



# Cedar Creek, Inc.

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Josh Wallace  
Pulte Homes  
15700 College Boulevard, Suite 201  
Lenexa, KS 66219

RE: 8712 Quill Street, Lenexa, KS

11/30/06

Josh,

This letter addresses the three areas of the homeowners concern with the bouncy floor.

The joist under the master bedroom live load (moveable items not part of the structure, furniture, ect.) deflects .243". The local code live load deflection limit is  $L/360$  which deflects as much as .481". The design criteria used for this joist is 40 psf of live load and 15 psf of dead load with the joists spaced at 24" on center. The load requirement set by Lenexa Building Codes is 30 lbs live load in bedroom areas. .

Using the same loading and spacing (40 lbs per square foot live load and 15 psf for dead load) as the master bedroom joist, the joist under the spare bedroom live load deflects .221" while the local building code allows as much as .498". This design is also stiffer than the minimum requirements noted above.

Lastly, the joists in the living room have the design criteria of 40 psf of live load and 15 psf of dead load with the joists spacing at 19.2" on center. The live load of these joists deflects .220" while the local code (40 lbs per square foot in living area) can allow as much as .481".

All of these joists are twice as stiff as is allowable by code. Here are a few suggestions to satisfy the homeowners concern of the deflection in the floor. The first is to install a perpendicular board in the mid-span of the joist starting at the rim board. This will minimize any lateral movement the joists may be having. The second option is to install OSB rim board to one or both sides of the i-joist to reduce the deflection. The third option would be to install blocking tight between the joists at mid-span to minimize the lateral movement, but the downside of this option is the potential for squeaks.

If you have any questions, please don't hesitate to call.

Sincerely,

  
Stu Downes