



STREAMLINING COMPLEX SPACES  
AND PROCESSES

# Industrial + Manufacturing Group

**GHAFARI**

SPACE  
TO  
THRIVE







## We've been on *ENR's* Top 10 Industrial and Manufacturing EAC firm list for over 10 years.



Our integrated team combines process engineering, facility engineering, architecture, and construction services to create comprehensive spaces tailored to the people and operations they house. This approach allows structures and processes to work in unison, which helps our clients streamline day-to-day operations and realize their full productivity potential.

Guided by 6 Sigma and lean principles, we tailor projects to the precise needs of each client. As we work together, we blend experience with ingenuity to find new ways of adding value to complex operating environments.

## MARKET SERVICES

### CONSULTING

3D Building Information Modeling  
Business Process Design and Evaluation  
Discrete Event Simulation  
Energy Use and Alternative Energy Strategy Development  
Facility Assessment Analysis  
Facility Network Analysis  
Feasibility Studies

- Cost Management
- Growth Planning

High-Definition Laser Scanning  
Integrated and Lean Project Delivery  
Internal Operations Planning and Industrial Engineering

- Finished Goods Material Handling
- Inventory Levels
- Material Flow and Value Stream Mapping
- Packaging Equipment
- Process Equipment
- Order Fulfillment
- Raw Material Handling

Lean Manufacturing Consulting  
Master Planning  
Operational Due Diligence  
Productivity Improvement  
Risk Assessment  
Supply Chain Strategy  
Sustainability  
Technology Assessment  
Transportation Analysis

### PROCESS + EQUIPMENT DESIGN

Conveyor Systems Design  
Equipment Installation  
Operational Due Diligence  
Material Handling Applications Design  
Packaging and Containerization  
Paint Finishing Systems Design  
Process Controls

### ARCHITECTURE + ENGINEERING

Architecture and Interior Design  
Civil Engineering  
Electrical Engineering  
Facility Planning and Programming  
Fire Protection and Plumbing Engineering  
ICT and Security Systems Engineering  
Mechanical Engineering  
Site Master Planning  
Structural Engineering

### CONSTRUCTION

Construction Management  
Design-Build Management  
Equipment Set and Tooling Installation Support  
Lump Sum and GMax Delivery  
Owner's Representation  
Pre-Construction Cost / Benefit Analysis  
Program / Project Management

### SYSTEMS + OPERATIONS

Automation and Control System Design  
Building Framing Systems  
Building Utility Systems  
Commissioning and Start-Up  
Conveyor Systems  
Industrial Ventilation and Dust Collection  
Interior Architecture Systems  
Material Handling Equipment Systems and Ops.  
Material Flow and Handling  
Paint Finishing Systems  
Power Systems Analysis  
Process Equipment Systems and Operations  
Thermal Process Design  
Vehicle and Pedestrian Traffic Flow Systems

### FACILITY TYPES

Assembly Plants  
Automated Warehouse and Logistics Facilities  
Casting Plants  
Central Utility Plants  
Climate-Controlled Distribution Facilities  
Coolers and Freezers  
Corporate Facilities  
Data Centers  
Dry Storage Facilities  
Manufacturing Plants  
Paint Shops  
Research and Development Facilities  
Stamping Plants



**COVER:** New York Daily News Press Facility **PREVIOUS PAGE:** Woodward Aircraft Turbine Systems Rock Cut Campus **TOP LEFT:** NextDiesel Biodiesel Production Facility **TOP RIGHT:** Woodward Aircraft Turbine Systems Rock Cut Campus **MIDDLE LEFT:** LG Chem / Compact Power Battery Manufacturing Plant **MIDDLE RIGHT:** Deere-Hitachi Excavator Manufacturing Facility **BOTTOM LEFT:** Production Line **BOTTOM RIGHT:** GM Lansing Delta Township Assembly Complex







## REPRESENTATIVE CLIENTS

BMW  
Bosch  
Brose  
Cargill  
Caterpillar  
Delphi Automotive  
Fiat Chrysler Automobiles  
Ford Motor Company  
GE Transportation  
General Motors  
Honda  
Jaguar Land Rover  
John Deere  
LG Chem  
Nestle  
Nissan  
Polaris Industries  
Ryobi  
Toyota  
Valeo  
Visteon  
W.W. Grainger  
Woodward  
Zeledyne

## OFFICE LOCATIONS

Birmingham, Alabama USA  
Chicago, Illinois USA  
Dearborn, Michigan USA  
Detroit, Michigan USA  
Greenville, South Carolina USA  
Indianapolis, Indiana USA  
Mexico City, Mexico  
São Paulo, Brazil  
Baroda, India  
Abu Dhabi, UAE  
Doha, Qatar  
Jeddah, Saudi Arabia  
Muscat, Oman

## FOR MORE INFORMATION

Direct any questions to [info@ghafari.com](mailto:info@ghafari.com), and a regional representative will contact you to discuss how a Ghafari partnership can help your business thrive.

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