibility does not extend to items which have been subject to owner neglect, modification or abnormal use.

Defects in appliances, fixtures and heating/air conditioning equipment properly installed by the contractor shall be limited to the manufacturer/builder's warranty.

Nothing in this section creates a warranty or limits a warranty.

The following classifications shall be inspected for code and standards violations by local authority.

1. Grading, fill and other site work
2. Masonry and concrete*
3. Carpentry and wood products*
4. Insulation
5. Moisture
6. Doors and windows
7. Finishes: paint, stain, wallpaper, carpet, tiles, flooring, etc.
8. Cabinets and countertops
9. Drywall
10. Roofing*
11. Siding
12. Windows and skylights
13. Caulking and weather-stripping
14. Hardware
15. Heating and air conditioning
16. Plumbing
17. Electrical

(*) Major structural damage, including structural damage to systems noted above by an asterisk*, and buildings which are unsafe, unsanitary, do not provide adequate egress, constitute a fire hazard, or are otherwise dangerous to human life shall be inspected for code violations during the first 1 year from COE (*time period to be deter* APPLICABLE BUILDING CODES

Building codes change from time to time. For the purpose of these Construction Standards, the building codes governing the structural, mechanical, plumbing, electrical, gas and energy requirements for new construction that were adopted and in effect at the time the house was constructed may be used to determine compliance. These standards apply uniformly regardless of any adopted code.

CHAPTER 2

INTRODUCTION TO CONSTRUCTION STANDARDS

These Construction Standards are intended to specify the minimum performance standards for the construction of homes¹ and to set forth the basis for determining the validity of all home buyer complaints² related to defective materials and workmanship.

It is not possible to discuss every conceivable situation that can occur in construction. Because of the limitless combinations that can be incorporated into a home, infinite conditions can occur. This manual describes the most common and repetitive situations. Likewise, the validity of any homeowner's complaint for defects for which a standard has not yet been addressed herein shall be determined on the basis of good industry practice, which assures quality of materials and workmanship, and any conciliation or arbitration of such complaints shall be conducted accordingly.

The following Construction Standards are expressed in terms of performance standards. Noncompliance with the performance standards calls for corrective action by the builder. The format is designed for easy comprehension by both layman and builder as follows:

1. Common Defect or Problem – a brief statement in simple terms of the deficiency to be considered.
2. Performance Standard – performance standards relating to a specific deficiency.
3. Builder Repair Responsibility – statement of the corrective action required of the builder to repair the deficiency, or any other damage resulting from making the required repair. The method of correction to meet the industry standard is at the builder's discretion. Alternatives for making acceptable repairs exist in most cases.

Many items related to deficiencies in the home are homeowner maintenance responsibilities. To assure themselves of long, comfortable use of their home and protection of their investment, homeowners should learn about and act on those maintenance responsibilities.

CHAPTER 3 CARPENTRY STANDARDS - ROUGH

(Rough Carpentry, Lumber and Truss)

Background

Framing or rough carpentry provides the skeletal structure of the residence, which includes fabrication of wood portions of the floor systems, exterior walls, interior partitions and roof, which are built on and supported by the foundation.

The exterior wall framing is designed to support the vertical load from the floors and roof and to resist lateral loads resulting from winds. Interior partitions may or may not be load bearing. The roof is designed to support its own weight plus that of anticipated loads from snow, ice and wind. The framing is quality controlled by the building code and subject to building inspection when the entire framed structure can be viewed.

Wood framing can be fabricated on or off a job site, or a combination of both. Even when most of the framing is done on site, there has been a trend to use pre-manufactured components, such as roof or floor trusses, in lieu of the more conventional joist and rafter construction. As a natural product, wood will respond to humidity and temperature conditions and can cause shrinking, twisting or warping of the framing material. Some of these conditions can be controlled or minimized; others are due to the nature of wood itself.

In single family construction, lumber type and grade, span, spacing and load bearing capacities are tightly controlled by code, while the carpentry foreman uses his own judgment in determining the exact layout. Hence, the accumulation of tolerances of several inches in overall dimension is not unusual.

1. Common Defect or Problem
Floors squeak.
Performance Standard
Floor squeaks are common to new construction and a squeak-proof floor cannot be guaranteed.
Builder Repair Responsibility
Builder should try to minimize the floor squeaks. It should be noted that a second-floor repair would be surface nailing in carpeted areas and impossible in vinyl or ceramic areas.
2. Common Defect or Problem
Uneven or unlevel floors.
Performance Standard
Floors shall not be more than 1/4" out of plane or level in wood, vinyl and ceramic areas or 1/2" out of plane in carpeted areas within any 32" measurement when measured parallel to the joists.
Builder Repair Responsibility
Builder to repair to meet performance standard.
3. Common Defect or Problem Crowned floor joist.
Performance Standard
Floors shall not be more than 1/4" out of plane or level in wood, vinyl and ceramic areas or 1/2" out of plane in carpeted areas within any 32" measurement when measured parallel to the joists.
Builder Repair Responsibility
Builder to repair to meet performance standard.
4. Common Defect or Problem
Seams or ridges appear in resilient flooring due to subfloor irregularities.
Performance Standard
In the natural settling and shrinkage process, some mismatch of the subfloor may exhibit and mirror itself as ridges or depressions showing on the surface goods.
If the ridge or depression effect exceeds 1/8" and cannot be corrected from below, the resilient floor must be corrected. The ridge measurements should be made by measuring the gap created when a 6" straight edge is placed tightly 3" on each side of the defect and the gap measured between the floor and the straight edge at the other end.
Builder Repair Responsibility
If ridges exceed standard, builder to remove the sheet goods in the minimum area where the joint will not be readily visible when repaired, re-nail the subflooring, sand smooth and/or fill gap and replace the sheet goods. Owner should note that there may be a mismatch in materials due to time or dye lot variations.
5. Common Defect or Problem
Bowed walls
Performance Standard
All interior and exterior walls have slight variances on their finished surfaces.
Walls should not bow more than 3/8" out of line within any 32" horizontal or vertical measurement.

Builder Repair Responsibility

Builder will repair to meet performance standard.

6. Common Defect or Problem

Out of plumb walls

Performance Standard

Walls should not be more than 3/4" out of plumb for any 8ft. vertical measurement.

Builder Repair Responsibility

Builder will repair to meet performance standard.

7. Common Defect or Problem

Out of plumb windows or windows do not operate.

Performance Standard

Windows must operate as designed by manufacturer.

Builder Repair Responsibility

Builder to repair to be operable.

8. Common Defect or Problem

Truss lift.

Performance Standard

Truss lift occurs during the heating season and normally returns back down in the summer months.³ Builder is not responsible for inadvertent cutting of tape where wallpapering may have been done.

Builder Repair Responsibility

This is to be corrected only during the summer months (as appropriate) after the first heating season, only if first reported during year one. If the problem reoccurs in the next heating season, and the gap exceeds 1", then additional methods must be taken to correct the problem.

9. Common Defect or Problem

Cracked trusses.

Performance Standard

Builder to contact truss manufacturer to make sure truss conforms to its engineering.

Builder Repair Responsibility

Builder to repair as per recommendation of truss manufacturer.

10. Common Defect or Problem

Bowed ceilings.

Performance Standard

All interior and exterior frame walls or ceilings have slight variations on the finished surfaces. Bowing should not be visible so as to detract from the finished surface. A ceiling bow which is more than 1/2" within a 36" measurement running parallel with the ceiling joist shall be excessive.

Builder Repair Responsibility

Ceiling bowed in excess of the performance standard shall be corrected.

CHAPTER 4 CARPENTRY STANDARDS - FINISH

(Finished Carpentry, Plumbing, Cabinetry, Millwork and Countertops)

Background

Wood and wood-like products are the basic materials used in finished carpentry. Wood is a natural product with individual grain variations in each species of wood. The matching of grain is not a standard procedure and may possibly be accomplished only as a specific contractual agreement between the owner and builder and with the careful selection of matching panels by the supplier. The variations in wood separate it from man-made products. One of the wonderful characteristics of wood is the difference in each piece.

Over the past several years, a marked change has taken place in the area of finished carpentry, paneling and millwork. Considerably less of the labor is being done on the site. Almost all millwork, paneling, cabinetry, countertops and doors are purchased by the builder as a completed product and are warranted by the builder according to manufacturers' standards.

Scratches, chips, gouges or nicks should be noted by the owner at the time of the Home Orientation Tour "HOT" inspection. To maintain the beauty of the wood and wood products, wood should be cared for by the owner much like furniture.

During the initial building stabilization period (first heating and cooling seasons), it is not unusual for doors to warp slightly or twist and alternately stick or not close. Warping, shrinking and swelling of wood and wood-like products can occur due to temperature and humidity changes.

The primary purpose is preservation, protecting the surfaces and edges from weather and moisture penetration. The owner should be made aware that any water damage is from the lack of maintenance.

1. Common Defect or Problem

Interior doors, closet doors, cabinet doors, or drawers warp and cannot be closed or will not stay closed.

Performance Standard

- a. The owner should note that during the initial building stabilization period, it is not unusual for doors to warp or twist and alternately stick or not close as the home goes through a settling and drying period, especially over the first heating season. The builder is obligated only to make replacements after this initial stabilization period, since often the door straightens during this process. Doors MUST be sealed on all six sides by the person contractually responsible for painting/staining.
- b. All interiors doors, closet doors, cabinet doors or drawers whose warpage exceeds the National Woodwork Manufacturers Association Standards (1/4" in most cases) and where the warp cannot be corrected by adjustment of either jambs, stops and/or hinges and cabinet catches to properly latch after the initial stabilization period of the building, at the end of the first year, shall be repaired or replaced by the builder.

Builder Repair Responsibility

Adjust, upon request of the owner, one time only, preferably at the end of the warranty period, any doors and drawers that fail to operate properly. Replace any doors or drawers that cannot be corrected to come within acceptable tolerance after stabilization. Refinish as necessary if staining or painting was part of the builder's contract.

2. Common Defect or Problem

Garage to house solid core door warps.

Performance Standard

Garage to house doors are more subject to weather conditions and thus these doors may warp but will tend to come back to their original state. This can be a continual occurrence with seasonal changes.

Builder Repair Responsibility

If the door does not come back in summer to seal, builder to replace

3. Common Defect or Problem

Warpage or non-closing of exterior doors (except storm doors).

Performance Standard

Because of the security provided by these doors, the doors must be adjusted or corrected as required.

Builder Repair Responsibility

During the first year, if the security of the building is jeopardized, correct as requested by the owner to maintain the security of the building. Replace any exterior doors whose permanent warpage exceeds the National Woodwork Manufacturers Association Standards after the stabilization period. Refinish as necessary if painting and staining was part of the builder's contract. If painting is part of owner's contract, they are cautioned to finish doors on all six surfaces at the earliest possible opportunity to prevent weather deterioration and warpage of the doors and to maintain a warranty on the door.

4. Common Defect or Problem
Cabinet doors do not align properly or there is a gap between door and cabinet frame.
Performance Standard
Space between doors where doors butt should not exceed 1/8". Top or bottom alignment should not exceed 1/16". Separation between the door and the frame should not exceed 1/4".
Builder Repair Responsibility
Builder to repair if any of the above conditions exceed acceptable tolerance.
5. Common Defect or Problem
Loosening or separation of veneer on doors and cabinet doors.
Performance Standard
Veneer should not crack or separate during the first year of warranty provided the doors have been properly finished
Builder Repair Responsibility
Builder should repair or replace any doors where the veneer has separated or delaminated during the first year of occupancy.
6. Common Defect or Problem
Shrinkage or swelling of paneled doors, panels in cabinet doors and/or paneling.
Performance Standard
Panels will, due to the nature of wood products, shrink and expand and may expose unpainted or unstained surfaces.
Builder Repair Responsibility
None.
7. Common Defect or Problem
Panels or door graining and/or color do not match.
Performance Standard
Since wood is a natural product and the grain structure is unique for each piece of wood, the builder is only responsible for supplying the grades and types of lumber and millwork and paneling specified in the contract. Grain and color matching is not the industry standard.
Builder Repair Responsibility
None, unless matched lumber was specifically stated in the contract.
8. Common Defect or Problem
Scratches on glass in doors.
Performance Standard
Scratching is inherent in the added safety features that are mandated in glass doors.
Builder Repair Responsibility
None.
9. Common Defect or Problem
Millwork trim graining or color does not match.
Performance Standard: See #7.
Builder Repair Responsibility
See #7.

10. Common Defect or Problem Gaps in miter joints.
Performance Standard
Gaps in miter joints should not exceed 1/8".
Builder Repair Responsibility
Builder should repair any gaps exceeding 1/8".
11. Common Defect or Problem
Gouges, cracks, nicks or other material or workmanship imperfections.
Performance Standard
Nail pops, blisters and other such blemishes at the time the owner closes or takes occupancy of the home that are readily visible from a distance of 6' under normal lighting conditions are unacceptable.
Builder Repair Responsibility
Builder to repair or replace millwork components with the above listed defects where the defect cannot be easily corrected through the use of sanding or filling, so long as these items were noted prior to occupancy.
12. Common Defect or Problem
Splices of millwork material within the length of a wall.
Performance Standard
Splicing is permissible.
Builder Repair Responsibility
None.
13. Common Defect or Problem
Cabinets separate or loosen from wall.
Performance Standard
Provided the cabinet installation is secure, some shrinkage may occur which may appear to indicate a gap between the cabinets and their mounting surface. This is normal and requires no correction. However, if the cabinet is actually loose, the builder shall correct.
Builder Repair Responsibility
Correct any loose cabinetry from the mounting surface, except those due to shrinkage.
14. Common Defect or Problem
Countertops separate from wall.
Performance Standard
Acceptable tolerance is 1/4" in width for Granite and 1/8" in width for Laminate.
Builder Repair Responsibility
Builder to caulk if gap is over standard.
15. Common Defect or Problem
Seams in laminate countertops rise.
Performance Standard
This will occur occasionally. Owner should keep seams sealed as water can penetrate.
Builder Repair Responsibility
None.

16. Common Defect or Problem

Exposed plastic laminate surfaces, laminate cabinetry and molded marble crack, chip, delaminate or are burned or scratched.

Performance Standard

There should be no imperfections in exposed plastic laminate surfaces at the time the owner takes occupancy of the home. Any defects must be noted in writing at the pre-occupancy inspection "HOT" and should be corrected by the builder. In some rare cases there may be latent defects in laminates, which would require adjustments by the manufacturer.

Builder Repair Responsibility

Correct defects noted at occupancy inspection. Defects occurring after that time are the owner's responsibility for correction since these surfaces are subject to owner's damage.

CHAPTER 5

CAULKING AND WEATHER-STRIPPING STANDARDS

Background

Weather-stripping of doors and windows helps keep the home properly heated or cooled. Metal stripping should be free of dents and loose sections and plastic or rubber stripping should be glued tightly. The junction between windows, doors and exterior wall material (i.e. siding, brick) will need to be caulked to minimize air infiltration. Caulking will need to be maintained by the homeowner throughout the life of the home. It should be noted that some air infiltration is normal during high winds.

1. Common Defect or Problem

Caulking cracks.

Performance Standard

All types of caulk will dry out. Owner will be responsible after COE.

Builder Repair Responsibility

None

2. Common Defect or Problem

Air infiltration around doors and windows.

Performance Standard

Doors and windows are cold spot sources and some infiltration of air must be expected. Proper weather-stripping and insulating around these areas can minimize air passage. However, depending on the type of window (i.e. double hung and sliding windows will have more air infiltration than casement or stationary windows) and under certain temperature and wind conditions, some infiltration will be observed by the homeowner.

Builder Repair Responsibility

Builder to inspect and adjust poorly fitted weather-stripping. If draft comes around casings, builder to make sure insulation is in place around window wherever possible.

CHAPTER 6

DRYWALL AND PLASTER STANDARDS

Background

In reviewing drywall problems, which occur during the first year of warranty, it is necessary to include some explanatory information on the nature of the material and its performance during and after the initial stages of construction.

Drywall is a relatively inflexible gypsum material, which is applied to interior surfaces. Drywall is applied in sheets, which are nailed or screwed to the stud or joist for application. The sheets are then taped, and the entire surface is sprayed and textured to produce a finished surface. In plaster, the final coats are troweled on.

Because the drywall or plaster has been placed on lumber surfaces which are subject to shrinkage and warpage and which are not perfectly level and plumb, problems occur through stress and strain placed on drywall during the drying of the lumber, which is inherent in the construction of a home.

In evaluating the need for drywall, the general rule to be applied is, if the defect is readily noticed by visual inspection, it should be repaired. However, due to the initial shrinkage problem that exists with a new home, it is impossible to correct each individual defect as it occurs, and for that matter it is essentially useless to do so. The entire house will tend to stabilize itself near the end of the warranty period, and one repair should be made when necessary, preferably near the end of the 12th month after occupancy upon request by the homeowner. Repairs will be made no more than one time during the warranty period. All repairs should be made within industry standards. Any reoccurrence beyond the warranty period becomes a homeowner's maintenance item.

Since drywall is a finish material, repairs will be slightly visible due to a color or texture mismatch after they have been made. The mismatch will be even more visible when a special textured finish has been employed. Repairs do not require repainting when they are applied on unpainted surfaces such as unpainted ceilings or when the builder did not contract for the painting. The builder will attempt to match the repair as closely as possible, but exact color match of the unpainted surface is impossible to achieve. Where the repair has been made on a painted surface, the builder will not be responsible for paint touch-up.

1. Common Defect or Problem

Visual defects caused by normal shrinkage or nail pops, cracks, seam lines, ridging or cracked corner beads.

Performance Standard

Any of the above defects which can be readily determined by visual inspection (without lighting the defect from one direction) shall be repaired by the builder except where normal repainting will cover the defect as in the case of a hairline crack. Cracks not exceeding 1/16" in width are common in gypsum wallboard installations and are considered acceptable.

Builder Repair Responsibility

Builder to repair to original finish as closely as possible. Repairs will be made no more than one time during the first year.

2. Common Defect or Problem

Defects caused by workmanship during installation such as blisters in the tape, excess compound in joints, or troweling marks.

Performance Standard

Defects, which can be readily observed by visual inspection (without lighting the defect from one direction), are beyond the industry standard except where normal repainting will cover the defect.

Builder Repair Responsibility

Builder to correct the defects.

3. Common Defect or Problem

Separation at ceiling due to trusses lifting.

Performance Standard

Truss lift occurs during the heating season and normally returns back down in the summer months. Builder is not responsible for inadvertent cutting of tape where wallpapering may have been done by the homeowner.

Builder Repair Responsibility

This is to be corrected only during the summer months after the first heating season. If the problem reoccurs in the next heating season and gap exceeds 1", additional methods must be taken to correct the problem (i.e. the use of a molding at the ceiling).

4. Common Defect or Problem

Uneven angular joints or corners.

Performance Standard

Defects that can be readily determined by visual inspection are to be repaired by builder only prior to decorating. The use of a rounded corner is acceptable at angles.

Builder Repair Responsibility

Builder to repair to be visually acceptable.

5. Common Defect or Problem

Texturing on repairs is uneven.

Performance Standard

Since drywall and plaster are finish materials, repairs will be slightly visible due to a color or texture mismatch after they have been made.

Builder Repair Responsibility

Attempt should be made to uniformly match the texture.

CHAPTER 7 ELECTRICAL STANDARDS

Background

Electrical system installation is performed by licensed electrical contractors and in accordance with state and national electrical codes. The electrical code dictates safety requirements predominantly to prevent fires and minimize the chance of personal injury.

The builder cannot be responsible for what an owner plugs into an electrical outlet. The builder is also not responsible for what an owner has added to the electrical system.

1. Common Defect or Problem

Outlets and switches do not work.

Performance Standard

All outlets and switches must be operative.

Builder Repair Responsibility

Builder to repair or replace wiring or replace defective outlets and switches to make units work properly.

2. Common Defect or Problem

Lights and fans do not work.

Performance Standard

Wiring to fixture must be operative.

Builder Repair Responsibility

Builder to repair defective wiring to lights and fans. If the fixture is inoperative, repair of the fixture is covered under a manufacturer's warranty. If the fixture was builder supplied, the builder is responsible for the service call. If the fixture was owner supplied, the owner is responsible for the service call.

3. Common Defect or Problem

Lights dim or flicker in parts of building.

Performance Standard

Lights may dim or flicker during starting of some motor driven equipment.

Builder Repair Responsibility

Check wiring for installation per standards of the applicable electrical code. If flickering/dimming does not occur when motor driven equipment is turned off, the owner should notify the builder to check if the wiring is per code. If nothing is found, the owner should contact the electric power company for possible defects in supply source.

4. Common Defect or Problem

Lights dim/flicker in entire building.

Performance Standard

Lights should not flicker throughout entire building at one time.

Builder Repair Responsibility

Builder should first have licensed electrical contractor check internal wiring as necessary. If internal wiring is proper, owner should then notify the electric power company for possible defects in supply source.

5. Common Defect or Problem
Circuit breakers trip out.
Performance Standard
Circuit breakers should not disengage under normal usage except in cases where there may be an overload of portable appliances (See #6 re: GFI circuits).
Builder Repair Responsibility
If it is determined that there is not an overload of portable appliances, a licensed electrical contractor is to repair or replace breaker.
6. Common Defect or Problem
Ground fault interruptor (GFI) circuit trips frequently.
Performance Standard
Ground fault interruptors are sensitive safety devices installed into the electrical system to provide protection against electrical shock. These sensitive devices can be tripped very easily.
Builder Repair Responsibility
A licensed electrical contractor shall install ground fault interruptor in accordance with approved electrical code. Tripping is to be expected and is not covered, unless due to a construction or product defect.
7. Common Defect or Problem
Fluorescent lights hum.
Performance Standard
Some fluorescent ballast will hum.
Builder Repair Responsibility
Excessive hum must be checked by a licensed electrical contractor.
8. Common Defect or Problem
Door bells/chimes do not work.
Performance Standard
Door bells/chimes carry a one-year warranty and should operate.
Builder Repair Responsibility
Licensed electrical contractor to repair or replace if doorbell/chimes supplied by builder.
Owner is responsible if owner supplied
9. Common Defect or Problem
Drafts from electrical outlets.
Performance Standard
Electrical junction boxes on exterior walls may produce airflow whereby the cold air can be drawn through the outlet into a room.
Builder Repair Responsibility
None. Owner can place a foam type insulation behind cover plate to cut down the airflow.

10. Common Defect or Problem

Water leaks into basement at builder installed conduits going through walls.

Performance Standard

Water leaks into basement should not occur at conduits. If the owner has graded or changed the grade around the foundation or has hired a third party to grade or change the grade around the foundation, the builder may not be responsible for leaks into the basement at conduits.

Builder Repair Responsibility

Builder to repair, providing grading is not at fault.

CHAPTER 8 FIREPLACE STANDARDS

Background

Fireplaces fall into two categories, the first is “full masonry.” This type of fireplace is constructed with a masonry flue, exterior veneer and interior firebox. The second is “prefabricated,” which has a metal pipe chimney and a manufactured metal firebox.

1. Common Defect or Problem

Fireplace or chimney does not draw properly.

Performance Standard

A properly designed and constructed fireplace and chimney shall function properly. It is normal to expect that high winds can cause temporary negative draft situations. Similar negative draft situations can also be caused by obstructions.

Builder Repair Responsibility

Builder will determine the cause of malfunction and correct, if the problem is one of design or construction of the fireplace.

2. Common Defect or Problem

Firebox paint changed by fire.

Performance Standard

Heat from fires can alter finish.

Builder Repair Responsibility

None.

3. Common Defect or Problem

Rust on the exterior of the fireplace or rust on the damper.

Performance Standard

As rust can form from condensation or moisture within a home, the owner should use a rust-removing product to remove rust.

Builder Repair Responsibility

None.

4. Common Defect or Problem

Fireplace fans are noisy.

Performance Standard

Fans will make some noise due to the location of their installation but should not be excessively noisy. Fireplace fans are covered by a one- year manufacturer’s warranty. Noise level is not to exceed manufacturer’s acceptable noise level.

Builder Repair Responsibility

None

5. Common Defect or Problem

Chimney separation from structure to which it is attached.

Performance Standard

Newly built fireplaces will often incur slight amounts of separation. Separation shall not exceed 1/2” from the main structure in any 10’ vertical measurement.

Builder Repair Responsibility

Builder will determine the cause of separation and correct to standard.

CHAPTER 9 FLOORING FINISH STANDARDS

Background

Finished flooring work is subject to the same phenomena during construction of a home that applies to drywall and plaster, namely shrinkage and warpage of the surface to which it is applied, settling of the home, and expansion and contraction of the subsurface to which it is applied with moisture and temperature variations. Most of the flooring problems are a result of these natural phenomena occurring during the stabilization of the home during the initial warranty period and are mirrored in the floor coverings.

The following finished flooring standards are contained separately in this section:

1. Carpeting
2. Ceramic or Quarry Tile
3. Resilient Flooring
4. Wood Flooring

CHAPTER 10 CARPETING STANDARDS

Background

Carpet installation may often be contracted for by the owners or may be done by the builder as an allowance item. A standard carpet installation will use seaming techniques to join the material and these seams will be somewhat visible. Carpeting is subject to normal manufacturing tolerance and most particularly to lot variations affecting color, texture and pattern. From time to time, patterns are discontinued, which makes it impossible to exactly duplicate the material;

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

Vacuuming high-traffic areas often, as well as regular vacuuming of all carpeted areas, will help keep carpets clean and extend their useful life. Spills should be blotted and stains spot-cleaned immediately. Always dab a stain; avoid rubbing it. Stain removers should be tested first on an out-of-the-way area of the carpet, such as in a closet, to check for any undesirable effects.

- **Shedding** is normal in a new cut-pile carpets. Vacuuming removes the loose fibers without harming the carpet.
- If **tufts** are pulled up from the carpet, clip them off with scissors. Never pull them. To remove yarn tufts that stick up higher than the carpet, clip off excess length with scissors. Do not use a knife. This is not a carpet manufacturing defect.
- **Carpet ridges** can be caused by sliding heavy furniture around, thereby loosening the carpet stretch. Use helpers to safely lift and move furniture to protect carpet.
- **Texture changes** are most apparent in high-traffic areas and in front of furniture. Pile crush is usually mistaken for wear. It is not actual yarn wear, but it gives that appearance due to the pile lying over. **Pile crushing** is aggravated by soiled shoes, pets, and bare feet. Although it cannot be eliminated, it is best minimized by regularly vacuuming against the lay of the tufts with a beater bar or by using a brush with a pile grooming feature to lift and restore the crushed pile. **Loss of twist** can be reduced by preventative measures such as use of a soft-backed rug in high-traffic areas.

All carpets will slowly lose some color due to natural and artificial forces in the environment. Fading can be reduced by:

- Frequently removing soil by vacuuming
- Regularly cleaning furnace filters (if applicable)
- Periodically having carpets professionally cleaned
- Reducing sunlight exposure with window coverings

1. Common Defect or Problem
Open carpet seams.
Performance Standard
Carpet seams will show. However, no visible gap is acceptable.
Builder Repair Responsibility
Builder to correct any open gaps.

2. Common Defect or Problem
Carpeting becomes loose, seams separate or stretching occurs.
Performance Standard
Wall to wall carpeting, installed as the primary floor covering, when stretched and secured properly, shall not come up, become loose or separate from its point of attachment.
Builder Repair Responsibility
Builder to re-stretch or re-secure carpeting as needed, if original installation was performed by the builder.

3. Common Defect or Problem
Spots on carpet/minor fading.
Performance Standard
Exposure to light may cause spots and/or minor fading on carpet. Spots, if noted prior to occupancy in writing, are the builder's responsibility.
Builder Repair Responsibility
None. However, if noted prior to occupancy in writing, builder would then clean or repair.

CHAPTER 11

CERAMIC AND QUARRY STANDARDS

Background

Ceramic or quarry tile is also used as a finished flooring surface and in some counter and wall applications. Hard tile is supplied as a finished product and is subject to lot variations. The tiles may be attached to the subfloor, finish floor or wall surface with mastic (glue) or directly set into a mud base (special concrete mix). After the tile is set, grout is applied to fill the joints. Grouting will be affected by the natural settling and shrinkage of the home. Re-grouting will be required by the homeowner as normal maintenance throughout the life of the home. With colored grout, it is virtually impossible to match colors should a repair of grout be desired.

In all cases of finished floor covering materials, the owner is advised to follow the manufacturer's suggested recommendations for maintenance and cleaning.

Narrow tipped or stiletto high heels will damage ceramic and quarry tile flooring and are not the builder's responsibility for repair. Because of the wear and tear caused by normal use of the floor, no reasonable repair can be expected to restore the flooring to a new, unused, perfect condition.

1. Common Defect or Problem

Cracks appear in grouting of ceramic tile joints or at junctions with other materials such as a bathtub.

Performance Standard

Cracks at the joints of ceramic tile are commonly due to the settling process, especially between the horizontal and vertical surfaces or the butting of dissimilar materials. As such, they require repointing.

Builder Repair Responsibility

Ceramic tile should be repointed when necessary, only once during the warranty period, preferably near the end of the warranty period. After one repointing, it becomes an item of owner maintenance.

2. Common Defect or Problem

Ceramic tile cracks or become uncemented.

Performance Standard

Tile should not crack or become loose during warranty period under normal wear. It should be noted that ceramic tile can crack if something is dropped on the floor, and this type of cracking is not usually warranted.

Builder Repair Responsibility

Builder to replace any cracked tiles and recement any loose tiles, unless the defects were caused by owner's negligence (owner is cautioned that there may be a color mismatch if no extra tiles are available).

3. Common Defect or Problem
Ceramic tile grout discolors.
Performance Standard
Normal efflorescence is a condition, which can be cleaned with a special solution or will disappear in time. Grout is porous and can be sealed by the homeowner to prevent dirt penetration.
Builder Repair Responsibility
None.
4. Common Defect or Problem Mildew forms on tile or grout.
Performance Standard
This is a homeowner's maintenance responsibility.
Builder Repair Responsibility
None.
5. Common Defect or Problem Color variations in tile.
Performance Standard
Color variations are inherent in all ceramic glazes fixed clay products.
Builder Repair Responsibility
None.
6. Common Defect or Problem
Tile style or pattern no longer available when repair called for.
Performance Standard
None.
Builder Repair Responsibility
Unless owner will accept a repair with as closely matching materials as is currently available, or correction by some other means, i.e. replacement to nearest door jam.
7. Common Defect or Problem
Floors squeak.
Performance Standard
Floor squeaks are common to new construction and a squeak-proof floor cannot be guaranteed.
Builder Repair Responsibility
Builder should try to minimize the floor squeaks and correct if possible. It should be noted that second floor repair would be a surface nailing in carpeted areas, and impossible in vinyl or ceramic areas.

CHAPTER 12 RESILIENT FLOORING STANDARDS

Background

Resilient flooring includes inlaid, roto-vinyl, seamless sheet vinyl and resilient vinyl composition tile.

All resilient flooring is subject to normal manufacturing tolerances and most particularly to dye lot variation affecting color, texture and pattern. From time to time, patterns are taken off the market, which makes it impossible to exactly duplicate a material when none is available. The most common problem occurring when partial replacement is called for in repair is the inability to match closely in color due to variation from dye lot to dye lot. In the replacement or correction of resilient flooring, the owner must be prepared to accept a variation in dye lot when the pattern is still in existence and is cautioned that a seam may show. When a repair is made, the smallest possible area should be repaired. Although the builder will attempt to match colors as closely as possible, the owner should note that the wax or vinyl dressing build-up on the existing areas, light variations, atmospheric conditions and other chemical reactions will produce a color variation, even within the same dye lot. The owner can minimize this variation by removing any build-up and thoroughly cleaning the floor according to the flooring manufacturer's recommendations. Likewise, the color variations will become less noticeable with subsequent dressings and use of the floor.

The nature of resilient flooring makes possible permanent deformation of the surface when subject to high loads which can be exerted by furniture with improper floor protectors or no protectors at all. Manufacturer recommended protectors are a necessity. The protectors must rest flat on the floor, not at an angle. The maximum surface load per square inch must not exceed 75 lbs. Narrow tipped or stiletto high heels will damage vinyl tile and all sheet vinyl flooring and are not the builder's responsibility for repair. Because the wear and tear caused by normal use of resilient flooring, no reasonable repair can be expected to restore the resilient flooring to a new, unused, perfect condition.

Resilient flooring is a manufactured product bought as a finished product, either in the form of squares or sheet goods, which is applied by the appropriate trade; predominantly with mastic directly over the surface prepared to accept it.

Wood is a natural product and is therefore subject to a number of natural processes. **Variations in grain and color** occur normally in wood products and are not considered deficiencies. Wood is further subject to **seasonal expansion and contraction** due to changes in temperature and humidity. This may result in changes in floor noise throughout the year, with some **pops and squeaks** as wood expands and contracts. Additionally, some **shrinkage** or warping can be expected around heat vents or any heat-producing appliance.

Minor surface scratches and imperfections will occur during normal installation and preparation of hardwood floors; this is typical and is not considered a defect. When wood floors are new, **small splinters of wood** may be evident. **Dimples or scratches** can be caused when furniture is moved, or heavy or sharp objects are dropped. Extra care must be taken to protect your hardwood from damage when moving appliances or furniture. Felt pads applied to the feet of furniture can help protect the floor finish.

Warping will occur if the floor repeatedly becomes wet or is thoroughly soaked even one time. Food spills should be cleaned up immediately.

A **dulling of the finish in heavy traffic areas** is likely. At exterior doors, use protective mats or area rugs approved for hardwood floors to help keep sand, grit, and moisture from getting on your floor. A **white, filmy** appearance may be caused by wear and/or moisture (often from wet shoes or boots). Please be aware that hardwood floors can be damaged by high-heeled shoes.

Yellowing and warping can result from the floor's contact with the rubber backing on area rugs or mats. Ultraviolet light(sunlight) may cause a floor finish to change in color and to vary from the finish color under furniture and area rugs, inside pantries, etc. Care should be taken to protect hardwood floor surfaces **from prolonged exposure to direct sunlight**.

Warranty Standards for Hardwood Flooring

- The hardwood floor was installed properly and in a workmanlike manner. Only **cosmetic flaws that are readily noticeable (from an observer's standing position) and noted on the New Home Orientation Tour list** will be corrected by us. This may involve filling and touch up. Any subsequent cosmetic item is not warrantable.
- We will correct **gaps in end joints that are in excess of 1/8"** in width with wood filler or replacement at our option during the term of the warranty.
- Some **pops and squeaks** may be evident in your floor and are not considered defects. A floor manufacturer or other professional may be consulted in extreme cases to determine installation and use.
- **Replacement flooring** installed in the course of warranty work may not exactly match your existing flooring; we are not responsible for discontinued wood flooring styles or natural variations in color.
- **Air infiltration under baseboards on exterior walls** during windy weather is not uncommon. No action is required under the warranty.

1. Common Defect or Problem
Nail pops appear on the surface of resilient flooring.
Performance Standard
All nail pops should be repaired.
Builder Repair Responsibility
Builder to correct all nail pops that have not broken the surface of the goods by driving the nails back into place. Replace any areas where the nail pop has broken the surface. Replace sheet goods in a minimum area so the joint will not be readily noticeable where the nail pop broke the surface.
2. Common Defect or Problem
Seams or ridges appear in the resilient flooring due to subfloor irregularities.
Performance Standard
In the natural settling and shrinkage process, some mismatch of the subfloor may exhibit and mirror itself as ridges or depressions showing on the surface goods. If the ridge or depression effect exceeds 1/8" and cannot be corrected from below, the resilient floor must be corrected. The ridge measurements should be made by measuring the gap created when a 6" straight edge is placed tightly 3" on each side of the defect and the gap measured between the floor and the straight edge at the other end.
Builder Repair Responsibility
If ridge exceeds standard, builder to remove the sheet goods in a minimum area so the joint will not be readily visible when repaired, re-nail the subflooring, sand smooth and/or fill gap and replace the sheet goods. Owner should note that there may be a mismatch in materials due to time difference or dye lot variations.
3. Common Defect or Problem
Resilient flooring lifts, bubbles or becomes unglued at joint.
Performance Standard
Resilient flooring should not loosen during the normal warranty period unless caused by the owner's negligence or excessive use of water.
Builder Repair Responsibility
Providing edges are still intact, re-secure the material. If not, replace the minimum area as per standard #2.
4. Common Defect or Problem
Shrinkage gaps show in resilient flooring.
Performance Standard
Gaps shall not exceed 1/8" in width in vinyl to vinyl joints. However, where dissimilar materials a butt, larger gaps may appear.
Builder Repair Responsibility:
Builder to correct to meet standard.
5. Common Defect or Problem
Flooring discoloration.

Performance Standard

Certain conditions and substances such as heat, oil, fertilizers, asphalt from driveways and driveway sealers with an asphalt or coal tar base, and some carpet dyes can cause permanent stains, especially in traffic areas. The owners are also cautioned that the use of certain latex or rubber-backed throw rugs can cause discoloration of the resilient flooring due to a chemical reaction.

Builder Repair Responsibility

This is not a manufacturing defect, nor the builder's responsibility. It is the owner's responsibility to protect these areas with doormats or proper rugs at each entrance. There are certain instances when discoloration may be warranted by the manufacturer. Owner should contact the manufacturer for a determination under his warranty.

6. Common Defect or Problem

Fading of color of resilient flooring.

Performance Standard

Exposures to excessive direct sunlight through glass sliding doors, for example, can cause fading or discoloration.

Builder Repair Responsibility

This is not a manufacturing defect, nor the builder's responsibility. It is the owner's responsibility to protect these areas by the use of drapes or blinds during times of direct sunlight exposure. Resilient flooring is no different in this instance than any drapes, furniture or carpeting in the home.

7. Common Defect or Problem

Heel marks, burns, scratches, scuffs and indentations on resilient flooring.

Performance Standard

All of the above items are caused by owner use and abuse.

Builder Repair Responsibility

None, unless problems are relayed to the builder in writing or noted during walk-through. If builder is notified at walk-through, it is builder's responsibility to repair. If the damage occurs after that time, it is the responsibility of the homeowner.

8. Common Defect or Problem

Wear on surface or loss of sheen on resilient flooring.

Performance Standard

Depending on the type of product, owner to refer to manufacturer's warranty.

Builder Repair Responsibility

None.

9. Common Defect or Problem

Floors squeak.

Performance Standard

Floor squeaks are common to new construction and a squeak-proof floor cannot be guaranteed.

Builder Repair Responsibility

Builder should try to minimize the floor squeaks. It should be noted that a second-floor repair would be surface nailing in carpeted areas and is impossible in vinyl and ceramic areas.

CHAPTER 13

WOOD FLOORING STANDARDS

Background

Wood flooring, as a finished surface, is applied directly over the subfloor. Wood flooring, while predominantly hardwood, may occasionally be softwood. Hardwood is generally preferred because of its better wearing qualities and the resistance to abrasions. Wood floorings may be either pre-finished or job-finished. All wood floors are subject to shrinkage, as a natural occurrence. Both stains and sealers on job-finished floors may require maintenance different from that of pre-finished floors. It should be noted that due to climate and humidity changes, wood floors may be subject to gapping.

1. Common Defect or Problem

Gaps in wood floor.

Performance Standard

It must be understood that gapping is a normal occurrence during the heating season. Repairs should then be made during the summer so a proper correction can be made because warm, humid weather will cause the floor to expand. Gaps in excess of 1/8" in summer are to be corrected. Relative humidity in the home can cause noticeable fluctuations in gaps between floor boards. This is a common phenomenon in climates and areas of the home that experience significant shifts in humidity. The consumer is responsible for maintaining proper humidity levels in the home.

Builder Repair Responsibility

Builder to repair gaps in excess of 1/8" by using a filler or other methods.

2. Common Defect or Problem

Wearing of finish on wood floor.

Performance Standard

Elements of nature, moisture and driveway materials may cause the finish on wood floors to wear faster. The homeowner should maintain his flooring to prevent this condition.

Builder Repair Responsibility

None.

3. Common Defect or Problem

Finish is uneven on wood floors.

Performance Standard

Slight variations may appear in the finish but must not be readily visible.

Builder Repair Responsibility

Builder to repair/replace if visibly uneven.

4. Common Defect or Problem

Cupping of hardwood floors.

Performance Standard

Cups in strip hardwood floorboards shall not exceed 1/16" in height in a 3" maximum span measured perpendicular to the long axis of the board.

Builder Repair Responsibility

Builder to repair or replace any boards that have cupped in excess of the performance standard on hardwood floors. The builder is not responsible for cupping caused by moisture beyond the control of the builder. There is no warranty for cupping on a pine or soft wood floor.

5. Common Defect or Problem

Dents in wood floors.

Performance Standard

This is a normal occurrence in wood floors due to high heels, etc., and must be noted to builder in writing at the home orientation walk through.

Builder Repair Responsibility

None, unless noted in writing prior to occupancy. If so, builder to repair.

6. Common Defect or Problem

Fading of wood floors.

Performance Standard

Exposures to excessive direct sunlight through glass sliding doors, for example, can cause fading or discoloration.

Builder Repair Responsibility

This is not a manufacturing defect nor the builder's responsibility. It is the owner's responsibility to protect these areas by the use of drapes or blinds during times of direct sunlight exposure. This is no different than other fabrics such as furniture or carpeting in the home.

7. Common Defect or Problem

Floors squeak.

Performance Standard

Floors squeak are common to new construction and a squeak-proof floor cannot be guaranteed.

Builder Repair Responsibility

Builder should try to minimize the floor squeaks. It should be noted a second-floor repair would be surface nailing in carpeted areas, and impossible in vinyl and ceramic areas.

CHAPTER 14 GARAGE DOOR STANDARDS

1. Common Defect or Problem
Bottom of overhead door does not fit to the floor.
Performance Standard
Door weather-stripping should fit flush to the floor.
Builder Repair Responsibility
Builder to scribe the bottom of the door to conform to the level of the concrete so weather-stripping on bottom of door affects a seal.

2. Common Defect or Problem
Garage doors allow entrance of snow or water.
Performance Standard
Garage doors shall be installed as recommended by the manufacturer. Some entrance of the elements can be expected under weather conditions.
Builder Repair Responsibility
Builder will adjust or correct garage doors to meet manufacturer's recommendations.

3. Common Defect or Problem
Door does not fit tightly at the sides and top.
Performance Standard
 - a. If it is an unweather-stripped door, there may be some small gaps.
 - b. If the door is weather-stripped, the door should fit tight.Builder Repair Responsibility
 - a. If the door is unweather-stripped, the builder has no repair responsibility.
 - b. If the door is weather-stripped, the builder is to repair.

4. Common Defect or Problem
Garage doors fail to operate under normal use.
Performance Standard
Garage doors shall operate properly.
Builder Repair Responsibility
Builder to correct or adjust garage doors as required, except where the cause is determined to result from homeowner abuse or negligence.

5. Common Defect or Problem
Door squeaks/jumps.
Performance Standard
Due to dirt/grime
Builder Repair Responsibility
None, owner needs to lubricate/clean tracks.

CHAPTER 15

GRADING, GROUND REMOVAL, GRAVEL AND FILL STANDARDS

Background

This standard is intended to assist in obtaining a uniform acceptable understanding of grading and related problems. The standard is not meant to supersede or substitute for other restrictions placed by agencies or communities. Such agencies have written manuals or means of arbitrating such disputes.

Because this phase of construction dealing with the movement of earth is so broad and ambiguous, since each site is unique unto itself and subject to the most diverse contractual relationships, it is necessary to establish certain “ground rules” or definitions for phases of work.

If finished grading or landscaping is not included in the building contract, it is of absolute necessity the owner promptly follow through with his grading and landscaping responsibilities and maintain a positive slope away from the foundation, including refilling any settled backfilled and trenched areas. The lack of proper maintenance in this area may cause foundation failure that will not be covered by the builder.

Excavation

To remove soil to the level and outline of the proposed footings in such a way as to permit material delivery for the mason to commence work. Excavated soil is normally cast (dropped on the property) around the foundation except where lot size, site conditions and/or elevation requires its removal.

Hauling (Trucking)

Hauling away excess ground or supplying and hauling in required fill, unless otherwise specified in the contract, is the responsibility of the owner.

Backfilling

To fill the exterior around a foundation or in a trench using a bulldozer or other necessary mechanical equipment utilizing only the ground which was available from such excavation or trench. The purpose of backfilling is to improve working conditions for further construction; attempt to protect the foundation from the elements such as frost, water, etc.; reduce the hazards inherent to open basements or foundations; and start the process of ground settlement, which could take three or more years depending upon the type of soil. Builder is not responsible for settling.

Rough Grading

Using mechanical equipment, the grader provides drainage away from the foundation in such a way as to indicate approximate grades at the building, walks, patios and driveways. This is normally done on an allowance specified in the contract. Builder is not responsible for settling.

Finish Grading

Using mechanical equipment and the dirt on the site, the grader establishes the yard grade within two inches of final landscaped grade with respect to the building, walks, drive and adjoining properties. Depending on the terms of the contract this would ordinarily include the entire lot. This is often contracted for by the owner, who is then responsible, and is the step to be performed just prior to landscaping.

Landscaping

Using light machinery or hand labor the grader finishes establishment of final grade, sodding or seeding, and provides ornamental shrubbery, trees and other planting.

Site, Drainage and Erosion

Site drainage must comply with all applicable building codes in the subject jurisdiction. All sites must be prepared initially to prevent or reduce erosion from excessive water runoff. All contractual agreements made between parties will take precedence over guidelines. Homeowner maintenance is required after the possession of site.

1. Common Defect or Problem

Settling of ground foundation, sewer or septic trenches and gravel-fill-in garage area after back-fill operations.

Performance Standard

Backfilled ground will settle. In fact, it is the intent to permit settling before further grading is done.

Builder Repair Responsibility

To the extent provided in the building contract, the builder is to perform the initial backfilling. Where the builder is not responsible by contract for finish grade or landscaping, the builder shall not be responsible for normal settling of backfilled or trenched areas. Utility lines installed by the builder that settle excessively shall be repaired by the builder during the first year.

Owner Responsibility

Unless otherwise specified by contract, fill in such depression as they occur or as soon as possible to avoid other related problems.

2. Common Defect or Problem

Wet basement walls after backfilling, due to insufficient slope away from the foundation when builder is responsible for backfill and/or rough grading only. "Wet" shall be defined as actual water running or trickling from, through or under the basement wall and onto the floor, thus puddling or eventually finding the floor drain. Dampness of the walls particularly at the upper 2 and lower 1 foot are common to new construction and should not be construed as "wet."

Performance Standard

Wet walls are usually a result of sunken areas around the foundation if the finished grading has not been performed. Proper grading, landscaping and waterproofing where applicable should eliminate damp or wet basements.

Builder Repair Responsibility

Builder to backfill in accordance to item #1, and/or waterproof where applicable.

3. Common Defect or Problem

Wet basement walls due to insufficient slope and drainage away from foundation when builder has contracted for finish grading.

Performance Standard

While some dampness is normal, wall should not be wet as defined in item #2 above.

Builder Repair Responsibility

If landscaping is owner's contractual responsibility and not completed within 30 days of finished grading, there is no builder responsibility. Otherwise, builder should correct slope as needed, other costs incidental to such correction are borne by the builder.

Owner Responsibility

Builder to fill in depressions, as they occur, due to settling. Direct downspouts and sump pump discharge from foundation and use extensions as needed. The owner's proper landscaping should eliminate a wet basement.

4. Common Defect or Problem

Improper drainage of the site.

Performance Standard

The builder, to ensure proper drainage away from the home, shall have established the necessary preliminary grades and swells. Standing or ponding water shall not remain for periods in excess of 48 to 72 hours after a rain, except that in swales which drain other areas, or in areas where sump pumps discharge, a longer period can be anticipated. Consideration must be given to the type of soil present and to the relationship to surrounding terrain. The possibility of standing water after an unusually heavy rainfall should be anticipated. No grading determination shall be made while there is frost or snow on the ground or while the ground is saturated.

Builder Repair Responsibility

The builder will try to establish the proper grades and swales based on soil conditions, site and weather conditions. The homeowner is responsible for maintaining such grades and swales once they have been established.

5. Common Defect or Problem

Heavy rains will cause erosion where grass and sod has not had time to be permanently established. Additional landscaping by homeowner or his agent can change the topography of the site.

Performance Standard

The defects or problems can be determined by visual inspection or by additional information gathered at site inspection.

Builder Repair Responsibility

Builder to repair to original finish as closely as possible. Repairs, if required by inspection, will be made no more than one time during first year.

6. Common Defect or Problem

Grass, ornamental shrubbery, trees and other plantings die.

Performance Standard

These are items of nature and are subject to homeowner care and maintenance.

Builder Repair Responsibility

None, unless noted in writing prior to occupancy, and the builder agreed to replace the plantings.

7. Common Defect or Problem

Water appears on interior crawl space surfaces.

Performance Standard

Crawl spaces should be graded and drained properly to prevent water from accumulating deeper than 1" and larger than 100 sq. ft. in crawl space area. Standing or ponding water shall not remain for extended periods after a rain (generally, no more than 48 hours) except in surfaces that drain other areas where sump pumps discharge. In these areas a longer period can be anticipated. The possibility of standing water after an unusually heavy rainfall should be anticipated by the owner.

Builder Repair Responsibility

The builder will take the necessary corrective measures to create positive flow within the crawl space or discharge water to the exterior of the structure.

CHAPTER 16

HARDWARE AND LIGHTING FIXTURE STANDARDS

Background

All hardware and lighting fixtures are finished products. Care should be taken to protect them, especially during painting. Homeowner maintenance is required. The homeowner should make sure not to use abrasive products (i.e. lacquer thinner, solvents, cleaners and cleaning solutions, etc.) to clean the hardware and light fixtures.

It should be understood that, as we come into contact with hardware and lighting fixtures, the natural chemicals in our bodies will cause a breakdown of the finish in time. It should be understood that there will be color variations within finishes.

Any hardware or light fixtures with a protective coating will gradually tarnish and eventually take on an antique appearance. Atmospheric conditions, direct sunlight, caustic agents such as cleaners or scratches from contact with sharp objects may cause the protective coating to crack or peel, exposing the natural material, causing spotting and discoloration. The integrity of the surface under such conditions of exposure is not warranted. Initial care for these products requires only periodic cleaning with mild nonabrasive soap and light buffing with a soft cloth.

Regarding breakage of glass in light fixtures, it should be noted that such breakage is the responsibility of the manufacturer or builder only until closing of the home "COE". Upon delivery, it is the owner's responsibility.

1. Common Defect or Problem

Finish on hardware or lighting fixture wears off.

Performance Standard

If the defect is caused by products such as lacquer, stain or varnish that was applied by the builder's subcontractor, the builder is responsible for correcting.

Builder Repair Responsibility

If the defect was caused by the builder's subcontractor, the builder is to replace or repair. If due to natural causes or negligence on the part of the homeowner, the builder is not responsible.

2. Common Defect or Problem

Locks do not work.

Performance Standard

All locks must work.

Builder Repair Responsibility

Builder to view lock to verify if it was installed properly. A faulty lock is covered by the manufacturer's one-year warranty. Builder is responsible for installation.

3. Common Defect or Problem

Lights or fans do not work.

Performance Standard

Wiring to fixture must be operative.

Builder Repair Responsibility

Builder is to repair defective wiring to lights and fans. If it is found that the fixture is inoperative, it would fall under a manufacturer's warranty. If the fixture was owner supplied, the owner will be responsible for the cost of the service call.

CHAPTER 17

HEATING AND SHEET METAL STANDARDS

Background

Heating and cooling systems are specified by code, with the equipment selection (size and capacity) being dependent upon the size of the home, outside design temperatures, and anticipated heat loss due to the home design. It should be noted that temperatures in the home may vary due to wind direction, windows, doors, etc. If parts of the home are colder than others, running the blower of the furnace constantly may help.

Cleaning of furnace filters is a homeowner's responsibility.

1. Common Defect or Problem

Noisy ductwork.

Performance Standard

When metal is heated it expands and when cooled it contracts. The result is "ticking" or "crackling" which is generally to be expected and shall be considered acceptable.

Builder Repair Responsibility

Installation to comply with codes.

2. Common Defect or Problem

Oil-canning.

Performance Standard

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

Builder Repair Responsibility

Builder to correct to eliminate this sound.

3. Common Defect or Problem

Furnace not placed as per plan.

Performance Standard

Due to heating design, venting and layout, the furnace location is to be determined by a heating contractor.

Builder Repair Responsibility

None.

4. Common Defect or Problem

Inadequate heating.

Performance Standard

Heating system shall be capable of producing an inside temperature of 70°F, as measured in the center of the living room at a height of 5' above the floor, under local outdoor winter design conditions of -10°F specified in the ASHRAE handbook. Federal, state or local energy codes shall supersede this standard where such codes have been locally adopted.

Builder Repair Responsibility

Builder will correct heating system to provide the required temperatures. However, the homeowner shall be responsible for balancing dampers, registers and other minor adjustments. Builder shall not be responsible when installation follows guidelines of Special Rate Programs offered by utility companies if utility standards are lower than manufacturers' recommendations.

5. Common Defect or Problem

Inadequate cooling.

Performance Standard

Where air-conditioning is provided, the cooling system shall be capable of maintaining a temperature of 78°F, as measured in the center of the main living area, at a height of 5' above the floor, under local outdoor summer design conditions as specified in the ASHRAE handbook. In the case of outside temperatures exceeding 95°F, a differential of 15°F from the outside temperature will be maintained where there is excessive glass, this may not be attainable. Owner should be advised on the use of shading in that area. Federal, state or local energy codes shall supersede this standard where such codes have been locally adopted.

Builder Repair Responsibility

Builder will correct system to meet temperature conditions, in accordance with specifications. Builder shall not be responsible for changes when installation follows guidelines of special rate programs offered by utility companies if utility standards are lower than manufacturers' recommendations.

6. Common Defect or Problem

Temperature in house is different than temperature set on the thermostat.

Performance Standard

If thermostat is properly calibrated according to equipment specs, temperature should not differ more than 4°.

Builder Repair Responsibility

Builder to repair if there is a difference of more than 4°.

7. Common Defect or Problem

Kitchen or hood fan lets cold air into home.

Performance Standard

All exhaust fans should have dampers, but drafts may develop during cold or windy weather. Because code requires boring through the outside wall, there also may be some condensation.

Builder Repair Responsibility

None. Owner should check to make sure damper operates and notify builder to repair if it does not operate.

8. Common Defect or Problem

Moisture runs back in at bath vent fan.

Performance Standard:

See # 11.

Builder Repair Responsibility:

See # 11.

9. Common Defect or Problem

Furnace is noisy.

Performance Standard

New furnaces are noisier due to design and blower size.

Builder Repair Responsibility

Builder to have manufacturer's representative determine if noise is excessive.

10. Common Defect or Problem

Condensation lines clog up.

Performance Standard

Condensation lines may clog eventually under normal use. This is a homeowner maintenance item. Builder shall provide unobstructed condensation lines at time of first occupancy.

Builder Repair Responsibility

None if installed properly. Builder shall provide unobstructed condensation lines at time of first occupancy.

11. Common Defect or Problem

Excessive humidity in home.

Performance Standard

See Chapter 20, Moisture Standards.

Builder Repair Responsibility

See Chapter 20, Moisture Standards.

12. Common Defect or Problem

Settling of air conditioning slab.

Performance Standard

Owner is required to maintain a proper slope and fill in dirt underneath slab.

Builder Repair Responsibility

Builder shall level within the first year.

CHAPTER 18

INSULATION STANDARDS

Background

Insulating is the process by which a fire-resistant material is installed at the perimeter or outer envelope of the structure to act as a barrier to create a resistance to heat flow. This produces a more controlled interior comfort climate and conserves energy. The primary characteristic that is desired in an insulating material is the ability to trap a gas to increase the resistance to heat flow. Physically, the efficiency of the insulating material increases as either the bulk of the air entrapped is increased or the movement of the gas is decreased within a given volume of insulating material.

The measurement of insulating effectiveness is called “resistance to heat flow” and is expressed as “R Value.” Each manufacturer is required to label materials with its resistance to heat flow at 75°F mean temperature (R Value). R Value is a number rating system. As R increases, the overall effectiveness of the insulating material increases. Caution – Insulation may not cover an entire surface. Its R Value must be averaged with other assembly material(s) to give a true total average R Value.

Minimum R Value is established by the State Energy Code.

The commonly used fibrous insulating materials are mineral wool, fiberglass and cellulose. These materials are selected for their large ratio of surface area to mass of the material in order to better entrap air. The normal form of the insulating material is either the blown loose material, as is most often used in the ceiling, or the batt form. Other forms are rigid materials such as polyurethane or polystyrene, which are usually supplied in panel form or are sprayed in their application.

Air infiltration can be further minimized by the installation of weather-stripping and caulking. Both require owner maintenance throughout the life of the home. Some infiltration will occur under certain temperatures and wind conditions.

The system of electric boxes and wiring on exterior walls produces an air flow passage whereby the cold or outside air can be drawn through the outlet into the room under most heating conditions, since the outside of the home is at a higher pressure than the inside. Also, venting for fans will produce some air flow. With acceptable building practices, this situation is virtually unpreventable, as are certain other situations resulting from many openings that do not exist in the home under normal construction.

Moisture in insulation causes it to lose its insulating value. Therefore, vapor barriers are put on the inside to keep moisture from entering into the walls and ceilings. It is also important to properly vent the attic to create airflow. This can be accomplished with roof vents, gable louvers, ridge vents and soffit vents. Cathedral ceiling areas, where there is no attic, require proper ventilation. Year-round ventilation is necessary.

Insulation and ventilation performance standards in some locations are specified by the applicable code.

You may wish to refer to the Moisture Standard (Chapter 20) for additional information.

With the above background on the insulation material in mind, the following are the most common problems occurring in the area of insulation:

1. Common Defect or Problem

Pipes freeze.

Performance Standard

Drain, waste and vent, and water pipes shall be adequately protected, as required by applicable code, during normally anticipated cold weather, and as defined in accordance with ASHRAE design temperatures, to prevent freezing.

Builder Repair Responsibility

Builder will correct situations not meeting the code. It is the homeowner's responsibility to drain or otherwise protect lines and exterior faucets and hose bibs (even if they have an anti-siphon valve attached) exposed to freezing temperatures.

2. Common Defect or Problem

Moisture condensation on windows.

Performance Standard

Moisture condenses on the window because it is the coldest object in any given room. Glass has a much higher rate of heat transmission than other surfaces; hence, it is the colder surface during the normal heating season. Moisture condensation on windows is an indication of either too much moisture in the room, or poor circulation of the moisture that is present. The owner can minimize this condition by merely opening a window to permit the excess moisture to escape or by installing a dehumidifying system if the condition persists. It should be noted that in homes with humidification equipment, the formation of moisture on the windows is an indication that the humidifying equipment is set too high and producing too much moisture. It is also recommended that screens be removed from casement windows during the heating season.

Builder Repair Responsibility

None, except to explain to the owner more thoroughly how this condition is caused.

3. Common Defect or Problem

Drafts at baseboards.

Performance Standard

The juncture of the floor and wall system is conducive to openings so a certain amount of draft is permissible, although it should be minimized.

Builder Repair Responsibility

Builder to check out the areas to assure the air leakage is at a minimum.

4. Common Defect or Problem Drafts from electric outlets.
Performance Standard
Electrical junction boxes on exterior walls may produce airflow whereby the cold air can be drawn through the outlet into a room.
Builder Repair Responsibility
Builder to check out the areas to assure the air leakage is at a minimum.

5. Common Defect or Problem
Drafts from recessed lights, ceiling fans and vent fans.
Performance Standard
Drafts in these areas are normal.
Builder Repair Responsibility
None, as long as there is proper insulation around the unit.

6. Common Defect or Problem
Drafts around doors and windows.
Performance Standard
Doors and windows are cold spot sources and some infiltration of air must be expected. Proper weather-stripping and insulating around these areas can minimize air passage. However, depending on the type of window (i.e. double hung and sliding windows will have more air infiltration than casement or stationary windows) and under certain temperature and wind conditions, some infiltration will be observed by the homeowner.
Builder Repair Responsibility
Builder and/or manufacturer to inspect and adjust poorly fitted weather-stripping. If draft comes around casings, builder to make sure insulation is in place around window wherever possible.

7. Common Defect or Problem
Blown insulation in attic displaces.
Performance Standard
This may occur due to wind and air movement in the attic.
Builder Repair Responsibility
During the first year, builder to redistribute insulation to meet the applicable code.

8. Common Defect or Problem
Blown insulation in attic settles.
Performance Standard
During the first-year insulation should not settle. However, after time, settling will occur.
Builder Repair Responsibility
Builder to correct during first year.

9. Common Defect or Problem
Not enough insulation.
Performance Standard
The builder must provide the R Rating as specified by the applicable code or contract.
Builder Repair Responsibility
Builder to correct to code/contract.

10. Common Defect or Problem Gaps at the top of batt insulation.
Performance Standard
There should be no gaps.
Builder Repair Responsibility
Builder to insulate or foam spaces to fill gaps.

CHAPTER 19

MASONRY AND CONCRETE STANDARDS

Background

Masonry and concrete work in residential construction provide the base structure upon which the house is built, and a permanent fire-proof construction and weatherproof exterior. The work is performed with quarried natural materials or with products manufactured by relatively simple processes, which have been selected for their wearing qualities. As such, they are subject to the same weathering phenomena as in their natural state, such as erosion, freezing and thawing, chipping, natural color variations and non-uniformity of size. Masonry work can be performed with an almost infinite variety of materials, methods of application, and techniques of installation. This permit an almost infinite range situations that can never be exactly duplicated. Masonry, more than any other trade, is dependent upon the variation of the product and the techniques of the individual mason or workman.

Masonry and concrete work consist of four primary divisions:

1. The construction of a basement, which may be either cast-in-place (poured) concrete or concrete block masonry installed on footings.
2. The placing (pouring) of flat slab areas consisting of footings, basement and garage floors, stoops, patios, walks or drives.
3. The veneering of the exterior of some structures with brick, stone or other masonry products.
4. The construction of fireplaces and chimneys.

Concrete is subject to several natural changes. The first is shrinkage in the hardening process, which creates shrinkage cracks; the type most common in concrete work, especially in flat slabs. Shrinkage cracks themselves do not affect the integrity of the surface. Concrete is subject to the elements and is attacked by certain chemicals. Pitting, scaling or spalling can develop under unusual conditions or when certain salt or chemicals are placed on a slab in winter for ice removal or drop from a car onto a garage slab and/or drive. A certain amount of surface dusting is normal. Proper owner maintenance can alleviate most of these situations. A sealer can be applied by the homeowner to the concrete to minimize dusting, spalling and effects from chemicals.

Cracking is a characteristic of concrete, and cracks in concrete walls or mortar joints of block foundations generally do not affect the structural strength of the home. Cracks are caused by settling of the house, shrinkage of concrete, expansion and contraction of concrete, and may occur continually throughout the life of the house.

Settling is a natural phenomenon in the construction of a new home, and concrete slabs are subject to the settling process.

Masonry and concrete work is also subject to color and texture variations due to the nature of the materials. Repairs, when made, seldom match in color and some variation is to be expected by the owner.

When selecting a veneer material, predominantly a matter of preference, many factors enter in, such as: the bond or pattern to be used for the brick or stone; the selection of the type of mortar joint (whether struck, raked or weeping pattern); the color of the mortar and the shading variation from batch to batch; the shades of the material involved and their relative contrast with the mortar chosen; the choice of material size, standard or king size brick or the type of stone chosen; and, finally, the individual workmanship of the mason. All of these variables set up a distinctive situation within the masonry field.

1. Common Defect or Problem

Leaks in basement or wet basement.

Performance Standard

No leaks or flow of water are acceptable, except when caused by an improper ground pitch away from the foundation (a proper pitch is 6" down for every 10' out from the foundation and must be maintained by the owner), or improper landscaping or subterranean problems where the responsibility is defined as the owners by the building contract. Leaking conditions should not be confused with dampness or moisture, which can be expected by the owner during the first year of the settling process, or with condensation during the summer months. If the basement had an engineered waterproofing system applied, then the owner should refer to the manufacturer's warranty.

Builder Repair Responsibility

Builder should correct as required. After correction, any openings made in order to correct should be repaired. Color variations in repairs are to be expected.

2. Common Defect or Problem

Cracked basement walls.

Performance Standard

Hairline cracks in mortar joints or cast-in-place concrete not exceeding 1/8" average width or hairline cracks in a single isolated block not extending to any adjacent blocks, providing these cracks do not cause a leaking problem are acceptable. If the cracks are caused by an improper pitch away from the foundation or owner landscaping, it is the responsibility of the owner to repair.

Builder Repair Responsibility

Builder to repair any cracks in mortar joints or poured walls exceeding 1/8" average width. Unless structural danger exists, repairs should be made approximately a year after occupancy to permit normal settling through the stabilization period. Broken blocks should be removed from the inside and repaired with a 4" block. Grout colors should be matched as closely as possible, but color variations should be expected by the owner. Exterior repairs will not be made except in the case of major structural damage

3. Common Defect or Problem

Cracking of basement floor.

Performance Standard

Shrinkage cracking is to be expected and requires no repair unless one or both of the following conditions exist:

- a. If the two surfaces of the crack are mismatched in height by more than 1/4".
- b. If the shrinkage occurs non-uniformly (i.e. all in one crack rather than several) and exceeds 1/4" average width.

Builder Repair Responsibility

Builder should correct using a latex filler, surface patching or other method as required, grinding surfaces smooth in case of mismatch. Owner is cautioned that repair will not match in color and a hairline crack may reappear.

4. Common Defect or Problem

Cracking of garage slab.

Performance Standard

Cracks in garage slabs in excess of 1/4" in width or 1/4" in vertical displacement shall be repaired.

Builder Repair Responsibility

Builder will repair cracks exceeding maximum tolerances by surface patching or other methods as required. See repair method for #3.

5. Common Defect or Problem

Cracks in patio, walks and drives.

Performance Standard

Except as may be otherwise covered by contract, no warranty against settling can be extended for floating slabs installed on soil which is less than 95% compacted. Cracks in excess of 1/4" in width or 1/4" vertical displacement on a surface which is 95% compacted shall be repaired. It should be noted that floating slab type concrete should not be installed until at least the end of the first year, if possible.

Builder Repair Responsibility

Builder to repair to meet performance standard. If replacement of a section is required, the minimum section should be removed from the walk, drive or patio at the blind or open joint.

6. Common Defect or Problem

Pitting, scaling or spalling and chert pops of concrete work.

Performance Standard

The aggregate in concrete work should not be exposed unless it is caused by a concentration of water, freezing and thawing, use of salt or other chemicals and mechanical implements and other factors beyond the builder's control. Owner should consider sealing the concrete.

Builder Repair Responsibility

Builder to correct using of a latex filler or grind to remove defect to meet acceptable tolerance. Owner is cautioned latex repair will not match in color.

7. Common Defect or Problem
Powdering or chalking of concrete work.
Performance Standard
Powdering or chalking may occur. Builder should advise owner to seal the surface with a concrete sealing compound.
Builder Repair Responsibility
None. However, only if the surface is soft, other repairs may be required. These are rare and severe instances which builder would then be required to correct.

8. Common Defect or Problem
Low spots in concrete slabs, except for stoops with foundations.
Performance Standard
No water pockets exceeding 1/4" depth shall exist in any slab within 32" length. Where a level slab has been requested by the owner or in basements, water pockets may appear.
Builder Repair Responsibility
Builder to correct to meet performance standards by filling with a latex or equivalent filler or grind as necessary. Finished repair should be feathered and smoothed. Minor color variations are to be expected.

9. Common Defect or Problem
Cracking of stoops with foundations.
Performance Standard
The effects of cracks or settling with inadequate drainage on stoops make acceptable tolerances much lower than for other slab forms. All cracks, except hairline cracks with no settling, require repair. Minor chips and cracks just beyond the acceptable tolerance should be corrected with a latex filler and beyond that point when complicated by settling.
Builder Repair Responsibility
Builder to correct to meet performance standard.

10. Common Defect or Problem
Water stands on stoops with foundations.
Performance Standard
No measurable water depth exceeding 1/8" is permissible on stoops.
Builder Repair Responsibility
Builder to correct to meet performance standards by filling with a latex filler or grinding. If the defect becomes qualified under item #9 on stoops, it shall be replaced as stated in that item.

11. Common Defect or Problem
Settling, heaving or separating of stoops, steps or garage floors.
Performance Standard
Stoops, steps or garage floors shall not settle, heave or separate in excess of 1" from the house structures.
Builder Repair Responsibility
Builder will take whatever corrective action is required to meet the performance standard.

12. Common Defect or Problem

Basement floor does not pitch to floor drain.

Performance Standard

Basement floors are only pitched in the immediate area of the floor drain. When there is to be a finished floor area around the drain, floors will not be pitched.

Builder Repair Responsibility

None, if the floor meets the performance standard.

13. Common Defect or Problem

Cracks in mortar joints of brick or other masonry veneer walls.

Performance Standard

Small hairline cracks due to shrinkage are common in mortar joints in masonry veneer construction as long as they don't exceed 3/16" width.

Builder Repair Responsibility

Builder will repair cracks in excess of performance standards by pointing or patching. These repairs shall be made at the end of the first year of the warranty period. Owner should note that there will be a color variation between old and new mortar.

14. Common Defect or Problem

Brick is different color than what was selected, or colors vary.

Performance Standard

Due to the natural materials used to make brick, there will be color lot variations. Even within a lot, brick may vary in color.

Builder Repair Responsibility

None.

CHAPTER 20 MOISTURE STANDARDS

Background

Because of the greater amount of desired and required insulation, including vapor barriers, caulking, tighter windows and building practices used to cut down air infiltration, new homes have become more energy efficient. In some homes this can also cause problems with high humidity. The homes are so tight that normal humidity caused by cooking, breathing, showering, etc. builds up inside the home. This can cause steamed-up windows, condensation around outlets or recessed lights and even drywall damage. When these conditions are first noticed, it is important to exhaust the humidity from the home. This can be done by running bath fans and vented cooking exhaust fans when necessary, using a dehumidifier, making sure the owner's dryer is vented outside, installing an air-to-air heat exchanger or opening the house and letting the inside air exchange with the outside air.

The installation of dehumidification and humidification equipment and air-to-air exchangers is usually an owner option. Proper levels of humidity must be maintained. Just as too much moisture causes problems as described above, insufficient humidity or excessive dryness can cause other serious problems.

It should be pointed out that household size, lifestyle and outdoor temperatures will affect the humidity level in the home. A home with an enclosed pool can be the source of excessive damaging moisture and requires special care in design, use and maintenance. To a lesser degree, saunas, hot tubs and whirlpools also require similar care. The owners are responsible for maintaining proper temperatures and humidity in the home as well as for damage caused by failure to do so.

As outside temperatures drop, the indoor relative humidity level of your home should be decreased. For homes equipped with at least insulating glass on their windows, the following levels can be used to keep window condensation to a minimum:

Humidity for:

Inside Relative:

Outside Air Temperature

-20 degrees F
-10 degrees F
0 degrees F
+1 degrees F
+20 degrees F

70 Degrees F Indoor Air Temp.

15 to 20 percent
20 to 25 percent
25 to 30 percent
30 to 35 percent
35 to 40 percent

1. Common Defect or Problem

Moisture condensation on windows.

Performance Standard

Moisture condenses on the window because it is the coldest object in any given room. Glass has a much higher rate of heat transmission than other surfaces; hence, it is the colder surface during the normal heating season. Moisture condensation on windows is an indication of either too much moisture in the room, or poor circulation of the moisture that is present. The owner can minimize this condition by merely opening a window to permit the excess moisture to escape or by installing a dehumidifying system if the condition persists. It should be noted that in homes with humidification equipment, the formation of moisture on the windows is an indication that the humidifying equipment is set too high and producing too much moisture.

Builder Repair Responsibility

None, except to explain to the owner more thoroughly how this condition is caused.

2. Common Defect or Problem

Moisture in attic.

Performance Standard

Builder must provide adequate ventilation to all areas of attic.

Builder Repair Responsibility

Builder to meet performance standards so that no moisture forms in the attic during normal weather conditions.

3. Common Defect or Problem

Dampness and moisture on basement walls, floors, pipes, etc.

Performance Standard

Owner should make sure that clothes dryer has been vented to the outside and no internal heat moisture recovery device is being used. Electronic dampers, if applicable, on furnace should be checked. Walls and slabs are cold due to ground conditions; warm moist air strikes the cold surfaces and condenses. Direct outside air should not be brought in as it is usually very moist during spring, summer and fall and the problem will be increased if such air is brought into the home.

Builder Repair Responsibility

None, other than explaining the causes to the owner and advising the use of a dehumidifier and increasing air circulation.

4. Common Defect or Problem

Water appears on interior crawl space surfaces.

Performance Standard

Crawl spaces should be graded and drained properly to prevent water from accumulating deeper than 1 inch and larger than 100 sq. ft. in crawl spaces area. Standing or ponding water shall not remain for extended periods after a rain (generally, no more than 72 hours) except in surfaces that drain other areas or in areas where sump pumps discharge. In these areas a longer period can be anticipated. The possibility of standing water after an unusually heavy rainfall should be anticipated by the owner.

Builder Repair Responsibility

The builder will take the necessary corrective measures to create positive flow within the crawl space or discharge water to the exterior of the structure.

5. Common Defect or Problem

Condensation on skylights.

Performance Standard

All skylights can develop condensation due to high humidity levels. If skylight is in bathroom, ventilating fans should always be used, or the window opened.

Builder Repair Responsibility

Builder not responsible for humidity levels in home.

6. Common Defect or Problem

Condensation on toilets.

Performance Standard

Condensation may occur during high humidity times of the year.

Builder Repair Responsibility

Builder not responsible for humidity levels in the home.

7. Common Defect or Problem

Condensation or frost on electrical outlets.

Performance Standard

Electrical junction boxes on exterior walls may produce airflow whereby the cold air can be drawn through the outlet into a room, sometimes creating condensation or frost.

Builder Repair Responsibility

None.

8. Common Defect or Problem

Mildew or fungus on painted surfaces.

Performance Standard

Mildew or fungus will form on a painted surface if the structure is subject to abnormal exposures or excessive moisture.

Builder Repair Responsibility

Mildew or fungus formation is a condition the builder cannot control and is a homeowner maintenance item.

CHAPTER 21

PAINTING, STAINING AND WALLPAPERING STANDARDS

Background

Preservation is the primary purpose of painting, varnishing and staining as they protect exposed surfaces, both interior and exterior, from environmental conditions and moisture penetration.

- Properly preparing the surface to accept the paint, stain or wallpaper, including filling nail holes and filling or sanding of imperfections.
- Properly applying material in accordance with manufacturer's recommendations.
- The number of coats to be applied as specified in the contract.
- Replacing hardware, fixtures and doors if they are removed for painting/staining or other finishing.
- Consequential damages are not the responsibility of the builder.
- By applying surface material or wall covering, the painting or wall covering contractor implies an acceptance of the work underneath.
- Grain variations in wood will accept stain/paint differently; therefore, it is not uncommon for two pieces of the same type wood, stained with the same product, to vary in color. An attempt should be made by the painter to leave small quantities of all paints and stains for future touch up, if there is any left.
- Some breakdown of the finish may occur around heavy concentrations of moisture (i.e. ranges, dishwashers, coffeepots, etc.) and is a homeowner maintenance item.
- Varnished, painted or stained millwork and floors must be cared for like furniture and cannot be scrubbed. Exterior varnished surfaces require more maintenance than painted surfaces.

1. Common Defect or Problem
Exterior paint or stain peels, including gutters, downspouts or other sheet metal areas.
Performance Standard
The occurrence of peeling should not occur during the warranty period.
Builder Repair Responsibility
Builder shall properly repaint affected areas, matching color as closely as possible. Owner must understand touch-ups may not match exactly. Should the paint deterioration affect the majority of a wall or area, the area should be repainted. The builder shall repaint in accordance with standards of good workmanship, but no warranty will be extended on the newly repainted surfaces.

2. Common Defect or Problem
Repainting of areas affected by drywall repairs.
Performance Standard
Industry standards require that the builder repaint new areas or repaired areas where painting has been affected by drywall repairs only when responsible for the repairs. Repairs required shall be finished to match surrounding areas as closely as possible. Owner must be aware that there may be a slight color mismatch.
Builder Repair Responsibility
Builder will finish repair areas as indicated above. Year-end drywall repairs not covered and are the owner's responsibility.

3. Common Defect or Problem
Deterioration of varnish, polyurethane or lacquer finishes.
Performance Standard
Natural finishes on interior woodwork shall not deteriorate during the first year of the warranty period. However, varnish type finishes used on the exterior will deteriorate rapidly and are not covered by the warranty. Millwork and floors must be cared for like furniture and cannot be scrubbed.
Builder Repair Responsibility
Builder will refinish affected areas of interior woodwork, matching the color as closely as possible.

4. Common Defect or Problem Insufficient coats applied.
Performance Standard
Builder is responsible to apply the number of coats specified in the contract.
Pre-priming of millwork or trim does count as one coat.
Builder Repair Responsibility
Builder to provide the proper number of coats as per manufacturer.

5. Common Defect or Problem
Paint and stain inside closet not of quality of other interior surfaces.
Performance Standard
Quality of workmanship may be lower in confined quarters where space limitations affect ability of workman to work freely.
Builder Repair Responsibility
Builder to paint and stain in a proper workmanlike manner within limitations stated above.

6. Common Defect or Problem
Mildew or fungus on painted surfaces.
Performance Standard
Mildew or fungus will form on a painted surface if the structure is subject to abnormal exposures or excessive moisture.
Builder Repair Responsibility
Mildew or fungus formation is a condition the builder cannot control and is a homeowner maintenance item.

7. Common Defect or Problem
Color variations within similar woods after staining.
Performance Standard
Since wood is a natural product and its grain structure is unique for each piece of wood, builder cannot guarantee an exact color match.
Builder Repair Responsibility
None.

8. Common Defect or Problem
Color variations between different types of woods after staining.
Performance Standard
Dissimilar woods cannot be matched exactly.
Builder Repair Responsibility
None.

9. Common Defect or Problem

Doors warp.

Performance Standard

The owner should note that during the initial building stabilization period, it is not unusual for doors to warp or twist and alternately stick or not close as the home goes through its initial settling and drying period, especially over the first heating season. The builder is obligated only to make replacements after this initial stabilization period, since often the door straightens in that process. Doors must be sealed on all six sides by the person contractually responsible for painting/staining.

All interior doors, closet doors, cabinet doors or drawers whose warpage exceeds the National Woodwork Manufacturers Association Standards (approximately ¼ “ in most cases), and where the warp cannot be corrected by adjustment of either jambs, stops, and/or hinges and cabinet catches to properly latch after initial stabilization period of the home, approximately the end of the first year, shall be replaced by the builder assuming the person responsible for painting/staining has sealed all six sides.

Builder Repair Responsibility

Builder to adjust, upon request of the owner, one time only, preferably at the end of the warranty period, any doors that fail to operate properly, assuming that all six sides have been sealed by owner if owner was responsible for painting/staining. Replace any doors, which cannot be corrected to be within performance standards after stabilization. Refinishing to be the responsibility of party contractually responsible for painting/staining.

10. Common Defect or Problem

Wallcovering pulls loose.

Performance Standard

Wallcovering should not pull loose.

Builder Repair Responsibility

Provided the wallcovering is in the builder's contract, it should be repaired. If a patch must be made, builder shall match as closely as possible. Because of dye lot differences, owner must understand exact match may not be possible. If installed by owner, wallcovering repairs are the owner's responsibility.

11. Common Defect or Problem

Edge mismatching in pattern of wallcovering.

Performance Standard

Wallcovering should match as closely as possible.

Builder Repair Responsibility

Builder to repair to meet performance standard. Because of dye lot differences, owner must understand that an exact match may not be possible.

CHAPTER 22 PLUMBING STANDARDS

Background

Plumbing system installation is performed by licensed contractors in accordance with detailed plumbing code requirements. These code requirements were established primarily for individual and public health reasons.

1. Common Defect or Problem
Leakage of any kind from piping.
Performance Standard
No leaks of any kind should exist in any soil, waste, vent or water pipe. Condensation on pipes or sweating fixtures does not constitute a leak.
Builder Repair Responsibility
Builder shall make necessary repairs to eliminate leakage.

2. Common Defect or Problem
Faucet leak or valve leak.
Performance Standard
No valve or faucet should leak.
Builder Repair Responsibility
Builder shall repair or replace the leaking faucet or valve. Washer or cartridge replacement is a homeowner's responsibility after the first year.

3. Common Defect or Problem
Water pipe banging/water hammer.
Performance Standard
There can be some instances when the electric valves on appliances or single control valves are shut off fast, which can cause some banging. All noises due to water flow and pipe expansion cannot be removed.
Builder Repair Responsibility
Builder is responsible to have pipes fastened properly.

4. Common Defect or Problem Fixtures do not hold water.
Performance Standard
Stoppers on fixtures should retain water for a sufficient length of time to accomplish the fixture's intended use.
Builder Repair Responsibility
Builder to correct until fixture holds water to meet performance standard.

5. Common Defect or Problem

Cracking, scratches or chipping of porcelain, fiberglass surfaces or faucets.

Performance Standard

Chips, cracks and scratches on surfaces of bathtubs, kitchen sinks and faucets can occur when surface is hit with sharp or heavy objects.

Builder Repair Responsibility

Builder shall repair any fixture or fitting which is outside acceptable standards as defined by the manufacturer. Builder will not be responsible for repairs unless damage has been reported to builder in writing at the home orientation tour "HOT" inspection prior to closing.

6. Common Defect or Problem

Stopped-up sewers, fixtures and drains.

Performance Standard

Sewers, fixtures and drains should operate properly to accomplish their intended function.

Builder Repair Responsibility

Builder will not be responsible for sewers, fixtures and drains, which are clogged through natural causes or the homeowner's negligence. If a problem occurs, the homeowner should consult builder for a proper course of action. Where defective construction is shown to be the cause, builder will assume the cost of the repair. Where homeowner negligence is shown to be the cause, the homeowner shall assume all repair costs.

7. Common Defect or Problem

Waste disposal unit does not operate properly.

Performance Standard

Disposal unit must accomplish its intended function.

Builder Repair Responsibility

Builder will repair any defective fixture or fitting which does not meet acceptable standards, as defined by the manufacturer, unless caused by homeowner negligence.

8. Common Defect or Problem

Sump pump does not operate.

Performance Standard

Sump pump should reasonably be expected to perform for a one-year period satisfactorily, unless unusual conditions such as underground springs or high-water tables are encountered. Owner is responsible for maintaining a proper grade and downspout extensions should be used to keep water from pooling near foundation.

Builder Repair Responsibility

Builder shall repair or replace malfunctioning sump pump, except under unusual conditions.

9. Common Defect or Problem

Inadequate flushing of toilets.

Performance Standard

It is not unusual for a toilet to be flushed twice due to energy conservation fixtures.

Builder Repair Responsibility

None, unless it is a manufacturer's defect or plumbing clog which is the cause. See item #6 for more information.

10. Common Defect or Problem Plumbing pipes freeze and burst.

Performance Standard

Drain, waste, vent and water pipes shall be adequately protected, as required by applicable code, during normally anticipated cold weather, and as defined in accordance with ASHRAE design temperatures, to prevent freezing.

Builder Repair Responsibility

Builder will correct situations not meeting code. It is the homeowner's responsibility to drain or otherwise protect lines and exterior faucets and hose bibs even if they have an anti-siphon valve attached exposed to freezing temperatures.

11. Common Defect or Problem

Condensation (sweating) of pipes.

Performance Standard

Condensation (sweating) is normal and may occur most often in well water systems due to the extreme cold temperature (45-50°F of water) of well water and humid basements.

Builder Repair Responsibility

None, unless pipe is leaking. A dehumidifier and pipe and tank insulation can be added by the owner.

12. Common Defect or Problem

Defective appliance or fixtures supplied by owner.

Performance Standard

Any appliances or fixtures supplied by the owner will not be warranted for leakage, etc. by the builder. There may be some instances where a plumber will not install an owner's fixtures if the fittings are not proper.

Builder Repair Responsibility

None.

CHAPTER 23 ROOFING STANDARDS

Background

The purpose of roofing material is to form a weatherproof surface, which prevents water or snow from entering the house. The materials used must be both waterproof and wind-resistant to afford effective protection of the dwelling.

Roofing materials have various life expectancies. Life expectancy is dependent upon building orientation to the sun and roof slope. The manufacturer provides a written warranty for each particular product, which delineates what is and is not covered. Although the sun is the major damaging force, wind and moisture also cause deterioration.

There are several types of roofing material used including asphalt, glass fiber, asbestos, wood tile and slate. The normal measurement of shingling material is the "square" which represents enough material to cover 100 square feet of roof area. Most man-made roofing materials are sold on the basis of longevity rather than weight and can be divided into several categories: organic vs. fiberglass, standard, laminated and specialty.

Wood shakes, slate, metal, tile and other specialized roofing materials each have a specific method of installation recommended by the manufacturer.

Shingle underlayment must be applied directly to roof boards. The purpose for this underlayment is as a secondary barrier to the roof covering.

Roofs or flashing should not leak under normally anticipated conditions. However, occasionally leakage may result from severe weather conditions, such as ice buildup, high winds or driving rain.

During extreme weather conditions, water may overflow the gutters. Homeowners should check gutters and downspouts regularly to prevent leaf build-up in the fall, and snow and ice dams in the winter, which can cause water to backup under shingles and cause leaks.

Storm damage to properly installed roofing is the owner's responsibility.

It must be noted that in the case of a repair to a roof, every effort should be made by the builder to match material and color as closely as possible. The homeowner must expect color variations.

1. Common Defect or Problem

Roof leaks.

Performance Standard

Roof should not leak. See homeowner's maintenance responsibility below. The integrity of the roof is dependent upon the performance of many trades. Roof application, sheet metal work, siding application, masonry, carpentry and plumbing can all have an effect on the ultimate performance of the roof system.

Builder Repair Responsibility

When a leak appears, builder should make an inspection to assure that the proper trade makes the repair, except when the leakage is a homeowner's maintenance responsibility.

Homeowner Maintenance Responsibility

Excessive ice or snow buildup with alternate freezing and thawing can create a condition causing leakage, which is a homeowner's maintenance responsibility. Owner can correct this by preventing leaf buildup gutters and removal of excess snow and ice. In severe cases, a gutter heating cable can be used. On some occasions, a driving rain with high wind velocity can produce a temporary leak. Owner can also contact builder as to alternative suggestions on how to correct.

2. Common Defect or Problem

Furnace/HVAC vent or chimney flashing leaks.

Performance Standard

Chimney or chimney flashing should not leak.

Builder Repair Responsibility

Builder to check and repair chimney flashing. On particularly persistent and severe leaks, the builder may find it necessary to modify or install a saddle between the roof and the chimney to divert roof water runoff from the chimney. If the flashing is not the cause of the leak, owner is responsible to seal masonry.

3. Common Defect or Problem

Shingles blow off.

Performance Standard

Shingles should not blow off during the warranty period except under storm conditions. It should be noted that seal down shingles require heat from the sun to cause their sealing, so that some warm weather is required to affect the full seal.

Builder Repair Responsibility

Builder to repair shingles that have blown off if not due to winds in excess of basic wind speeds (above 100mph). In a repair situation, the owner is cautioned that a color mismatch in shingles may occur.

4. Common Defect or Problem
Shingle color mismatch.
Performance Standard
Color variations in roofing materials are normal and acceptable and are not covered under any warranty. Angle of the sun, granule placement, pitch of the roof, and many variables can all have an effect on the appearance of the roof.
Builder Repair Responsibility
None.
5. Common Defect or Problem
Broken shingles.
Performance Standard
Broken shingles must be replaced if reported to builder in writing prior to occupancy.
Builder Repair Responsibility
Builder to repair and match shingles as closely as possible.
6. Common Defect or Problem
Standing water on flat roof.
Performance Standard
Flat roofs must be installed according to manufacturers' specifications.
Builder Repair Responsibility
Builder to repair to manufacturer's specifications.
7. Common Defect or Problem
Moss and fungus growth.
Performance Standard
Under some conditions, moss and fungus tends to grow on shingles.
Builder Repair Responsibility
None. Homeowners may wish to pursue remedies on the market that can be applied to shingles to prevent or retard these conditions.
8. Common Defect or Problem
Skylights leak.
Performance Standard
Skylights should not leak.
Builder Repair Responsibility
Builder to repair. Care should be taken not to confuse condensation for leakage. Refer to Chapter 20, Moisture Standards, item #5.
9. Common Defect or Problem
Roof vents leak.
Performance Standard
Under driving rains or snow conditions, vents may leak. Vents are a necessary and integral part of a building. Anything that lets air out can, under certain circumstance, let snow or rain back in.
Builder Repair Responsibility
This is a normal, temporary condition, which should require no repair.

10. Common Defect or Problem

Ridges of roof decking showing through roof.

Performance Standard

If the ridge or depression effect exceeds 3/8" and cannot be corrected from below, the ridge must be corrected. The ridge measurements should be made by measuring the gap created when a 6" straight edge is placed tightly 3" on one side of the defect and the gap measured between the roof and the straight edge of the other end. Fiberglass shingles will magnify and mirror any unevenness of the roof decking below.

Builder Repair Responsibility

Builder to meet performance standard.

11. Common Defect or Problem

Chimney flashing leaks.

Performance Standard

Chimney flashing should not leak. However, some masonry is porous, allowing moisture/dampness to seep in under certain conditions.

Builder Repair Responsibility

Builder to check and repair chimney flashing. If the flashing is not the cause of the leak, owner is responsible for sealing the masonry. On particularly persistent and severe leaks, the builder may find it necessary to modify or install a saddle between the roof and the chimney to divert roof water runoff from the chimney.

12. Common Defect or Problem

Any other flashings, valleys and roofing leak.

Performance Standard

Flashings, valleys and roofing should not leak.

Builder Repair Responsibility

Builder to repair.

13. Common Defect or Problem

Gutters and downspouts leak.

Performance Standard

Gutters and downspouts should not leak but may overflow during heavy rains. It shall be the owner's responsibility to keep gutters and downspouts free of leaves and debris which could cause excessive overflow. A leak is defined as a steady stream of water, a drip does not constitute as a leak.

Builder Repair Responsibility

Builder to repair so gutters and downspouts do not leak.

14. Common Defect or Problem

Water stands in gutters.

Performance Standard

A water level not in excess of 1” depth in any gutter section after the rain ceases when unobstructed by debris is acceptable. Industry practice is to install gutter approximately level without pitch. Consequently, it is entirely possible that small amounts of water will stand in certain sections of the gutter after a rain.

Builder Repair Responsibility

Builder shall correct when water level is in excess of 1” in depth.

CHAPTER 24

SIDING STANDARDS

Background

There are numerous types of siding. Wood and wood products, aluminum, cement board and vinyl are the most prevalent types being used. Each product is different and has its own inherent characteristics.

Caulking is an owner's maintenance responsibility after occupancy. It should be noted that caulk does not adhere to vinyl siding and thus, as per manufacturer's recommendation, vinyl is not caulked.

1. Common Defect or Problem

Dents, chips or scratched on the siding.

Performance Standard

Dents are to be noted in writing at the time the owner closes or takes occupancy of the home.

Builder Repair Responsibility

Builder to repair within one year of substantial completion or initial closing if notified prior to occupancy, whichever is later. It should be noted that repaired area may not match in color and/or textures.

2. Common Defect or Problem

Siding comes loose.

Performance Standard

Siding should not come loose.

Builder Repair Responsibility

Builder to refasten.

3. Common Defect or Problem

Caulking cracks.

Performance Standard

All types of caulk can dry out. Caulking becomes an owner maintenance responsibility after COE/occupancy.

Builder Repair Responsibility

None

4. Common Defect or Problem

Fading siding.

Performance Standard

Siding will fade.

Builder Repair Responsibility

None.

5. Common Defect or Problem

Wood shrinks, cracks, twists, bows and knots fall out.

Performance Standard

Due to the inherent characteristics of wood, all of the above may happen.

Builder Repair Responsibility

Builder will caulk knot holes one time and any gaps in excess of 1/2" shall be caulked if noted prior to occupancy. The owner shall notify the contractor within 30 days after completion of construction if a preoccupancy inspection was not conducted. After occupancy, this is a homeowner maintenance responsibility.

6. Common Defect or Problem

Wood siding splits where nail penetrates.

Performance Standard

If noted in writing to builder within 30 days after completion of construction if a preoccupancy inspection was not conducted, builder to replace/repair piece and restain, if staining was builder's responsibility.

Builder Repair Responsibility

Builder to repair in accordance with performance standard.

7. Common Defect or Problem

Lap on wood bevel siding.

Performance Standard

Lap shall be no less than 3/4" prior to shrinkage.

Builder Repair Responsibility

Repair to meet performance standard.

8. Common Defect or Problem

Delamination of veneer siding.

Performance Standard

All siding should be installed according to manufacturer's accepted standards. Delamination's shall be repaired or replaced. If owner is responsible for staining or painting of exterior surfaces and does not do it, builder is not responsible for delamination.

Builder Repair Responsibility

Builder will repair or replace siding as needed unless caused by homeowner's neglect to maintain siding properly. Repaired area may not match in color and/or texture. For surfaces requiring paint, builder will paint only the new materials if builder was responsible for exterior painting or staining. The homeowner can expect that the newly painted surface may not match the original surface in color.

9. Common Defect or Problem

Paint peels or fades on wood siding.

Performance Standard

Exterior paints or stains should not fail during the first year. However, fading is normal, and the degree is dependent on climatic conditions.

Builder Repair Responsibility

If paint or stain peels and builder is responsible for painting, builder will properly prepare and refinish affected areas, matching color as close as possible. Where finish deterioration affects the majority of the area, the whole area will be refinished. The builder shall repaint in accordance with standards of good workmanship, but no warranty will be extended on the newly repainted surfaces.

10. Common Defect or Problem

Cracks in exterior stucco wall surfaces.

Performance Standard

Cracks are not unusual in exterior stucco wall surfaces.

Builder Repair Responsibility

Builder will repair cracks exceeding 1/8" in width or where causing water damage.

CHAPTER 25

WINDOW STANDARDS

Background

Air infiltration around double-hung and slide by windows.

Homeowners are cautioned not to use razor blades when cleaning windows.

1. Common Defect or Problem

Scratches, cracks or breakage of glass not caused by vandalism.

Performance Standard

If glass damage is not reported to builder in writing prior to occupancy, it is the homeowner's responsibility.

Builder Repair Responsibility

Builder to repair only if noted in writing prior to COE.

2. Common Defect or Problem

Holes in screens not caused by vandalism.

Performance Standard

If screen damage is not reported to builder in writing prior to occupancy, it is the homeowner's responsibility.

Builder Repair Responsibility

Builder to repair only if noted in writing prior to occupancy.

3. Common Defect or Problem

Window check rails not even or flush.

Performance Standard

Acceptable tolerance is 3/16".

Builder Repair Responsibility

Builder to correct.

4. Common Defect or Problem

Out of plumb windows.

Performance Standard

Windows must operate with reasonable ease as designed.

Builder Repair Responsibility

Builder to repair to be operable.

5. Common Defect or Problem

Windows do not operate properly.

Performance Standard

Windows shall operate with reasonable ease as designed.

Builder Repair Responsibility

Builder to correct as required.

6. Common Defect or Problem

Air infiltration around doors and windows.

Performance Standard

Drafts around the doors and windows are cold spot sources. Proper weather-stripping and insulating around these areas can minimize air passage. However, under certain temperature and wind conditions, some infiltration will be observed by the homeowner.

Builder Repair Responsibility

Builder/Manufacturer to adjust poorly fitted doors, windows and weather-stripping.

7. Common Defect or Problem

Moisture condensation on windows.

Performance Standard

Moisture condenses on the window because it is the coldest object in any given room. Glass has a much higher rate of heat transmission than other surfaces; hence, it is the colder surface during the normal heating season. Moisture condensation on windows is an indication of either too much moisture in the room, or poor circulation of the moisture that is present. The owner can minimize this condition by merely opening a window to permit the excess moisture to escape or by installing a dehumidifying system if the condition persists. It should be noted that in homes with humidification equipment, the formation of moisture on the windows is an indication that the humidifying equipment is set too high and producing too much moisture. It is also recommended that screens be removed from casement windows during the heating season.

Builder Repair Responsibility

None, except to explain to the owner more thoroughly how this condition is caused.

CHAPTER 26

SITE DRAINAGE AND EROSION STANDARDS

Background

Site drainage must comply with all applicable building codes in subject jurisdiction. All sites must be prepared initially to prevent or reduce erosion from excessive water runoff. Homeowner maintenance is required after possession of site.

1. Common Defect or Problem

Heavy rains will cause erosion where grass and sod has not had time to be permanently established. Additional landscaping by homeowner or his agents can change the topography of site.

Performance Standard

The defects or problems can be determined by visual inspection or by additional information gathered at site inspection.

Builder Repair Responsibility

None

CHAPTER 27

MANUFACTURER INSTALLATION STANDARDS

All building material affixed to the residential structure, shall be installed in accordance with the adopted building codes and/or the manufacturers Installation instructions.