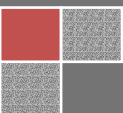




**COMPARATIVE  
MEDICAL DEVICES & SUPPLIES  
MANUFACTURING COSTS**

**BizCosts®....*The Cost of Doing Business***

**BizCosts.com**  
Princeton, NJ



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## EXECUTIVE SUMMARY AND NOTES

### *Introduction*

In the following **BizCosts®** analysis, major operating costs scaled to a representative medical devices & supplies plant are presented for a series of 74 comparative production sites in the U.S., Canada and Mexico. In the full **BizCosts® Report's** summary Exhibit I, annual costs are itemized and totaled and the full study ranks the 74 locations from the highest cost site to the lowest.

Annual operating costs were projected solely for comparative purposes, with only major geographically-variable factors being considered. Those costs not varying significantly with geography, including relocation and start-up expenses, were not considered. The full **BizCosts® Report** focuses on those key geographically-variable cost elements considered to be most pivotal to the medical devices & supplies industry site selection process. All costs in the analysis are expressed in U.S. dollars. Canadian costs are at parity and Mexican figures reflect an exchange rate of .0916. Geographically-variable operating cost differentials are current for **2010 and 2011**.

Overall costs were scaled to a hypothetical 150,000 sq. ft. production plant employing 275 workers and shipping over-the-road to a national U.S. market. The full **BizCosts® Report** is designed to provide an independent, third-party point of reference for the corporate planner's assessment of relative operating cost levels in each of the surveyed manufacturing sites. The format of the cost exhibits will further allow the planner to tailor cost data, facility specifications and shipping assumptions to reflect alternate scales of operation, staffing needs and market expectations.

The full **BizCosts® Report** has been structured to be an authoritative cost-comparison tool for a broad segment of the \$50 billion medical devices & supplies industry. This includes major sectors such as surgical and medical

instruments, surgical appliances and supplies, electro-medical and electrotherapeutic devices, ophthalmic goods, dental and orthodontic equipment and supplies, laboratory apparatuses, and other devices and supplies in the medical electronics and medical plastics fields.

### ***Comparative Plant Locations***

For purposes of comparative economic analysis, major geographically-variable operating costs have been projected in the full ***BizCosts® Report*** for a series of 74 manufacturing sites in the U.S., Canada and Mexico. The comparative locations in the ***BizCosts®*** analysis all house significant concentrations of medical devices & supplies manufacturing. Major benchmark centers for the medical devices & supplies industry in Massachusetts, Connecticut, New Jersey, Minnesota, Illinois, Florida, Utah and California are included in the analysis, as are a series of other key North American manufacturing hubs.

Operating cost structures for Mexico are representative of Maquiladora plant sites in cities such as Tijuana, Mexicali, Juarez and Nogales which have attracted new medical devices & supplies plants in the recent post-Nafta period.

The 74 comparative locations included in the full ***BizCosts® Report*** are detailed below by region.

#### ***New England Region***

- Bridgeport/Stamford/Norwalk/Danbury, Connecticut
- Hartford, Connecticut
- New Haven/Milford, Connecticut
- Boston/Cambridge, Massachusetts
- Worcester/Marlborough, Massachusetts
- Springfield, Massachusetts
- Manchester/Nashua/Salem, New Hampshire

***Mid-Atlantic Region***

- Nassau/Suffolk, New York
- Rochester, New York
- Albany/Schenectady/Troy, New York
- Middlesex/Somerset/Hunterdon, New Jersey
- Princeton, New Jersey
- Philadelphia, Pennsylvania
- Pittsburgh, Pennsylvania

***Southeast Region***

- Baltimore/Hunt Valley, Maryland
- Bethesda/Rockville/Gaithersburg, Maryland
- Richmond, Virginia
- Raleigh/Durham, North Carolina
- Greenville/Spartanburg, South Carolina
- Atlanta, Georgia
- Athens, Georgia

***Florida Region***

- Jacksonville, Florida
- Orlando, Florida
- Palm Beach County, Florida
- Miami, Florida
- Tampa/St. Petersburg, Florida
- Ft. Myers/Cape Coral, Florida
- Pensacola, Florida

***Mid-South Region***

- Nashville, Tennessee
- Memphis, Tennessee

- Birmingham, Alabama
- Huntsville, Alabama
- Louisville, Kentucky
- New Orleans, Louisiana
- Jackson, Mississippi

***East North Central Region***

- Cleveland, Ohio
- Columbus, Ohio
- Cincinnati, Ohio
- Indianapolis, Indiana
- Fort Wayne, Indiana
- Grand Rapids, Michigan
- Ann Arbor, Michigan

***South Central Region***

- Houston, Texas
- San Antonio, Texas
- Dallas/Ft. Worth, Texas
- Austin, Texas
- El Paso, Texas
- Oklahoma City, Oklahoma
- Tulsa, Oklahoma

***West North Central Region***

- Chicago, Illinois
- Milwaukee, Wisconsin
- Minneapolis/St. Paul, Minnesota

- Rochester, Minnesota
- Kansas City, Missouri
- St. Louis, Missouri
- Lincoln, Nebraska

***Western Region***

- Phoenix/Scottsdale, Arizona
- Tucson, Arizona
- Denver/Boulder, Colorado
- Salt Lake City, Utah
- Provo/Orem, Utah
- Seattle/Bellevue, Washington
- Portland, Oregon

***California Region***

- San Jose/Sunnyvale, California
- San Francisco, California
- Sacramento/Davis, California
- Los Angeles/Long Beach, California
- Orange County, California
- San Diego, California
- Riverside/San Bernardino, California

***NAFTA Region***

- Toronto, Ontario
- Montreal, Quebec
- Vancouver, British Columbia

- Maquiladora, Mexico

***Labor Costs***

Annual costs for labor, including direct and indirect production workers, are presented in the full ***BizCosts*® Report's** Exhibit II. Costs are based on a representative mix of 37 different nonexempt manufacturing, assembly, clean room, technical, engineering, material handling/transportation and office/clerical job descriptions for the model medical devices & supplies plant. Comparative labor costs for management staff were not included as these costs would tend not to vary as significantly by geography, but rather by individual company compensation practices. Fringe benefit costs are included as a percent of annual base payroll costs and are assumed to include all statutory benefits, pay for time not worked, and company-sponsored benefits.

***Comparative Electric Power and Natural Gas Costs***

Comparative annual electric power and natural gas costs are presented in the full ***BizCosts*® Report's** Exhibit III. Annual costs reflect industrial rate schedules of the respective local electric utilities serving each area. Natural gas costs are based on an assumed monthly consumption of industrial-use gas.

***Comparative Land Acquisition and Construction Costs***

The full report's Exhibit IV presents comparative costs for the purchase of industrially-zoned land and the construction of new medical devices & supplies plant manufacturing space in each of the surveyed North American locations.

***Comparative Ad Valorem and Sales Tax Costs***

Exhibit V presents comparative ad valorem (property) tax costs in each of 74 surveyed production sites scaled to the land and building specifications of the model medical devices & supplies plant. Also presented in this exhibit are comparative local and state sales tax costs based on a fixed annual purchase of

supplies, equipment, furnishings and other taxable goods associated with the plant.

### ***Comparative Shipping Costs***

Transportation costs from each of the 74 surveyed manufacturing sites to a designated national U.S. market are detailed in the full ***BizCosts***® ***Report's*** Exhibit VI. Comparative costs reflect over-the-road finished product shipments in truckload lots.

### ***About BizCosts***® ***About Boyd***

***BizCosts***® is a registered trademark of The Boyd Company, Inc., of Princeton, NJ, and represents the firm's proprietary operating cost data bank used to shape its domestic and international corporate site selection recommendations. Founded in 1975, Boyd ([www.theboydcompany.com](http://www.theboydcompany.com)) provides independent location counsel to leading U.S. and overseas corporations. Devoted exclusively to corporate mobility, The Boyd Company is recognized as the nation's premier authority in comparative business cost analysis.

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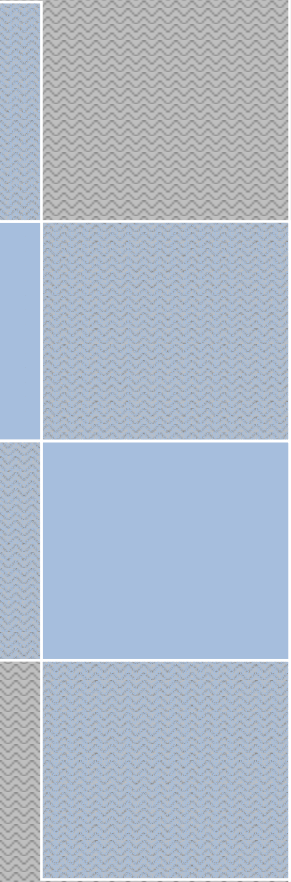
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