



February 23, 2023

KC Custom Homes

Re: 2058 NW O'Brien Rd  
Lot 144, Estates of Woodside Ridge  
Lee's Summit, MO  
Permit # PRRES20222996

Apex Engineers Inc. observed the house under construction at the above-referenced address. Our firm has been retained to address comments from the city rough-in inspection. For the purposes of this report, the house will be referred to as facing south.

1. *Load-bearing stud notched greater than 25% near SE garage.*
  - Studs shall be repaired with Simpson Stud Shoes (SS) at notches exceeding 25%. Install per the manufacturer's recommendations.
2. *Address holes bored closer than 2" together and closer than 2" closer from the bottom of joist at pex line in the garage and dining.*
  - 24" long 16-gauge steel coiled straps shall be installed at the bottom edge of the joist and centered over the notched holes. Install per manufacturer's recommendations.
3. *Pex lines bored too close to bottom of joist and closer than 2" in bed 5.*
  - 24" long 16-gauge steel coiled straps shall be installed at the bottom edge of the joist and centered over the notched holes. Install per manufacturer's recommendations.
4. *Address no bearing of joist in pantry, and joist cut too short of bearing.*
  - Joists observed with no bearing at the pantry shall be hung into the flush (2) 2x10 beam with Simpson LUS210 face mount hangers, installed per manufacturer's recommendations.
  - Where the joists are cut short of the beam, the cantilevered joist shall be lapped min 6" and fastened together with min (10) 10d common nails. The bearing location of the joists on the stud wall shall be fastened to the top plate with Simpson A34 angle clips, installed per the manufacturer's recommendations.
  - Install blocking between cantilevered joists, typ.
5. *Beam for deck to be (2) 2x12 per plan.*
  - 6x6 cedar post and deck pier shall be placed at mid-span of the beam as shown per plans (pg. A-6) or the deck beam shall be replaced with (2) 1-3/4"x11-7/8" Treated PWT 2.0E LVL or 3.5"x11-7/8" 24FV8-1.8E SP/SP Glulam beam.
6. *Have engineer address rafters landing on 2x4s on edge and connection to the joists in bed 2.*
  - #2-2x4 kickers shall be installed at every heel joist connection where the rafter and ceiling joist are not face-nailed. Fasten the kicker to the rafter and ceiling joist per figure 1.0. Install solid blocking between rafters. Install solid blocking as needed for kicker attachment.

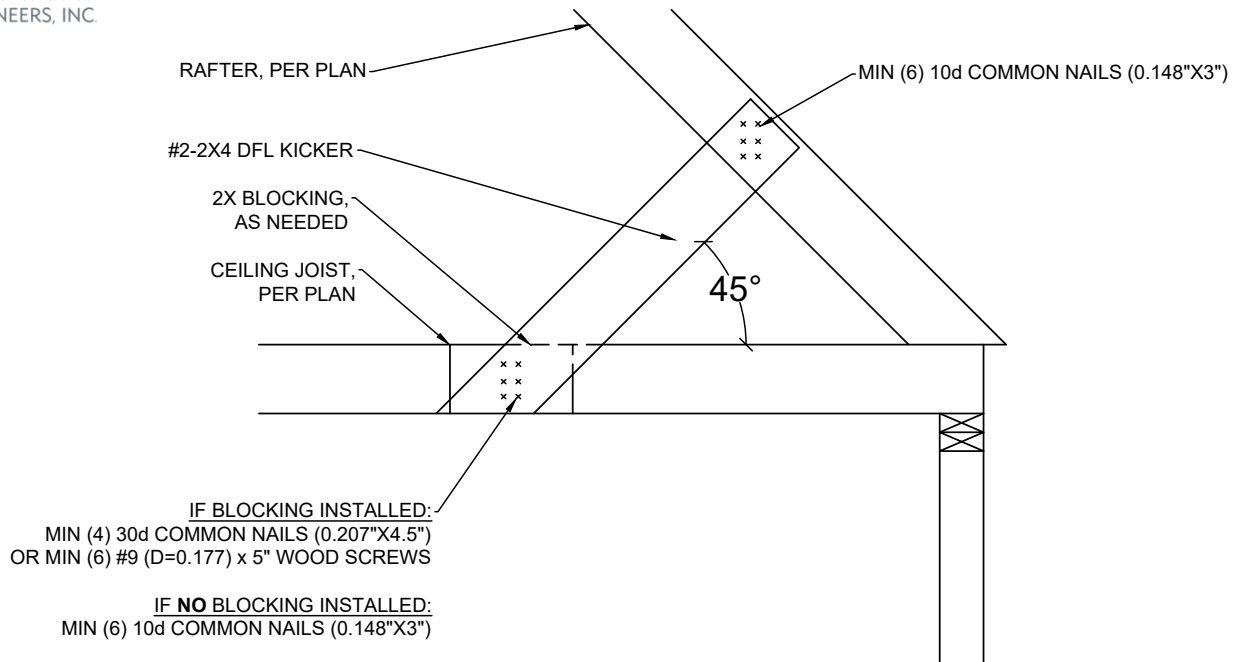


Figure 1.0 – Kicker Connection Detail

7. Address joists landing on non-load-bearing wall in the laundry/master wall.
  - Min (2) #2-2x10 full-length floor joists shall be installed under the wall separating the laundry and master bedroom or the ceiling joists shall be reframed per plans.
8. Address joists and roof loads bearing on non-load-bearing walls in the master bath and walk-in closet.
  - Area shall be reframed to be supported by the load-bearing wall per plan.
9. Overnotched stud at exterior wall by electrical panel
  - 12" long 2x6 stud shall be fastened to the stud notched for the sill anchor bolt. Fasten studs together with (3) 10d nail (0.148x3.0) rows at 4" on center.
10. Address deck post to beam connection.
  - Corner posts shall be fastened to the deck beam with (2) Simpson LCE4Z post caps [(1) post cap for post above and (1) post cap for post below]. Install per the manufacturer's recommendations.

Contingent upon the repairs outline above, our firm recommends approval of these items.

Please call if our firm can of further assistance.

#### LIMITATIONS

The scope of our services includes only those items specifically addressed herein. All other items are outside the scope of this inspection; including any environmental assessment (such as but not limited to mold, mildew, or the presence of any other toxic substance or environmental risks).

In addition, the scope of our services does not include any evaluation of the building or site for job-site safety and/or hazardous conditions. All construction shall be performed in compliance



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with IRC and OSHA standards at all times. Our firm has not been retained to examine the site or building for any of these conditions. In addition, the contractor shall retain sole responsibility for the quality of work, for adhering to plans, specifications, appropriate codes, and, for repairing defects, deficiencies, or omissions, regardless of when they are found. By the use of this report, it is understood the above conditions are agreed to.

Best Regards,  
Apex Engineers, Inc.

A handwritten signature in black ink, reading 'Nick A. Shifflett'.

Nick A. Shifflett, E.I.T.  
*Field Engineer*

Clayton J. Hess, P.E.  
*Principal*

