



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
Fort Worth, Texas USA
Grand Rapids, Michigan USA
Greenville, South Carolina USA
Indianapolis, Indiana USA
Mexico City, Mexico
São Paulo, Brazil
Baroda, India
Istanbul, Turkey
Abu Dhabi, UAE
Jeddah, Saudi Arabia
Muscat, Oman

FOR MORE INFORMATION

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

GHAFARI.COM

#9

RANKING

Ranked among the top 500 U.S. Engineering and Architectural firms by *Building Design and Construction*.

TOP 10

RANKING

We are ranked #7 on the *Building Design and Construction* Industrial Sector Engineering Firms list.

TOP 5

RANKING

We are ranked #4 on *Engineering News-Record's* top Manufacturing designers list and #1 on the Auto Plants designers list.

GHAFARI