MADISON AREA BUILDERS ASSOCIATION

SUGGESTED STANDARDS FOR RESIDENTIAL CONSTRUCTION

Guidelines for Contractual Negotiations of Performance Standards Between Builders and Homeowners

This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. It is provided with the understanding that the publisher is not engaged in rendering legal, accounting, or other professional service. If legal advice or other expert assistance is required, the services of a competent professional should be sought.

> -From a Declaration of Principles jointly adopted by a Committee of the American Bar Association and a Committee of Publishers and Associations

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Construction Industry Quality Standards

PURPOSE OF PUBLICATION

INTRODUCTION

Beyond building codes and local regulations, Builders, Remodelers, Contractors, and Buyers have long sought a measurable benchmark that deals with the expectations of performance in the goods and services provided by the residential construction industry. The purpose of this Construction Industry Quality Standards publication ("Standard(s)") is to provide a basic performance level for residential construction in this market area. The guidelines are intended for use as a reference and should be interpreted, always, with common sense. They should be applied only within the scope of the project being performed and are not intended to answer all questions pertaining to the quality of construction that might arise in the course of a typical residential construction project. The guidelines selected for this Standard deal with those issues that most frequently give rise to questions for Builders, Remodelers, Contractors, and Buyers. Although many Builders, Remodelers and Contractors routinely build to higher standards, this is a collection of minimum performance criteria and should be interpreted as such.

A perfect home cannot be built by any Builder and/or Contractor. A perfect remodeling or addition project cannot be completed by any Remodeler and/or Contractor. Because of the wide range of materials used in the building of a new home, the remodeling of an existing home or the construction of an addition, materials and finishes are subject to some degree of imperfection through handling and installation. Minor scratches, dents or other imperfections in construction materials will occur and are unavoidable. Variations in wood finishes can be by natural variations in wood surfaces and how the wood species takes those finishes, and such variation are likely to occur. Natural variations in wood are not controllable. Minor and hard to see nicks, scratches, cuts, blemishes, color and finishing variations are normal. Items such as scratches, nicks, chips, gouges, etc. must be reported to the Builder, Remodeler or Contractor in writing prior to occupancy, or will become the Buyer's responsibility. There are many items that are Buyer maintenance responsibilities. A Buyer should become educated on these responsibilities.

These Standards do not constitute a warranty nor are they intended as a substitute for a warranty, however, all parties may agree to incorporate them by reference within a warranty or within any other construction contract provision. They are separate and distinct from any manufacturers', suppliers' or fabricators' warranties that may apply to materials and products used in the project. Builders, Remodelers and/or Contractors often refer to these Standards in the Dispute Resolution section of their contracts as the first step prior to any mediation, arbitration, or other legal action. Essentially, these Standards provide a basic criterion that often serves to eliminate the need for any type of dispute resolution in several cases.

These Standards are applicable for the first year of occupancy only.

Nothing in these Standards should be construed as policy, an endorsement, warranty (express or implied), or guaranty by the Madison Area Builders Association ("MABA") or any persons or organizations involved in the creation of this publication of any technical descriptions, systems, details, requirements, materials, or products. The MABA expressly disclaims any responsibility for any damage arising from the use, application, or reliance on the recommendations and information contained in these Standards.

SCOPE OF RESPONSIBILITIES

Typically, numerous parties are involved in a residential construction project, whether it is building a new home or remodeling an existing one. Each of these parties has specific responsibilities to fulfill. The contract documents should provide a clear statement of the agreement between the Builder, Remodeler or Contractor and the Buyer. In addition to the specific provisions of any contract, the following general responsibilities should be noted:

The Builder or Remodeler: For the purposes of these Standards, the Builder or Remodeler is the company named in the contract that has primary responsibility for completing the project. The Builder or Remodeler often employs others, often referred to as contractors or subcontractors and shall collectively referred to as "Contractor(s)" for the purposes of this publication, to assist in completing the construction. In most cases, the Builder or Remodeler is responsible for all work assigned in the contract regardless of who performs the work. If the Buyer selects others to work on the project that are outside the Builder's or Remodeler's control, then the responsibility for evaluation and remedy of proposed problems with that work will be the Buyer's responsibility.

The Buyer: The Buyer is the purchaser of the product or service named in the contract. The Buyer is responsible for carefully reviewing the contract and specifications to insure it accurately represents his or her expectations for the final product. Once the Buyer has accepted the project and moves into the home or occupies the newly renovated space, then he or she is responsible for routine maintenance and upkeep. Buyers should note that in some of the performance requirements contained in these Standards, the Builder or Remodeler is not obligated to make repairs to items when they fall within the Buyer's maintenance responsibility. If the Buyer selects others to work on the project that are outside the Builder's or Remodeler's control, then the responsibility for evaluation and remedy of proposed problems with that work will be the Buyer's responsibility.

The Manufacturer or Supplier: Manufacturers or Suppliers warrant many residential construction components that may fall outside the scope of the Builder's or Remodeler's responsibilities, such as kitchen appliances, furnaces, air conditioners, and the like. Other less obvious items may include certain types of siding, roofing, or flooring. If there is a warranty problem with one of these components, the Buyer should be aware that the Builder or Remodeler might not be responsible for the performance of the product once it is installed. If a problem occurs, the Buyer will often deal directly with the Manufacturer or Supplier to have the problem evaluated and, if necessary, rectified. The Builder's or Remodeler's responsibilities may end once he or she provides the appropriate information on how to contact the Manufacturer or Supplier, unless otherwise specified in the contract.

STANDARDS - GUIDELINES

These Standards are intended to specify the minimum performance level for construction of homes, the remodeling of an existing home or an addition to an existing home.

These Standards describe the most common and repetitive situations. It is not possible to discuss every conceivable situation that can occur in building a new home or remodeling an existing home or adding an addition. Because of the limitless combinations that can be incorporated into a home, infinite conditions can occur. Likewise, the validity of any Buyer's complaints for deficiency for which a standard has not yet been dressed herein shall be determined based on good industry practice. Disagreements not addressed within this publication shall be resolved through mediation and/or arbitration.

The following Standards are expressed in terms of performance standards. Non-compliance with the Standards calls for corrective action by the Builder or Remodeler. The format is designed for easy comprehension by both Buyer and Builder, or Remodeler as follows:

1. **Common Deficiency or Problem** - a brief statement in simple terms of the problems to be considered.

2. **Performance Standard** - a performance standard relating to a specific deficiency.

3. **Builder or Remodeler Repair Responsibility** - a statement of the corrective action required of the Builder or Remodeler to repair the deficiency or any other damage resulting from making the required repair. The method of correction to meet the Standard is at the Builder's or Remodeler's discretion. Alternatives for making acceptable repairs exist in most cases.

4. **Buyer's Responsibility** (optional) – a statement noting that the corrective action is the Buyer's responsibility, due largely to maintenance being a factor in the Common Deficiency or Problem. This statement will generally note optional methods that Buyers can take to correct the problem.

In many areas of the construction process, the work is required to follow locally approved, applicable building codes. **If any conflict arises between these Standards and applicable codes, as a matter of law, the code requirements take precedence over these Standards.**

These Standards apply only to contracting work as specified in the contract documents for the project. They do not apply to designs, plans, materials, or workmanship that is supplied by the Buyer or is outside the scope of the project. They are also designed to apply only to the part of the job addressed in each Standard.

ACKNOWLEDGMENTS

The MABA gratefully acknowledges the leadership and commitment of the members of the Suggested Standards Task Force, in partnership with staff and members of the Wisconsin Builders Association (WBA), and the Metropolitan Builders Association (MBA), in creating this update and producing these Standards through the direction of the MABA's Board of Directors.

GRADING, GROUND REMOVAL, GRAVEL & FILL STANDARD

Background
This standard is meant to help obtain a uniform acceptable understanding of grading and related issues. It is not meant to supersede or substitute for other governmental agency or community restrictions. Moisture, soil, and weather conditions greatly affect the cost and timetable of work performed under this section. Because of this, the cost of this work is hard to estimate and therefore it is often performed on an allowance basis. Grading is performed and charged on an hourly basis, which generally includes travel time.

Excavation
Excavated soil is normally cast around the foundation except where lot size, site conditions and/or elevation requires its removal. Trucking or grading costs to move or remove soil are the responsibility of the Buyer, unless otherwise defined in the construction contract. The Contractor is responsible for setting the elevation, or following the elevation approved by the municipality.

Hauling (Trucking)
Hauling away excess ground or supplying and hauling in required fill, unless otherwise specified in the contract, are an extra cost to the Buyer.

Stone & Gravel
Stone can be used as fill of any kind, including driveway fill, garage fill, frost wall fill, fill under basement floors and garage floors, stoops, and porches. If stone and gravel work is done on an allowance basis, the "allowance value" will include both the material costs and material delivery and placement charges.

Backfilling
Backfilling is to fill the exterior around a foundation or in a trench using mechanical equipment, generally utilizing only the ground which was available from the excavation. Using mechanical equipment, the grader slopes the terrain to provide drainage away from the foundation. Bringing in additional stone or fill would be an additional cost to the Buyer. 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 to begin the process of ground settlement. Depending on the soil type, ground settlement can take several years.

Rough Grading
Using mechanical equipment, the grader slopes the terrain to provide drainage away from the foundation. This is normally done in an allowance specified in the contract. Contractor is not responsible for settling. Often, this step is done concurrently with backfilling.

Finish Grading
Using mechanical equipment and the dirt on the site, the grader establishes the yard grade with respect to the building, walls, drive, and adjoining properties.

Final Grading
[See Landscape Standard.]

These Quality Standards are applicable for the first year of warranty only.

1. **The ground has settled around the foundation, over utility trenches, or in other areas.**
   Performance Standard
   Backfilled ground will settle.

Contractor Repair Responsibility
None.

Buyer Repair Responsibility
Buyer is responsible for maintaining a positive slope away from the foundation, as defined by code.

2. **Wet basement walls after backfilling or rough grading due to insufficient slope away from the foundation when Contractor is responsible for backfill and/or rough grading only.**
Performance Standard
Wet walls during construction are usually a result of settling, poor grade, loose fill or depressions around the foundation. This is a common occurrence prior to completion of the final grading. The subsequent proper grading and landscaping should eliminate damp or wet basements.

Contractor Repair Responsibility
None.

Buyer Repair Responsibility
See #1 of this Section, "Buyer Repair Responsibility."

3. **Extra costs incurred at time of excavation or grading due to poor subsoil conditions, frost, springs, drain tile, rock formations, tree stumps, trees, high water table, etc.**
Performance Standard
All extra costs related to these types of items shall be paid by the Buyer.

Contractor Repair Responsibility
None, except to provide documentation to substantiate costs.

4. **Improper drainage of the site (excluding backfilled areas).**
Performance Standard
To ensure proper drainage in the immediate area around the home, the Contractor shall establish the necessary grades and swales if the work is included in the contract. Standing water shall not remain for more than 24 hours period after the rain ends, within 10-foot area around the house. An exception to this would be grading plan swales and lot lines that drain other areas or in areas where sump pumps discharge. In these areas a longer period can be anticipated (generally no more than 48 hours). Water may stand longer during periods of heavy rains, especially when heavy rains occur on successive days. No grading determination shall be made while frost or snow is on the ground or while the ground is saturated.

Contractor Repair Responsibility
If Contractor did rough grading only, there is no repair responsibility. If Contractor has done the finish grading and landscaping, the Buyer is responsible to re-establish the proper grades and swales as well as maintaining such grades and swales.

CONCRETE & MASONRY STANDARD

Background

Concrete and masonry work in residential construction is most often the base structure upon which the house is built. It may also provide the veneer for the architectural appearance and is a system growing in popularity for reasons of durability and performance for the house itself. The work is performed with manufactured or natural materials combined through manual labor and therefore can express variations in natural color and size uniformity. Subject to harsh weathering conditions such as erosion, freezing and thawing and chipping these systems are designed for permanence or longevity. The work can also be performed with an almost infinite variety of materials, methods of application and techniques of installation. This permits the Buyer a wide range of choices, creating a finished product that can never fully be duplicated. The final appearance of either concrete or masonry work is dependent upon the variation of the product and the techniques of the individual workman.

Builders and homeowners should consult the latest edition of the Wisconsin state building codes (UDC: Uniform Dwelling Code) along with standards provide by the ACI (American Concrete Institute and the WARFP (Wisconsin Association of Foundation Repair Professionals) for the most up to date requirements for new construction and remodeling/repair projects. They include and are not limited to:

Masonry and concrete work consist of four primary divisions:

1. **Foundations** – The construction of a basement which may be of cast-in-place (poured) concrete, concrete block masonry, or engineered systems

2. **Flatwork** – The placing of basement slabs, garage floors, stoops, patios, walks or drives.

3. **Veneer** – The veneering of the interior or exterior of some structures with brick, stone, cultured stone, or other masonry products.

4. **Structural Shells** – The construction of above-grade shells which may be of cast-in-place (poured) concrete, concrete block masonry, or engineered systems and include walls, suspended slabs and even roofs.

Depending on the severity of the climate and the division (location) for the application of this work, weathering variables and nature of the concrete or masonry work itself will require consideration. Concrete is subject to natural stresses including shrinkage, settling, volume change and temperature. These stresses as well as structural loads create cracks. These cracks may not affect the integrity of the structure, which is why reinforcement is added for controlling cracks.

Flatwork

Flatwork is rarely a structural component of the house. However, concrete driveways and garage floors are subject to the elements and are attacked by deicing chemicals. Pitting, scaling, or spalling can develop under unusual conditions or when certain salts or chemicals are placed on a slab in winter for ice removal or drop from a car onto a garage slab and/or drive. Proper Buyer maintenance is required. A certain amount of surface dusting can be normal along with surface crack development. A sealer can be applied by the Buyer to the concrete to minimize dusting, spalling or other effects from chemicals. Settling is a natural phenomenon in the construction of a new home and concrete slabs are subject to the settling process. For this reason, it is recommended that wherever possible, the construction of floating slabs, such as patios, walks and drives, be postponed until at least the end of the first year of occupancy or even longer so that a more stabilized soil condition will be available prior to doing the work. Exterior slabs or slabs in an unheated area may heave in the winter due to frost.

Walls

Like flatwork, cracking is normal and a natural characteristic of concrete. Cracks in walls are usually caused by shrinkage of the concrete during the volume change that occurs during the curing process. Expansion and contraction due to temperature and humidity changes may also occur throughout the life of the house.

Cracks in concrete walls or mortar joints of concrete masonry foundations may not compromise the structural integrity of the home and the design of reinforcement assumes cracking.

Pre-Cast Concrete

All standards for pre-cast concrete falls under the design, installation guidelines and warranty of the manufacturer.

Appearance

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

When concrete is used as a decorative or finished material, the Buyer should be aware that the same standards apply. The Buyer is cautioned that samples used for selecting colors are not very good indicators of the final product, as variables within the cement affect the color and texture of the finished product along with color migration over time, humidity, and other variables. Any repair to decorative concrete cannot be guaranteed to match the existing product. Furthermore, periodic maintenance of the concrete, including waxes, tints, and sealers, are often necessary to maintain the intended appearance of the decorative concrete.

These standards are applicable for the first year of warranty only.

FOUNDATION WALLS

1. **Interior surface of a basement/foundation wall is wet.**

   Performance Standard

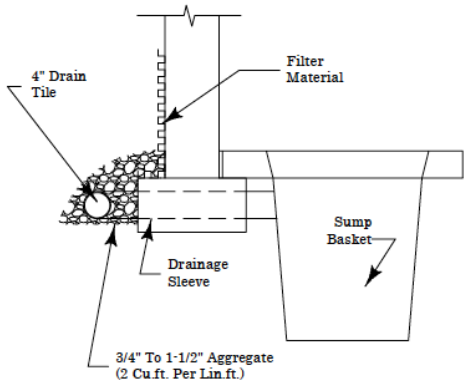
   The interior surface of a basement or foundation wall is considered wet if persistent moisture exists, over an extended period, on the surface of the wall. It is not acceptable for leaks or flow of water to exist.

   Causes

   Wetness of a basement or foundation wall is most often due to excessive groundwater. Cracks in a wall left untreated will allow moisture to migrate through the wall. Additionally, long-term exposure to persistent excessive water without treatment will allow the migration of water through any concrete section. Groundwater adjacent to foundations is most often caused by an improper ground pitch toward the foundation. A proper grade must be delivered by the contractor and maintained by the Buyer. The International Residential Code (IRC) requires a proper pitch to be 6 in. (300 mm) of fall for every 10 ft. (3.05 m) away from the foundation. Failure to maintain downspouts and gutters for designed removal of rainwater away from the foundation can also lead to excessive groundwater as well as a failed, ineffective, or non-present drainage system at the perimeter base of the foundation. A foundation contractor cannot be held responsible for unknown or unforeseen subsoil conditions or improper landscaping by the Buyer. If the basement has an engineered waterproofing system (spray-applied or mechanically fastened), the Buyer should refer to the manufacturer's warranty.

Contractor Repair Responsibility

Once a proper grade has been established at the proper height and pitch away from the foundation, if wet conditions, leaks, or flow of water still exist, then Contractor will correct as required to include waterproofing systems, repair of drainage systems and injection crack repairs. Any openings made to correct should be repaired. Color variations and hairline cracks in repairs are to be expected.



2. Basement wall is damp.

Performance Standard

Periodic dampness of basement walls, discoloration or water beads can be normal. However, the presence of moisture should not be persistent in significant quantity at the base of the wall and no water flows should be present on the face of the wall (see #1 above).

Cause

Water condensation is a condition occurring when the relative humidity of the air confined by the foundation meets a wall surface cooler than the air temperature itself. Often uninsulated basement or foundation walls are exposed in areas of a foundation with little to no air movement that would mix warm moist air with cooler and/or drier air. The moisture condenses from the warm humid air on the colder concrete surface and becomes absorbed by the natural pores of the concrete.

Contractor Repair Responsibility

There is no responsibility for this condition by the foundation contractor unless the relative humidity is determined to be the cause of a drainage system issue. If this is determined, cases of water flow or persistent moisture presents, see # 1 above. The mechanical contractor should be consulted for potential issues with the HVAC system or altered use of the structure has resulted in the need for improvements to be made.

Neither the builder nor the homeowner can control the effects of a high-water table or extreme weather conditions, flooding, underground springs, etc.

3. Cracked basement wall.

Performance Standard

Vertical cracks or diagonal cracks at the corners of openings in foundations not exceeding 3/16 in. (5 mm) that do not leak water are acceptable and to be considered as normal. These include step cracks in concrete block walls at mortar joints through one course of block or where a horizontal crack at a mortar joint with no bowing. Cracks that leak need to be investigated and repaired as determined per #1 above. Cracks that are not vertical, evidence displacement or are wider than 3/16 in. (5 mm) may or may not need repair depending on severity and would need to be analyzed by the Contractor and/or a Licensed Design Professional.

Cause

Cracks are caused either by volume change (shrinkage or temperature) or from pressures applied to the structure that exceed the capacity of the constructed condition. Cracks from volume change only create problems when pressure from moisture causes them to leak. Cracks may become problematic structurally with pressure over time that exceeds the intended design. Backfilling a basement or foundation wall improperly may produce initial cracking and/or bowing.

Contractor Repair Responsibility

a. Once the grade is determined to be correct per #1 above, then poured concrete foundation cracks that exceed 3/16" or are leaking need to be repaired. If the cracks exceed 3/16" and are not leaking, and are outside of a control joint, the cracks will need to be filled. Color and texture will not match. If the wall is leaking, it will need to be repaired from the inside. No repairs on the outside are necessary.

b. Block foundation cracks exceeding 3/16" width or cracks that are leaking need repair by the Contractor. The inside face of the broken blocks should be removed and replaced. Tuckpointing of the affected joints should be done. It should be noted that the mortar color will not match. If the wall leaks, it must be repaired by the Contractor. If the wall has horizontal cracks and/or is bowed, an engineered repair may be needed.

c. Bowing in a foundation wall must be reviewed by the Contractor or a Licensed Design Professional and determined if structure is sacrificed.

4. Surface irregularities in poured concrete walls.

Performance Standard

Surface defects greater than 50 in2 (322 cm2) consisting of voids with depths greater than 1/2 in. (13mm) are unacceptable and shall be repaired. Any steel reinforcement bars or wire mesh exposed in a finished concrete wall shall also be repaired to protect from corrosion and spalling of concrete surfaces. Aggregate can be exposed in a poured wall and pockets in the surface, commonly referred to as “bug holes” are to be expected when an architectural finish is not specified.

Fins or projections greater than 0.5 in. (13mm) are unacceptable and create concern for the performance of wall treatments or the accuracy of wall finishes and shall be removed.

Contractor Repair Responsibility

Contractor will repair voids that do not meet the Performance Standard. Proper repair can be affected by thoroughly filling the hole. The repaired area will not match the color of the surrounding concrete. Refer to ACI 332.1R for repair guidelines.

Contractor will “rub” the exterior wall surfaces and any interior surfaces of the wall that enclose occupied space to remove projections greater than 0.5 in. (13mm). This is to be completed prior to leaving the work site so as not to interfere with damp-proofing or waterproofing systems (exterior) or impede the interior surface finish system work quality.

5. Basement wall is out of plumb.

Performance Standard

Walls shall not be out of plumb greater than +/- 1 in. (25mm) in 8 ft. (2.44m) when measured from the base to the top of the wall from a vertical plane.

Contractor Repair Responsibility

A wall deemed out of plumb must be reviewed by a licensed design professional. If the wall meets building codes and structural engineering requirements, then no corrective action is required. Walls subject to

correction as directed may be reinforced by columns or may need to be replaced if found to be structurally unsound. Masonry walls subject to an out of plumb condition may also be stabilized with ground anchors.

6. **Basement wall is bowed.**
   Performance Standard
   Basement or foundation walls shall not exhibit a bow of the horizontal or vertical plane more than 1 in. (25mm) in 8 ft. (2.44m) when measured between two corners, offsets or the top and bottom by string line.

   Contractor Repair Responsibility
   If the wall meets building codes and structural engineering requirements, then no corrective action is required. Masonry walls shall be noted to the owner as stable for periodic observation of cracking or movement. Walls that required repair may be reinforced with steel support restraints every 3 to 5 ft. (0.9 to 1.5 m) on center without excavation and grouted for full contact with the wall. Additional stabilization repairs shall be sought if necessary, from a licensed design professional.

7. **A cold joint is visible in exposed poured concrete foundation walls.**
   Performance Standard
   A cold joint is a visible joint that indicates where the pour terminated and continued. Cold joints are normal and should be expected to be visible. Cold joints should not be an actual separation or a crack that exceeds ¼" in width.

   Note: Horizontal or sloping lines with changes in texture or color are indicators of a construction condition referred to as a "pour line" where two loads of concrete were separated by time but not much that structural performance is at risk. A pour line is not a crack and not of structural concern despite being a cosmetic mark.

   Contractor Repair Responsibility
   Contractor will cosmetically repair any cold joint that exceeds ¼" in width. Color variation in the repair should be expected.

FLATWORK (SLABS-ON-GROUND)

1. **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 3/16".
   b. If the shrinkage crack exceeds 3/16" width.

   Contractor Repair Responsibility
   Contractor to repair cracks exceeding maximum tolerances by surface patching.

2. **Basement floor does not pitch to floor drain.**
   Performance Standard
   Basement floors are only pitched in the immediate area of the floor drain.

   Contractor Repair Responsibility
   None, if the floor meets the Performance Standard.

3. **Pitting, scaling, or spalling, and chert pops of concrete work.**
   Performance Standard
   Aggregate pops and scaling are normal. Excessive aggregate pops and scaling should be analyzed by the Contractor. Contractor is not responsible for pops and scaling caused by freezing and thawing, use of salt or

other chemicals and mechanical implements, and other factors beyond the Contractor's control. Buyer should consider sealing the concrete.

Contractor Repair Responsibility
The Contractor will take corrective measures necessary to repair defective concrete surfaces. The Contractor is not responsible for deterioration caused by salt, chemicals, mechanical implements, or other factors beyond the Contractor's control.

CONCRETE STOOPS AND STEPS

1. **Water stands on stoops with foundations.**
   Performance Standard
   No measurable water depth exceeding 1/8" is permissible on stoops.

   Contractor Repair Responsibility
   Correct to meet Performance Standards by filling with a latex filler or grinding. Color variations in concrete are to be expected.

2. **Cracking and chipping of stoops with foundations.**
   Performance Standard
   All cracks, except hairline cracks, may require repair. Chips greater than 1" in diameter and cracks more than 3/16" in width may be corrected with a filler. Color variations in concrete are to be expected.

   Contractor Repair Responsibility
   Correct to meet Performance Standard.

3. **Color or texture variation in concrete.**
   Performance Standard
   Due to the nature of the materials, weather conditions, and the concrete installation process, concrete work is subject to color and texture variations. Spotting and other color discoloration is considered normal. For example, a concrete color variance between the front stoop and exterior slab-on-grade sidewalk should be expected. Any repairs, when made, will seldom match in color, and some variation is to be expected.

   Contractor Repair Responsibility
   None.

GARAGE FLOORS

1. **Garage floor not pitched to drain.**
   Performance Standard
   Garage floors are pitched in the immediate area of the floor drain. No measurable water depth exceeding 5/16" is permissible.

   Contractor Repair Responsibility
   Contractor will take corrective action to meet Performance Standard.

2. **Cracking of garage slab.**
   Performance Standard
   Just like a basement floor, 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 3/16".

b. If the shrinkage crack exceeds 3/16" width.

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

Contractor Repair Responsibility
Contractor to repair cracks exceeding maximum tolerances by surface patching.

3. **A garage concrete floor has settled, heaved, or separated.**
   Performance Standard
   The garage floor shall not settle, heave, or separate more than 1" from the structure during normal summer weather. In the colder months, since garages are typically not heated, frost can move a garage floor naturally.

   Contractor Repair Responsibility
   The contractor will make a reasonable and cost-effective effort to meet the performance standard. This standard does not mandate the replacement of the entire slab.

DRIVEWAYS AND SIDEWALKS

1. **An asphalt driveway has cracked.**
   Performance Standard
   Longitudinal or transverse cracks greater than 1/16" in width or vertical displacement are considered excessive.

   Contractor Repair Responsibility
   The contractor shall repair the affected area to meet the standard. The contractor may repair using tar sealer. Buyer is cautioned that the repair may be more visible than the actual crack.

2. **Standing water is observed on an asphalt pavement surface.**
   Performance Standard
   Standing water greater than 1/8" in depth shall not remain on the surface 24 hours after a rain.

   Contractor Repair Responsibility
   The contractor shall repair or replace the affected area to meet the performance guideline. Buyer is cautioned that the repair may be more visible than the actual crack.

3. **Adjoining exterior concrete flatwork sections deviate in height from one section to another.**
   Performance Standard
   Adjoining concrete sections shall not differ in height by more than ½" in normal summer weather. In colder months, frost can move adjoining concrete sections differently, but they will typically go back to their normal height after the frost is gone.

   Contractor Repair Responsibility
   The contractor shall repair deviations to meet the standard.

4. **The aggregate of asphalt pavement is raveling.**
   Performance Standard
   Asphalt pavement shall not ravel. However, raveling at the edges of driveways is normal and within the standard.

Contractor Repair Responsibility
The contractor shall repair or replace the affected area to meet the standard.

5. **A sidewalk and other exterior concrete flatwork have settled.**
   Performance Standard
   Adjoining concrete sections shall not differ in height by more than 1/2" in normal summer weather. In the colder months, frost can move adjoining concrete sections differently, but they will typically go back to their normal height after the frost is gone.

   Contractor Repair Responsibility
   The contractor shall repair the affected areas to meet the standard.

6. **Water collects (ponds) on the sidewalk.**
   Performance Standard
   No water pockets exceeding 5/16" depth shall exist in any slab that is pitched. No measurable water depth exceeding 1/16" is permissible on stoops with foundations. Where a level slab has been requested by homeowner or in basements, water pockets may appear.

   Contractor Repair Responsibility
   The contractor shall repair or replace the affected area to meet performance guideline.

7. **Cracks in poured concrete patios and drives.**
   Performance Standard
   Cracks more than 1/4" in width or vertical displacement (measured when no frost in ground) on a surface shall be repaired.

   Contractor Repair Responsibility
   Contractor 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. (In the case of a city sidewalk, the municipality may require more.) Buyer is cautioned that color of repaired section may not match.

8. **Municipal or subdivision sidewalk cracks.**
   Performance Standard
   If the sidewalk existed prior to construction, Contractor would have no repair responsibility.

   Contractor Repair Responsibility
   None.

CARPENTRY STANDARD

ROUGH CARPENTRY

Framing or rough carpentry provides the skeletal structure, which includes fabrication of wood portions of the floor systems, exterior walls, interior partitions, and roof that 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 premanufactured components, such as roof or floor trusses, in lieu of the 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 controlled by code, while the carpentry foreman uses his own judgment in determining the exact layout. An accumulation of several inches in overall dimension is not unusual.

Floor vibration is a natural phenomenon of a floor system in response to dynamic forces such as people walking or a washing machine spinning. All suspended floors vibrate to some degree regardless of floor framing type, whether it is solid-sawn lumber, an engineered wood product, steel, or concrete. Floor systems are regulated by building codes; floor vibrations are not. Hence, floor vibrations are acceptable, provided the floor has been built per code, and where applicable, to manufacturers' recommendations.

These Quality Standards are applicable for the first year of warranty only.

1. **Floors squeak**.
   Performance Standard
   Floor squeaks are common in new construction and a totally squeak-proof floor cannot be guaranteed.

   Contractor Repair Responsibility
   The Builder will identify the source of the floor squeak and will make a reasonable attempt to minimize and/or eliminate such squeaks during the warranty period.

2. **Uneven or unlevel floors**
   Performance Standard
   Floors shall not be more than 3/8" out of plane or level within any 36" measurement when measured parallel to the joists.

   Engineered flooring systems are not covered under these standards but are covered by manufacturer engineering standards.

   Contractor Repair Responsibility
   Contractor will correct or repair to meet performance standard.

3. **Crowned floor joists or uneven subfloor**.

   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 36" measurement.

   Contractor Repair Responsibility

   Contractor will correct or repair to meet performance standard.

4. **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. This can be minimized by the Buyer in selection of an embossed pattern in a darker color. Lighter solid colors and/or smooth vinyl surfaces mirror any minor variations of the sub-surfaces to which they are applied and emphasize this ridging. 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.

   Contractor Repair Responsibility

   If ridge exceeds standard, Contractor 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. Buyer should note that there might be a mismatch in materials due to time or dye lot variations. If the material is unavailable due to discontinuation, unless the Buyer will accept a repair with as closely matching materials as are currently available or correction by some other means, Contractor should credit the Buyer 1½ times the Contractor's cost to repair if the materials were available. That would be 1½ times the minimum service charge, plus the additional hourly labor charge and material cost needed to make the repair.

5. **Bowed walls**.

   Performance Standard

   All walls have slight variances on their finished surfaces. Walls should not be bowed more than 1/4" out of line within any 32" measurement.

   Contractor Repair Responsibility

   Contractor to repair to meet performance standard.

6. **Out of plumb walls**.

   Performance Standards:

   Walls should not be more than 1/4" out of plumb for any 32" vertical measurement.

   Contractor Repair Responsibility

   Contractor to repair to meet performance standard.

7. **Truss and rafter lift**.

   Performance Standard

   Truss lift is a term used to define the situation in which the bottom chord of a truss (to which the drywall is attached) separates the drywall of the ceiling from the drywall of the wall causing a visible gap at the ceiling/wall juncture. Natural truss lift occasionally occurs. Truss lift occurs during the heating season; trusses normally return down in the summer months.

Contractor Repair Responsibility
None

8. **Cracked truss**.
   Performance Standard
   Contractor to contact truss manufacturer to make sure truss conforms to its engineering.

   Contractor Repair Responsibility
   Repair as per recommendations of truss manufacturer.

9. **Roof ridge deflects.**
   Performance Standard
   Roof ridge deflection greater than 1" in 8' is considered excessive.

   Contractor Repair Responsibility
   The Contractor shall repair any deficiencies that do not meet the Performance Standards.

10. **Roof or ceiling rafter bows.**
    Performance Standard
    Rafters that bow greater than 1" in 8' are considered excessive when measured parallel to the rafter.

    Contractor Repair Responsibility
    Contractor shall repair any deficiencies that do not meet the performance standards.

FINISH CARPENTRY

Wood and wood-like products are the basic materials used in finish carpentry. Wood is a natural product with individual grain variations in each species of wood. The matching of grain is not a standard procedure. 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 finished carpentry, paneling and millwork. Considerably less of the labor is being done on the site. Almost all millwork, paneling, cabinetry, and doors are purchased by the Contractor as a completed product and are warranted by the manufacturer's standards.

Scratches, chips, gouges, or nicks should be noted by the Buyers at the time of the pre-occupancy inspection. To maintain the beauty of the wood and wood products, wood should be cared for by the Buyer much like furniture. Contractor should caution Buyer to only use products recommended by the manufacturers when cleaning and maintaining wood products.

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

If painting, staining, and finishing are to be done by the Buyer, it should be finished within the timeframe prescribed by the manufacturer's warranty. Their primary purpose is preservation, protecting the surfaces and edges from weather and moisture penetration. **Buyers should be made aware that all surfaces of doors must be sealed on all six sides.** If a door or drawer fails and if it was not sealed on all six sides and the Buyer did or contracted for his staining, then the Contractor is not responsible for repairing. Filling and sanding of minor imperfections and splits are the responsibility of the painter. Filling holes is considered part of painting and finishing. If the Contractor is responsible for the painting and/or staining, samples or names of the paint products should be left with the Buyer for minor touch-ups. **These Quality Standards are applicable for the first year of warranty only.**

1. **Interior doors, closet doors, cabinet doors, or drawers warp and cannot be closed or will not stay closed.**
   Performance Standard
   a. The Buyer should note that during the initial building stabilization period, it is not unusual for doors to warp or twist and periodically stick or not close as the home goes through a settling and drying period, especially over the first heating season. The Contractor is obligated only to make replacements or adjustments 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 interior doors, closet doors, cabinet doors, or drawers whose warpage exceeds 3/8", 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 replaced by the Contractor. Doors **MUST** be sealed on all six sides by the person contractually responsible for painting/staining to be warranted.

   Contractor Repair Responsibility
   Adjust, upon request of the Buyer, 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, which cannot be corrected to be within acceptable tolerance after stabilization. Refinish as necessary if staining was part of the Contractor's contract.

2. **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 throughout the initial first year's warranty only if the security of the building is jeopardized.

   Contractor Repair Responsibility
   Correct as requested by the Buyer to maintain the security of the building. Replace any exterior doors whose permanent warpage exceeds the standards, referred to in Item #1 after the stabilization period. Refinish as necessary if painting and staining were part of the Contractor's contract. If painting is part of the buyer'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.

3. **Cabinet doors do not align properly or there is a gap between the 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".

   Contractor Repair Responsibility
   Contractor is to repair if any of the above conditions exceed acceptable tolerance.

4. **Interior door margin is not parallel to the door jamb.**
   Performance Standard
   Door margin shall be within 3/16" of parallel to the door jamb. Where the Contractor installs the door in an existing jamb that is out of square, the guideline does not apply.

   Contractor Repair Responsibility
   Contractor to adjust the door as necessary to meet Performance Standards.

5. **Loosening or separation of veneer on doors and cabinet doors.**
   Performance Standard
   Veneer should not crack or separate during the first year's warranty provided the doors have been properly finished. If painting is to be done by the Buyer, they are cautioned to finish all six surfaces of the veneer doors at the earliest possible opportunity to prevent weathering deterioration of the door which can lead to delamination or warpage.

   Contractor Repair Responsibility
   Contractor should repair or replace any doors where the veneer has separated or delaminated during the first year of occupancy. Door replacement due to delamination is the Buyer's responsibility if the Buyer has not promptly followed through on his responsibility to finish the doors or has not finished all six sides of the doors. Contractor to refinish only if painting or staining was part of the Contractor's contract.

6. **Shrinkage or swelling of paneled doors, panels in cabinet doors and/or paneling.**
   Performance Standard
   Panels will shrink and swell, due to the nature of wood products. Shrinking and expanding may expose unpainted or unstained surfaces. Wooden door panels shall not split to the point where light is visible through the door.

   Contractor Repair Responsibility
   None, unless light is visible, then Contractor to repair. The Contractor will refinish repaired areas if the Contractor was responsible for the original interior painting/staining. A perfect match between original and new paint/stain cannot be expected.

7. **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 Contractor 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.

   Contractor Repair Responsibility
   None, unless matched lumber was specifically stated in the contract.

8. **Millwork trim graining or color does not match**.
   Performance Standard
   See #7.

   Contractor Repair Responsibility
   See #7.

9. **Gaps in mitered and coped joints prior to finishing.**
   Performance Standard:
   Gaps in mitered or coped joints in stained areas shall not exceed 1/16". Gaps in mitered or coped joints in painted areas shall not exceed 3/16".

   Contractor Repair Responsibility
   Contractor to repair any gaps exceeding 1/16" in stained areas and 3/16" in painted areas.

10. **Cracks in painted or stained woodwork**.
    Performance Standard
    Shrinkage cracks at flat joints are acceptable.

Contractor Repair Responsibility
None.

11. Machine marks on millwork.

Performance Standard
Machine marks are inherent in the process of production. However, machine marks on millwork shall not be readily visible from 6 feet under normal lighting conditions.

Contractor Repair Responsibility
Contractor to repair any machine marks visible from 6 feet under normal lighting conditions.

12. Gaps in mitered or coped joints after wood is finished.

Performance Standard
Gaps in mitered or coped joints should not exceed 1/16".

Contractor Repair Responsibility
Contractor should repair any gaps exceeding 1/16". The Contractor will refinish repaired areas if the Contractor was responsible for the original interior painting/staining. A perfect match between original and new paint/stain cannot be expected.

13. Gouges, cracks, nicks or other material or workmanship imperfections.

Performance Standard
Any imperfections that are readily visible from 6 feet under normal lighting conditions are unacceptable but must be noted in writing by the Buyer to the Contractor at the time the Buyer closes or takes occupancy of the home.

Contractor Repair Responsibility
Contractor to replace millwork components with the above listed defects where the defect cannot be easily corrected using sanding or filling, so long as these items were noted prior to occupancy. It should be noted that if the Buyer is responsible for the painting/staining portion of the contract, the painting/staining work becomes the Buyer's responsibility.

14. Splices of millwork material within the length of a wall.

Performance Standard
Splicing is permissible.

Contractor Repair Responsibility
None.

15. Cabinets separate from wall or loosen.

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 loose, the Contractor shall correct.

Contractor Repair Responsibility
Correct any loose cabinetry from the mounting surface, except those due to shrinkage.

16. Gaps exist between stair risers and tread.

Performance Standard
Gaps between interior stair risers and tread that are designed to meet shall not exceed 1/8" in width.

Contractor Repair Responsibility
Contractor to fill gap and/or replace parts.

17. Gaps exist between trim and drywall.

Performance Standard
All trim will not fit tight against drywall. Gaps up to 1/8" are acceptable.

Contractor Repair Responsibility
Painter shall caulk between trim and drywall to eliminate visible gaps.

18. Walls and baseboard may appear bowed.

Performance Standard
In instances where drywall mud is built up in exterior or interior corners causing baseboard and wall to appear bowed, this is acceptable.

Contractor Repair Responsibility
None

EXTERIOR FINISH STANDARD

Background
There are numerous types of siding. Each product is different and has its own inherent characteristics.
All siding should be installed per manufacturer's specifications.

These Quality Standards are applicable for the first year of warranty only.

WOOD & HARDBOARD STANDARD
Being a natural material, wood siding will shrink and expand seasonally, with variations in temperature and humidity and with aging. Wood siding must be painted or sealed within the 1st year to protect the wood. Caulking is commonly used where siding meets a dissimilar surface. Caulking may harden and fade at a different rate than the wood siding. Maintenance of caulk is the Buyer's responsibility.

Where a repair is made by replacing siding, and Contractor was responsible for painting he will prep and refinished affected areas. Touch-up painting may not match surrounding area. It is the Buyer's responsibility to refinish affected areas after the repair if Buyer was responsible for exterior painting.

When installing siding, a staggered and random pattern is ideal for the butt-joints. However, a "zipper" or "stair-step" pattern in no way compromises the integrity of the product.

1. **Wood Siding comes loose.**
   Performance Standard
   Wood Siding should not come loose except under extreme weather events.

   Contractor Repair Responsibility
   Contractor to refasten. Damage caused by extreme weather events is the Buyer's responsibility.

2. **Caulking cracks.**
   Performance Standard
   Contractor to repair at cracked areas one time during the warranty period, preferably at the end of the first year. After the one repair, caulking becomes a Buyer maintenance responsibility.

   Contractor Repair Responsibility
   Contractor to repair to Performance Standard one time during the first year.

3. **Wood shrinks, cracks, twists, bows and/or knots fall out.**
   Performance Standard
   Due to the inherent characteristics of wood, all of the above may happen.

   Contractor Repair Responsibility
   Contractor will caulk knotholes one time and any gaps in excess of 1/8" shall be caulked if noted prior to Date of Completion. After the Date of Completion, this is a Buyer maintenance responsibility. Refer to manufacturer's recommendations.

4. **Wood siding splits where nail penetrates siding.**
   Performance Standard
   Hairline cracks are normal. If noted in writing to Contractor prior to Date of Completion, and crack exceeds 3/16", Contractor to caulk or replace piece and re-stain if staining was Contractor's responsibility. Touch-up painting or staining may not match the surrounding area.

Contractor Repair Responsibility
Contractor to repair in accordance with Performance Standard.

5. **Inadequate lap on wood bevel siding.**
   Performance Standard
   Lap shall be no less than 3/4" prior to shrinkage.

   Contractor Repair Responsibility
   Contractor to repair to meet Performance Standard.

6. **Wood siding end gap is visible.**
   Performance Standard
   End gaps wider than 3/16" are considered excessive.

   Contractor Repair Responsibility
   Contractor will repair end gaps that do not meet the Performance Standard. Proper repair can be affected by providing joint covers or by caulking the gap. This is important if the gaps were intentionally made for expansion joints. If the siding is painted, the Contractor will paint the new caulking to match existing as close as possible.

7. **Wood siding is not installed on a straight line.**
   Performance Standard
   Any piece of lap siding more than 1/2" off parallel in 20 feet with contiguous courses is considered excessive.

   Contractor Repair Responsibility
   The Contractor will reinstall siding to meet the Performance Standard for straightness, and replace any siding damaged during removal with new siding.

8. **Face nails are excessively countersunk into hardboard surface.**
   Performance Standard
   Siding nails should not be countersunk to expose visible fiber of hardboard siding.

   Contractor Repair Responsibility
   The Contractor shall repair as necessary to meet Performance Standard. If visible fiber of hardboard siding is exposed, paint surface to coat fiber; if nail is countersunk 1/16" to 1/8", caulk and touch-up paint; if countersunk more than 1/8", caulk and add an additional nail flush to the surface.

9. **Wood siding is buckled.**
   Performance Standard
   Siding that project more than 3/16" from the face of adjacent siding is considered excessive.

   Contractor Repair Responsibility
   Contractor will repair or replace any siding not meeting the Performance Standard.

10. **Nails in wood siding rust.**
    Performance Standard
    This may occur in wood siding. This condition is more prevalent on unstained wood.

    Contractor Repair Responsibility
    None.

11. Paint peels on wood siding.

Performance Standard

Exterior paints or stains should not fail during the paint manufacturer's warranty period. However, fading is normal, and the degree is dependent on climatic conditions.

Contractor Repair Responsibility

If paint or stain peels and Contractor is responsible for painting, Contractor will properly prepare and refinish affected areas, matching color as close as possible during the Contractor's one-year warranty period only. Where finish deterioration affects most of the area, the whole area will be refinished. The Contractor shall repair in accordance with standards of good workmanship, but no warranty will be extended on the newly repainted surfaces. All paint shall be applied in accordance with the manufacturer's specifications. No action is required on fading of wood siding.

12. Paint fades on wood siding.

Performance Standard

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

Contractor Repair Responsibility

None.

13. Varnish, lacquer or clearcoat finishes have deteriorated.

Performance Standard

Clear finishes used on exterior surfaces may deteriorate rapidly. This is beyond the Contractor's control. Heat and sunlight can cause rapid deterioration. Maintenance is the Buyer's responsibility.

Contractor Repair Responsibility

None.

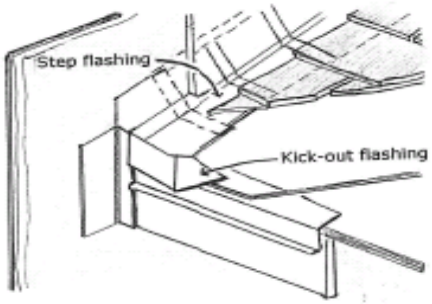
14. Insufficient or non-existent flashing at roof-wall intersection.

Performance Standard

Wood manufacturer installation guidelines may require a "kick-out" flashing at any roof-to-wall intersection to deter water intrusion from behind the siding.

Contractor Repair Responsibility

Contractor to install or improve "kick-out" flashing to meet Performance Standard.



ALUMINUM STANDARD

Aluminum exterior products should be installed per manufacturers' specifications.

Aluminum siding is a rigid product. Denting and scratching of this product is possible. Any dents or scratches not caused by extreme weather events or vandalism must be noted to Contractor prior to the Date of Completion.

Aluminum siding will react to climate changes. Expansion and contraction of this product can produce some noise.

Caulk is used in conjunction with aluminum siding. Both caulk and aluminum siding will fade over time. Each product is subject to fading at different rates. Because of this, uneven fading may occur. After the first year, caulking is the Buyer's maintenance responsibility.

These Quality Standards are applicable for the first year of warranty only.

1. **Aluminum siding buckles or ripples.**
   Performance Standard
   Because aluminum siding has been placed over lumber surfaces which are subject to shrinkage or warpage, buckling may occur. Siding should not be more than 1/4" out of plane in an 8' length.

   Contractor Repair Responsibility
   Contractor to repair to meet Performance Standard.

2. **Dents or scratches on the aluminum siding.**
   Performance Standard
   Dents and scratches are to be noted in writing prior to Date of Completion.

   Contractor Repair Responsibility
   Contractor to repair if notified prior to Date of Completion. Please note that the repaired area may not match in color and/or texture.

3. **Aluminum siding comes unfastened.**
   Performance Standard
   Siding should not come unfastened except under an extreme weather event.

   Contractor Repair Responsibility
   Contractor to refasten. Damage caused by extreme weather events is the Buyer's responsibility.

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

   Contractor Repair Responsibility
   No corrective action is required of the contractor. The Buyer should contact the siding manufacturer.

5. **Caulking cracks.**
   Performance Standard
   Contractor to repair at cracked areas one time, preferably at the end of the first year. After one repair within the warranty period, caulking becomes a Buyer maintenance responsibility.

Contractor Repair Responsibility
Contractor to repair to Performance Standard one time during the first year.

6. **Aluminum siding is not correctly spaced from moldings.**
   Performance Standard
   Aluminum siding is cut back up to ¼" allowing for expansion and contraction. Gaps between siding and molding shall not exceed ¼".

   Contractor Repair Responsibility
   Repair to meet Performance Standard.

7. **Siding is not installed on a straight line.**
   Performance Standard
   Any piece of lap siding more than ½" off parallel in 20 feet with contiguous courses is considered excessive.

   Contractor Repair Responsibility
   The Contractor will reinstall siding to meet the Performance Standard for straightness, and replace any siding damaged during removal with new siding.

VINYL STANDARD

Vinyl exterior products should be installed per manufacturers' specifications.

Vinyl siding will react to climate changes. Expansion and contraction of this product can produce some waving. Vinyl is a soft material and is therefore susceptible to melting under extreme heat conditions.

While most types of siding are caulked, vinyl siding is the exception. Vinyl accessories are used in place of caulk.

Vinyl siding will expand more than other siding products. For that reason, it is installed in a floating system.

Vinyl siding is subject to cracking. Any cracks not caused by extreme weather events or vandalism must be noted to Contractor before the Date of Completion. Vinyl siding will crack on high impact in cold weather.

These Quality Standards are applicable for the first year of warranty only.

1. **Vinyl siding buckles.**
   Performance Standard
   Because vinyl siding has been placed over lumber surfaces which are subject to shrinkage or warpage buckling may occur. Siding should not be more than 1/4" out of plane in an 8' length.

   Contractor Repair Responsibility
   Contractor to repair to meet Performance Standard.

2. **Vinyl siding rippling.**
   Performance Standard
   Vinyl siding will react to climate changes. Expansion and contraction can cause rippling.

   Contractor responsibility
   None.

3. **Cracks in vinyl siding.**
   Performance Standard
   Cracks are to be noted in writing prior to Date of Completion.

Contractor Repair Responsibility
Contractor to repair if notified prior to Date of Completion. Please note that repaired area may not match in color and/or texture.

4. **Vinyl Siding comes unfastened.**
   Performance Standard
   Siding should not come unfastened except under extreme weather events.

   Contractor Repair Responsibility
   Contractor to refasten. Damage caused by weather events is the Buyer's responsibility.

5. **Fading of vinyl siding.**
   Performance Standard
   Vinyl siding will fade.

   Contractor Repair Responsibility
   None.

6. **Vinyl siding is loose.**
   Performance Standard
   Siding is installed in a floating system, and therefore is loose in areas. This is normal and does not harm the integrity of the siding nor the frame.

   Contractor Repair Responsibility
   None.

7. **Vinyl siding not cut tight to moldings.**
   Performance Standard
   Vinyl Siding is cut back up to 1/4" to allow for expansion and contraction. Gaps between siding and molding shall not exceed 1/4".

   Contractor Repair Responsibility
   Contractor to repair to meet Performance Standard.

8. **Siding is not installed on a straight line.**
   Performance Standard
   Any piece of lap siding more than 1/2" off parallel in 20 feet with contiguous courses is considered excessive.

   Contractor Repair Responsibility
   The Contractor will reinstall siding to meet the Performance Standard for straightness, and replace any siding damaged during removal with new siding.

9. **Vinyl lap siding is cut crookedly.**
   Performance Standard
   Gaps shall comply with the manufacturer's guidelines. Cut edges of vinyl siding should always be covered by trim or receiving channels and should not be visible. Cuts should be made so that when properly installed in trim, edges are not visible.

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

STUCCO & PARGE STANDARD

"Stucco" includes cementitious coatings and similar synthetically based finishes. Coloring and texture of stucco is affected by several variables. It is impractical to achieve a color or exact texture match between stucco coatings applied at different times. An exact match of material applied on different days or under differing environmental conditions (e.g., temperature, humidity, etc.) is not attainable. Synthetically based finishes (including stucco and parge) shall, in all instances, follow the manufacturer's recommended installation guidelines.

1. **Exterior stucco wall surface is cracked.**
   Performance Standard
   Cracks in exterior stucco wall surfaces shall not exceed 1/8" in width.

   Contractor Repair Responsibility
   One time only during the warranty period, the contractor will repair cracks exceeding 1/8" in width. Caulking and touch-up painting are acceptable. An exact color or texture match may not be attainable.

2. **Coating has separated from the base on an exterior stucco wall.**
   Performance Standard
   The coating shall not separate from the base on an exterior stucco wall during the warranty period.

   Contractor Repair Responsibility
   The Contractor will repair areas where the coating has separated from the base. An exact color or texture match may not be attainable.

3. **Lath is visible through stucco.**
   Performance Standard
   Lath should not be visible through stucco, nor should the lath protrude through any portion of the stucco surface.

   Contractor Repair Responsibility
   Contractor will make necessary corrections so that lath is not visible. The finish colors may not match.

4. **Rust marks are observed on the stucco finish coat.**
   Performance Standard
   Rust marks on the stucco surface are considered excessive if more than five (5) marks measuring more than one (1) inch long occur in 100 square feet.

   Contractor Repair Responsibility
   Contractor may repair or replace affected subsurface components or seal the rusted areas and recolor the wall.

5. **There is water damage to interior walls as a result of a leak in the stucco wall system.**
   Performance Standard
   Stucco walls should be constructed and flashed to prevent water penetration to the interior of the structure under normal weather and water conditions. Damage to the stucco system caused by external factors out of the Contractor's control that result in water penetration are not the Contractor's responsibility.

Contractor Repair Responsibility
If water penetration is the result of a system failure and doesn't result from external factors, the Contractor will make necessary repairs to prevent water penetration through the stucco wall system.

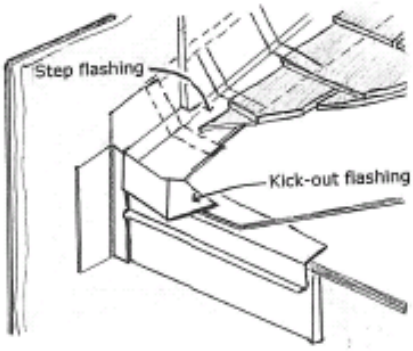
Water penetration resulting from external factors such as windblown moisture or sprinkler systems are not the Contractor's responsibility.

6. **Poor location or too many/few expansion joints in stucco.**
   Performance Standard
   Contractor will locate expansion joints where necessary to achieve maximum performance of stucco product.

   Contractor Repair Responsibility
   None.

7. **Insufficient or non-existent flashing at roof-wall intersection.**
   Performance Standard
   Stucco or parge installation guidelines may require a "kick-out" flashing at any roof-to-wall intersection to deter water intrusion from behind the siding.

   Contractor Repair Responsibility
   Contractor to install or improve "kick-out" flashing to meet Performance Standard. (See illustration below)



FIBER CEMENT STANDARD

Fiber Cement exterior products should be installed per manufacturer installation guidelines. Like any material, Fiber Cement siding will expand and contract. Natural weather conditions, such as sun, wind, relative humidity, storms, etc., can all have effects on exterior materials. Should minor changes need to be made, the Contractor is not responsible for painting the entire wall to achieve a match.

Fasteners must be corrosive resistant and installed snug or flush to the surface of the plank. Siding fasteners should not be countersunk to expose visible fiber. Contractor is responsible to repair if this is not the case. Furthermore, where blind nailing is the primary means of installation, caulk should be applied on top of the over-driven fastener. An additional fastener is not required.

When installing siding, a staggered and random pattern is ideal for the butt-joints. However, a "zipper" or "stair-step" pattern in no way compromises the integrity of the product.

1. **Gaps are visible at the butt-joints.**

   Performance Standard

   Butt-joint gaps exceeding 1/4" are considered excessive. Proper repair can be achieved by caulking the gap or replacing affected pieces of siding. If butt-joint gaps are caulked, Contractor will paint the new caulking to match existing as close as practical. If affected pieces of siding are replaced, the repaired area may not match the original siding precisely.

   If siding is replaced, face nailing is acceptable. If siding was painted originally by Contractor, Contractor will paint the replacement siding to match existing as close as practical. If siding was painted by Buyer, Buyer to paint the replacement siding.

   Contractor Repair Responsibility

   Contractor will repair or replace as needed to meet the Performance Standard.

2. **Planks are loose or rattle.**

   Performance Standard

   For "aesthetic" reasons, Fiber Cement siding is typically blind nailed per manufacturer installation guidelines. Although the preferred "aesthetic" method of installation is blind nailing, blind nailing cannot ensure a perfectly tight panel.

   Contractor Repair Responsibility

   Contractor to refasten affected panels with face nailing as necessary. If siding was painted originally by Contractor, Contractor to paint touch-up on all face nail heads. If siding was painted by Buyer, paint touch-up is the responsibility of Buyer. Damage cause by weather events is the Buyer's responsibility.

3. **Siding is cracked or broken.**

   Performance Standard

   Fiber Cement siding should be free of cracked broken, dented, chipped, or scratched planks at the time of closing. If affected pieces of siding are replaced, the repaired area may not match the original siding precisely.

   Contractor Repair Responsibility

   Contractor will repair or replace as needed to meet the Performance Standard. If siding is replaced, face nailing is acceptable. If siding was painted originally by Contractor, Contractor will paint the replacement siding to match the existing as closely as practical. If siding was painted originally by Buyer, Buyer to paint the replacement siding.

4. **Siding is bowed.**

   Performance Standard

   Fiber Cement siding will mirror the underlying structure. Due to the natural characteristics of wood framing, exterior wood framed walls cannot be built perfectly flat. Since Fiber Cement siding is held by nails into studs, expansion caused by increasing relative humidity may cause bulges or waves. Even with proper installation, siding will tend to bow inward and outward in adjacent stud spaces. Bows exceeding 1/4" in 32" are considered excessive.

   Contractor Repair Responsibility

   Contractor to repair.

5. **Face nails are too prevalent.**

   Performance Standard

   All fasteners must be corrosive resistant per manufacturer installation guidelines. While the "preferred" method of installation is blind nailing for "aesthetic" reasons, face nailing is also an acceptable practice per the manufacturer installation guidelines.

   Contractor Repair Responsibility

   Contractor to blind nail or face nail as necessary to meet the Performance Standard.

6. **Fasteners are rusting.**

   Performance Standard

   All fasteners must be corrosive resistant per manufacturer installation guidelines.

   Contractor Repair Responsibility

   Contractor to replace to meet the Performance Standard.

7. **Fasteners are not painted.**

   Performance Standard

   All fasteners must be corrosive resistant per manufacturer installation guidelines. All exposed fasteners should be painted.

   Contractor Repair Responsibility

   If siding was painted originally by Contractor, Contractor to paint touch-up all face nail heads. If siding was painted by Buyer, paint touch-up is the responsibility of Buyer.

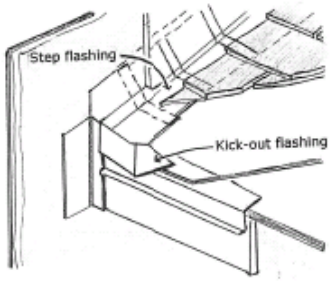
8. **Insufficient or non-existent flashing at roof-wall intersection.**

   Performance Standard

   Fiber Cement manufacturer installation guidelines will require a "kick-out" flashing at any roof-to-wall intersection to deter water intrusion from behind the siding.

   Contractor Repair Responsibility

   Contractor to install or improve "kick-out" flashing to meet Performance Standard.



9. **Lap siding is in contact with roof, porch, patio, or another hard surface.**
   Performance Standard
   Fiber Cement siding manufacturer installation guidelines typically require a clearance of approximately 1" – 2" between Fiber Cement siding material and roof. Refer to specific manufacturer installation guidelines.

   Contractor Repair Responsibility
   Contractor to repair affected areas to meet Performance Standard.

10. **Caulk color does not match the pre-finished siding color.**
    Performance Standard
    Manufacturer installation guidelines will caution you that Fiber Cement siding colors will not match perfectly to all caulk colors. No satisfactory solution exists for a perfect match of pre-finished Fiber Cement siding and caulk.

    Contractor Repair Responsibility
    None.

11. **Siding is not installed in a straight line.**
    Performance Standard
    Any piece of lap siding more than 1/2" off parallel in 20 feet with contiguous courses is considered excessive unless the Buyer and the Contractor have previously agreed to disregard the Performance Standard to match a pre-existing structural condition.

    Contractor Repair Responsibility
    The Contractor will reinstall siding to meet the Performance Standard for straightness, and replace any siding damaged during removal with new siding.

12. **Paint fades on fiber cement siding.**
    Performance Standard
    Any color siding, when exposed to the ultra-violet rays of the sun, will fade. Fading cannot be prevented by the Contractor. However, panels installed on the same wall and under the same conditions should fade at the same rate.

    Contractor Repair Responsibility
    None.

MASONRY & VENEER STANDARD

The Buyer is required to maintain brick or stone. Some masonry walls and chimneys may need to be sealed by the Buyer due to their permeability to water. Sealing can change the color of the brick or stone

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

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

1. **Brick, stone, or simulated stone has color variations from selection panel.**
   Performance Standard
   Due to the natural materials used to color brick or stone and the natural variations, there will be color dye lot variations. Even within a lot, brick or stone may vary in color.

Contractor Repair Responsibility
None.

2. **Brick, stone, or simulated stone wall or chimney is leaking**.
   Performance Standard
   Brick/stone walls can leak. The Contractor is to check that the brick was installed correctly. If leak is not caused by faulty construction, Buyer to seal brick. Certain bricks/stones are porous and may require sealing. Sealing is the Buyer's responsibility. Installation of brick, flashing and weepholes shall be done to Code. On some occasions, substantial rains with high winds can produce a temporary leak.

   Contractor Repair Responsibility
   When a leak appears in the wall system and the wall is not built to Code, including flashing and caulking, Contractor is to repair, caulk and flash to Code. If leak is not caused by faulty workmanship, Buyer to seal brick.

3. **Efflorescence is present on the surface of masonry or mortar.**
   Performance Standard
   This is a common condition caused by moisture reacting with the soluble salts in the mortar. Efflorescence is evidenced by the presence of a white film on the surface of masonry or mortar. It is a particularly common occurrence where masonry or concrete are in contact with high moisture levels as may be found in basements.

   Contractor Repair Responsibility
   None.

4. **Mortar or rust stain on exterior brick or stone.**
   Performance Standard
   Exterior brick and stone shall be free from mortar and
   rust stains detracting from the appearance of the finished wall when viewed from 20 feet.

   Contractor Repair Responsibility
   The Contractor will clean the mortar stains to meet the Performance Standard.

5. **Brick, stone or simulated stone veneer is spalling.**
   Performance Standard
   Spalling of newly manufactured brick, stone or simulated stone veneer should not occur and is considered excessive. Spalling of used brick is acceptable.

   Contractor Repair Responsibility
   Contractor will repair or replace newly manufactured bricks, stones or simulated stones that have spalled. An exact match of brick and mortar cannot be assured.

6. **Masonry or brick veneer course is not straight.**
   Performance Standard
   No point along the top of any course shall be more than 1/4" higher or lower than any other point within 10 feet along the top of the same course. Dimensional variations of the courses depend upon the variations in the brick selected.

   Contractor Repair Responsibility
   The Contractor will rebuild the wall as necessary to meet the Performance Standard.

EXTERIOR TRIM STANDARD

Exterior trim products should be installed per manufacturers' specifications. For wood, vinyl, aluminum, and fiber cement standards, Buyer should refer to the applicable siding standard.

These Quality Standards are applicable for the first year of warranty only.

1. **Gaps show in exterior trim.**
   Performance Standard
   Joints between exterior trim elements, including siding and masonry, shall not result in joints opened wider than 1/4". In all cases, the exterior trim shall perform its function of excluding the elements.

   Contractor Repair Responsibility
   The Contractor will repair open joints that exceed the performance standard. Caulking is acceptable.

2. **Exterior trim boards are split.**
   Performance Standard
   Splits wider than 1/8" are considered excessive.

   Contractor Repair Responsibility
   The Contractor will repair splits by filling with a durable filler. Touch-up painting may not match the surrounding area.

3. **Exterior trim boards are bowed or twisted.**
   Performance Standard
   Bows and twists exceeding 3/8" in 8' are considered excessive.

   Contractor Repair Responsibility
   The Contractor will repair defects exceeding the performance standard by refastening or replacing deformed boards. Touch-up painting may not match the surrounding area.

4. **Exterior trim boards are cupped.**
   Performance Standard
   Cups exceeding 1/4" in 7 ½" are considered excessive.

   Contractor Repair Responsibility
   The Contractor will repair defects exceeding the performance standard by refastening or replacing deformed boards. Touch-up painting may not match the surrounding area.

WINDOW, SKYLIGHT, & GLASS STANDARD

Background

As building practices have improved with better products, and methods, air infiltraction has been greatly reduced in new homes resulting in increased energy efficiency. If not properly managed by the occupant, this can cause problems with high humidity. Today's homes are so airtight that normal humidity caused by cooking, breathing, showering, presence of houseplants, etc., can build up inside the home. This can cause condensation around outlets, recessed lights, or any surface with a cooler surface temperature, like windows. When these conditions are noticed, it is important to exhaust the humidity from the home. This can be done by an air exchanger (ERV or HRV), a dehumidifier, running bath or kitchen exhaust fans.

The installation of dehumidification and humidification equipment and air exchangers is an owner/builder option. Excess moisture is typically a symptom of today's air tight homes. Just as too much moisture can cause problems, insufficient humidity can cause other serious problems. Proper levels of humidity must be maintained by the homeowner.

Household size, lifestyle and outdoor temperatures will affect the humidity level in the home. Optional items such as saunas, and whirlpools can be the source of large humidity changes in the home that must be maintained by the homeowner.

As outdoor temperatures change in our climate, indoor relative humidity levels need to change as well. The following levels can be used as a good rule of thumb to keep indoor condensation at a minimum:

Outside Air Temperature	**Inside Relative Humidity for 70 Degrees F Indoor Air Temperature**
-20 degrees F	15 to 20 percent
-10 degrees F	20 to 25 percent
0 degrees F	25 to 30 percent
+10 degrees F	30 to 35 percent
+20 degrees F	35 to 40 percent

All doors and windows will have some air infiltration. Window manufacturers have their windows tested by standards set by various testing agencies. Consult your manufacturer for specific details. Different styles of windows have different design pressure and performance levels.

Air infiltration around double-hung and slide-by windows can be greater than that of casement or direct set windows.

Glass is warranted by the manufacturer against seal failure and stress cracks. It is the Buyer's responsibility to contact manufacturer after the first year.

Buyers are cautioned that cleaning glass with razor blades or abrasive materials can cause scratching on glass and may void certain manufacturer's warranties.

Buyer should note that there may be a color variation between the wood components in windows, doors, and the finished casing due to differing wood species.

Buyer should make sure that all window, door, and skylight wood is sealed and should be maintained by Buyer throughout the life of the home.

Moisture left to accumulate on wood windows or doors can cause long-term damage. The Buyer is responsible to wipe moisture off the wood parts of the windows. Screens can be removed from casement windows during the winter, to reduce moisture formation on the glass surface.

Moisture condenses on the window, door, or sidelight since it is the coldest object in any given room with the glass having a much higher rate of heat transmission. Condensation or frost on windows is an indication of either too much humidity in the room, or inadequate movement of air. The Buyer can minimize this condition by opening a window to permit the excess condensation to escape or by installing a dehumidifying system. 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 recommended that screens be removed from casement windows during the heating season. Raising blinds or opening draperies will help minimize the situation. Also, exhaust fans and continuous running of furnace fans and ceiling fans should be used to reduce moisture.

These Quality Standards are applicable for the first year of warranty only.

WINDOWS

1. **Scratches on glass.**
   Performance Standard
   Glass surfaces shall not have scratches visible from six feet under normal lighting conditions. Scratches caused by Buyer during cleaning or using razor blades are not the Contractor's responsibility.

   Contractor Repair Responsibility
   Contractor to repair only if noted in writing prior to occupancy.

2. **Cracks or breakage of glass**.
   Performance Standard
   If glass damage is not reported to Contractor in writing prior to occupancy, it is the Buyer's responsibility. Damaged glass caused by Buyer negligence is the Buyer's responsibility.

   Contractor Repair Responsibility
   Contractor to repair only if noted in writing prior to occupancy.

3. **Damage or holes in screens.**
   Performance Standard
   If screen damage is not reported to Contractor in writing prior to occupancy, it is the Buyer's responsibility. Damaged caused by Buyer negligence is the Buyer's responsibility.

   Contractor Repair Responsibility
   Contractor to repair only if noted in writing prior to occupancy.

4. **Windows and patio doors do not operate properly**.
   Performance Standard
   Windows and patio doors shall operate with reasonable ease as designed.

   Contractor Repair Responsibility
   Contractor to correct as required.

5. **Air infiltration around doors and windows**.
   Performance Standard
   Some infiltration is usually noticeable around doors and windows, especially during high winds. No daylight shall be visible around frame when window or door is closed.

   Contractor Repair Responsibility
   Contractor to correct to meet the Performance Standards.

6. **Moisture accumulates in between the glass.**
   Performance Standard
   Buyer should contact the manufacturer for coverage under their warranty.

   Contractor Repair Responsibility
   None.

SKYLIGHTS AND SUN TUBES

1. **Condensation on skylights and sun tubes**.
   Performance Standard
   All skylights and sun tubes can have condensation on them due to humidity levels.

   Contractor Repair Responsibility
   Contractor not responsible for humidity levels in home. Ventilating fans should always be used in bathroom and kitchen.

2. **Leaks around skylights and sun tubes**.
   Performance Standard
   Skylights and sun tubes should not leak.

   Contractor Repair Responsibility
   Contractor to repair.

3. **Scratches on glass.**
   Performance Standard
   Glass surfaces shall not have scratches visible from six feet under normal lighting conditions. Scratches caused by Buyer during cleaning or using razor blades are not the Contractor's responsibility.

   Contractor Repair Responsibility
   Contractor to repair only if noted in writing prior to occupancy.

4. **Cracks or breakage of glass**.
   Performance Standard
   If glass damage is not reported to Contractor in writing prior to occupancy, it is the Buyer's responsibility. Damaged glass caused by Buyer negligence is the Buyer's responsibility.

   Contractor Repair Responsibility
   Contractor to repair only if noted in writing prior to occupancy.

5. **Discoloration on plastic skylight or sun tube windows.**
   Performance Standard
   Discoloration is inherent in the product. Attempts to clean plastic skylights with cleaners can result in permanent damage.

   Contractor Repair Responsibility
   None.

GARAGE DOOR & GARAGE DOOR OPENER STANDARDS

Background
Garage doors come in a variety of products including cedar, redwood, steel, fiberglass, hardboard and masonite.

The surface of hardboard used on garage doors is ideal for field-applied coatings, since hardboard does not have any knots, grain raise, or other defects that typically shorten the coatings life. Hardboard used on garage doors is made from wood. As such, it must be properly coated initially and maintained if satisfactory performance is to be achieved from the hardboard door as well as the field-applied coating. If the Buyer does his own painting and staining, for the warranty to be effective, paint must be applied to inside and outside surfaces and on all edges, as soon as possible after installation.

An inherent characteristic of flush doors is the possibility of bowing (either inward or outward). This is not considered a defect. Proper painting of the door, plus the use of paint other than a dark color, will minimize this possibility. (Dark paint does not deflect the heat of the sun as well as lighter paints do).

Uninsulated steel doors can dent and scratch very easily. Any dents or scratches should be reported to the Contractor in writing prior to occupancy.

All garage door openers have safety features which include photo beams across the bottom or a sensitivity adjustment on the opener. Buyer is cautioned that if the photo beam is bumped or damaged it may affect the alignment and is a Buyer responsibility.

These Quality Standards are applicable for the first year of warranty only.

1. **Bottom of overhead door does not fit to the floor.**
   Performance Standard
   Door weather-stripping should fit flush to the floor. The door should always be installed "level" and the bottom seal should be in contact with the concrete – assuming the concrete is also level.

   Contractor Repair Responsibility
   Contractor to scribe the bottom of the hardboard or wood door to conform to the level of the concrete so weather-stripping on bottom of door affects a seal. Tolerances for steel doors are contained in the manufacturer's warranty. Improperly pitched or uneven concrete is not a defect in the bottom seal.

2. **Garage doors allow entrance of snow, water, or air under wind pressure**
   Performance Standard
   Garage doors shall be installed as recommended by the manufacturer. Even with proper installation, some entrance of the elements can be expected under certain weather conditions.

   Contractor Repair Responsibility
   Contractor will adjust or correct garage doors to meet manufacturer's recommendations. Aftermarket "storm shield" is available to assist in keeping water out.

3. **Door does not fit tightly at the sides and top.**
   Performance Standard
   If it is an unweather-stripped door, there may be some small gaps.
   If the door is weather-stripped, the door should contact the weather-stripping. Some daylight may be visible from inside the garage, because too much pressure on the door will cause the opener to reverse.
   Arched openings may cause standard weather-stripping to bind.

Contractor Repair Responsibility
If the door is unweather-stripped, the Contractor has no repair responsibility.
If the door is weather-stripped, the Contractor is to repair. Top seal applied to the top of the door is an acceptable solution.

4. **Split in door panel**.
Performance Standard
Split panels shall not allow light to be visible through the door.

Contractor Repair Responsibility
Contractor will, if light is visible, fill split and match paint or stain as closely as possible if they did the painting originally. This will be done only one time in the warranty period, preferably at the end of the first year.

5. **Garage door openers do not operate properly.**
Performance Standard
Photo beams must be properly installed per safety requirements and aligned. Garage door openers must operate properly.

Contractor Repair Responsibility
Maintaining alignment of the photo beams, and keeping them free of obstruction, is a Buyer maintenance responsibility. If the photo beams are aligned and the garage door opener still does not operate, it is the Contractor's responsibility.

6. **Decorative Hardware**
To be applied to screws, rivets or magnets. As the name implies, these are for decoration only. Damage may occur if used as a lift handle.

7. **Wood Cracks & Bowing**
Small cracks and bowing are natural characteristics of wood. Large cracks and severe bowing may be covered under warranty within the first year of install (see manufacturer warranty). All wood doors must be property sealed on all sides within 1 week of install to preserve the warranty. Dark colors are not recommended and require additional maintenance.

8. **Rust**
Most manufacturers offer a limited warranty against rust through on steel doors. Warranty is void if door is exposed to corrosive materials such as salt or sitting water. Labor warranty is limited to 1 year from date of install.

9. **Garage Door Frost**
Frost may occur on overhead doors due to moisture present in the garage. The occurrence of frost may be exacerbated by low outdoor temperatures and/or heating the garage. This is an homeowner's responsibility to maintain

10. **Maintenance**
Your garage door opener should be lubricated and adjusted annually. Springs and cable assemblies are under extreme tension. They should be worked on by a trained professional or serious injury may occur. Loose nuts, bolts and teks should be tightened. Spring, rollers and bearings should be lubricated with a light weight oil or spray lubricant (never use grease). Test safety reverse mechanism on opener.

ROOFING STANDARD

Background
The purpose of roofing material is to form a weather resistant surface which prevents water or snow from entering the house. 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. 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 the product chosen, 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 fungus and moisture also cause deterioration.

There are several types of roofing material used including fiberglass, wood, rubber, metal, tile and slate. Every roofing material has various guidelines for installation recommended by the manufacturer.

Roofs or flashing should not leak under normally anticipated conditions. However, occasionally leakage may result from severe weather conditions, such as ice build-up, high winds, or driving rain. Storm damage is the Buyer's responsibility. Homeowers should check with their insurance carriers regarding appropriate coverage. In the case of repair to a roof during the warranty period, every effort should be made by the builder to match material and color as closely as possible. Because and exact match cannot be guaranteed, the homeowner must expect color variations.

These Quality Standards are applicable for the first year of warranty only. Roofing products shall be installed per specific manufacturer recommendations.

ROOFING

1. **Roof leaks.**
   Performance Standard
   Roof should not leak. See Buyer's Maintenance Responsibility below.

   Contractor Repair Responsibility
   Contractor will repair any verified roof or flashing leaks except those caused by ice build-up, leaves, debris, abnormal conditions, or the Buyer's actions or negligence.

   Buyer Maintenance Responsibility
   Excessive ice or snow buildup with alternate freezing and thawing can create a condition causing leakage. Buyer can correct this by preventing leaf buildup in 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.

2. **Ice builds up on the roof.**
   Performance Standard
   Ice dams form naturally in cold climate areas when repeated cycles of melted snow refreezes at roof edges or valleys.

   Contractor Repair Responsibility
   None.

3. **Chimney cap/chimney flashing leaks.**
   Performance Standard
   Chimney cap or chimney flashing should not leak.

   Contractor Repair Responsibility
   Contractor to check and repair chimney cap, chimney caulking and chimney flashing.

4. **Shingles blow off.**
   Performance Standard
   Shingles should not blow off in winds less than the manufacturer's warranty statement or applicable building codes. It should be noted that seal down shingles require heat from the sun to cause their sealing, so some warm weather is required to affect a full seal.

   Contractor Repair Responsibility
   Contractor to repair shingles that have blown off. In a repair situation, the Buyer is cautioned that a color mismatch in shingles may occur. Storm damage or wind speeds that are more than the manufacturer's coverage is Buyer's responsibility.

5. **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 influence the appearance of the roof.

   Contractor Repair Responsibility
   None.

6. **Shingles are not horizontally aligned**.
   Performance Standard
   Shingles should be installed according to the manufacturer's standards and specifications.

   Contractor Repair Responsibility
   Contractor will remove shingles that do not meet the Performance Standards and replace them with new shingles that are properly aligned.

7. **Shingle edges or corners are curled or cupped**.
   Performance Standard
   Shingle edges and corners need not be perfectly flat.

   Contractor Repair Responsibility
   None.

8. **Shingles do not overhang edges of roof or hang too far over edges of roof.**
   Performance Standard
   Shingles shall overhang roof edges by not less than 1/4", and not more than 3/4", unless the manufacturer's standards/specifications indicate otherwise.

   Contractor Repair Responsibility
   The Contractor will trim or replace shingles as necessary to meet the Performance Standards.

9. **Roofing nails are exposed at the ridge or hip of a roof.**
   Performance Standard
   Nail heads shall be sealed.

   Contractor Repair Responsibility
   Contractor to repair.

10. **Holes from construction activities are found in shingles.**
   Performance Standard
   Holes or damaged shingles from construction activities shall be flashed or sealed below the asphalt shingle tab to prevent leakage. If the patch is visible from the ground, the shingle should be replaced.

   Contractor Repair Responsibility
   Contractor will repair or replace the affected shingles to meet the Performance Standard.

11. **Roof sheathing is wavy or appears bowed.**
   Performance Standard
   This problem may be inherent due to the shrinkage of the wood underneath. Roof should not be wavy or bowed greater than 1/2" out of plane in a 2' length.

   Contractor Repair Responsibility
   Contractor to repair to meet Performance Standard.

12. **Sheathing or roofing nails have loosened from framing and raised shingles.**
   Performance Standard
   Nails shall not loosen from roof sheathing to raise shingles from surface.

   Contractor Repair Responsibility
   Contractor shall repair all areas as necessary to meet the Performance Standard.

13. **Standing water on flat roof.**
   Performance Standard
   A water level not more than ½" depth after rain ceases when unobstructed by debris is acceptable.

   Contractor Repair Responsibility
   Contractor shall correct when water level is more than ½".

14. **Mold, moss, and fungus-type growth on roofs.**
   Performance Standard
   Under some conditions, mold, moss, and other fungus tends to grow on roofs.

   Contractor Repair Responsibility
   None. Note: Buyers may wish to pursue products on the market that can be applied to shingles to prevent or retard these conditions.

15. **An attic vent or louver leaks.**
   Performance Standard
   Attic vents and louvers shall not leak. However, infiltration of wind-driven rain and snow are not considered leaks and are beyond the control of the Contractor.

   Contractor Repair Responsibility
   The Contractor shall repair or replace the roof vents as necessary to meet the Performance Standards.

16. **Roof ridge beam has deflected.**
    Performance Standard
    Roof ridge beam deflection greater that 1" in 8' is considered excessive.

    Contractor Repair Responsibility
    Contractor shall repair affected ridge beams that do not meet the Performance Standard.

GUTTERS & DOWNSPOUTS STANDARD

1. **Gutter overflows during a heavy rain.**
    Performance Standard
    Gutters may overflow during a heavy rain.

    Contractor Repair Responsibility
    None.

2. **Downspouts are in an inconvenient location or are too prevalent.**
    Performance Standard
    Downspout quantity and location are made at the discretion of the builder and their trade partners.

    Contractor Repair Responsibility
    None.

3. **Other flashing, valleys, or tin shingles leak.**
    Performance Standard
    Flashing, valleys, and tin shingles should not leak.

    Contractor Repair Responsibility
    Contractor to repair.

4. **Gutters and downspouts leak.**
    Performance Standard
    Gutters and downspouts should not leak but may overflow during heavy rains. It shall be the Buyer's responsibility to keep gutters and downspouts free of leaves and debris, which could cause excessive overflow.

    Contractor Repair Responsibility
    Contractor to repair so gutters and downspouts do not leak. Sealants are acceptable.

5. **Water stands in gutters.**
    Performance Standard
    A water level not more than 1" depth in any gutter section after rain ceases when unobstructed by debris is acceptable. Contractors usually install residential gutters with a minimal slope to maintain an attractive appearance.

    Contractor Repair Responsibility
    Contractor shall correct when water level is more than 1" in depth.

6. **Leaves accumulate on top of the gutter protection system and roof.**

   Performance Standard

   Leaf protection systems are designed to keep leaves out of gutters and do not prevent debris buildup on roofs.

   Contractor Repair Responsibility

   None

PLUMBING STANDARD

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.

The Contractor is not responsible for consequential damages (a loss other than the cost to correct a deficiency) caused by water.

Certain water conditions can cause damage to fixtures and appliances. It is the Buyer's responsibility to have water tested and to add a water conditioning system if necessary. Unless specified in the Building Contract, the quality of the water is not the responsibility or warranted by the builder. OR water pressure to house, or consequences to plumbing fixtures caused by improper pressure.

These Quality Standards are applicable for the first year of warranty only.

1. **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.

   Contractor Repair Responsibility
   Contractor shall make necessary repairs to eliminate leakage. Buyer is responsible for any consequential damages.

2. **Faucet leak or valve leak.**
   Performance Standard
   No valve or faucet should leak.

   Contractor Repair Responsibility
   Contractor shall repair or replace the leaking faucet or valve. Washer or cartridge replacement is a Buyer's responsibility after the first year. Buyer is responsible for any consequential damages.

3. **Water and waste pipe banging, hammering, and ticking.**
   Performance Standard
   There may be some banging, hammering, or ticking of pipes due to length or location of piping or rapid closing of faucets. All noises due to water flow and pipe expansion caused by changing water temperatures are not the Contractor's responsibility.

   Contractor Repair Responsibility
   None, assuming pipes are fastened per code.

4. **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 but are not watertight.

   Contractor Repair Responsibility
   Contractor to correct until fixture holds water to meet Performance Standard.

5. **Cracking, scratches, or chipping of plumbing fixtures.**
   Performance Standard
   Chips, cracks, and scratches on surfaces of plumbing fixtures can occur.

   Contractor Repair Responsibility
   Contractor shall repair any fixture or fitting which is outside acceptable standards when reported prior to occupancy. Contractor will not be responsible for repairs unless damage has been reported to Contractor in writing prior to closing. There may be minor color variations in repaired areas.

6. **Stopped up sewers, fixtures and drains.**
   Performance Standard
   Sewers, fixtures and drains should operate properly to accomplish their intended function.

   Contractor Repair Responsibility
   Contractor will not be responsible for sewers, fixtures and drains which are clogged through natural causes or the Buyer's negligence. Where defective construction is shown to be the cause, Contractor will assume the cost of the repair. Where Buyer negligence is shown to be the cause, the Buyer shall assume all repair costs.

7. **Waste disposal unit does not operate properly.**
   Performance Standard
   Disposal unit must accomplish its intended function.

   Contractor Repair Responsibility
   Contractor will repair any defective fixture or fitting which does not meet acceptable standards, as defined by the manufacturer during the warranty period, unless caused by Buyer negligence.

8. **Inadequate flushing of toilets.**
   Performance Standard
   It is not unusual for a toilet to be flushed twice or more due to energy conservation fixtures.

   Contractor Repair Responsibility
   None, unless it is a manufacturer's defect.

9. **Plumbing pipes freeze and/or burst.**
   Performance Standard
   Drain, waste and water pipes shall be adequately protected as required by applicable Code, during normally anticipated cold weather.

   Contractor Repair Responsibility
   Contractor will correct situations not meeting the Code. It is the Buyer's responsibility to drain or otherwise protect lines, exterior faucets, and hose bibs (even if they have an anti-siphon or anti-freeze valve attached), and hoses that are exposed to freezing temperatures. Consequential damages are not the responsibility of the Contractor. It may be necessary in extremely cold weather to open a cabinet door to allow warm air circulation.

10. **Vent freezes or becomes plugged**.
    Performance Standard
    Buyer is responsible to keep plumbing vent unobstructed.

    Contractor Repair Responsibility
    None.

11. **Condensation (sweating) of pipes.**

Performance Standard

Condensation (sweating) is normal and may occur most often in water systems due to cold water and humidity.

Contractor Repair Responsibility

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

12. **Sewer odor is present**.

Performance Standard

Buyer to check to see if septic sump is sealed. Water should be put in all drains, including floor and fixture drains and rough-ins.

Contractor Repair Responsibility

Buyer to add water to all drains. Contractor to check seal on sanitary sump crock if odor persists.

13. **Finish on plumbing fixture is scratched or damaged by a chemical agent or foreign substance.**

Performance Standard

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

Contractor Repair Responsibility

If the defect was caused by the Contractor or Contractor's subcontractor, and is noted by the Buyer prior to occupancy, the Contractor is to replace or repair.

14. **Self-rimming sink does not sit flush to countertop**.

Performance Standard

1/4" average caulk gap is acceptable.

Contractor Repair Responsibility

Contractor to repair to Performance Standards.

SEWERAGE & WATER LATERALS, STORM SEWERS, WELLS & SEPTIC SYSTEM STANDARD

Background

Well and well pump, septic system, sewer and water lateral installation must be performed by a licensed Contractor. In the normal building contract, the Contractor provides for this type of work on an allowance or estimate basis, which is cost plus Contractor's mark-up. Where the installation charge plus Contractor's mark-up exceeds the allowance or estimate value, the Buyers should expect to pay this as an extra in addition to the allowance.

Well and septic systems are highly regulated by state and local code. Additionally, the location of the system on the property is dictated by code.

Buyer is responsible for the marking of the area where the system will be located. It is also the Buyer's responsibility to verify depth of sewer location or acquire percolation tests for any sewer that is needed. The Contractor is not responsible for extra charges related to the absence of the appropriate components.

The party who contracts for the installation of these systems assumes responsibility for assuring that the permits, records, and work is completed in a workmanlike manner and in full accordance with applicable codes.

WELLS

The well driller's responsibility is to drill a well at the location designated by code and practicality to an appropriate depth making available a quantity of water. Due to geological conditions, water quality and quantity cannot be guaranteed. There is no way to determine the depth of a well before drilling the well. This operation is normally performed on a flat rate cost per foot determined by ultimate depth of the well (most have a 100' minimum), plus an additional cost for the pump installation, plus wiring, coring, permits and water tests, etc. Depth of wells can vary from lot to lot. In some areas, side by side wells can be substantially different depths. In addition to the drilling of the well, the installation of pump and electric power to the pump shall be included in the well allowance. If a special screen is required due to the material of the bottom of the well, this would be charged as an extra to the Buyer. If in rock, grouting may be required and would be an additional expense to the Buyer.

The Buyer should notify the Contractor of intended use, so that water pressure may be adequate (i.e., the installation of sprinkler systems). Some wells cannot use sprinkler systems due to insufficient gallons per minute.

The well driller is responsible for the initial well chlorination and bacteria samples. Thereafter, it is the Buyer's responsibility for water samples and well maintenance

SEPTIC SYSTEMS

Septic system installation is normally accomplished on an allowance basis, which includes the cost for the septic tank, its installation and connections with the building's sewerage system, permits, wiring, coring, fabrics, etc. and dispersal component. Minimum sizing and type of the septic system are established by the soil test and state and county codes. If the septic system is above the level of the floor, a lift system with alarm and wiring would be necessary at an extra expense.

Care should be taken to keep septic system locations free from compaction, stripping or filling.

Areas where mound systems are to be installed should not be disturbed by equipment. If this occurs, another site may have to be tested and approved for septic system.

Buyer actions that constitute negligence under this standard include, but are not limited to the following:

- Excessive use of water such as overuse of washing machine and dishwasher, including their simultaneous use.
- Connection of sump pump, roof drains, or backwash from a water conditioner into the system.
- Septic tank covers left at ground surface. This can allow groundwater infiltration, causing the system to flood out, resulting in premature failure of the system.
- Covers that are not six inches (6") above the ground surface.
- Placement of nonbiodegradable items into the system.
- Addition of any harsh chemicals, greases or cleaning agents, and excessive amount of bleach or drain cleaners
- Placement of surfaces not permeable to water over the disposal area of the system.
- Allowing vehicles to drive or park over the disposal area of the system.
- Failure to pump out the septic tank periodically, as required.
- Failure to maintain the septic tank effluent filter.
- Use which exceeds the system's design standards.
- Failure to have a system with pretreatment components serviced at recommended service intervals.

Excessive or improper use of a garbage disposal may not be recommended in a septic system.

SEWER/WATER/STORM SEWER LATERALS

Sewer and water and storm sewer laterals are billed on an allowance or cost per foot basis. The locations of the laterals are determined by the Contractor. Typically, laterals are stubbed to lot line, (if they are not, the Buyer will be charged an extra to tap into the sewer or water main. Charges to Buyer include permits, cleanouts, meters, permits, etc.). Unusual soil conditions, excessive water, or excessive depth of main connection can cause extra charges to the Buyer.

These Quality Standards are applicable for the first year of warranty only.

1. **Low or excessive water pressure.**
   Performance Standard
   In a well situation you may have less water pressure due to the nature of the system. In a municipal system, the pressure you get is what the municipality provides. In certain cases, a pressure-compensation regulation may need to be utilized, at an additional cost. Water conditioning units can decrease pressure 5-10 lbs. in many situations.

   Contractor Repair Responsibility
   None, except to make sure system was installed properly and the pressure at the tank is set properly in a well situation.

2. **Water and waste pipe banging, hammering, or ticking.**
   Performance Standard
   There may be some banging, hammering, or ticking of pipes due to length or location of piping or rapid closing of faucets. All noises due to water flow and pipe expansion cannot be removed.

   Contractor Repair Responsibility
   Contractor is responsible to have pipes fastened properly.

3. **Condensation (sweating) of pressure tank and pipes.**
   Performance Standard
   Condensation (sweating) is normal and may occur more often in well water systems due to cooler temperatures (45°-50 °) of well water. Humidity levels affect the amount of condensation on piping.

   Contractor Repair Responsibility
   None. A dehumidifier and pipe and tank insulation can be added by the Buyer.

4. **Poor water quality or mineral content, and/or hardness of water.**
   Performance Standard
   There may be some odor, chemical, radon, or mineral content or water discoloration evident and is beyond the control of the Contractor.

   Contractor Repair Responsibility
   Contractor is not responsible for quality of water, only that it is bacteriologically safe at the time of installation. However, Buyer may wish to install conditioning equipment to improve color and odor. Periodically, Owner should check the safeness of the well water. (See #11 below).

5. **Leaking from piping or pressure tank.**
   Performance Standard
   No leaks of any kind should exist. Condensation on pipes and tank does not constitute a leak.

   Contractor Repair Responsibility
   Contractor to repair any leaks during the first year of occupancy.

6. **Freezing of exterior pipes, well, septic, water, or sewer lateral.**
   Performance Standard
   All exterior water and sewer system pipes should be installed to Code. Excessive conditions can cause pipes to freeze and is not the Contractor's responsibility.

   Contractor Repair Responsibility
   None provided system is installed per Code.

7. **Septic/sewer line clogged.**
   Performance Standard
   Septic/sewer lines should operate properly to accomplish their intended function.

   Contractor Repair Responsibility
   Contractor will not be responsible for septic/sewer lines that are clogged through natural causes or the Buyer's negligence. Where defective construction by the Contractor is shown to be the cause, Contractor will repair and assume the cost. Where Buyer negligence is shown to be the cause, the Buyer shall assume all repair costs.

8. **Septic odor emitting from sealed sanitary sump crock.**
   Performance Standard
   No odor shall emit from a sealed sanitary sump crock.

   Contractor Repair Responsibility
   Contractor should seal sump crock properly to eliminate odor.

9. **Sewer gas odor coming from outside of house**.
   Performance Standard
   Septic system and roof vents can emit odors.

   Contractor Repair Responsibility
   None.

10. **Septic system fails**.
    Performance Standard
    System should not fail in first year.

    Contractor Repair Responsibility
    Contractor to repair unless caused by Buyer's negligence.

11. **Well or city water becomes contaminated**.
    Performance Standard
    Bugs, ground water, flooding, etc. can contaminate water.

    Contractor Repair Responsibility
    None. Buyer may need to test water and chlorinate.

CLEAR WATER SUMP PUMPS

Background
A drainage system around the houses foundation collects water and drains it into the sump crock. When water reaches a certain level, the pump turns on and discharges the water. Owner is responsible to maintain adequate slope in grade to discharge water away from house. Homeowners should consider having a backup power supply to power the sump pump in case of a power outage.

A sump pump system is designed for normal quantities of water. During periods of particularly wet weather, sump pumps may not be able to adequately discharge all water.

There are two basic models of sump pump, the pedestal and submersible. The pedestal model has a motor on top and pump at the base. This motor should not get wet. A ball float turns the pump on and off. The submersible pump is designed to be submerged in water and sit on the bottom of the sump crock.

Per Wisconsin code either type pump should have a check valve on the water outlet pipe, so the water doesn't flow back into the sump crock when the pump shuts off.

These Quality Standards are applicable for the first year of warranty only.

1. **Sump pump runs continuously.**
   Performance Standard
   Sump pumps are designed to be continuous duty pumps. In certain "spring like" weather occurrences or heavy rains, the sump pump may run continuously. Contractor is not able to control ground water table levels and the amount of precipitation received.

   Contractor Repair Responsibility
   Builder to assure the float switch is set to manufacturer's standard and per code, and pump is set at proper height in crock.

   Homeowner is responsible for maintaining positive slope for drainage around the perimeter of the home. Homeowner may also want to consider a higher horsepower pump or the installation of 2nd sump crock and pump.

2. **Sump pump cycles frequently.**
   Performance Standard
   The sump pump should run for a minimum of 20 seconds before shutting off. Contractor is not able to control ground water table levels and the amount of precipitation received.

   Contractor Repair Responsibility
   Builder to assure the float switch is set to manufactures standard, and pump is set at proper height in crock.

   Homeowner responsible for maintaining positive slope for drainage around the perimeter of the home.

ELECTRICAL STANDARD

Background
Electrical system installation is performed 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 Contractor cannot be responsible for what a Buyer plugs into an electrical outlet. Contractor is also not responsible for what a Buyer has added to the electrical system.

If a Buyer's complaint is found to be the Buyer's responsibility, the Buyer will pay for the service charge and any subsequent expenses. Additionally, any electrical device supplied by Buyer and installed by Contractor requires no repair responsibility by the Contractor.

Regarding breakage of glass in light fixtures, it should be noted that such breakage is the responsibility of manufacturer only until acceptance of delivery to job site. Upon delivery, safe-keeping of the fixtures becomes the Buyer's responsibility.

These Quality Standards are applicable for the first year of warranty only.

1. **Outlets and switches do not work.**
   Performance Standard
   All outlets and switches must be operative and installed per approved electrical code.

   Contractor Repair Responsibility
   Repair or replace wiring or replace defective outlets and switches to make units work properly.

2. **Lights and fans do not work.**
   Performance Standard
   Wiring to fixture must be operative.

   Contractor Repair Responsibility
   Contractor 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 Contractor supplied, the Contractor would be responsible for the service call. If the fixture was Buyer supplied, the Buyer would pay the service call.

3. **Lights dim or flicker.**
   Performance Standard
   Lights may dim or flicker during starting of some motor driven equipment and appliances. This is considered normal and is within the standard. Additionally, LED bulbs emit light on frequencies that may be disturbed by other equipment while it is running.

   Contractor Repair Responsibility
   None.

4. **Circuit breakers trip out.**
   Performance Standard
   Circuit breakers should disengage in cases where there may be an overload of a circuit. (See #5 re: GFCI circuits) Circuit breakers trip to disconnect a dangerously large load to prevent overheating the wires and causing a fire. Many outlets may be connected to one breaker. Portable appliances such as coffee makers, toasters, hot plates and heaters place heavy demands on electrical circuits. When more than one of these type appliances are plugged into a multi-outlet circuit, the circuit breaker may overload and trip. In this case

the owner will be required to limit the number of appliances in use at one time. Some portable appliances such as air conditioners and heaters may require a dedicated circuit.
ARC fault breakers required may not be compatible with certain fixtures or exercise equipment.

Contractor Repair Responsibility
If it is determined that there is not an overload of portable appliances, Contractor to repair or replace breaker.

5. **Ground fault circuit interrupter (GFCI) circuit trips frequently.**
Performance Standard
Ground fault circuit interrupters are sensitive safety devices installed into the electrical system to provide protection against electrical shock. These sensitive devices can be tripped very easily. Buyers should check their appliances to make sure there is no defect.

Contractor Repair Responsibility
Contractor shall install ground fault interrupter in accordance with approved electrical code. Tripping is to be expected and is not covered, unless due to a construction or product defect.

6. **Drafts from electrical outlets.**
Performance Standard
Electrical junction boxes on exterior walls may allow air flow whereby the cold air can be drawn through the outlet into a room.

Contractor Repair Responsibility
None.

7. **Water leaks into basement at Contractor installed conduits going through walls.**
Performance Standard
Water leaks into basement should not occur at conduits assuming Buyer has properly graded around foundations.

Contractor Repair Responsibility
Contractor to repair, provided grading is correct with a positive slope away from the foundation (6" down for every 10' from the foundation; 8” down from any wood product).

8. **Dimmer switches get hot.**
Performance Standard
Heat is a by-product of all dimmers.

Contractor Repair Responsibility
Contractor is responsible to ascertain that dimmer is sized properly and properly wired for the lighting load.

9. **Noisy exhaust fans.**
Performance Standards
Exhaust fans are noisy.

Contractor Repair Responsibility
Contractor is responsible for assuring the fans are operating to manufacturer’s specifications.

10. Electrical device supplied by Buyer does not work.

Performance Standard

An electrical device supplied by the Buyer and installed by the Contractor does not fall within the Builder Warranty.

Contractor Repair Responsibility

None.

11. Low voltage lighting

Performance standard

Products should perform as stated, approved components only should be used together. Mixing of Product components can lead to system failures.

Contract Repair Responsibility

Confirm balance rated components where product performance is not as stated. Balance electrical capabilities where needed, replace system items if defective and if contractor supplied. Buyer responsible for system replacements if they provided, contractor to install to assure safety.

12. LED lighting

Performance Standards

LED bulbs or integrated arrays in fixtures should function as expected. LED can vary in color type output, this is chosen by builder or buyer, contractor not responsible. Contractor to supply type specified if contractor supplied.

Contract Repair Responsibilities

Confirm dimmer and LED light type are matched if performance is not as expected. Change dimmer if needed to fix performance. Replace any LED found to be defective. Buyer to supply replacement if not contractor provided.

HEATING & SHEET METAL STANDARD

Background

The heating and cooling systems are installed to be compliant to local and or national building code, with the equipment selection (rated output capacity) being dependent upon the size of the home, outside design temperatures, and calculated heat loss based on the homes build specifications and design. It should be noted that setpoint temperatures in the home may fluctuate due to wind direction, efficiency of windows and doors, and homes lot orientation and site considerations, etc. If temperature variances are experienced within different areas of the home running the furnace blower continuously can help even out these differences.

Replacement of furnace filters and cleaning of ductwork are the Buyer's responsibility. Buyer is cautioned to keep the furnace intake and exhaust vent pipes free of snow or other obstructions. The location and quantity of supply and return vents and location of intake and exhaust is selected to meet code and at the discretion of the installing Contractor.

These Quality Standards are applicable for the first year of warranty only.

1. **Noisy ductwork and vents.**

   Performance Standard

   When supply duct metal or plastic furnace venting pipes heated it expands and when cooled it contracts. The result can be "ticking" or "popping" noises which are generally to be expected and shall be considered acceptable. "Whistling" or other air noise can be heard whenever air flow is restricted due to closed or blocked registers or dirty furnace filters.

   Contractor Repair Responsibility

   None.

2. **Oil canning.**

   Performance Standard

   Beaded or cross-broken ductwork of the appropriate gauge metal shall be used such to avoid excess booming noises commonly called "oil canning". This noise can also be caused by excess movement in structural joists or flooring systems. Excessive booming noise caused by "oil canning" is not acceptable.

   Contractor Repair Responsibility

   Contractor will attempt to repair ductwork oil canning noises, however resolution cannot be guaranteed.

3. **Furnace not placed as per plan.**

   Performance Standard

   Due to heating design, venting location restrictions and building layout, the furnace location may have to be adjusted by the heating contractor to ensure adequate system performance...

   Contractor Repair Responsibility

   None.

4. **Inadequate heating.**

   Performance Standard

   Heating system shall be capable of producing an inside temperature of 70°, as measured in the center of each room at a height of 5 feet above the floor, under local outdoor winter design conditions of -10° specified in ASHRAE (American Society of Heating, Refrigerating and Air Conditioning Engineers) handbook. Federal, state or local energy codes shall supersede this standard where such codes have been locally

adopted. Temperature variations between floor and rooms may vary depending on construction methods, number and size of window openings, and orientation of the home.

Contractor Repair Responsibility
Contractor will correct heating system to provide the required minimum temperatures. However, the Buyer shall be responsible for seasonally adjusting balancing dampers, registers and other minor adjustments.

5. **Inadequate cooling.**
Performance Standard
Where air conditioning is provided, the cooling system shall be capable of maintaining a temperature of 78°, as measured in the center of each room at a height of 5 feet above the floor, under local outdoor summer design conditions as specified in ASHRAE handbook. In the case of outside temperatures exceeding 95°, a differential of 15° from the outside temperature will be maintained. Where there is excessive glass, this may not be attainable. Federal, state or local energy codes shall supersede this standard where such codes have been locally adopted. Temperature variations between floor and rooms may vary depending on construction methods, number and size of window openings, and orientation of the home.

Contractor Repair Responsibility
Contractor will correct cooling system to meet temperature conditions, in accordance with specifications.

6. **Kitchen or bath fan allows air infiltration.**
Performance Standard
Kitchen and bath fans shall be installed in accordance with the manufacturer's instructions and code requirements.

Contractor Repair Responsibility
None, provided that fans meet applicable guidelines.

7. **Kitchen fan, bath fan, or dryer vent creates a rattling sound.**
Performance Standard
Some kitchen fans, hood fans, or dryer vents utilize backdraft dampers that are designed to move. During high winds, this can cause a rattling sound. This is a natural occurrence.

Contractor Repair Responsibility
None.

8. **Condensation on the outside of air handlers, ducts, bath vent fan.**
Performance Standard
Air handlers, bath vent fans, and supply or return ducts may collect condensation on their exterior surfaces when extreme temperature differences and high humidity conditions exist. Condensation usually results from excess humidity within the home created by the Buyer or during the initial natural curing process of a new home.

Contractor Repair Responsibility
None. This is usually the result of conditions beyond the Contractor's control.

9. **Air flow noise at register**.
Performance Standard
Under certain conditions, some noise may be experienced with the normal flow of air. Product should be correctly installed according to manufacturer's specifications.

Contractor Repair Responsibility
None.

10. **The air handler or furnace vibrates.**
    Performance Standard
    Under certain conditions, some noise may be experienced with the normal flow of air. See manufacturer's specifications.

    Contractor Repair Responsibility
    None.

11. **Condensation lines clog up.**
    Performance Standard
    Condensation lines may form blockages over time even under normal use. This is a Buyer routine maintenance item. Contractor shall provide appropriately installed, unobstructed condensation lines at time of installation completion.

    Contractor Repair Responsibility
    None.

12. **Refrigerant line leaks**.
    Performance Standard
    Refrigerant lines and system piping should not leak during normal operation. All installations are to be leak tested and sound upon completion of install.

    Contractor Repair Responsibility
    The Contractor will repair refrigerant leaks and restore appropriate refrigerant charge to the air-conditioning system unless the damage was caused by the Buyer's actions, negligence, or unit is no longer under warranty.

13. **Excessive humidity in the home.**
    Performance Standard
    See Moisture Standards (pg. 93).

    Contractor Repair Responsibility
    See Moisture Standards (pg. 93).

14. **Air conditioning condenser is not where the Buyer thought it should be (if not marked on plan).**
    Performance Standard
    Generally, air conditioning condensers are placed as close as possible to the furnace for efficiency. Contractor and the heating contractor are responsible for placing the condenser in a reasonable location and in accordance with local codes.

    Contractor Repair Responsibility
    None.

15. **Settling of air conditioner slab**.
    Performance Standard
    Ground around air conditioner slab will settle. Buyer is required to maintain a proper slope and fill underneath slab unless landscaping was part of Contractor's contract.

Contractor Repair Responsibility
None.

16. Placement of cold air returns and supply vents is unacceptable.

Performance Standard
Placement of cold air returns and supply vents is chosen at the discretion of the Contractor to ensure proper air distribution and system performance. .
See heating and cooling performance standards.

Contractor Repair Responsibility
None.

INSULATION STANDARD

Background

Insulating is the process by which material is installed at the perimeter or outer envelope of the structure to reduce heat flow. This produces a more controlled interior comfort climate and conserves energy. The primary characteristic desired in an insulating material is the ability to trap 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 his materials with its resistance to heat flow (R value). R value is a number rating system. As the R value increases, the overall effectiveness of the insulating material increases.

Commonly used insulating materials are fiberglass, cellulose, and two-part Spray Polyurethane Foams (SPF). These materials should be installed per the manufacturer's recommendations. The normal form of the insulating material is blown loose material, batts, and the two SPFs, both open and closed cell. Other forms are rigid materials such as polyurethane or polystyrene, which are usually supplied in panel form.

Heat loss can be further minimized by the installation of weatherstripping and caulking. Both require Buyer maintenance throughout the life of the home. Infiltration of air and water vapor can occur under certain temperature 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. Also, venting for fans will produce some air flowage.

Moisture in insulation causes it to lose its insulating value. Therefore, vapor retarders are put on the warm side of the exterior wall to help prevent moisture from entering into the walls and ceilings. It is also important to properly vent the attic to create air flow. This can be accomplished with certain specific combinations of 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 are specified by Code.

You may wish to refer to the Moisture Standard (pg. 93) 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.

These Quality Standards are applicable for the first year of warranty only.

1. **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 (American Society of Heating, Refrigerating and Air-Conditioning Engineers) design temperatures, to prevent freezing.

   Contractor Repair Responsibility

   Contractor will correct situations not meeting the Code.

Buyer's Repair Responsibility
It is the Buyer's responsibility to drain or otherwise protect lines to exterior faucets and hose bibs (even if they have an anti-siphon valve attached) exposed to freezing temperatures.

2. **Frost appearing or condensation on interior walls, closets, or exterior doors and sidelights.**
Performance Standard
House must be built and insulated to Code. Some condensation and frost may appear during extreme weather conditions.

Contractor Repair Responsibility
If home has been built and insulated to Code, no Contractor responsibility. If not built to Code, Contractor to repair to Code.

Buyer's Repair Responsibility
It may be necessary at times for Buyer to allow air circulation into closets.

3. **Condensation or frost accumulates on edges of windows**.
Performance Standard
Moisture condenses on the window since it is the coldest object in any given room with the glass having a much higher rate of heat loss and, hence, being the colder surface during the normal heating season. The Buyer 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. Window treatments can reduce the temperature on the glass, thus causing condensation. It is recommended that interior screens be removed from casement windows during the heating season. Raising blinds or opening draperies will help minimize the situation. Also, exhaust fans, ceiling fans, and furnace fans should be used to reduce moisture.

Contractor Repair Responsibility
None, except to explain to the Buyer more thoroughly how this condition is caused.

4. **Drafts at baseboards, electrical outlets, recessed lights, ceiling fans, and vent fans.**
Performance Standard
The juncture of the floor and wall system is conducive to openings so a small amount of draft may result at the baseboards. Additionally, electrical junction boxes on exterior walls may produce air flow whereby the colder air can be drawn through the outlet into a room. Lastly, drafts from recessed lights, ceiling fans, and vent fans are a normal condition.

Contractor Repair Responsibility
None. Buyer is cautioned not to stuff electrical junction boxes with insulation.

5. **Drafts around doors and windows**.
Performance Standard
Sources of some infiltration of air must be expected around doors and windows. Proper weatherstripping 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 Buyer.

Contractor Repair Responsibility
Contractor to inspect and adjust poorly fitted weatherstripping. If draft comes around casings, Contractor to make sure insulation is in place around window wherever possible.

6. **Blown insulation in attic displaces.**
   Performance Standard
   Blown insulation in attic can be displaced. It is possible for strong winds to access the attic through roof vents and vented soffits.

   Contractor Repair Responsibility
   None. Buyer to inspect attic insulation on a regular basis and rake displaced insulation back to its normal location.

7. **Blown insulation settles**.
   Performance Standard
   Insulation is installed to contracted R-value and approved building code. Insulation will settle. Some settling will occur, however, it should not settle below manufacturers' required thickness in first year.

   Contractor Repair Responsibility
   Contractor to correct during first year.
   None

8. **Inadequate insulation**.
   Performance Standard
   Insulation is installed to contracted R-value and approved building code.

   Contractor Repair Responsibility
   None

9. **Gaps at the top of batt insulation in a wall**.
   Performance Standard
   There should be no gaps.

   Contractor Repair Responsibility
   Contractor to insulate or foam gaps in a wall.

CAULKING & WEATHERSTRIPPING STANDARD

Background
Weatherstripping and caulking doors and windows helps maintain a home's heating and cooling capability. Heat loss can be minimized by the installation of weatherstripping and caulking. Both caulking and weatherstripping require Buyer inspection and maintenance throughout the life of the home. Some infiltration of air will occur under certain temperature and wind conditions. Condensation can occur when temperatures reach extremely low levels, causing moisture and frost on weather stripping.

The joint between windows, doors and exterior wall material (i.e. siding, brick) will need to be caulked to minimize air infiltration. Vinyl siding is not caulked. Caulking should be neat, uniform and blend with the rest of the job, and performed in a workmanlike manner.

These Quality Standards are applicable for the first year of warranty only.

1. **Caulk cracks or pulls away**.
   Performance Standard
   Caulking is a Buyer maintenance responsibility.

   Contractor Repair Responsibility
   None.

2. **Caulk is missing**.
   Performance Standard
   Contractor is responsible to caulk all areas in a manner consistent with local codes.

   Contractor Repair Responsibility
   Contractor to meet Performance Standard.

3. **Areas of home have excessive air infiltration**.
   Performance Standard
   Doors, windows, and other exterior penetration points are cold spot sources and some infiltration of air can be expected. Proper weatherstripping and insulating around these areas can minimize air passage. Under certain temperature and wind conditions, some infiltration will be observed by the Buyer.

   Contractor Repair Responsibility
   Contractor should ensure that all exterior penetrations are properly caulked and sealed.

DRYWALL AND PLASTER STANDARDS

Background

In reviewing drywall and plaster 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 or synthetic material which is applied to the interior surfaces. Drywall is applied in sheets, which are fastened to the framing or joists for application. The sheets are then taped and the entire surface is 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 always perfectly level and plumb, imperfections 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 and plaster repairs, the general rule to be applied is, if the defect is readily noticed by visual inspection from a distance of 5 feet under normal lighting conditions, it should be repaired. However, due to the initial shrinkage that exists with the new home, it is impossible to correct each individual defect as it occurs. The entire house will tend to stabilize within the first year and one repair will be made when necessary, preferably near the 12th month after occupancy upon request by the Buyer. Repairs will be made no more than one time during the warranty period. All repairs should be made to within industry standards. Any reoccurrence beyond the warranty period becomes a Buyer maintenance item.

Additionally, drywall installed in garage areas shall be installed in accordance with code and the applicable specifications. However, drywall in garage areas is generally not covered by the standard warranty.

Since drywall and plaster are finish materials, 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 ceiling or when the Contractor did not contract for the painting. The Contractor will attempt to match the repair texture as closely as possible, but the exact color match of the unpainted surface is impossible to achieve. Where the repair has been made on a painted surface, the Contractor will not be responsible for paint touch-up, provided color samples are left by the painter at the home, otherwise the Contractor shall be responsible to touch up the repair. A perfect match between original and new paint cannot be expected. The Contractor is not required to paint an entire wall, ceiling or room.

In a repair situation, care will be taken by the Contractor to minimize dust, however, it is the Buyer's responsibility to clean up the dust.

These Quality Standards are applicable for the first year of warranty only.

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

   Performance Standard

   Any of the above defects which can be readily determined by visual inspection from five feet away (without lighting the defect from one direction) shall be repaired by the Contractor except where normal repainting will cover the defect as in the case of a hairline crack.

   Contractor Repair Responsibility

   Repair to original finish as closely as possible. Repairs will be made no more than one time during the warranty period.

2. **Defects caused by workmanship during installation such as blisters in the tape, excess compound in joints, gouges, or troweling marks.**
   Performance Standard
   Defects that can be readily observed by visual inspection (without lighting the defect from one direction) are beyond the standard of industry except where normal repainting will cover the defect.

   Contractor Repair Responsibility
   Correct such defects as in (1) above.

3. **Photographing of mudded areas (tape lines, seam lines, nails, corners) in sand-sprayed or textured drywall.**
   Performance Standard
   The paint on the wallboard surface has a different texture than on the taped and mudded areas. This can happen in an attempt to conceal mudded areas.

   Contractor Repair Responsibility
   Photographing is not common, but when it is readily visible from five feet away (without lighting the defect from one direction), it is the Contractor's obligation to repair.

4. **Uneven texturing.**
   Performance Standard
   As textures are composed of natural materials, there will be some variation. Blemishes should not be visually apparent from five feet away.

   Contractor Repair Responsibility
   None.

5. **Separation at ceiling due to truss lifting.** (Also see Carpentry (Rough) #9
   Performance Standard
   Truss lift occurs during the heating seasons and typically returns to normal in the summer months. This is a normal occurrence and can happen.

   Contractor Repair Responsibility
   None.

6. **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.

   Contractor Repair Responsibility
   Contractor to repair to Performance Standard of #3 and #4 above

7. **Tape lines are visible.**
   Performance Standard
   Tape lines should not be visible except in the case of plastic tape being used on angular joints where the spray does not penetrate the same, thus leaving a visible line.

   Contractor Repair Responsibility
   Repair all paper or fiber tape lines so they are not visible. Minimize the plastic tape lines. Buyer may need to paint ceilings in these cases.

PAINTING, STAINING & WALLPAPERING STANDARD

Background

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

The cost in this type of work is mainly labor and, for that reason, Buyers sometimes undertake the responsibility for painting/staining their homes. In any event, the party who undertakes the painting/staining contract, be it Buyer or Contractor, assumes responsibility for:

- Promptly and properly providing protection to exposed surfaces to prevent damage due to deterioration of unfinished interior surfaces. Warping, checking, cracking, and blackening of millwork and siding, which takes place due to improper, untimely or no painting/staining, is the responsibility of the party contracting for painting/staining. Millwork manufacturers do not normally extend warranties on their product against warping or cracking unless the surface has been properly finished. Special care must be exercised to assure that all sides and edges of doors and millwork are sealed to prevent warping.
- Properly preparing the surface on the interior of the home to accept paint or stain, including filling nail holes.
- The number of paint coats to be applied is as specified in the contractual documents. If additional coats are necessary, Buyer is responsible for applying additional coats.
- Replacing hardware, light fixtures and doors if they are removed for painting/staining or other finishing.
- If Contractor does the interior staining and Buyer does interior painting, the Buyer is responsible for doing any paint touch-up over stain and varnish.

Ceilings and closets are not normally painted in new construction, but receive the drywall texture spray. Ceiling and closet drywall repairs only require the type of drywall spray originally used and may not match exactly.

By applying surface material or wall covering, the painting or wallpapering Contractor implies an acceptance of the work underneath.

All paint and stain colors can discolor to some degree.

Some airborne particles may cause minor imperfections in the finish.

Some satin, eggshell, semi-gloss and dark color paints may require additional coats. Touch-ups may be visible and require an additional coat. The Contractor is not responsible for re-painting entire wall.

Where white or off-white paint or stain is used, the tannin may show through if only one coat is applied.

Grain variations in wood will accept stain differently, therefore, it is not uncommon for two pieces of the same type of wood or the same piece of wood, stained with the same product, to vary in color. End grain will accept stain differently and will not finish as smoothly due to the nature of the wood.

An attempt should be made by the painter to leave small quantities of 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, bathtubs, sinks, showers, windows) and is a Buyer maintenance item.

Painted, stained or finished millwork must be cared for like furniture and cannot be scrubbed.

Buyer is cautioned that finishes can discolor due to cleaning products. Buyer should test a small area before applying the cleaning product to the entire section.

These Quality Standards are applicable for the first year of warranty only.

1. **Exterior paint or stain peels or chalks, including gutters, downspouts or other sheet metal areas.**
   Performance Standard
   The occurrence of peeling or chalking should not occur during the warranty period unless the Contractor has specifically informed the Buyer in writing that the particular color chosen may chalk. Exterior paints or stains applied to horizontal or smooth surfaces may peel.

   Contractor Repair Responsibility
   Contractor shall properly prepare and repaint affected areas, matching color as closely as possible. Buyer must understand touch-up may not match exactly. Should the paint deterioration affect the majority of a wall or area, the area should be repainted. The Contractor shall repaint in accordance with standards of good workmanship, but no warranty will be extended on the newly repainted surfaces.

2. **Exterior paint or stain has discolored**.
   Performance Standard
   Discoloration of exterior paints and stains is normal and the degree of discoloration depends on climatic conditions.

   Contractor Repair Responsibility
   None.

3. **Repainting of areas affected by drywall repairs.**
   Performance Standard
   Since drywall and plaster are finish materials, repairs may be slightly visible due to a color or texture mismatch after they have been made. The Contractor will attempt to match the repair texture as closely as possible, but the exact color match of the unpainted surface is impossible to achieve. Repairs do not require repainting when they are applied on unpainted surfaces such as unpainted ceiling or when the Contractor did not contract for the painting.

   Where the repair has been made on a painted surface, the Contractor will not be responsible for paint touch-up, provided color samples are left by the painter at the home, otherwise the Contractor shall be responsible to touch up the repair. A match between original and new paint cannot be expected. The Contractor is not required to paint an entire wall, ceiling or room.

   Contractor Repair Responsibility
   Contractor to repair areas as indicated above.

4. **Ceiling not painted originally or after repair**.
   Performance Standard
   Industry standards do not require painting of ceilings, as long as a drywall spray is used, unless specified in contract or specifications. Ceiling drywall repairs do not require painting if the painting of ceilings was not specified in the contract.

   Where finishes other than flat are selected by homeowner, drywall imperfections may be expected.

   Contractor Repair Responsibility
   None, unless ceiling painting was specified in the contract or specifications. See #3.

5. **Deterioration of varnish, urethane, acrylic or lacquer finishes, etc.**

   Performance Standard

   Natural finishes on interior woodwork shall not deteriorate during the first year of the warranty period. Varnish type finishes used on the exterior will deteriorate rapidly and are not covered by the warranty. Millwork must be cared for like furniture and cannot be scrubbed. Buyer to check with manufacturer as to proper maintenance.

   Contractor Repair Responsibility

   Contractor will refinish affected areas of interior woodwork, matching the color as closely as possible, provided that deterioration was not caused due to Buyer's actions.

6. **Insufficient paint coats applied.**

   Performance Standard

   Contractor is responsible to apply the number of paint coats specified in the contract. Factory primed millwork, windows or doors or trim do not count as a finish coat.

   Contractor Repair Responsibility

   Contractor to provide the proper number of paint coats as per contract.

7. **Paint and stain inside closet not of quality of other interior surfaces.**

   Performance Standard

   Finish quality may be lower in closets. Closets do not need to be painted, and may only be drywall sprayed, depending on the contract.

   Contractor Repair Responsibility

   Paint and stain in a proper workmanlike manner within limitations stated above.

8. **Mildew or fungus forms on painted or stained surfaces.**

   Performance Standard

   Mildew or fungus can form on a painted or stained surface.

   Contractor Repair Responsibility

   None.

9. **Color variations within similar woods.**

   Performance Standard

   Since wood is a natural product and its grain structure is unique for each piece of wood, Contractor is only responsible for supplying the type of lumber and millwork and paneling specified in the contract. Grain and color matching is not the industry standard.

   Contractor Repair Responsibility

   None.

10. **Color variations between different types of wood.**

    Performance Standard

    Dissimilar woods are even harder to match than similar woods. See #9 above.

    Contractor Repair Responsibility

    None.

11. **Wallcovering pulls loose.**
    Performance Standard
    Wallcoverings should not pull loose in the first year.

    Contractor Repair Responsibility
    Provided the wallcovering is in the Contractor's contract, it should be repaired. If a patch must be made, Contractor shall match as closely as possible. Because of dye lot differences, Buyer must understand exact match may not be possible. If installed by the Buyer, wallcovering repairs are the Buyer's responsibility. Wallcoverings affected by moisture caused by homeowner are not a warranty issue.

12. **Wallcovering, painting or staining done by Buyer is affected by other repairs**.
    Performance Standard
    This is a consequential damage. As such, the Buyer is responsible for any subsequent paint, stain and wallcovering repairs or any other consequential damages.

    Contractor Repair Responsibility
    None.

13. **Edge mismatched in pattern of wallcovering.**
    Performance Standard
    Wallcovering should match as closely as possible.

    Contractor Repair Responsibility
    Repair to meet Performance Standard. Because of dye lot differences, Buyer must understand that an exact match may not be possible.

14. **Shrinkage cracks in painted woodwork.**
    Performance Standard
    Hairline cracks at flat joints are acceptable.

    Contractor Repair Responsibility
    None on flat joints. Contractor to caulk hairline cracks in miters during first year.

15. **Scratches on glass or mirrors not caused by vandalism**.
    Performance Standard
    Glass or mirror surfaces shall not have scratches visible from six feet under normal lighting conditions. Scratches caused by Buyer during cleaning or using razor blades are not the Contractor's Responsibility.

    Contractor Repair Responsibility
    Contractor to repair only if noted in writing prior to occupancy.

16. **Gouges, cracks, nicks, scratches or other material or workmanship imperfections.**
    Performance Standard
    Any imperfections that are readily visible from a distance of 6 feet under natural lighting conditions are unacceptable, but must be noted in writing by the Buyer to the Contractor at the time the Buyer closes or takes occupancy of the home.

    Contractor Repair Responsibility
    Contractor to 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. It should be noted that if the Buyer is responsible for the painting/staining portion of the contract, the painting/staining work becomes the Buyer's responsibility.

17. Brush marks or lap marks show on interior painted or stained surface.

Performance Standard

Brush and lap marks shall not be readily visible on interior painted surfaces when viewed from a distance of 6 feet under natural lighting conditions.

Contractor Repair Responsibility

The Contractor will refinish as necessary and match surrounding areas as closely as practical.

18. Drips and runs in woodwork finish.

Performance Standard

Drips and runs shall not be readily visible on surfaces when viewed from a distance of 6 feet under natural lighting conditions.

Contractor Repair Responsibility

Contractor will repair as necessary to meet the Performance Standard.

COUNTERTOP STANDARD

Background
Scratches, chips, gouges or nicks should be noted by the Buyers at the time of the pre-occupancy inspection. Contractor should caution Buyer to only use products recommended by the manufacturers when cleaning and maintaining countertops. In laminate countertops heat and steam can cause laminate to rise. Buyer is cautioned not to place heat producing products, such as coffee pots, candles, etc., directly on top.

Stone, Quartz, and natural material countertops are delicate materials and can be easily cracked. Because of this, sitting, kneeling, or standing on countertops is not advised and may result in permanent damage to the countertop. Contractor is not responsible for cracks that occur after occupancy.

Locations of seams in countertops are chosen at the discretion of the countertop fabricator. Slab size in materials vary so a seamless top is not always possible. The undersides of stone, quartz material, and solid surface, countertops are unfinished. All seams should be kept sealed to avoid water infiltration.

Inherent in granite countertop material and some quartz materials are extreme natural or designed color variations and geological flaws, such as veins and mineral deposits. In the case of stones that are highly veined or fractured prior to installation, it is standard practice to repair with epoxy coloring to match stone and then re-polishing the affected area. Also, rods or liners may be required to be installed to ensure that the countertop is stable and structurally sound.

Natural stone countertops should be sealed, in accordance with the manufacturer's recommendations. In spite of being sealed, staining can still occur on natural materials.

Concrete countertops are custom made specifically for each project. Product samples are a representation of the actual color; not an exact match. Color will vary slightly from job to job. Seams are visible and put together with silicone. Concrete is porous and can stain or etch if it's in contact with acids such as citrus juices, wine, or vinegar. As a result, the top needs to be resealed, in accordance with the manufacturer's recommendations. Hairline surface cracks are a natural part of concrete countertops and require no repair.

Defects occurring after the time of occupancy are the Buyer's responsibility since these surfaces are subject to Buyer's damage.

These Quality Standards are applicable for the first year of warranty only.

1. **Countertops separate from wall or backsplash**.
   Performance Standard
   Acceptable tolerance is 1/16" in width.

   Contractor Repair Responsibility
   Contractor to caulk if gap is over 1/16".

2. **Seams in laminate countertops raise**.
   Performance Standard
   This will occur occasionally. Buyer should keep seams sealed as water, heat, and steam can penetrate.

   Contractor Repair Responsibility
   None.

3. **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 Buyer takes occupancy of the home.

   Contractor Repair Responsibility

   Contractor to repair if noted prior to occupancy.

4. **Seams in countertops are uneven (i.e. miters and butts).**

   Performance Standard

   Seams, mitered or butt joints, should not exceed 1/32" in laminate or natural materials. All seams in solid surfaces should be bonded. Certain material designs/patters will make seams visibly apparent. All seams should be solid and impenetrable by water. Seam locations vary and are selected at the discretion of the countertop fabricator.

   Contractor Repair Responsibility

   Contractor to repair any seams with a height variation in excess of 1/32" on laminate and 1/32”on natural materials. Installer of countertop (cabinets) is responsible for ensuring that the cabinets are level at joints.

5. **Chips, cracks, or face pitting in granite, marble, or concrete tops**.

   Performance Standard

   As a natural product, cracks and face pitting can appear naturally in these products due to each mineral having different hardness.

   Contractor Repair Responsibility

   Contractor to attempt to fill any cracks or pits and re-polish area, if noted prior to occupancy.

6. **Cracks or breaks that occur after installation and are noted after occupancy.**

   Performance Standard

   Materials may show cracks or voids in surface or joints over time. Proper care and maintenance, including sealing, is the responsibility of the Buyer.

   Contractor Repair Responsibility

   None.

7. **Staining on natural material countertop.**

   Performance Standard

   Natural materials can stain. Proper care and maintenance, including sealing, is the responsibility of the Buyer. Mineral residue around plumbing fixtures especially are common and are to be expected.

   Contractor Repair Responsibility

   None.

8. **Consistency of sink perimeter with countertop.**

   Performance Standard

   Perimeter consistency of the countertop with an undermount sink can vary on all sides to as much as 1/4”. Cut-out for sink to follow manufacturer’s specification.

   Contractor Repair Responsibility

   Contractor to repair if variance is in excess of 1/4”.

9. **Size of gap between top of undermount sink and bottom of countertop.**
   Performance Standard
   Inconsistencies in spacing between countertop and undermount sink is inherent to natural stone.

   Contractor Repair Responsibility
   If required, sealing of this gap may be necessary.

10. **Countertop supports on overhanging surfaces.**
    Performance Standard
    Proper and sufficient use of countertop support (brackets, legs, etc.) is acceptable. Location and size of brackets and supports will be determined by the Contractor, and countertop fabricator. Brackets are to have a finish paint coat.

    Contractor Repair Responsibility
    None.

HARDWARE & LIGHTING FIXTURE STANDARD

Background

All hardware and lighting fixtures are finished products and care should be taken to protect them, especially during painting and staining. Buyer maintenance is required. The Buyer 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 the natural chemicals in your body will cause a breakdown of the finish in time. It should also be understood that there will be color variations within finishes.

Any hardware or light fixtures may gradually tarnish and eventually take on an antique appearance. Some types of hardware material are intentionally designed to have a tarnished "look". The finish of these products transforms with age and use. Atmospheric and weather 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.

Buyer is cautioned to utilize the appropriate size bulb for the given light fixture.

Regarding breakage of glass in light fixtures, it should be noted that such breakage is the responsibility of manufacturer only until acceptance of delivery. Upon delivery, breakage is the Buyer's responsibility. If light fixtures are provided by the Buyer, Contractor is under no responsibility to repair. If light fixtures are provided by the Contractor, Contractor must repair to the applicable performance standard. Buyer is cautioned that long lead times for replacement glass may occur.

These Quality Standards are applicable for the first year of warranty only.

1. **Finish on hardware or lighting fixture wears off, is pitted, or is tarnished.**
   Performance Standard
   Natural causes, weather conditions, normal wear, chemical agents or negligence can cause finishes to wear off or change color. Typically, there is no warranty unless specifically stated by the manufacturer.

   Contractor Repair Responsibility
   None.

2. **Finish on hardware or lighting fixture is damaged by a chemical agent or foreign substance that was applied by the Contractor or the Contractor's subcontractor.**
   Performance Standard
   This must be noted prior to occupancy. If the defect is caused by products such as lacquer, stain or varnish that was applied by the Contractor's subcontractor, the Contractor would be responsible for correcting.

   Contractor Repair Responsibility
   If the defect was caused by the Contractor or Contractor's subcontractor, the Contractor is to replace or repair. If due to natural causes or chemical agents or negligence on the part of the Buyer, the Contractor would not be responsible.

3. **Locks do not work.**
   Performance Standard
   All locks must work. However, pressure must typically be applied to the door in order to engage dead bolts.

   Contractor Repair Responsibility
   Contractor to repair if lock does not work.

4. **Lights or fans do not work.**
   Performance Standard
   Wiring to fixture must be operative.

   Contractor Repair Responsibility
   Contractor is to repair defective wiring to lights and fans. If it is found that the Builder-supplied fixture is faulty, it would fall under a manufacturer's warranty. The Buyer will be responsible for the cost of the service call that was incurred if it is determined that the Buyer-supplied fixture is faulty.

   Buyer Repair Responsibility
   Buyer to check bulb to see if burned out, or incompatible with fixture, or call manufacturer in the case of a faulty fixture.

5. **Fluorescent lights hum.**
   Performance Standard
   Some fluorescent ballasts will hum. This is not a defect.

   Contractor Repair Responsibility
   None.

6. **Door bells/chimes do not work.**
   Performance Standard
   Door bells/chimes should operate.

   Contractor Repair Responsibility
   Contractor to repair or replace if door bells/chimes supplied by Contractor. Buyer is responsible if Buyer supplied.

7. **Ceiling fan vibrates excessively / ceiling fan is noisy.**
   Performance Standard
   The Contractor shall install fans and balance them in accordance with the manufacturer's specifications.

   Contractor Repair Responsibility
   The Contractor shall make a one-time repair on any fan installation not in accordance with Performance Standard if supplied and installed by the Contractor. If fan is supplied by Buyer, it is the Buyer's responsibility.

8. **Cabinet hardware is loose.**
   Performance Standard
   Over time and through use, the hardware on cabinets may become loose. This is a natural occurrence.

   Contractor Repair Responsibility
   None.

FINISH FLOORING STANDARDS

Background
Finished flooring work is subject to the same phenomena during construction of a home that drywall and plaster are, namely shrinkage and warpage of the surface to which it is applied. Moisture and temperature variations may cause movement in the subsurface to which finish flooring is applied and to the flooring material itself. Most of the issues which occur during the first year affecting flooring are a result of natural occurrences that take place during the stabilization of the home and are mirrored in the floor covering.

It is important that the Buyer care for all flooring materials using the manufacturer's recommended practices.

Lightweight gypsum floor products need to be installed per the manufacturer's recommendation before covering with flooring materials. By applying surface material, the flooring contractor implies an acceptance of the subfloor underneath. In the event that the flooring is installed by Buyer or Buyer's subcontractor, the Contractor has no duty to repair, in the event that the flooring does not meet the performance standards. Defects traced to Buyer's inappropriate use or care are not the Contractor's nor manufacturer's responsibility.

Maximum transition shall be 1/2", except 3/4" from finish flooring to concrete. If unique materials are used, special consideration may need to be made. The approximate height of the carpeting is factored in to the differential.

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

1. Carpeting
2. Ceramic or Natural Stone, Counters and Wall Applications (Hard Tile)
3. Resilient Flooring
4. Wood Flooring
5. Laminate Flooring

CARPETING STANDARD
Carpet selection and/or installation may be assumed by the Buyer or may be done by the Contractor as part of the contract or 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 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; hence it is recommended that the Buyers save any scrap material from the carpet installation for any future repairs that may be required because of burns, spots, etc.

By installing the carpeting, the flooring contractor implies an acceptance of the subfloor underneath. In the event that the carpeting is installed by Buyer or Buyer's subcontractor, the Contractor has no duty to repair, should the flooring fail to meet the Performance Standard. Defects traced to Buyer's inappropriate use or care are not the Contractor's nor manufacturer's responsibility.

These Quality Standards are applicable for the first year of warranty only.

1. **Open carpet seams**.
   Performance Standard
   Carpet seams will show, especially in particular types of carpeting. However, no visible gap is acceptable.

   Contractor Repair Responsibility
   Contractor shall correct any visible gaps due to improper installation. As determined by vendor

2. **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. Excessive moisture or the presence of water can cause carpet to become loose.

   Contractor Repair Responsibility
   The Contractor shall re-stretch or re-secure the carpeting unless caused by excessive moisture or the presence of wate.

3. **Spots on carpet or fading**.
   Performance Standard
   Exposure to light may cause spots on carpet and/or fading. Spots, if noted prior to occupancy in writing, would be the Contractor's responsibility if caused by Contractor or their subcontractors.

   Contractor Repair Responsibility
   None.

4. **Void appears in padding areas below carpet surface.**
   Performance Standard
   Carpeted areas shall have full coverage of pad consistent throughout the flooring area except at attachment points.

   Contractor Repair Responsibility
   The Contractor will repair any deficiencies to meet Performance Standard.

5. **Carpeting appears crushed.**
   Performance Standard
   Upon installation, carpeting may appear to be crushed.

   Contractor Repair Responsibility
   None. Time and vacuuming will resolve this issue.

6. **Fading of carpet.**
   Performance Standard
   Exposure to direct sunlight through glass will cause fading or discoloration.

   Contractor Repair Responsibility
   This is neither a manufacturing defect nor the Contractor's responsibility, but is the Buyer's responsibility to protect these areas during times of direct sunlight exposure.

7. **Floors squeak.**
   Performance Standard
   Floor squeaks are common in new construction (suggest remove "new construction" and a totally squeak-proof floor cannot be guaranteed.

   Contractor Repair Responsibility
   Contractor will make one attempt to minimize or eliminate floor squeak at the end of the warranty period.

8. **Screws or nails rise up in carpet.**
   Performance Standard
   Screws or nails from the subfloor may rise over time.

Contractor Repair Responsibility
Contractor will repair to eliminate the raised fastener.

HARD TILE STANDARD

Hard tile is 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 dye lot variations. The tiles may be attached to the subfloor, a mud base, a cement backerboard, concrete, finish floor or wall surface with appropriate types of mastics and adhesives as required by the manufacturer. After the tile is set, grout is applied to fill the joints. The natural stabilization and shrinking of the home will affect grouting. Re-grouting will be required by the Buyer as normal maintenance throughout the life of the home. It is virtually impossible to exactly match grout colors should a repair of grout be desired. Additionally, many hard tile applications require caulk. The Contractor will reasonably attempt to match caulk with grout.

In all cases of finished floor covering materials, the Buyer is advised to follow the manufacturer's suggested recommendations for maintenance and cleaning. Additionally, all products should be sealed per manufacturer's recommendations.

Hard tile installation may be performed as an allowance item. Installation and tile costs may vary with the tile size, shapes and patterns selected by the Buyer. Stone tile is a natural product and what is selected in the tile showroom may be different than what is installed due to color variations.

Narrow tipped or stiletto high heels may damage hard tile flooring and would not be the Contractor's responsibility for repair. Because of normal wear and tear caused by everyday use of the floor, no reasonable repair can be expected to perfectly restore the flooring to a new, unused condition. It is suggested that Buyer not discard any unused tile.

When moving large furniture or appliances, Buyer must protect the floor to protect it from gouges or scratches.

By installing the tile, the flooring contractor implies an acceptance of the subfloor underneath. In the event that the tile is installed by Buyer or Buyer's subcontractor, the Contractor has no duty to repair, in the event that the flooring does not meet the performance standards. Defects traced to Buyer's inappropriate use or care are not the Contractor's nor manufacturer's responsibility.

These Quality Standards are applicable for the first year of warranty only.

1. **Cracks appear in grouting of hard tile joints or at junctions with other products such as a bathtub.**
   Performance Standard
   Cracks at the joints of hard tile commonly occur during the stabilization period of the house, especially between the horizontal and vertical surfaces or the butting of dissimilar materials. As such, these areas may require re-grouting or caulking.

   Contractor Repair Responsibility
   Cracks at the joints of hard tile should be re-grouted or caulked when necessary, only once during the warranty period – preferably near the end of the warranty period. After one repair, it becomes an item of Buyer maintenance.

2. **Hard tile cracks.**
   Performance Standard
   Tile will be installed free of cracks.

Contractor Repair Responsibility
None.

3. **Hard tile becomes loose.**
   Performance Standard
   Due to shrinking and settling, tile can become loose.

   Contractor Repair Responsibility
   Re-secure any loose tiles, unless the defects were caused by the Buyer's negligence. (Buyer is cautioned that there may be a color mismatch if no extra tiles are available, and new grout may not match worn, existing grout.)

4. **Grout discolors**.
   Performance Standard
   Grout is porous and can be sealed by the Buyer to help prevent dirt penetration, but some household cleaning products can cause grout discoloration. Normal efflorescence is a condition that can be cleaned or will disappear in time.

   Contractor Repair Responsibility
   None.

5. **Grout or mortar joint is not a uniform color at time of occupancy**.
   Performance Standard
   Some color variation is acceptable, however, if the above defects can be readily determined by visual inspection from 6' under normal lighting conditions, the Contractor shall repair it.

   Contractor Repair Responsibility
   The Contractor will repair to meet the Performance Standard.

6. **Mildew forms on tile or grout.**
   Performance Standard
   This is a Buyer's maintenance responsibility.

   Contractor Repair Responsibility
   None.

7. **Color variations in tile.**
   Performance Standard
   Color variations are inherent in all hard tile and stone fixed clay products.

   Contractor Repair Responsibility
   None.

8. **Caulk does not match color of grout**.
   Performance Standard
   There may be shade variations in the color between caulk and grout. Even though it is labeled as the matching color, there may still be a difference.

   Contractor Repair Responsibility
   No repair is required if Contractor used the matching grout and caulk. If Contractor used the caulk color closest to grout color, no further repair is required. However, if they did not do either of the above and the two shades are significantly different, Contractor is responsible for correction.

9. **Floors squeak under hard tile.**
   Performance Standard
   Floor squeaks are common in new construction (suggest remove "new") and a totally squeak-proof floor cannot be guaranteed.

   Contractor Repair Responsibility
   Contractor will make one attempt to minimize or eliminate floor squeak at the end of the warranty period.

10. **There is excessive "lippage" of adjoining hard tile and stone.**
    Performance Standard
    "Lippage" greater than 1/16" is considered excessive, except where the materials are designed with an irregular height (such as hand-made tile). Ungauged or rougher stone products will also have greater variations than 1/16".

    Contractor Repair Responsibility
    The Contractor will repair to meet Performance Standard.

RESILIENT FLOORING STANDARD

Resilient flooring includes inlaid, roto-vinyl, sheet vinyl, linoleum, resilient vinyl composition tile, luxury vinyl tile (LVT) and planks (LVP).

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

Resilient Flooring products are traditionally adhered to a substrate. Some newer products are designed to be installed as a floating installation. If the manufacturers installation instruction requires this type of installation method, the performance standards listed in the Laminate Flooring section should apply (See Laminate Flooring section).

All resilient flooring is subject to normal manufacturing tolerances, particularly to dye lot variations 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. When partial replacement is called for in repair, a perfect match cannot be achieved due to variation from dye lot to dye lot. In the replacement or correction of resilient flooring, the Buyer 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 Contractor will attempt to match colors as closely as possible, the Buyer should note that wax or vinyl dressing build-up on the existing areas, sun and atmospheric conditions, and other chemical reactions can produce a color variation, even within the same dye lot. The Buyer can minimize this variation by removing any build-up and thoroughly cleaning the floor according to the flooring manufacturers' 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 manufacturer's recommendations. Narrow tipped or stiletto high heels will damage tile and sheet vinyl flooring. Because of this and 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 condition. When moving large furniture or appliances, Buyer must protect the floor to shield it from gouges or scratches.

By installing the resilient flooring, the flooring contractor provides an implied acceptance of the subfloor underneath. The Buyer should be familiar with the proper use and care of their floors. Defects traced to Buyer's inappropriate use or care are not the Contractor's nor manufacturer's responsibility.

These Quality Standards are applicable for the first year of warranty only.

1. **Nail pops appear on the surface of resilient flooring.**
   Performance Standard
   Readily visible nail pops are not acceptable.

   Contractor Repair Responsibility
   Correct all nail pops which have not broken the surface of the goods by driving the nails back into place. Repair or replace flooring in any areas where the nail pop has broken the surface. Replace sheet goods in the minimum area where the joint will not be readily noticeable where the nail pop broke the surface. Contractor is not responsible for discontinued patterns or color variations when replacing the floor covering.

2. **Depressions or ridges appear in resilient flooring due to subfloor irregularities.**
   Performance Standard
   In the natural stabilization and shrinkage process, some mismatch of the subfloor may exhibit and mirror itself as ridges or depressions showing on the surface goods. This can be minimized by the Buyers in their selection of an embossed pattern in a darker color. In particular, lighter solid colors and/or smooth vinyl surfaces mirror any minor variations of the subsurface to which they are applied and emphasize this ridging. If the ridge or depression effect exceeds 1/8" and cannot be corrected from below, the resilient floor must be corrected. The ridge measurement 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.

   Contractor Repair Responsibility
   If ridge exceeds Performance Standard, Contractor 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. Buyer should note that there might be a mismatch in materials due to time difference or dye lot variations. Contractor is not responsible for discontinued patterns or color variations when replacing the floor covering.

3. **Resilient flooring loses adhesion**.
   Performance Standard
   Glued down resilient flooring should not lift, bubble or detach during the warranty period unless caused by the Buyer's negligence or excessive use of water.

   Contractor Repair Responsibility
   Provided edges are still intact, Contractor shall re-secure the material using the manufacturer's recommended installation guidelines. If not, replace the minimum area as per standard #2.

4. **Bubbles appear on sheet flooring**.
   Performance Standard
   Bubbles resulting from trapped air that protrude higher than 1/16" from the floor are not acceptable. This Performance Standard does not apply to perimeter attached vinyl floors.

   Contractor Repair Responsibility
   The Contractor will repair to meet Performance Standard.

5. **Seams and joints show in resilient flooring.**

   Performance Standard

   Gaps shall not exceed 1/16" in width and should be sealed per the manufacturer's recommendation in vinyl to vinyl joints. However, where dissimilar materials abut, gaps should not exceed 1/8". Transition strips are an acceptable repair.

   Contractor Repair Responsibility

   Contractor to repair to meet Performance Standard.

6. **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, household products, and some carpet dyes can cause permanent stains especially in traffic areas. The Buyer is cautioned that the use of certain latex or rubber-back throw rugs can cause discoloration of the resilient flooring due to a chemical reaction that occurs.

   Contractor Repair Responsibility

   This is neither a manufacturing defect nor the Contractor's responsibility but is the Buyer's responsibility to protect these areas. There are certain instances in which discoloration may be under warranty by the manufacturer. Buyer should contact the manufacturer for a determination under their warranty.

7. **Fading of color of resilient flooring.**

   Performance Standard

   Exposure to direct sunlight through glass will cause fading or discoloration.

   Contractor Repair Responsibility

   This is neither a manufacturing defect nor the Contractor's responsibility but is the Buyer's responsibility to protect these areas during times of direct sunlight exposure.

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

   Performance Standard

   Resilient flooring shall be free of heel marks, burns, tears, scratches, scuffs and indentation at occupancy.

   Contractor Repair Responsibility

   None.

9. **Wear on surface or loss of sheen on resilient flooring.**

   Performance Standard

   Buyer to refer to manufacturer's warranty.

   Contractor Repair Responsibility

   None.

10. **Floors squeak.**

    Performance Standard

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

    Contractor Repair Responsibility

    Contractor will make one attempt to minimize or eliminate floor squeak at the end of the warranty period.

11. **Patterns on sheet flooring are misaligned.**
    Performance Standard
    Patterns at seams between adjoining pieces shall be aligned to within 3/32".

    Contractor Repair Responsibility
    Contractor will repair the flooring to meet Performance Standard.

WOOD FLOORING STANDARD

Wood flooring, as a finished surface, is applied directly over the subfloor. Wood flooring, while predominantly hardwood, may occasionally be soft wood. Wood flooring may be either prefinished or job-finished. All wood floors are subject to shrinkage, as a natural occurrence. Sealers on job-finished floors may require maintenance different from that of prefinished floors. It should be noted that due to climate and humidity changes, wood floors are subject to gapping. When moving large furniture or appliances, Buyer must protect the floor to shield it from gouges or scratches.

The number one variable of a hardwood floor is moisture content. Wood floors naturally expand when moisture is present and shrink when it is not. The following are some of the common effects when there is too much or too little moisture in and around wood floors.

GAPS BETWEEN BOARDS: Almost every wood floor endures some expansion and contraction as seasons and humidity levels change. When homes are heated, humidity levels decrease, boards shrink and spaces appear between the boards. In dry months, gaps between boards can easily develop, with light-colored woods making the gaps appear larger. These spaces are to be expected and usually close up as moisture levels increase. To reduce the degree of change, Buyers can humidify the air during the dry months.

CUPPING & CROWNING: Both cupping and crowning are natural reactions to moisture. "Cupping" describes a condition in which the edges of a board are high, and its center is lower. "Crowning" is the opposite of cupping. The middle of the board is higher than the edges of the board. This can occur when the surface of the floor encounters moisture. Humidity is usually the culprit, although cupping can also occur if water has been spilled onto the floor and absorbed into the wood. The moisture causes the wood to swell, crushing the boards together and deforming them at the edges. Some species of wood floor are much more sensitive to environmental conditions than other species. In order to repair the floor, the cause of the moisture must be identified and mitigated. Other causes could include situations where moisture migrates up into the subfloor and the wood flooring. Once the cause of the moisture is controlled, cupping may be reversed depending on the severity. The use of fans may be necessary to speed the drying process. After the floor has dried, it may be necessary to re-coat the floor with finish, or to sand and refinish the floor. Some engineered floors are used to minimize cupping and crowning.

BUCKLING: Buckling is one of the most extreme reactions to moisture that can occur with a hardwood floor. It happens when the floor literally pulls away from the subfloor, up to heights as high as several inches. Buckling is an uncommon occurrence, usually happening only after a floor has experienced high moisture levels.

Controlling humidity is the most important factor in preventing problems with moisture and your wood floor. The correct maintenance will go a long way in avoiding problems. All woods should be of the species specified in the contract. Different grades of wood allow different color variations and knots.

By installing the wood flooring, the flooring contractor provides an implied acceptance of the subfloor underneath. The Buyer should be familiar with the proper use and care of their floors, based on the manufacturer's recommendations. Defects traced to Buyer's inappropriate use or care are not the Contractor's nor manufacturer's responsibility. When moving large furniture or appliances, Buyer must protect the floor to shield it from gouges or scratches.

These Quality Standards are applicable for the first year of warranty only.

1. **Gaps in hardwood floors.**
   Performance Standard
   Separation or gaps in wood floor is acceptable up to 1/8''.

   Contractor Repair Responsibility
   Contractor to repair separation or gaps that remain in excess of 1/8" year-round through seasonal changes. It is the Buyer's responsibility to maintain recommended moisture levels within the home.

2. **Wearing of finish on wood floor.**
   Performance Standard
   Wood will be installed free of wear of the finish at the time of closing. Minor damage to the floor can be easily fixed or filled with finishing putty.

   Contractor Repair Responsibility
   None.

3. **Finish is uneven on wood floors.**
   Performance Standard
   Slight variations may appear in the finish but must be visible from more than six feet under normal lighting conditions.

   Contractor Repair Responsibility
   Contractor to repair/replace if visible from more than 6' under normal lighting conditions.

4. **Cupping or crowning of hardwood floors.**
   Performance Standard
   Cupping or crowing of hardwood floors is due to excess moisture.

   Contractor Repair Responsibility
   None. It is the Buyer's responsibility to maintain recommended moisture levels within the home.

5. **Dents in wood floors.**
   Performance Standard
   Hardwood floors will be free of dents at the time of closing. Minor damage to the floor can be easily fixed or filled with finishing putty.

   Contractor Repair Responsibility
   None.

6. **Fading and changing colors of wood floors.**
   Performance Standard
   Exposure to sunlight through glass will cause fading or discoloration of wood floors. Additionally, certain conditions and substances such as heat, oil, fertilizers, asphalt from driveways and driveway sealers with an asphalt or coal tar base, household products can cause permanent stains especially in traffic areas. The Buyers are cautioned that the use of certain latex or rubber-back throw rugs can cause discoloration of the wood flooring due to a chemical reaction that occurs.

   Contractor Repair Responsibility
   This is neither a manufacturing defect nor the Contractor's responsibility but is the Buyer's responsibility to protect these areas.

7. **Wood flooring grain 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 Contractor is only responsible for supplying the grades and types of wood flooring specified in the contract. Grain and color matching is not the industry standard.

   Contractor Repair Responsibility
   None.

8. **Top coating on hardwood flooring has peeled**.
   Performance Standard
   Top coating shall not peel during normal usage.

   Contractor Repair Responsibility
   The Contractor shall refinish.

9. **Hardwood floor buckles from substrate**.
   Performance Standard
   Hardwood floor should not buckle from substrate under normal use conditions.

   Contractor Repair Responsibility
   The Contractor will repair to meet Performance Standard.

10. **Floors squeak.**
    Performance Standard
    Floor squeaks are common in new construction and a totally squeak-proof floor~~s~~ cannot be guaranteed.

    Contractor Repair Responsibility
    Contractor will make one attempt to minimize or eliminate floor squeak at the end of the warranty period.

11. **Slivers or splinters appear in strip flooring.**
    Performance Standard
    Slivers or splinters that occur during the installation of the flooring are unacceptable. The imperfections that occur during installation should have been shaved and the area filled prior to sanding and finishing. If wood is prefinished, it is acceptable to repair after installation, per manufacturer's recommendations.

    Contractor Repair Responsibility
    Contractor to repair.

LAMINATE FLOORING STANDARD

Laminate flooring is designed to be a floating floor that may be installed over virtually any type of sub floor. It is not nailed or glued to the sub floor. A glueless system provides an extremely strong and durable tongue and groove locking system.

Just as all materials in the home expand and contract, laminate floors react to the changes in temperature and humidity. Because this is a "floating floor", a minimum ¼" expansion space must be left around the entire perimeter of the floor and any fixed objects to allow for movement. Failure to meet these requirements can result in buckling. Laminate floors offer a wide variety of coordinating moldings and transition pieces to cover the 1/4" expansion space at walls, doorways, and transitions to other flooring.

The use of appropriate installation materials and techniques is not a guarantee for a perfect and durable sealed joint, and therefore does not afford absolute protection against moisture ingress. Laminate flooring should not be mopped or scrubbed using a large amount of water or a regular wet cleaning. Buyer is advised to follow the manufacturer's suggested recommendations for maintenance and cleaning.

By installing the laminate flooring, the flooring contractor provides an implied acceptance of the subfloor underneath. Although laminate flooring may be more resistant to damage than other types of floor covering, damage can result from failure to follow the manufacturer's floor care instructions. When moving large furniture or appliances, Buyer must protect the floor to shield it from gouges or scratches. Defects traced to Buyer's inappropriate use or care are not the Contractor's nor manufacturer's responsibility.

These Quality Standards are applicable for the first year of warranty only.

1. **Buckling or gapped boards.**
   Performance Standard
   As organic wood-based products are used as the core material in the majority of laminate flooring there is a natural tendency for the wood to expand and contract as a result of its unique hygroscopic properties. This may lead to dimensional changes in both individual planks and the floor as a whole. The following tolerances may occur.

   Uneven Joints: Irregularities and tolerances between individual planks may become apparent along the sides and ends. Maximum height differences of 1/16" are tolerable.

   Convex/Concave Warping: The maximum acceptable tolerance for convex and concave, measured across the full width of the installed plank, is 1/8"

   Gaps Between Planks: Openings within the floor surface with a maximum width of 1/8" are acceptable.

   Providing that manufacturing tolerances are within the specified limits, there should be no further need for adjustment of joints to ensure alignment.

   The above-mentioned tolerances include such irregularities as are inherent in the manufacturing process and joint gaps which may be the result thereof.

   The above-mentioned irregularities and tolerances can be deemed to be natural properties of the product and therefore do not constitute a defect. Additionally, utilization of different dye lots may provide slight variations in floor color/tint.

   Contractor Repair Responsibility
   None, providing the flooring has been installed according to the manufacturer's recommendations.

2. **Seams peak.**
   Performance Standard
   All peaking is acceptable as long as floor is installed as per the manufacturer's recommendations.

   Contractor Repair Responsibility
   None.

3. **Gaps at transitions**.
   Performance Standard
   As laminate flooring is free floating, transition pieces are used.

Contractor Repair Responsibility
None.

4. **Wearing of finish**.
   Performance Standard
   Buyer should consult the manufacturer's recommendations for maintenance and cleaning.

   Contractor Repair Responsibility
   None.

5. **Heel marks, burns, scratches, scuffs and indentations of laminate flooring.**

   Performance Standard
   Laminate flooring shall be free of heel marks, burns, cuts, scratches, scuff marks and indentations at occupancy.

   Minor damage to the floor can be easily fixed or filled with finishing putty.

   Contractor Repair Responsibility
   None.

6. **Floors squeak.**
   Performance Standard
   Floor squeaks are common in new construction and a totally squeak-proof floor cannot be guaranteed.

   Contractor Repair Responsibility
   Contractor will make one attempt to minimize or eliminate floor squeak at the end of the warranty period.

FIREPLACE & STOVE STANDARD

Background

There are two types of fireplaces – full masonry and factory built. Masonry fireplaces are constructed with a full foundation, masonry flue, and a masonry fire brick firebox.

Factory built fireplaces are constructed with a metal firebox and utilize a metal flue. Factory built fireplaces can be wood or gas burning. Wood burning fireplaces can also be fitted with gas logs. Gas burning fireplaces cannot burn wood. Gas fireplaces utilize two different types of venting systems – "B" vent and direct vent. "B" vent fireplaces can only be terminated vertically and use room air for combustion. Direct vent fireplaces can be terminated vertically or horizontally. Direct vent fireplaces are sealed units. Outside air cannot enter the room and inside air will not leave the room.

These standards also apply to gas and wood burning stoves. Glass doors, grates, and blowers are not standard on a fireplace. It should also be noted that glass doors do not seal. Buyers should be aware that when it rains water may get into the chimney.

These Quality Standards are applicable for the first year of warranty only.

1. **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 such as large branches of trees too close to the chimney. Some homes may need to have a window opened slightly to create an effective draft or an outside air intake if they have been insulated and weatherproofed to meet high-energy conservation criteria. Under certain circumstances, in order to increase the draw, the Buyer should warm the flue. (See-through and multi-sided fireplaces with dissimilar ceiling heights in adjoining rooms are not included in this section). Due to negative pressure concerns in the lower level of most homes, the installation of non-sealed combustion wood or gas fireplaces in these areas is not recommended. Non sealed fireplaces will have to perform venting functions in a negative pressure environment and will be susceptible to back drafting and other venting related issues.

   Contractor Repair Responsibility

   Contractor will determine the cause of the poor draft and minimize the problem, if possible. The Buyer can minimize the problem by warming the flue prior to starting the fire or opening a window on the opposite side of the house to increase the draw. Lower level fireplace installation should be discussed with the builder in the design phase of the home.

2. **Firebox paint is damaged by a fire in the fireplace.**

   Performance Standard

   Heat and discoloration are common occurrences.

   Contractor Repair Responsibility

   None.

3. **Firebrick, simulated firebrick, and mortar joints in firebox are cracked.**

   Performance Standard

   Firebrick, refractory, and mortar may crack due to heat or misuse. Proper break in procedures in required which will cure the firebrick by removing the moisture from the bricks and minimize cracking. These procedures are included in the owner's manual for Manufactured fireplaces.

   Contractor Repair Responsibility

   On masonry fireplaces, if the crack is larger than 1/8" in width it should be tuckpointed. On factory-built wood burning fireplaces, if the crack allows the insertion of a quarter, the refractory should be replaced or

patched. As you use the fireplace, expansion and contraction will cause minor cracking of the refractory. This is normal and unavoidable and will not affect the performance of the fireplace. If the cracks become large enough that the metal behind the refractory is exposed or large pieces fall out, the panels should be replaced.

4. **Rust on the exterior of the fireplace or rust on the damper.**
   Performance Standard
   This is a common occurrence.

   Contractor Repair Responsibility
   None. Buyer should lubricate damper regularly.

5. **Cracks in chimney and fireplace caps.**
   Performance Standard
   (There should be no cracks at occupancy) Chimney and fireplace caps should be checked periodically by the Buyers for hairline cracks in the concrete and brick and especially next to the flue. These cracks are caused by shrinkage and severe weather conditions and should be caulked with an elastic type caulking compound or tuckpointed with mortar or cement and sealed with a masonry sealer. Failure to do this could result in moisture getting into the chimney, freezing and cracking the flue material or the face of the brick or stone.

   Contractor Repair Responsibility
   None, (any crack during warranty period should be tuckpointed or a metal pan installed.)unless crack exceeds 1/8" in width. Contractor will then tuckpoint.

6. **Brick/stone wall or chimney is leaking.**
   Performance Standard
   (Brick or stone walls should NOT leak!). The Contractor is to check that the brick was installed correctly. If leak is not caused by faulty construction, Buyer to seal the brick. Certain bricks/stones are porous and may require sealing. Sealing is the Buyer's responsibility. Installation of brick, flashing and weep holes shall be done to Code. On some occasions, substantial rains with high winds can produce a temporary leak.

   Contractor Repair Responsibility
   When a leak appears in the wall system and the wall is not built to Code, including flashing and caulking, Contractor is to repair, caulk and flash to Code. If leak is not caused by faulty workmanship, Buyer to seal brick.

7. **Fireplace fans are noisy.**
   Performance Standard
   Fireplace fans assist in the movement of air around the inside of the fireplace cavity shell. Some fan designs are louder than others. If possible, the Buyer may turn the fan to a lower speed.

   Contractor Repair Responsibility
   If the fan is incorrectly placed, the Contractor will adjust the placement.

8. **Cracks in mortar joints of brick or other masonry veneer wall.**
   Performance Standard
   Small hairline cracks due to shrinkage are common in mortar joints in masonry construction as long as they don't exceed 1/8" in width.

Contractor Repair Responsibility

Contractor will repair cracks in excess of Performance Standard by tuckpointing or patching. These repairs shall be made at the end of the first year of the warranty period. Buyer should note that there will be a color variation between old and new mortar.

9. 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-foot vertical measurement.

Contractor Repair Responsibility

The Contractor will repair gaps that do not meet the Performance Standard. Caulking is acceptable.

MOISTURE STANDARD

Background

Because of the greater amount of desired and required insulation, 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 condensation and frost on windows, as well as around outlets or recessed lights and exterior doors, and even drywall damage. It should be noted that windows do not cause condensation.

It is important to exhaust the humidity from the home. This can be done by running bath fans and vented cooking exhaust fans (that vent to the outside) when necessary, using a dehumidifier, making sure the Buyer'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.

Using central air conditioning during spring/summer/fall can help alleviate or reduce moisture/condensation conditions. Also, running the furnace fan can aid in decreasing moisture/condensation.

The installation of de-humidification and humidification equipment and air to air exchangers is usually a Buyer option. Proper levels of humidity must be maintained by the Buyer. 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 indoor 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 Buyer is 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.

Outside Air Temperature	**Inside Relative Humidity for 70 Degrees F Indoor Air Temperature**
-20 degrees F	15 to 20 percent
-10 degrees F	20 to 25 percent
0 degrees F	25 to 30 percent
+10 degrees F	30 to 35 percent
+20 degrees F	35 to 40 percent

These Quality Standards are applicable for the first year of warranty only.

1. **Moisture condensation on windows.**

   Performance Standard

   Moisture condenses on the window since it is the coldest object in any given room with the glass having a much higher rate of heat loss and, hence, being the colder surface during the normal heating season. The Buyer can minimize this condition by merely opening the 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. Window treatments can reduce the temperature on the glass, thus causing condensation. It is recommended that interior screens be removed from casement windows during the heating season. Raising blinds or opening draperies will help minimize the situation. Also, exhaust fans, ceiling fans, and furnace fans should be used to reduce moisture.

Contractor Repair Responsibility
None, except to explain to the Buyer more thoroughly how this condition is caused.

2. **Moisture in attic.**
Performance Standard
Contractor must provide adequate ventilation to all areas of attic per Code. No matter how well an attic is ventilated, under severe weather conditions, frost may appear in the attic and should be considered a normal occurrence. Buyer must keep roof and soffit ventilation clear.

Contractor Repair Responsibility
Contractor to verify ventilation is to the approved building code.

3. **Frost appearing or condensation on the interior surface of exterior walls, overhung bays, or closets.**
Performance Standard
Some condensation and frost may appear during extreme weather conditions.

Contractor Repair Responsibility
Contractor should check for air infiltration leaks in overhung areas. It may be necessary for the Buyer at times to allow air circulation into closets and cabinets.

4. **Dampness and moisture on basement walls, floors, pipes, etc.**
Performance Standard
Buyer 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.

Contractor Repair Responsibility
None, other than explaining the causes to the Buyer and advising the use of a dehumidifier and increasing air circulation, including the opening of heat vents in basements.

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

Contractor Repair Responsibility
None.

6. **Condensation on toilets and pressure tanks.**
Performance Standard
Condensation may occur during high humidity times of the year.

Contractor Repair Responsibility
None.

7. **Condensation or frost on electrical outlets.**
Performance Standard
Electrical junction boxes on exterior walls may allow air flow whereby the cold air can be drawn through the outlet into a room, sometimes creating condensation or frost.

Contractor Repair Responsibility
None.

8. Mildew or fungus on surfaces occurring after occupancy.

Performance Standard

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

Contractor Repair Responsibility

None. Mildew or fungus formation is a condition the Contractor cannot control and is a Buyer maintenance item. (See Background)

APPLIANCE STANDARD

Background

Appliances are either provided by the Contractor per the contract, or provided by the Buyer outside of the contract. The plumbing subcontractor typically installs the garbage disposal, dishwasher, or gas cook-top. The electrical or HVAC subcontractor typically installs the built-in microwave, double-oven, or electric cook-top. A professional appliance installer may also be used, whether hired by the Contractor or Buyer. Non--built-in appliances are installed by the Buyer or Buyer's appliance supplier, usually after closing. Buyer is responsible, at all times, for consequential damages. Appliances featuring "smart technology" need to be programed by others (builder, homeowner or technician).

Due to the wide variety of appliance options, it is imperative that the Buyer work closely with the Contractor to ensure that appliance selection is compatible with the design and layout requirements of the home and to ensure that appliances are compatible with space allocated. Depending on the appliance selection made by Buyer, certain appliances, such as hoods, require special supplemental home "make-up air" systems per code. Dented or damaged appliances must be noted in writing by Buyer prior to closing.

In the event that an appliance installed by the Contractor ceases working properly, it is the Buyer's responsibility to contact the manufacturer directly for warranty claim. Note: Prior to calling a manufacturer for service under a warranty, Buyer should check to ensure that the wall switch, electrical breaker, and GFCI are all in proper working order. Additionally, if the appliance is gas powered, Buyer should confirm that the gas supply valve is in the "on" position.

These Quality Standards are applicable for the first year of warranty only.

1. **Buyer provides incorrect appliance specifications.**

   Performance Standard

   The Buyer is responsible for providing complete and accurate specifications and installation instructions on all Buyer-purchased appliances, with respect to all rough-in dimensions, and mechanical and electrical requirements. If appliance specifications are inaccurate and an error is made due to incorrect specifications, then the party directly purchasing the appliance is responsible for all rework costs to cabinets, countertops, flooring, ductwork, plumbing and electrical. Buyer may also be subject to extra costs for a delay, if accurate specifications are not provided in a timely manner.

   Contractor Repair Responsibility

   None.

2. **Damages to floors and/or walls during delivery or installation of appliances.**

   Performance Standard

   The party installing the appliance is responsible for any damage incurring during such installation.

   Contractor Repair Responsibility

   None, unless Contractor installed the applicable appliance.

3. **Electric, gas, venting, or plumbing rough-in is improperly located.**

   Performance Standard

   Buyer is responsible for providing complete specifications to the Contractor.

   Contractor Repair Responsibility

   None, unless the Contractor did not comply with the provided specifications.

DECK STANDARD

Background
It is the Buyer's responsibility to maintain their deck. No deck material is "maintenance free". Follow the manufacturer's recommended guidelines for care and maintenance of all deck materials.

These Quality Standards are applicable for the first year of warranty only.

1. **Deck is springy or shaky.**
   Performance Standard
   All structural members in a deck shall be sized, and fasteners spaced, according to appropriate building codes and manufacturer's recommended guidelines.

   Contractor Repair Responsibility
   None.

2. **Spaces between deck boards, railing, and other deck components are not uniform.**
   Performance Standard
   Different deck members require different spacing. Due to movement, shrinkage, and expansion of deck materials, spacing will vary.

   Contractor Repair Responsibility
   None.

3. **Deck members, balusters, and rails are split, warped, or cupped.**
   Performance Standard
   At the time of occupancy, splits, warps and cups in decking members shall not exceed the tolerances established by the official grading rules issued by the agency responsible for the lumber species used for the deck members, or by the manufacturer of the composite decking. Some cupping will occur in all decking.

   Contractor Repair Responsibility
   None.

4. **Stain color variations are on wood deck.**
   Performance Standard
   Stain color variations resulting from weathering or varying porosity of the wood used to build the deck are normal.

   Contractor Repair Responsibility
   None.

5. **Deck members have nail or screw heads protruding.**
   Performance Standard
   Nail or screw heads should not protrude.

   Contractor Repair Responsibility
   Contractor to refasten nail or screw heads during the first year.

6. **Peeling and wearing of wood deck stain.**
   Performance Standard
   Peeling and wearing of stain, especially on a flat surface, will occur.

Contractor Repair Responsibility
None.

7. **Fading and staining of composite deck material.**
   Performance Standard
   Composite deck material will fade. Check the manufacturer's warranty for the fading standards. Routine cleaning by the Owner of composite decks is required, per manufacturer's recommendations.

   Contractor Repair Responsibility
   None

8. **Deck piers not centered on concrete footing.**
   Performance Standard
   Pier should be supported by concrete footing, per code.

   Contractor Repair Responsibility
   Contractor to repair, per code.

LANDSCAPING STANDARD

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

If the landscaping is the Contractor's responsibility, any sod, shrubs, plants or trees that have been planted should be alive at the time of occupancy. Beyond this point, the responsibility of maintaining the life of all plantings is the responsibility of the Buyer. Similarly, not all grass seeds will germinate, and the maintenance of that process is the responsibility of the Buyer.

Moving or protecting plants, trees, shrubs, and any other landscaping items prior to and during construction are the responsibility of the Buyer and must be dealt with before construction begins. Other handling of these items must be specified in the contract to designate the responsible party. Also, any tree stumps that are left in a disturbed area of the property are the responsibility of the Buyer to remove. Existing trees, shrubs, and other vegetation may incur damage solely from heavy traffic on the lot and are not the responsibility of the Contractor.

1. **Seeding washes out.**
   Quality Standard
   The contractor will place seed only once. Seeded areas are susceptible to washouts.

   Repair Responsibility
   Owner is responsible for repair and re-seeding of washed-out areas.

2. **Mulch blows off seeded lawn.**
   Quality Standard
   Mulch is susceptible to wind. The contractor will place mulch on seeded areas one time.

   Repair Responsibility
   It is the owner's responsibility to keep mulch moist to keep it in place. If wind blows mulch off, the owner is responsible for re-spreading as necessary.

3. **Rocks appear in seeded lawn.**
   Quality Standard
   After the lawn is finish graded, there should be no rocks larger than ½" in diameter visible when seed and mulch are placed.

   Repair Responsibility
   The homeowner is responsible for removing any rocks which appear after seed and mulch are placed. Homeowner should be aware that rocks may work their way to the surface -- this is a natural process.

4. **Birds feed on newly-seeded lawn.**
   Quality Standard
   Birds will eat microorganisms brought to the surface during the landscaping process. Birds rarely eat lawn seed.

   Repair Responsibility
   None.

5. **Weeds appear in a newly-seeded lawn.**
   Quality Standard
   Weed seeds are always present in the air and in the soil.

   Repair Responsibility
   None. Homeowner is advised not to pull the weeds since pulling will disturb roots of the grass. Homeowners are advised not to use a chemical herbicide for one year; fertilizer should be applied as advised by the landscaper.

6. **Bare spots appear in a lawn that has been seeded.**
   Quality Standard
   A seeded lawn should be free of large bare spots. With proper maintenance, including mulching and watering, bare spots should not occur.

   Repair Responsibility
   The homeowner shall water and fertilize the lawn according to landscaper's specifications.

7. **Sod turns brown.**
   Quality Standard
   Sod must be kept wet for a minimum of ten days after installation.

   Repair Responsibility
   Homeowner is responsible for maintaining moisture in sod based on landscaper's recommendations.

8. **Sod slides.**
   Quality Standard
   Sod laid on any slope with a rise greater than one foot in every four feet of length (25% grade) should be pinned.

   Repair Responsibility
   If sod was not pinned (staked) for a slope greater than 4'/1', landscaper shall repair.

9. **Soil erodes from a retaining wall.**
   Quality Standard
   Some erosion will occur until vegetation is established in gaps of a retaining wall.

   Repair Responsibility
   Homeowner is advised to establish vegetation as quickly as possible after installation of a retaining wall.

10. **Retaining wall has failed.**
    Quality Standard
    A retaining wall should not fail during the warranty period, unless changes which could affect the integrity of the wall were made to the adjacent area.

    Repair Responsibility
    Landscaper shall repair to Quality Standard, unless failure is due to changes to the area affecting the wall.

11. **Newly-installed plant material dies.**
    Quality Standard
    Plantings should perform according to the landscaper's warranty, provided that plant material has received proper care and watering. No warranty is provided for damage caused by winter injury, animals, machinery, carelessness, etc.

Repair Responsibility
Landscaper shall replace dead plantings within the warranty period as per Quality Standard specifications above.

12. **Soil settles.**
Quality Standard
Soil will settle. Different soils settle at different rates.

Repair Responsibility
Homeowner is responsible for repair due to settling.

GLOSSARY

AFCI (arc fault circuit interrupter): A type of circuit breaker that is designed to reduce the likelihood of fire caused by electrical arcing faults.

Beam: A structural member that transversely supports a load.

Bi-fold doors: Doors that are hinged at the center and guided by an overhead track.

Blocking: A solid, tight closure used between framing members.

Breakline: A dividing point between two or more surfaces.

Brick veneer: A non-structural outer covering of brick.

Bridging: Wood or metal structural members between horizontal (joists) or vertical (studs) framing that provide lateral rigidity to the membership to which applied.

Bug holes: Pits, surface voids, and similar imperfections in a concrete wall. Bug holes generally are up to one inch wide or deep.

Cantilever: Construction that is unsupported at one end and that projects outward from the site of the structure to carry loads from above or below.

Ceiling joist: The horizontal structural members to which the ceiling is fastened. Some members may support a floor above.

Checking: Cracks in wood.

Chimney cap: A metal or masonry surface that covers the top portion of a chimney that prevents the penetration of water.

Circuit: The complete path of electricity away from and back to its source.

Circuit breaker: A device that automatically interrupts an electrical circuit when it becomes overloaded.

Cold joint: A joint in poured concrete that indicates where the pour terminated and continued.

Control joint: A joint that is molded or cut in concrete to allow for expansion and contraction and to attempt to control random cracking.

Corner bead: A strip of wood or metal fastened over a corner for protection.

Crawl space: An area under a home which is not a basement or cellar.

Damper: A device used to regulate draft in a furnace or fireplace chimney.

Dead spots: Areas below a carpeted surface where padding appears to be missing or improperly installed.

Deflection: The amount a truss or beam bends under a load.

Dew point: The temperature at which moisture in the air condenses into drops.

Disturbed area: Any area adjacent to a dwelling where original vegetation has been altered or removed.

Downspout: A pipe that carries rainwater from the roof to the ground or to a sewer connection.

Drywall: Gypsum wallboard.
Duct: A round or rectangular pipe used to transmit and distribute warm or cool air from a central heating or cooling unit.

Eave: The lower or outer edge of a roof that projects over the die walls of a structure.

Efflorescence: A white powder that appears on the surface of masonry walls. It is usually caused by moisture reacting with the soluble salts in concrete and forming harmless carbonate compounds.

Finish flooring: The top flooring material that covers the subflooring surface; usually carpeting, hardwood, tile, vinyl, etc.

Flashing: Strips of metal or plastic materials used to prevent moisture from entering roofs, walls, windows, doors, and foundations.

Floor joist: A horizontal framing member to which flooring is attached.

Footing: A flange-like part at the base of a foundation wall which ties and distributes loads from the foundation into the ground and prevents shifting and settling.

Foundation: The part of a building which is below the surface of the ground and on which the superstructure rests.

Frost lift: A condition caused by water freezing and causing soil to expand, which can cause two overlying, adjoining surfaces to separate from each other. Frost lift sometimes occurs at the junction of a garage floor and driveway.

GFCI (ground fault circuit interrupter): A type of circuit breaker that is extremely sensitive to moisture and changes in resistance to an electrical current flow. A GFCI protects against electrical shock or damage.

Gypsum: Hydrous calcium sulphate mineral rock.

Gypsum wallboard: See “drywall”.

Hardboard: A wood fiber panel with a density range of 50 to 80 pounds per cubic foot. It is made of wood fibers pressed into solid boards by heat and pressure.

Hardwood: A term used to designate wood from deciduous trees (which lose their leaves annually).

Header: A structural member placed across the top of an opening to support loads above.

Hinge-bound: A condition of a passage or entry door where hinge function impedes proper operation.

Holidays: Voids or inconsistencies in a finished surface.

Honeycomb: Voids in a concrete wall that are larger than bug holes (*see* “bug holes”).

HVAC: The abbreviation for heating, ventilating, and air conditioning systems.

Jamb: The side framing or finish material of a window, door, or other opening.

Joist: An on-edge-horizontal lumber member, such as a 2x6, 2x8, 2x10, or 2x12, which spans from wall to wall or beam to provide main support for flooring, ceiling, or roofing systems.

Junction box: A box that forms junctions between sections of house wiring.

Lath: Any material used as a base for plastering or stucco surfacing.

Lippage: The difference in surface alignment between two materials.

Mortar: An adhesive and leveling material used in brickwork, stone, block, and similar masonry construction.

Muntins: Strips of wood, metal, or plastic that divide a window into pans. Muntins can be installed within two pieces of glass or on the surface of the glass.

Parging: A rough coat of mortar applied over a masonry wall.

Pitch: The degree of incline (or decline) in a sloped or roof structure..

Plumb: A measurement of true vertical.

Rafter: Structural members which shape and form the support for the roof deck and the roof covering.

Raveling: A condition in which aggregate is loose from asphalt pavement.

Register: A louvered device that allows air travel from the ducts into a room.

Riser (stairway): A vertical stair member that supports a tread.

Riser (plumbing): A water pipe that extends vertically one full story or more to convey water to branches or to a group of fixtures.

Roof ridge: The apex of a roof system.

Scaling: The flaking or peeling away of a surface portion of hardened concrete.

Setting: The driving of a fastener flush or below the surface of a material.

Shakes: Split wooden shingles that are random in thickness.

Sheathing: The application of panels to the face of framing members. Also known as “decking.”

Shim: A thin, tapered piece of materials (usually wood) that is used to adjust or provide support for a member.

Sill: A framing member placed on top of and around a foundation to serve as a level base on which to support exterior wall studs.

Slab: A concrete floor/surface.

Soffit: The enclosed under surface of an eave.

Spalling: The breaking away of a small piece of concrete.

Stair skirt: A finishing board that may cover the outside staircase edge.

Stud: A vertical framing member.

Subflooring: A floor decking material laid on tope of the floor joists.

Substantial completion of the project: A project has met substantial completion where the areas of functional for their intended use as stated by the contract (except for items noted prior to final presentation), and clean-up on the site has been completed.

Sump pump: A pump that is installed in a crawl space, basement, or other low area to discharge water that might collect.

Swale: A shallow depression in the ground that is used as a drain way for water.

Telegraphing: A condition of a subsurface projecting through the finish material.

Tread: A horizontal stair member. A tread is the part you step on when walking up or down stairs.

Truss: An engineered assembly of wood or metal components that general is used to support roofs or floors.

Vapor retarder: Plastic film or other material used to limit the amount of moisture vapor that passes through a material or wall assembly.

Warranty period: The duration of the applicable warranty provided by the Contractor or any other period agreed to by the parties.

Weather stripping: Material placed around doors, windows, and other openings to prevent the infiltration or air, dust, rain, etc.