



WESTERN MICHIGAN UNIVERSITY

Bronco Construction
Research Center

Estimate

Item Code	Description	Quantity	\$ Each		Amount
Staff Compensation					
Center Director	Director	1	\$72.84/hour		
Labor- Research Associate	R3 Research Associate	1	\$33.76/hour		
Labor- Carpenter	Carpenter/General Labor	1	\$30.00/hour		
Labor- Mechanical Engineer	\$30/hour	1	\$30.00/hour		
Student Worker	\$20/hour	1	\$20.00/hour		
Bending and Ductility					
Weld Bend	CSA W47.1 fusion welding of steel, CSA W47.2 fusion welding of aluminum, ASME IX QW-160 welding general requirements – tension tests, ASME IX QB-160 welding general requirements – tension tests	EA	\$60.00/each*		
Fillet-Weld Bend	CSA W47.1 fusion welding of steel, CSA W47.2 fusion welding of aluminum, ASME IX QW-180 welding general requirements – fillet weld tests	EA	\$64.00/each*		
Facility Operating Expenses (Daily)					
Facility Operating Expenses	Daily Rate	1	\$112.71/day		
Equipment Costs					
Equipment Costs (10-year depreciation)	Daily Rate	1	\$232.53/day		

Above tests entail producing a data set and graphs, no analysis. Tests requiring machining, sample preparation, fixturing, or significant setup time will be charged by the hour at applicable rates plus materials costs. An estimate will be given upon receipt of samples

*specimen preparation and fixturing is additional via Staff Compensation + Facility Operating Expenses