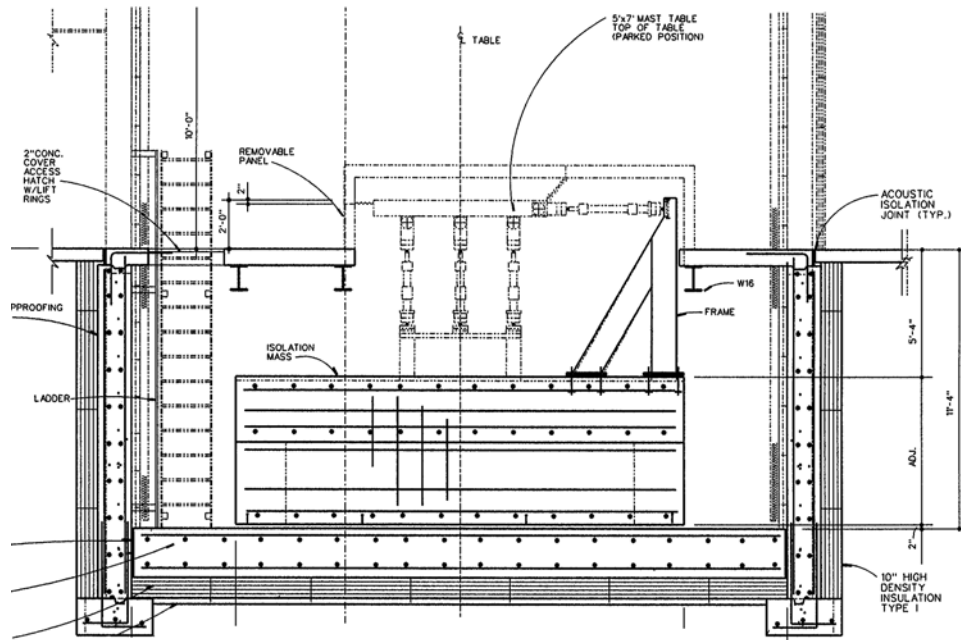


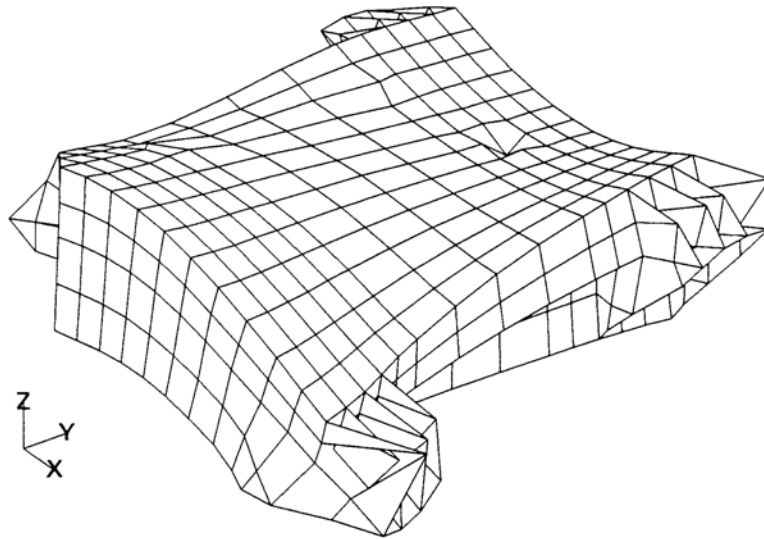
## General Motors Proving Ground 5-Axis Multi-Axis Shaker Table (MAST)



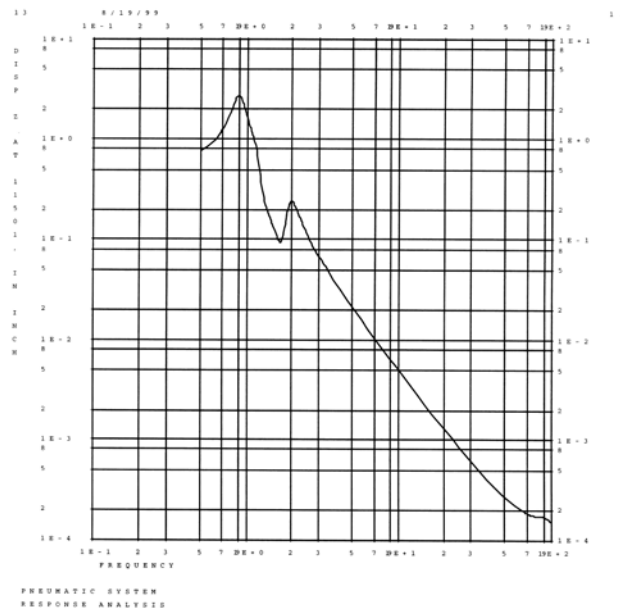
The existing multi-axis shaker table (MAST) was installed on a concrete reaction mass without isolation.



Fabreeka designed massive steel "outrigger" brackets to the mass. The brackets provide interface for the pneumatic isolators and increase the stiffness and dynamic response of the mass.



Fabreeka performed a dynamic and structural analysis of the mass (brackets attached) simulating the inputs from the shaker table. The bending and rigid body modes of the mass are analyzed and approved or the design is revised to meet the dynamic specifications.



A Fabreeka modal analysis of the reaction mass design includes the isolation system response to the dynamic inputs. Dynamic deflection and natural frequencies are obtained when simulating the shaker table inputs.



Four (4) isolators support the reaction mass and shaker table payload. Each isolator is 40" in height and can support 120,000 pounds.



The isolation system has a vertical and horizontal natural frequency of 1.5 Hz. The system has adjustable vertical damping so that the isolator response can be fine-tuned in the field during acceptance testing.