

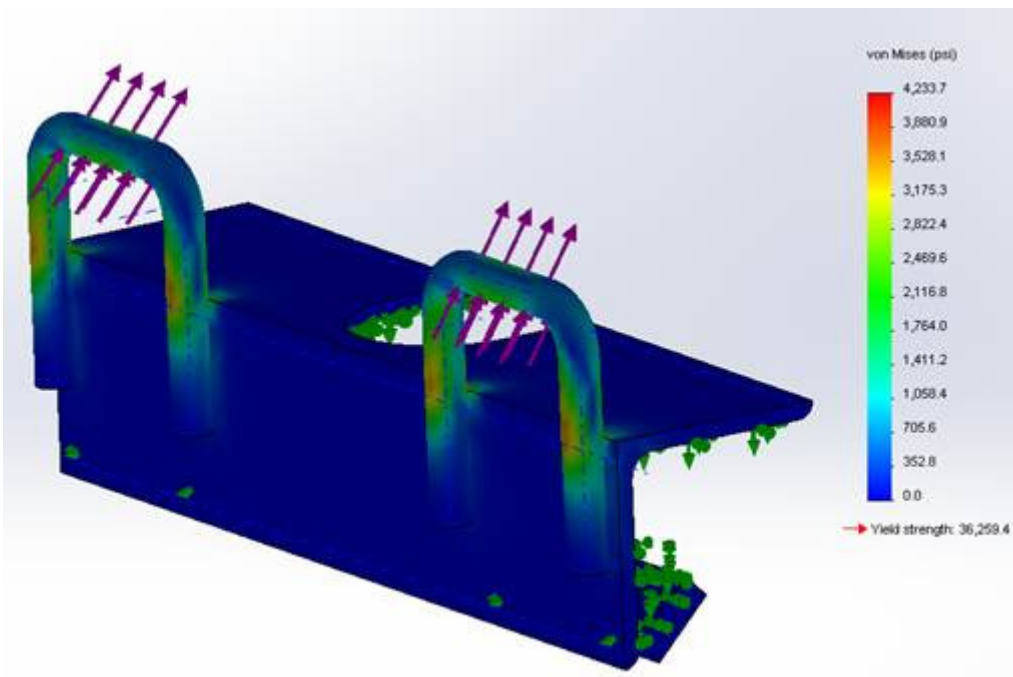
Heath Ploeger

From: John Bartoli <jbartoli@hccincorporated.com>
Sent: Monday, April 01, 2013 5:38 PM
To: Heath Ploeger (hploeger@triple-c-inc.com)
Subject: FEA Results - HCC

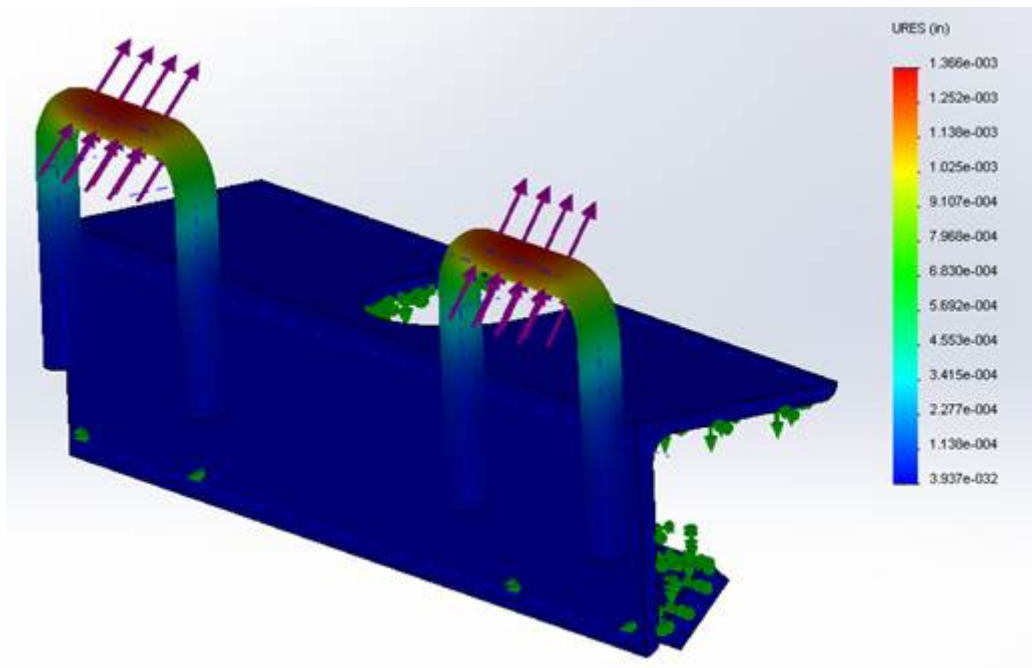
Heath,

For drawing 95-1108, I performed the analysis based on the free body diagrams of the lifting points. Each load applied (purple arrows) is 150 lbs.

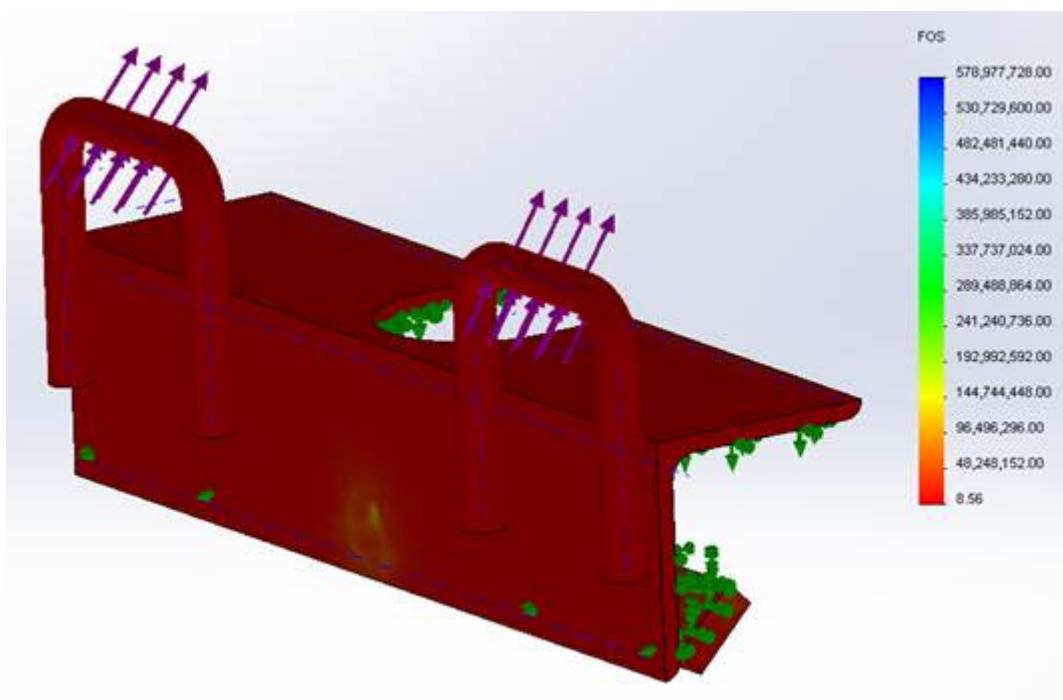
Stress Plot (max = 4233.7 psi):



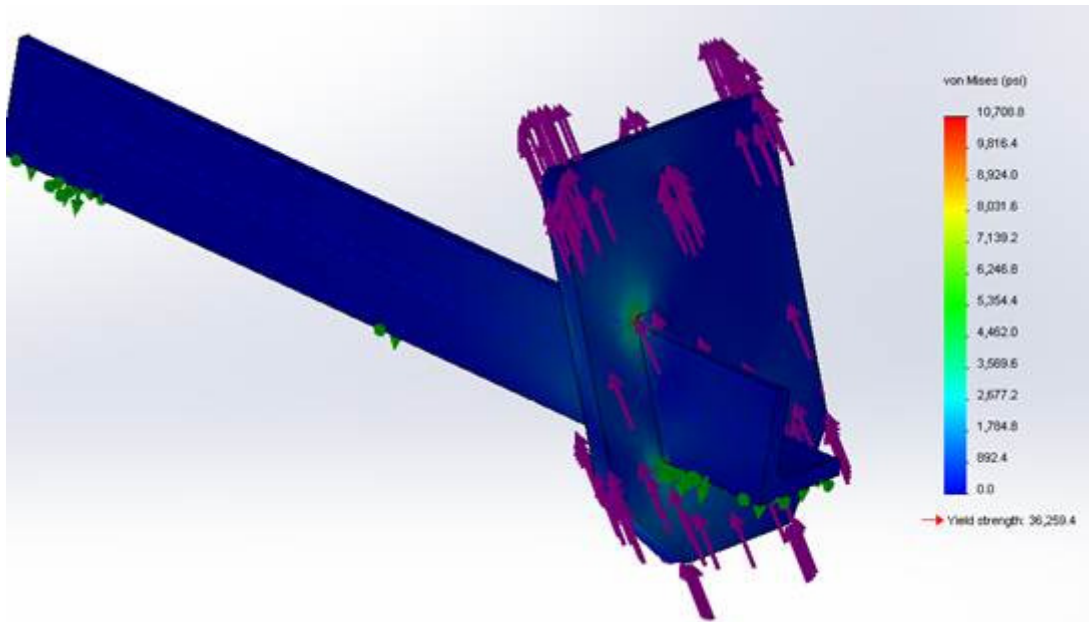
Deflection Plot (max = .0014"):



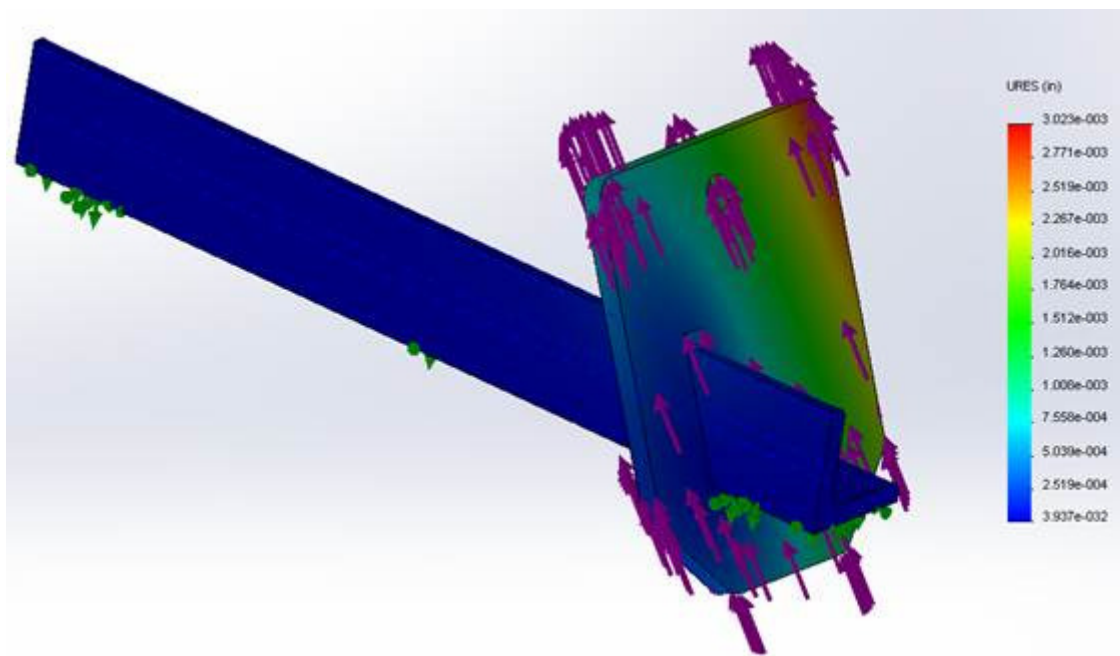
Factor of Safety Plot (min = 8.56):



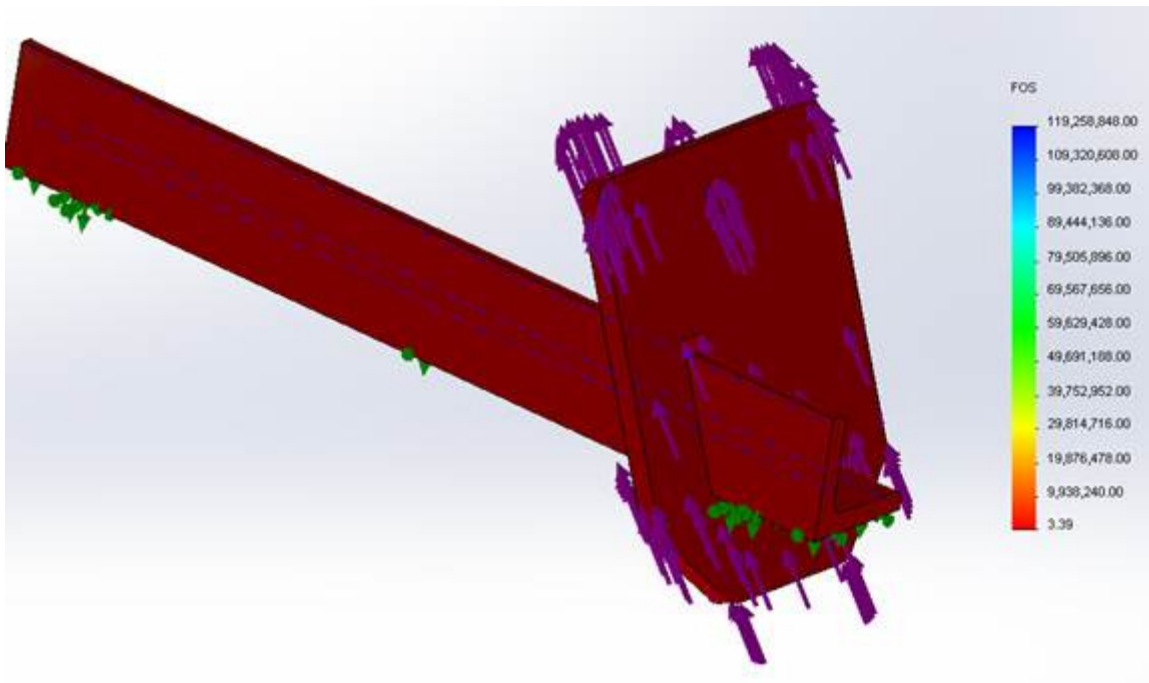
Stress Plot (max = 10,708.8 psi):



Deflection Plot (max = .003"):



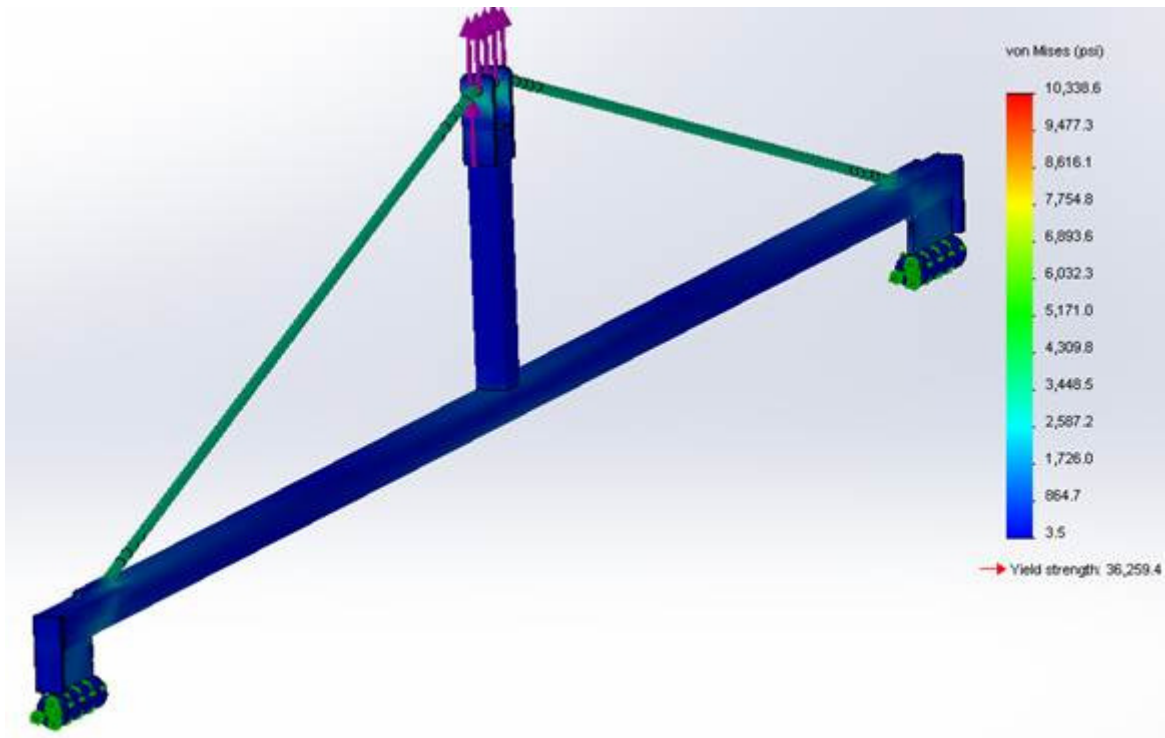
Factor of Safety Plot (min = 3.39):



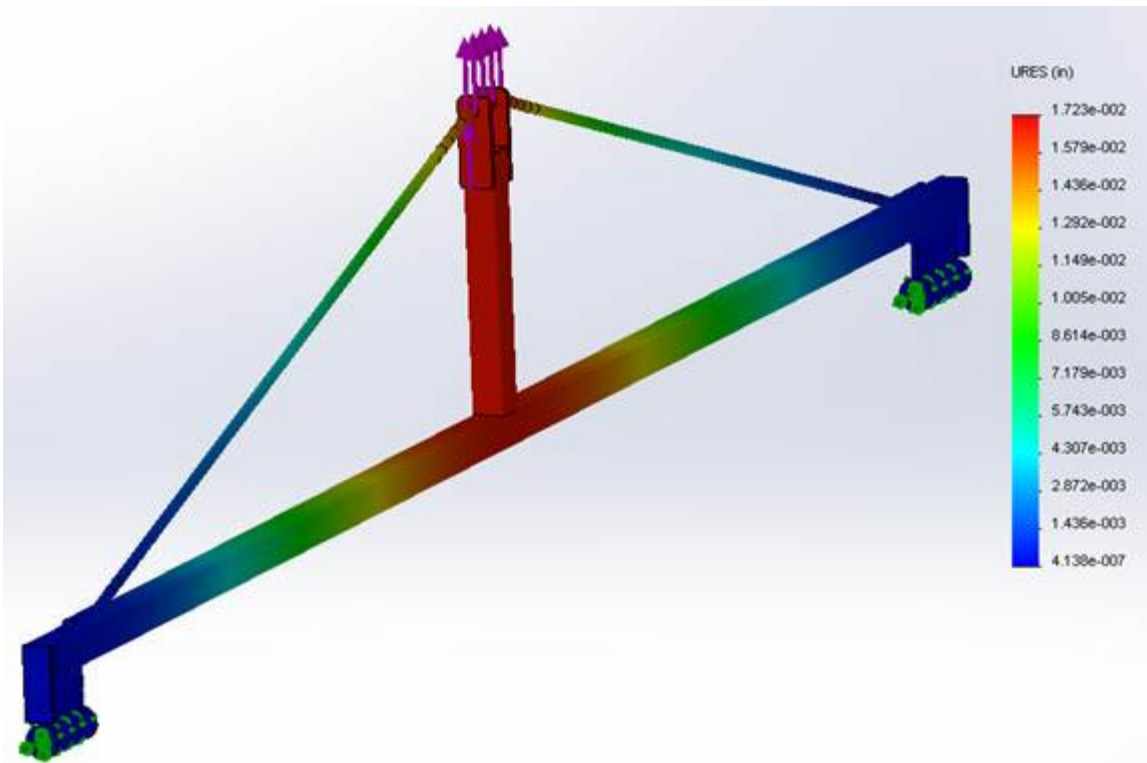
The 5/16" chains (verify Grade 80) being used for the above lifting locations will accept a 4500 lb working load (see chart in previous email). This size and grade of chain would have no trouble supporting the overestimated 150 lb force.

For drawing 95-1110, the results are based on an upward force of 450 lbs (purple arrows).

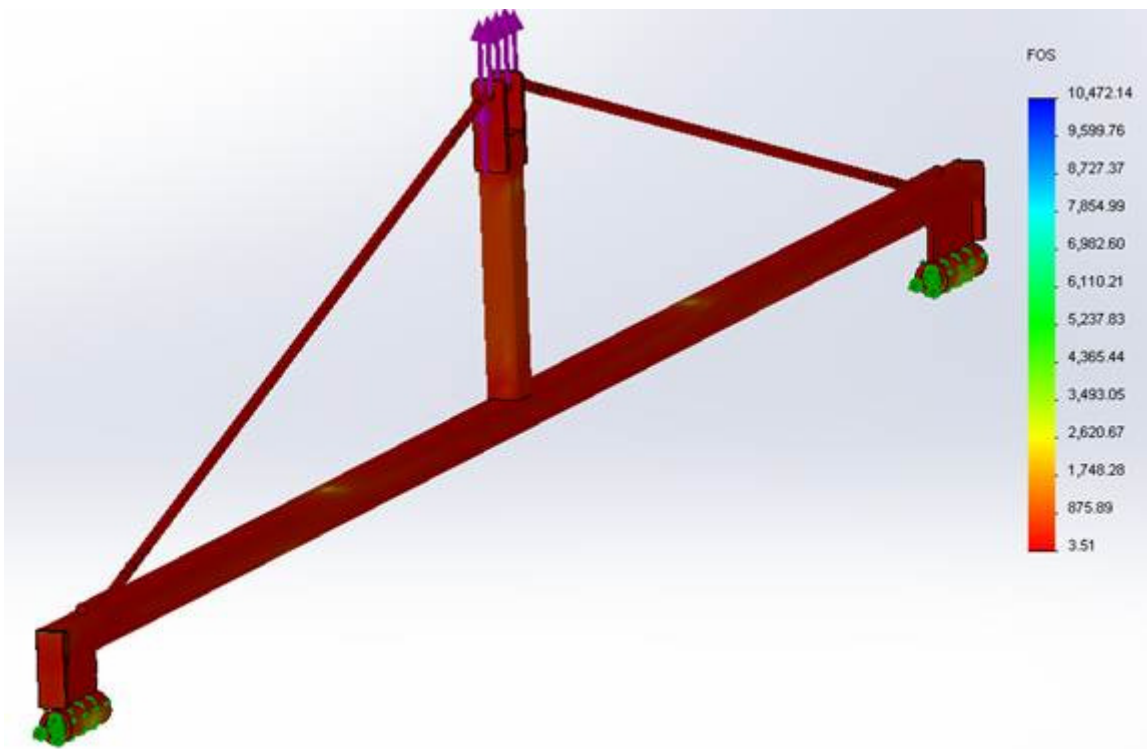
Stress Plot (max = 10,338.6 psi):



Deflection Plot (max = .017"):



Factor of Safety Plot (min = 3.51):



I don't see any structural issues with the above lifting assemblies as the safety factors are all well above 2. I'm currently working on drawing 95-1109 and should have results for you tomorrow. Feel free to call me with any questions/concerns.

Thanks,

John