A laboratory demonstration on the performance of reinforced concrete test beams will be conducted. The beam dimension, reinforcement, and material strengths are specified on the next page. In this assignment, calculate the Moment-Curvature behavior at first cracking, first yielding, and ultimate for the beams labeled A, B, C, and D (E is the same as C for bending strength), and compare their behavior in writing (maybe a 1 or 2 paragraph essay). Assume that the 1” concrete cover is constant for all beams. Photographs of the reinforcement can be found on my web page.
Beam - A  2 - #3  \[ f'_c = 3,000 \text{ psi} \]
Beam - B  2 - #5  
Beam - C  2 - #7  \[ \text{ASTM Gr. 60} \]
Beam - D  2 - #9  
Beam - E  2 - #7 *No Stirrups in Shear Span