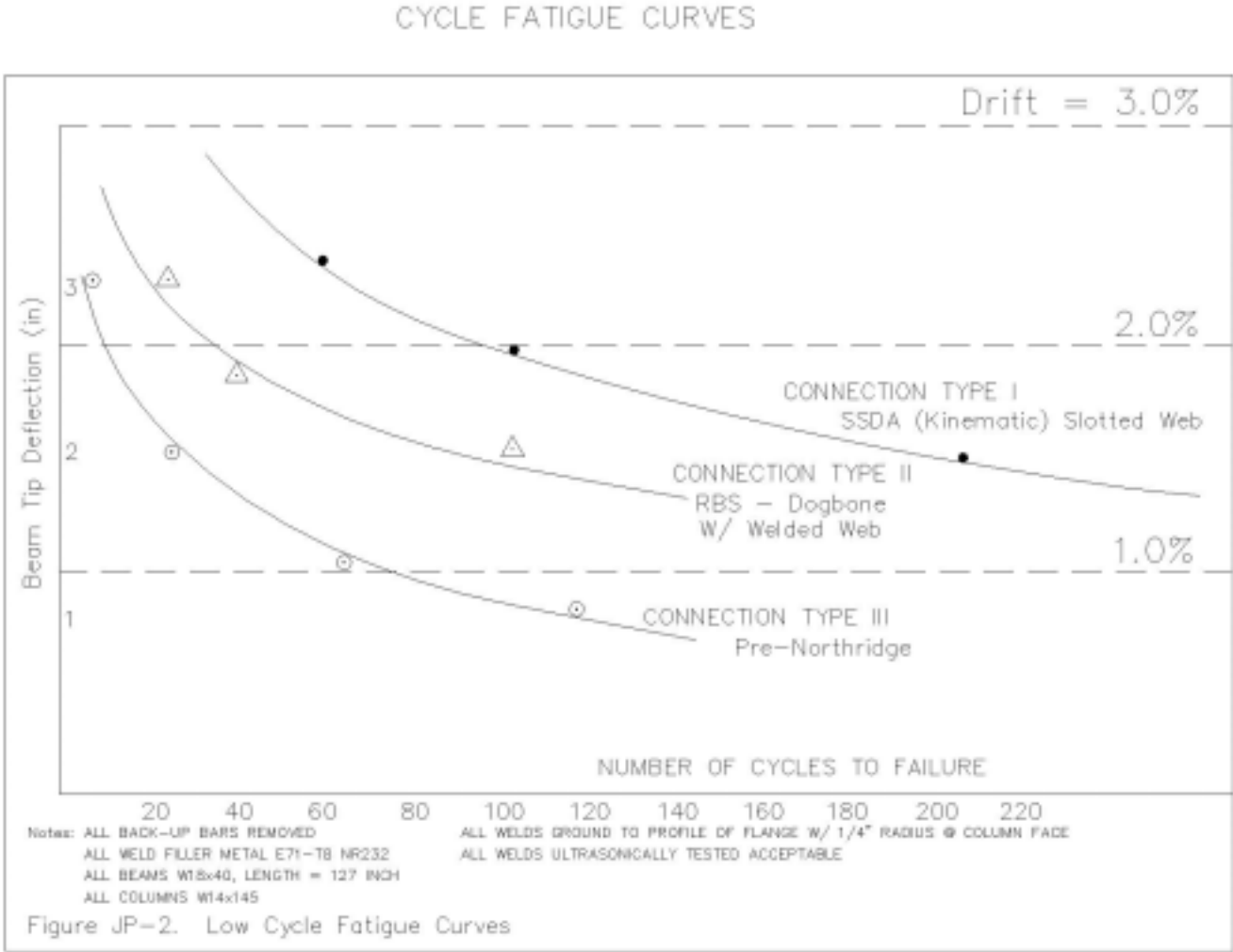
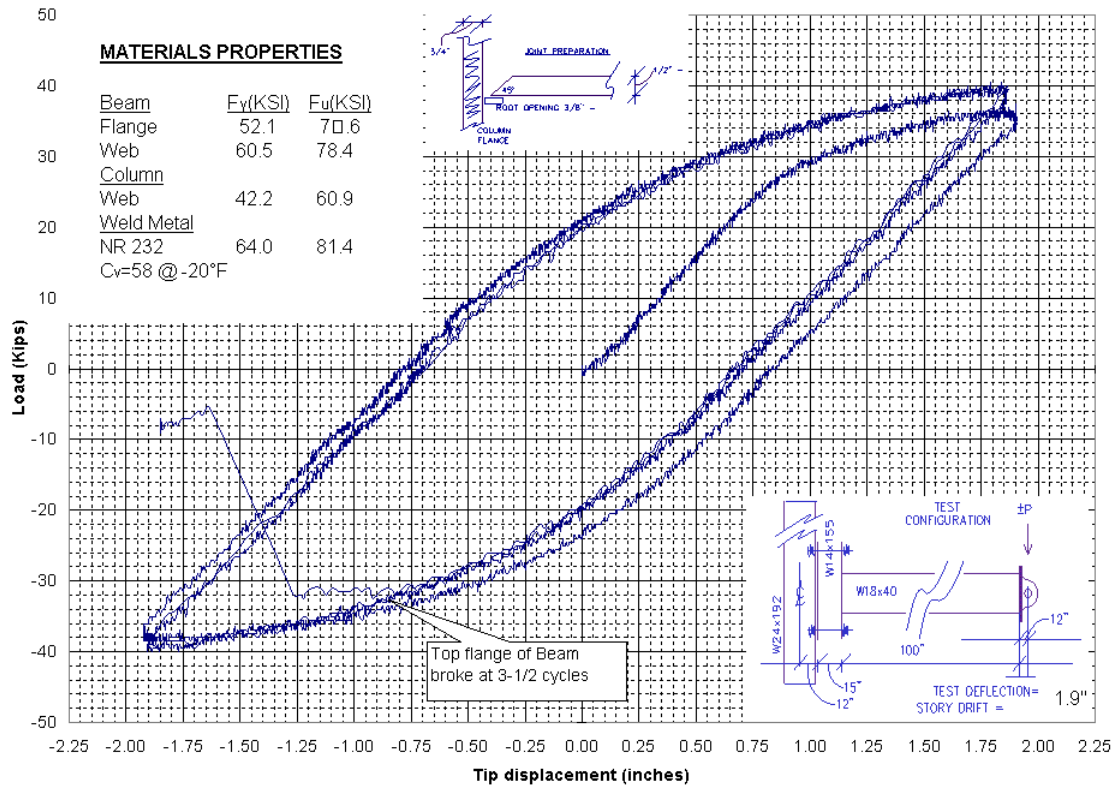


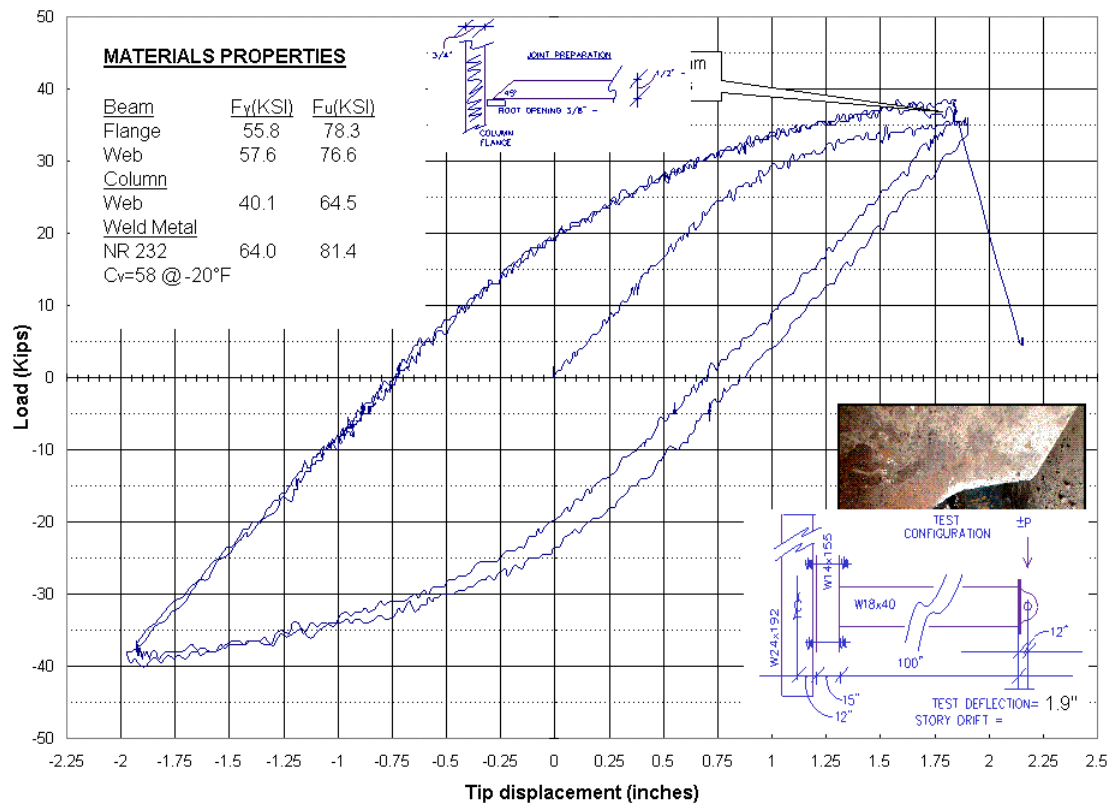
**Figure 19: Strain Gauge Accumulation**



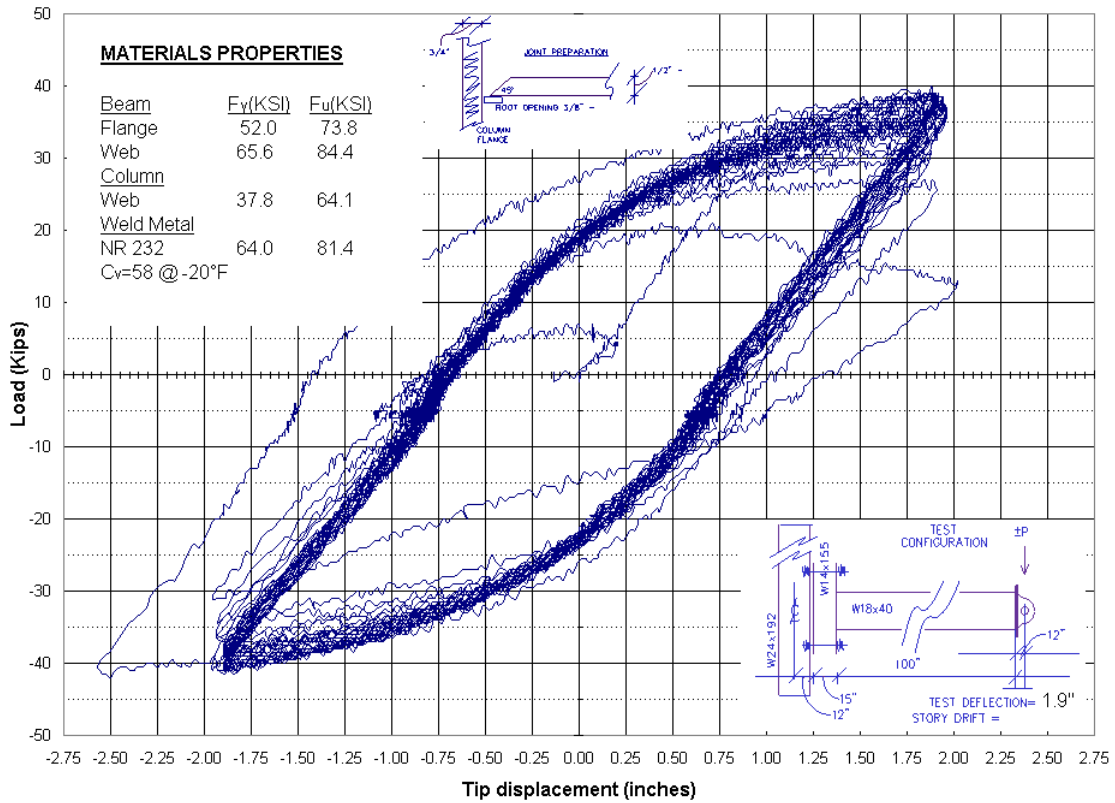
**Figure 20: Low Cycle Fatigue Curves**



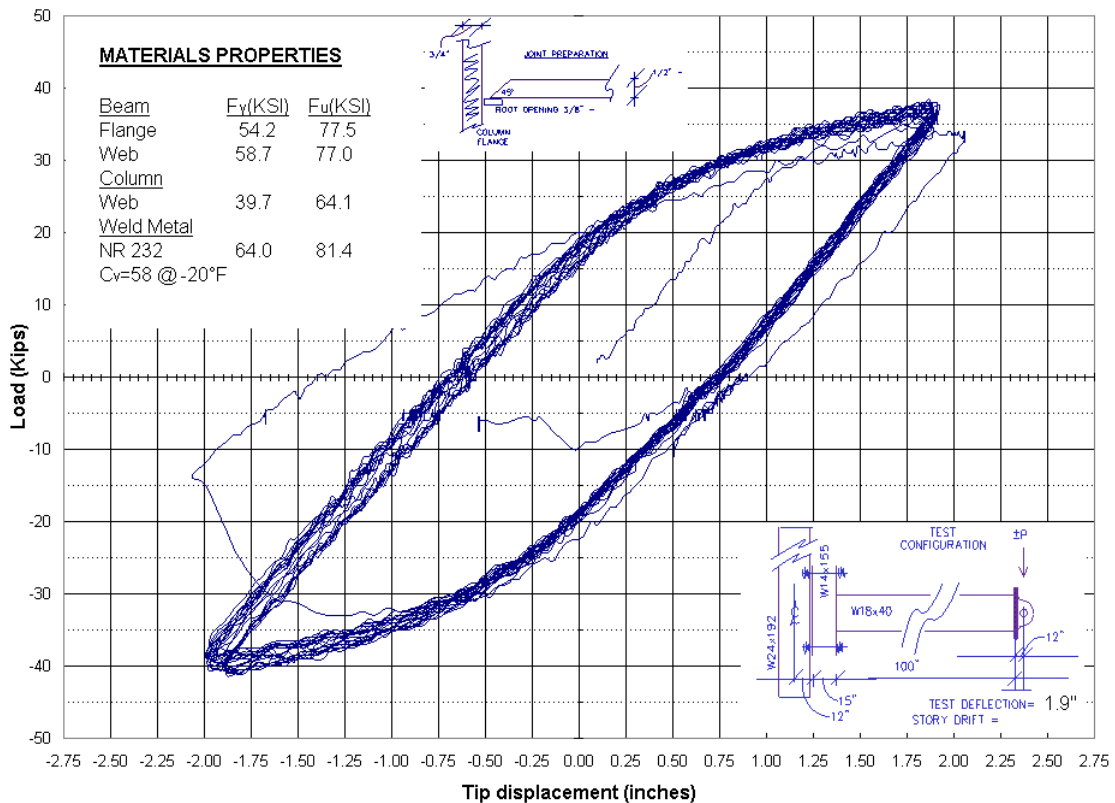
**Figure 21: Pre-Northridge Cyclic Test #1 @ 1.9" - February 8, 2000**



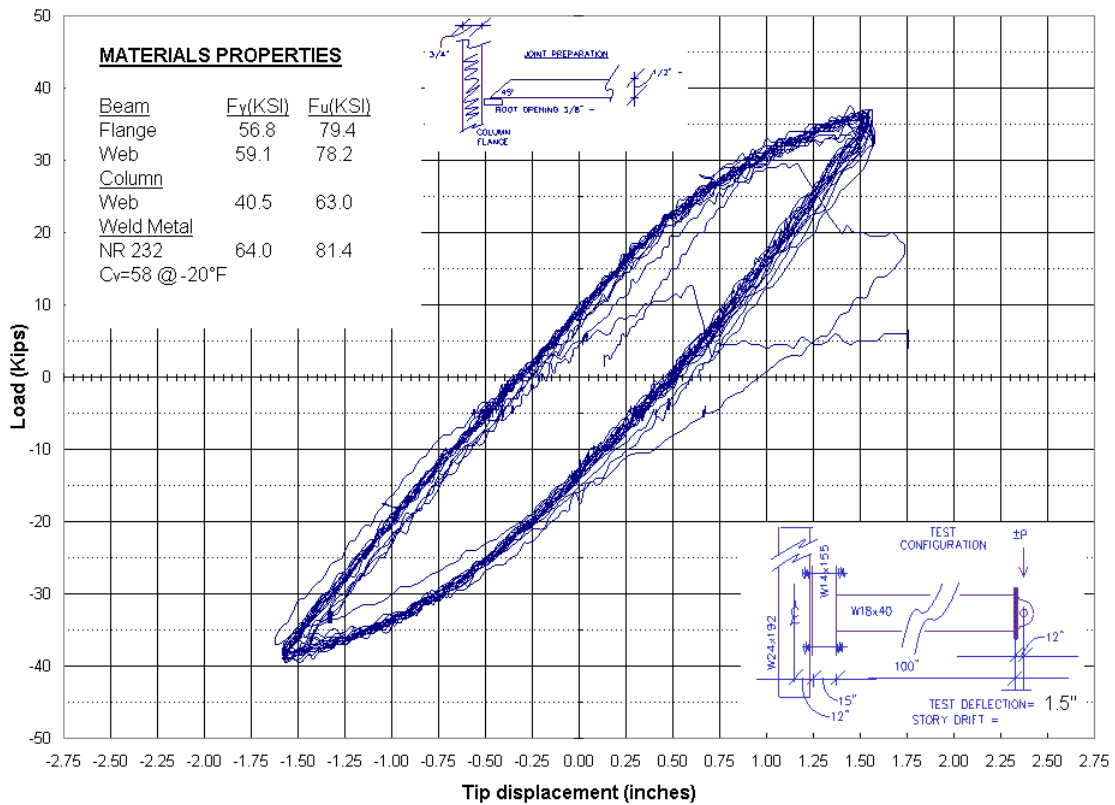
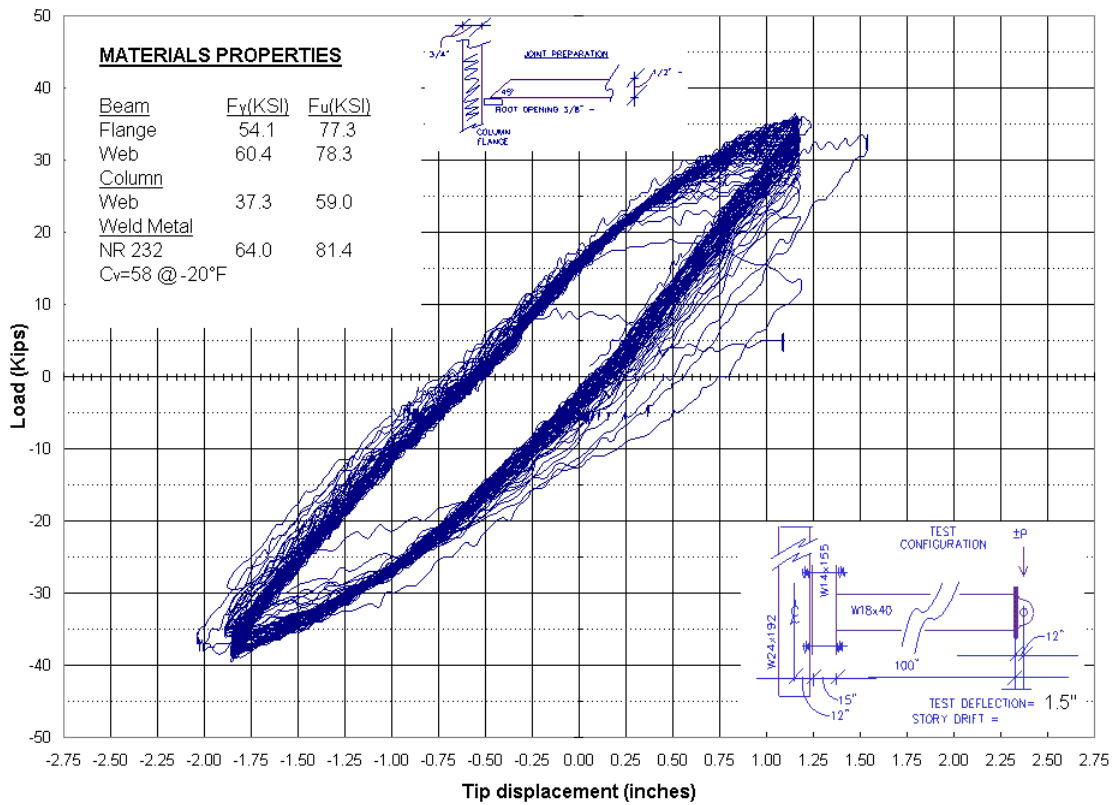
**Figure 22: Pre-Northridge Cyclic Test #2 @ 1.9" - February 10, 2000**

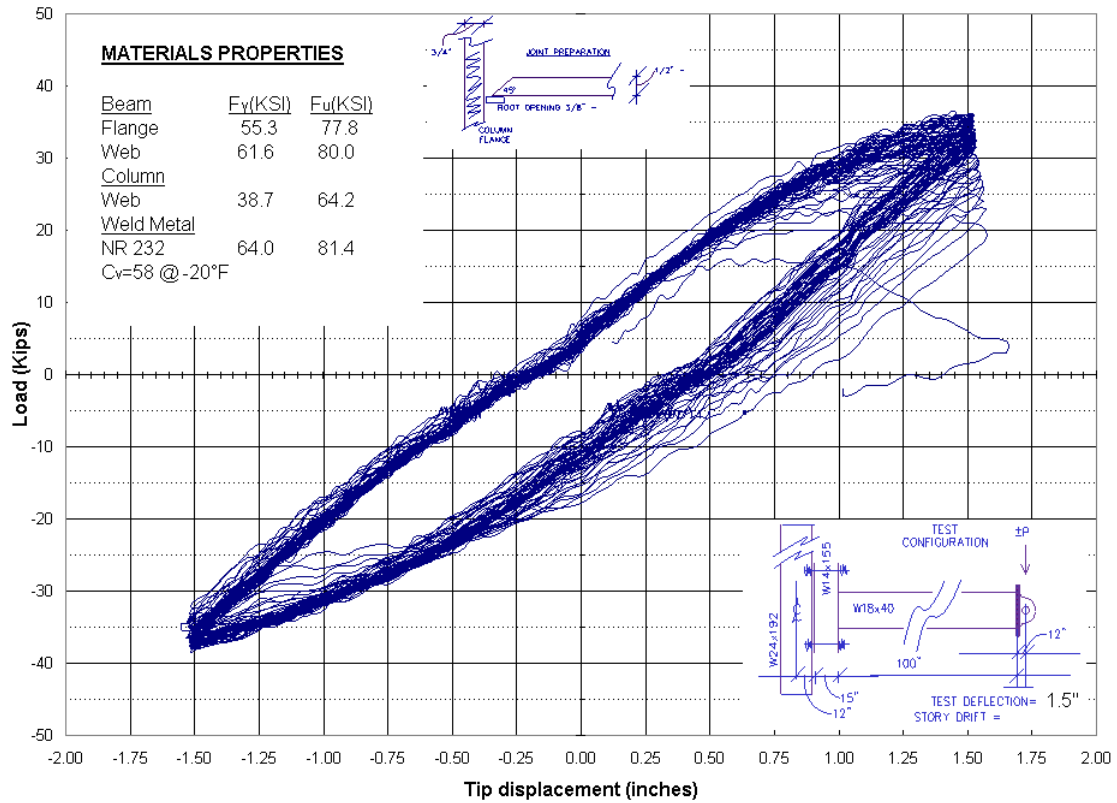


**Figure 23: Pre-Northridge Cyclic Test #4 @ 1.9\"** - February 17, 2000

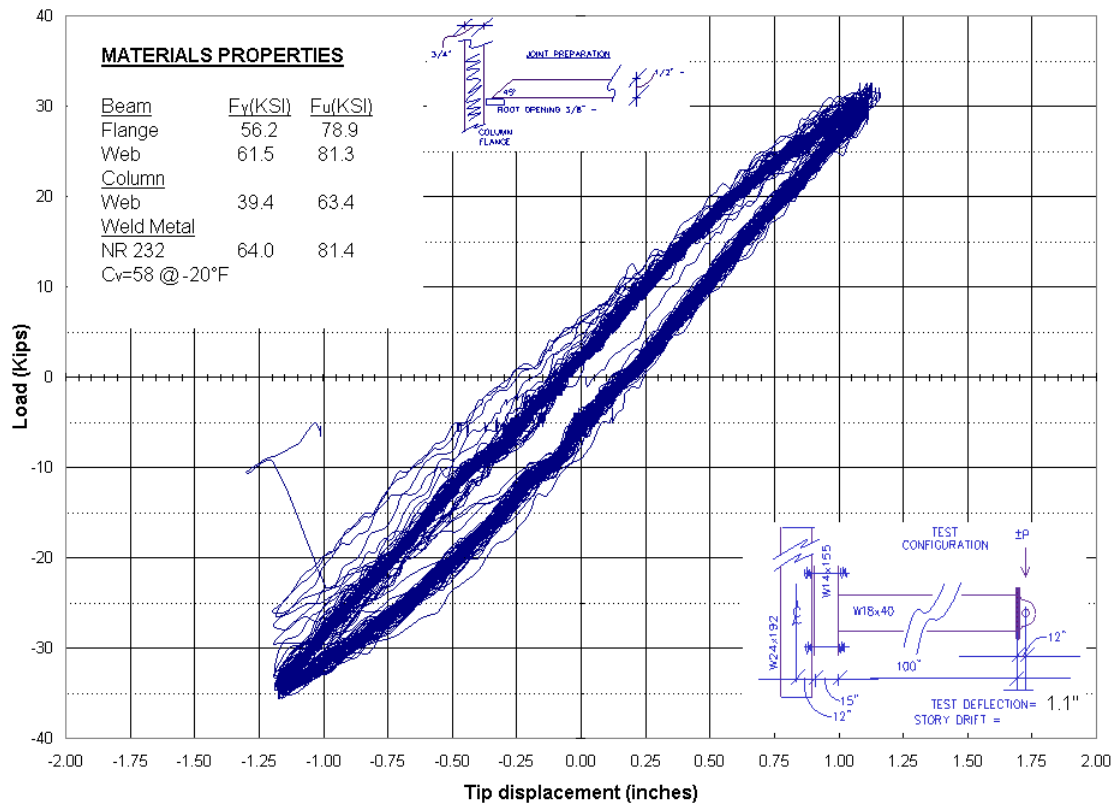


**Figure 24: Pre-Northridge Cyclic Test #4 @ 1.9\"** - February 17, 2000

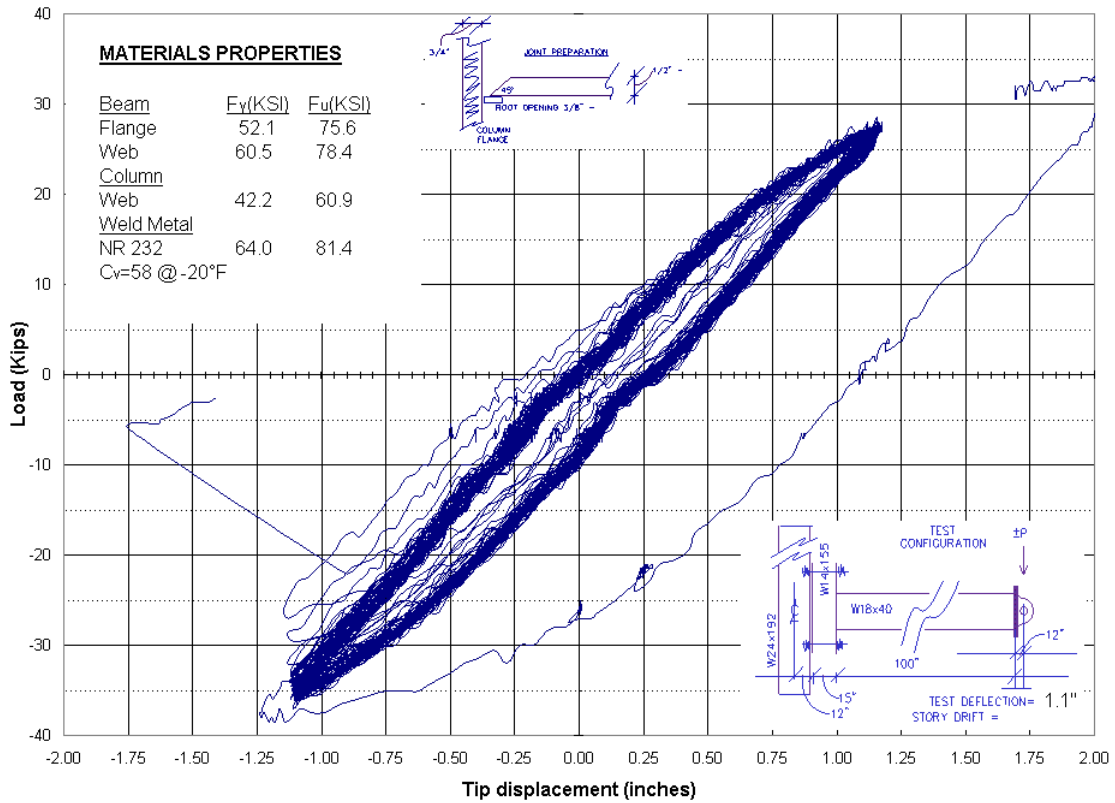




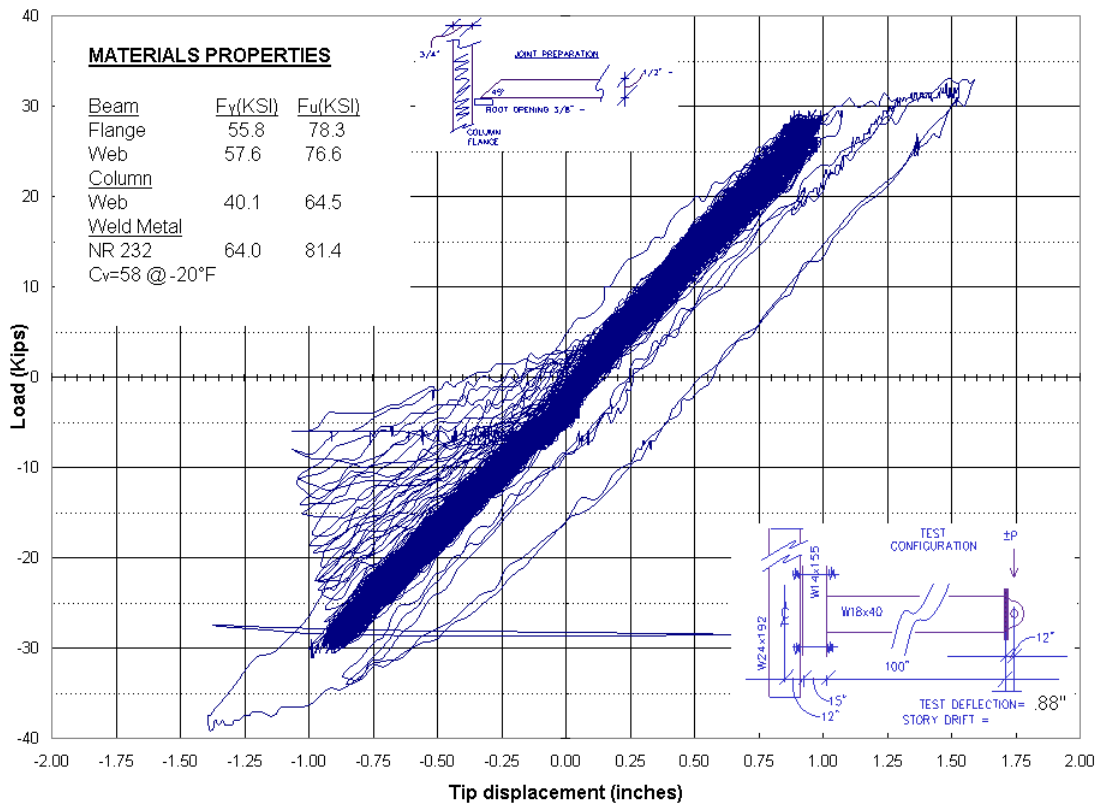
**Figure 27: Pre-Northridge Cyclic Test #7 @ 1.5" – February 25, 2000**



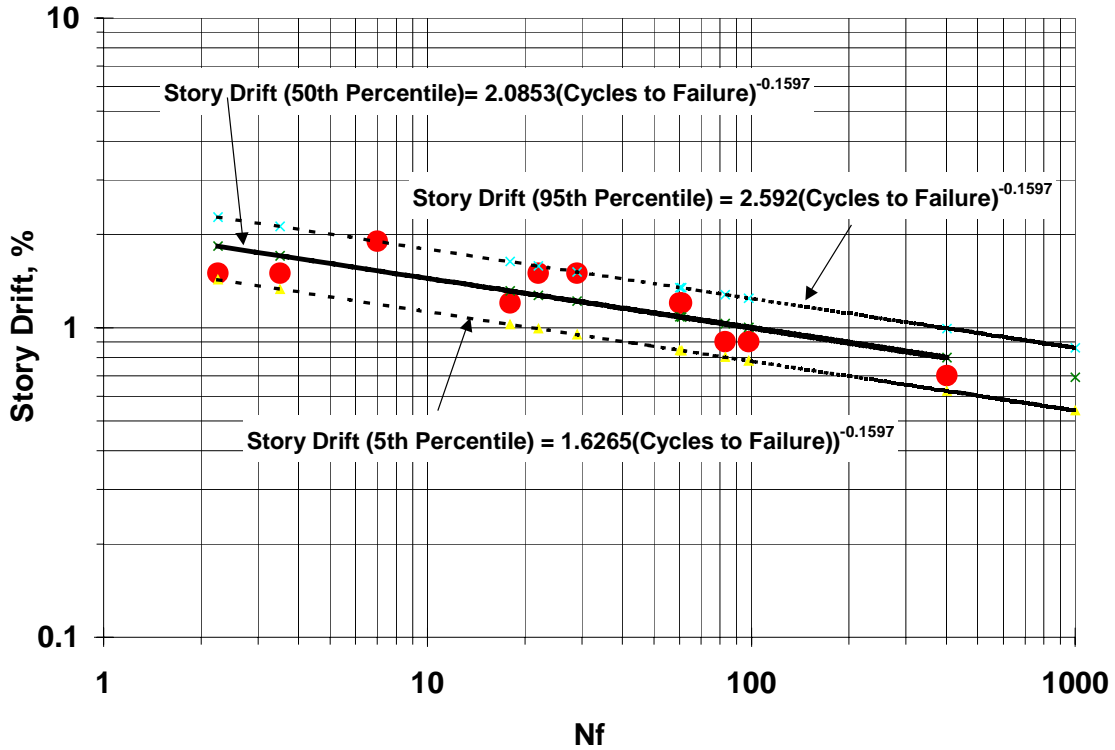
**Figure 28: Pre-Northridge Cyclic Test #8 @ 1.1" – February 25, 2000**



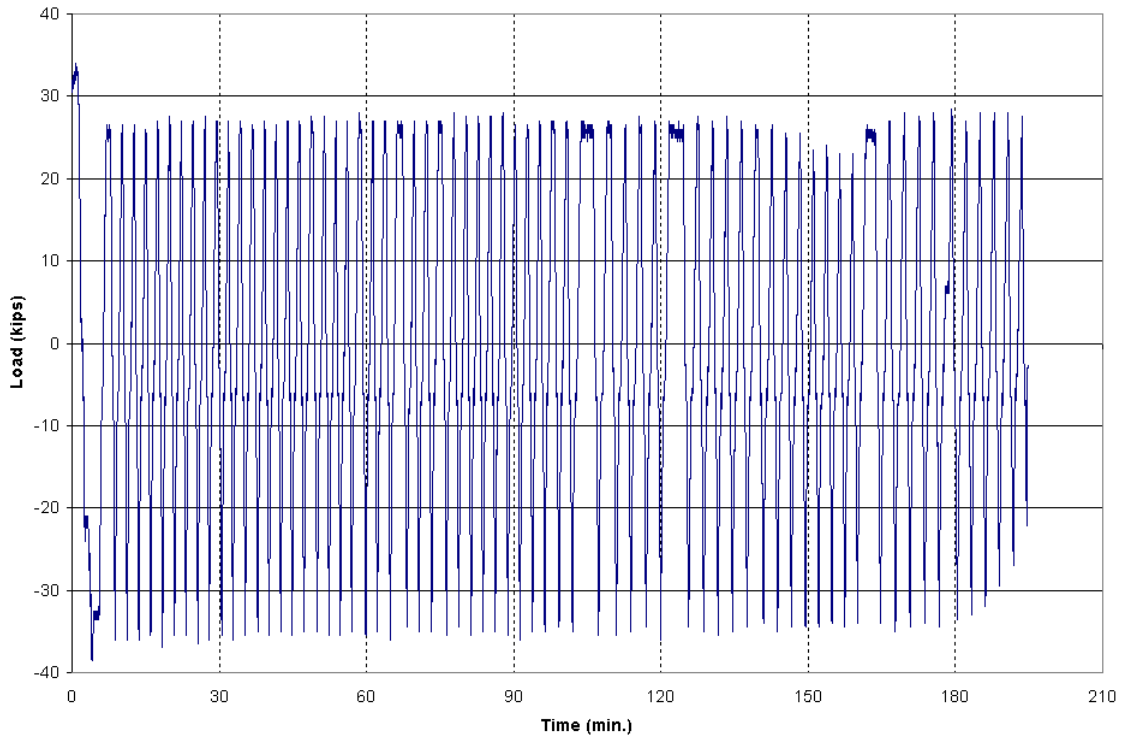
**Figure 29: Pre-Northridge Cyclic Test #9 @ 1.1" – March 15, 2000**



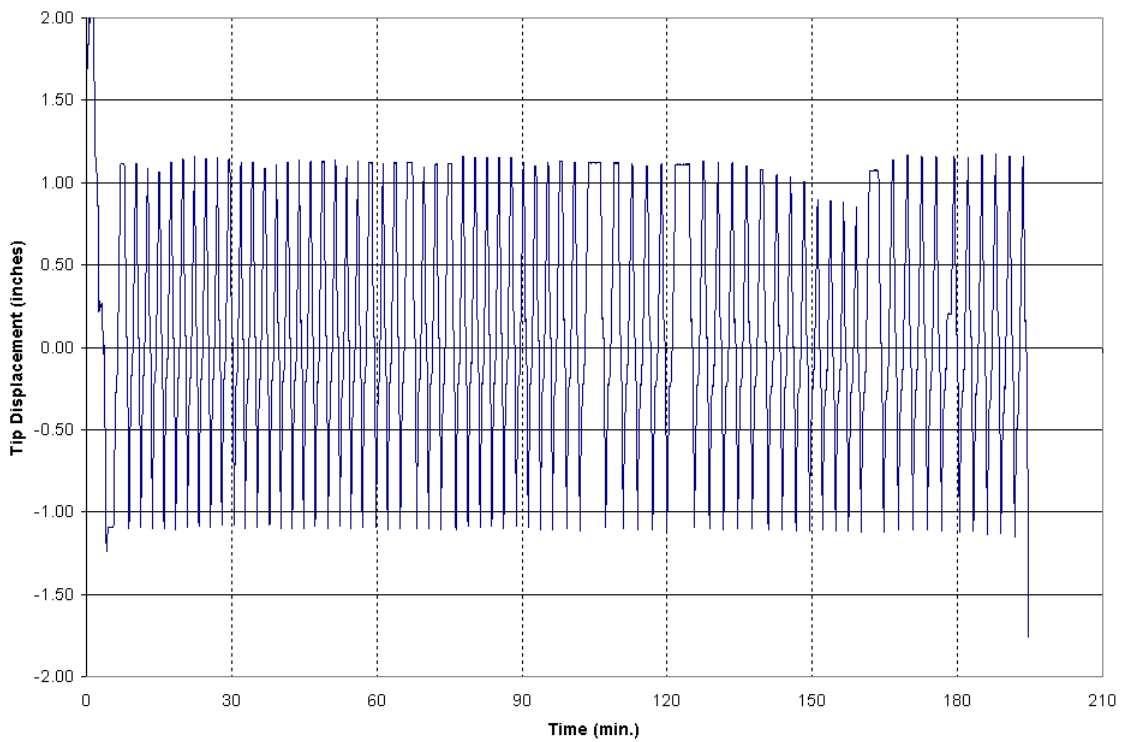
**Figure 30: Pre-Northridge Cyclic Test #10 @ 0.88"**



**Figure 31:** Low Cycle Fatigue Performance of W18x40 Beam-to-Column Connections Fabricated Using an AWS D1.1 TC-u4aGF Weld Joint (made with NR-232 FCAW wire and with the backing bar removed and a root fillet weld added)



**Figure 32:** Pre-Northridge Cyclic Test # 9 @ 1.1" Load History – March 15, 2000



**Figure 33:** Pre-Northridge Cyclic Test #9 @ 1.1" Tip Displacement History – March 15, 2000