LORAC DESIGN GROUP, LLC
Structural Engineers

June 2, 2022

Mr. Jeff Boehm, Owner
Zvacek Construction Company
Lee's Summit, Missouri

Re: **Structural Review of Slider Header**
4808 Jamestown, Lee's Summit, Missouri

Jeff,

We have reviewed the condition shown in your photographs and have the following requirements.

1. **Deck must be tied to Rim Joist.**

   To accomplish this, attached ½" Lags at 32" o.c. along the length of the deck rim joist.

2. **Deck supports must be out of the dirt.**

   Either regrade or place 2x3x1' concrete pads under each leg. Reinforce with 3-#4's e.w.

3. **Deck spandrels require Lag attachment.**

   The existing nail connections need to be backed up with screwed connections. Simpson structural screws will suffice.

If you have any further questions, please ask.

For the Firm,
LORAC Design Group, LLC

STATE OF MISSOURI
JOSEPH ALAN TOWNS
NUMBER E-22017
REGISTERED PROFESSIONAL ENGINEER

Joseph A. Towns, R.A., P.E., SE., AIA, NCARB, LEED AP, BD+C
Missouri Professional Engineer, #E-22017 (Structural)

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Design Calculations

4808 Jamestown

Lee's Summit, Mo

Lag Bolt "Withdrawal" Check

Source: Equation 8-14b, Wood Handbook, pg 8-12

Withdrawal Capacity = 8100*G^(3/2)*D^(3/4)*L

Where

G =	0.51	Specific Gravity, Table 5-2, Oak in General
D =	0.625	Shank Diameter (design)
L =	2	inches in Depth into side grain
p =	**4147**	**lbs**

Applied to 4 Bolt Base

Number of Bolts =	2	bolts per side
"d" between bolts =	3	inches in couple
p =	4147	lbs
resistive force per side =	8294.883	lbs
M =	24,885	lbs inch

M = 12,600 lbs inch for 42" handrail w/ 300lbs@42"

Design Sufficient

LORAC DESIGN GROUP, LLC
Structural Engineers

I N V O I C E #0622085

June 2, 2022

Mr. Jim Boehm, Owner
Zvacek Construction Company
Lee's Summit, Missouri

VIA E L E C T R O N I C T R A N S M I S S I O N

Re: **Structural Review of Deck Framing**
4808 Jamestown, Lee's Summit, Missouri

My professional fees for this work are:

Inspection – Sealed Report - $500

The following invoice is for Professional Structural Engineering services.

For the Firm,
LORAC Design Group, LLC

Joseph A. Towns, R.A., P.E., S.E, AIA, NCARB, LEED AP, BD+C
Missouri Professional Engineer, #E-22017 (Structural)