



## Northrop Grumman Corporation

*Iuka, Mississippi*

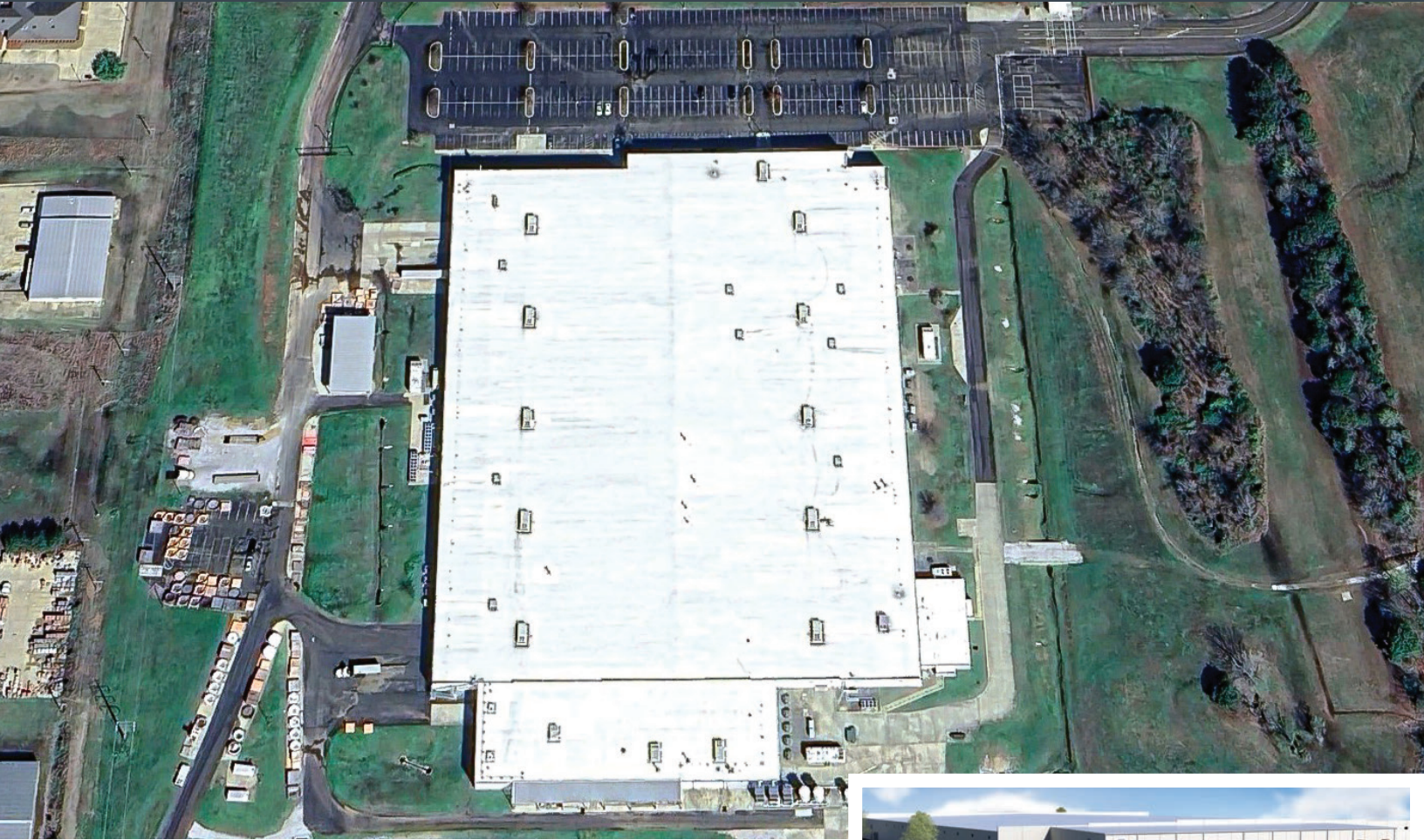
### Large Composite Aerospace Structures

H&M Company and its wholly owned self-perform groups have been performing various ongoing projects for Northrop Grumman Corporation at their Iuka, Mississippi facility since 2014 to present. The first project, H&M self-performed the concrete work for a mass foundation machine, which required tolerance of thousandths of an inch.

H&M was also responsible for the engineering and design of six separate and independent renovations inside the existing facility, all requiring Sensitive Compartmented Information Facility (SCIF) certification. H&M value-engineered the solutions to satisfy US Government specifications while holding cost to an acceptable level, achieved in large part by self-performing the electrical and mechanical work. These renovations were constructed while the facility was in full operation, without any interference to their production schedule. In concurrence, a separate SCIF office facility was constructed outside the existing plant.

Another project consisted of the design and installation of new equipment, replete with SCIF requirements. H&M self-performed the equipment installation, electrical and mechanical portions of the project, at the same time adding another area of renovation inside their SCIF Certified manufacturing facility.

H&M is familiar with the challenges of providing certified background checked employees to perform work in highly regulated government facilities such as Northrop Grumman Corporation. Additional project details regarding the work performed at Northrop Grumman by H&M is not available due to corporate and national security restrictions.



## GE Aerospace

*Batesville, Mississippi*

Aircraft Engine Composite Components  
200,000 square foot Autoclave Addition

### H&M Scope Summary:

- Full Design and Construction Services





## Boeing Electronics Company

Corinth, Texas

Military Electronics Manufacturing and Assembly Facility  
204,000 square feet

### H&M Scope Summary:

- Full Design and Construction Services
- Facility features include:
  - Class 200,000 and 400,000 Controlled Areas and Design
  - Facility and service provisions for Class 10,000 and Class 100,000 Clean Rooms
  - Environmental control of the Controlled Areas and Clean Rooms includes a chilled water cooling system, steam humidification in each air handling unit and high efficiency filters
  - Controlled Areas and Clean Rooms were designed to meet requirements of Federal Standard 209 and Boeing Standard 5703





## Olin Corporation Winchester Ammunition

*Oxford, Mississippi*

**Ammunitions Manufacturing Facility**  
993,000 square feet

### H&M Scope Summary:

- Full Design and Construction Services





## Gestamp North America

*Chattanooga, Tennessee*

**Automotive Frames Manufacturing Facility**  
225,000 square feet

LEED® Silver Certified



### H&M Scope Summary:

- Full design and construction
- Self-performed concrete, electrical, and structural and miscellaneous steel erection and fabrication
- Project includes 100,000 square feet of heavy-duty metal stamping press area with extensive scrap conveyor tunnels, press pits, cranes, etc., and 90,000 square feet of assembly space



## Pacific Manufacturing Tennessee, Inc.

*Jackson, Tennessee*

**Metal Stamping Facility**

160,000 square feet

170,000 square foot Expansion

175,000 square foot Expansion

### H&M Scope Summary:

- Turnkey construction of facility
- Over 150,000 sf of ~55' tall Stamping Bay
- Over 330,000 sf of Assembly/Shipping area
- Over 30,000 sf of Office Space
- Press foundations for: 3 ea. 500-ton Presses, 3 ea. 1,000-ton Presses, 2 ea. 1,500-ton Presses, 1 ea. 3,000-ton Press
- Over 1,300 lf of Scrap Tunnels beneath the production floor
- Self-performed all Structural Steel

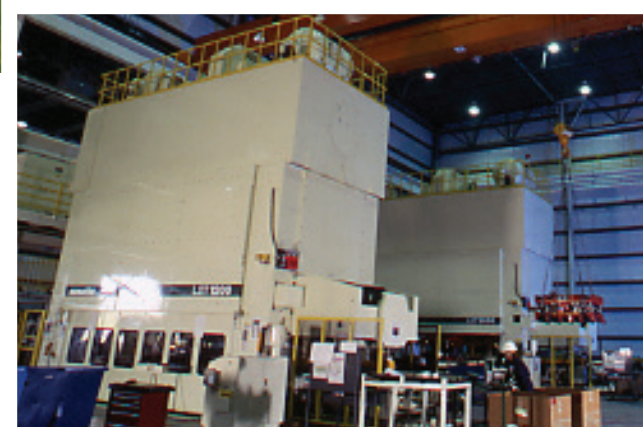




## Toyota Boshoku Tennessee, LLC (formerly ARJ Manufacturing)

*Jackson, Tennessee*

Seat Frames Manufacturing Facility  
194,000 square feet



### H&M Scope Summary:

- Full Design and Construction
- Design and installation of all equipment foundations
- Construction Engineering for process installation
- Installation of all process piping and power
- Support for commissioning and start-up
- Project features: 277/480 volt, 4000 amp, 3 phase electrical system; compressed air systems; process water systems; extensive press foundations connected by continuous tunnel for a scrap conveyor system; 1200 ton Kamatsu stamping presses; extensive bridge crane system



## Pirelli Tire

*Rome, Georgia*

**Automobile Tire Manufacturing Facility and National Headquarters**  
425,000 square feet

### H&M Scope Summary:

- Full Design and Construction Services
- Site Selection Services
- Site Analysis Services
- Process Installation
- Start-Up Services





## Double G. Coatings, Inc.

U.S. Steel / ArcelorMittal JV

Jackson, Mississippi

Galvanized and Galvalume® Process Steel  
225,000 square feet



### H&M Scope Summary:

- Design and Construction of 280,000 square foot building and all building services
- Design and Construction of all equipment foundations
- Receive, unload and store all equipment
- Install, align, and grout all Line and Off-Line Equipment to vendor specifications and tolerances
- Installation of 1,000-foot Continuous Steel Galvanizing Line including upper and lower pass payoff section, entry and exit accumulators, electrostatic cleaners, furnace APC tower and equipment, Ajax pots, Kohler air knives and equipment, skinpass mill with tension leveler, chemical treatment section and terminal recoiling equipment
- Labor and support for Commissioning and Start-up Assistance



## Texarkana Aluminum

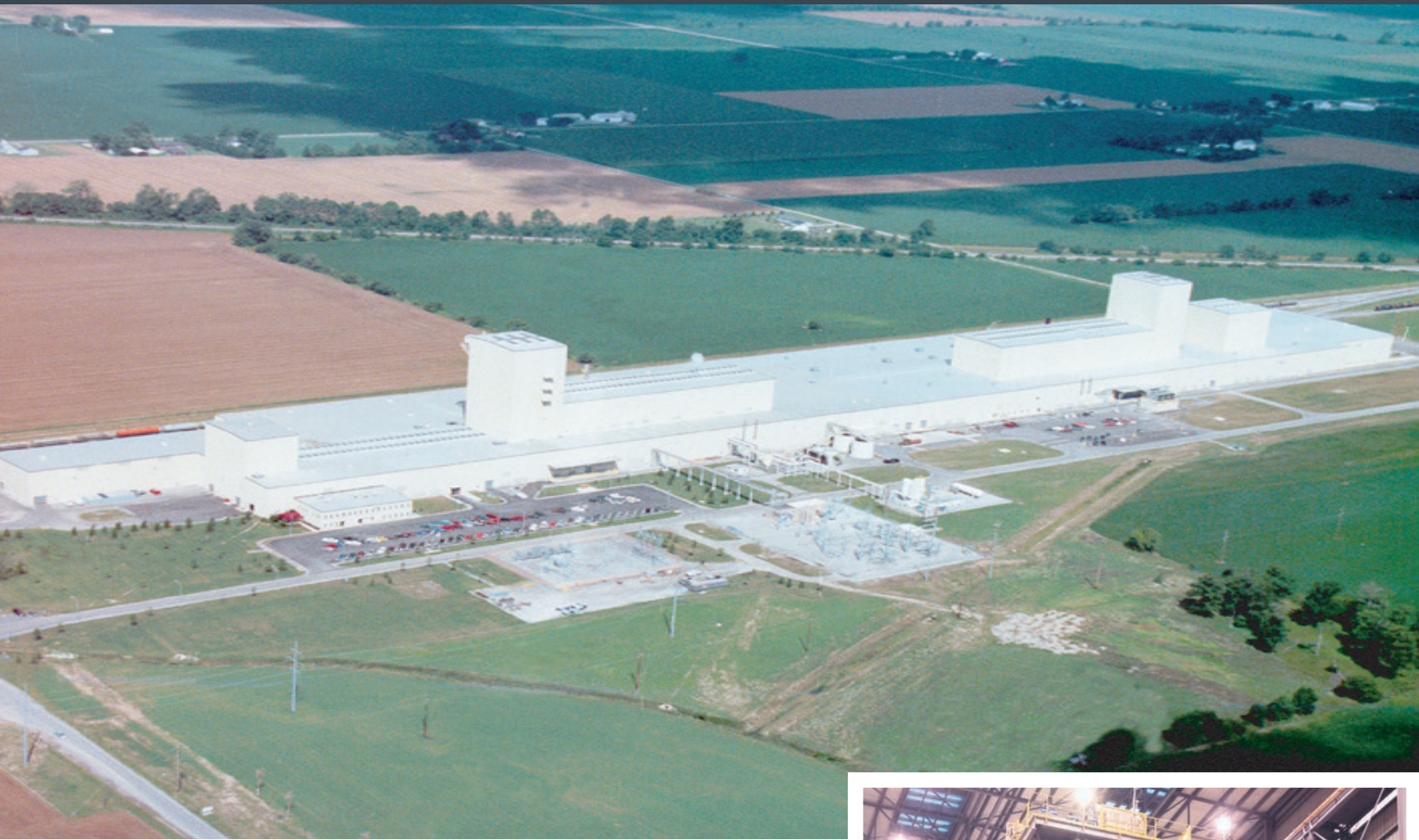
Texarkana, Texas

Aluminum Cold Rolling Mill  
210,000 square feet

### H&M Scope Summary:

- Designed and built 210,000 sf expansion - turnkey
- Designed and built all building, equipment and process related foundations
  - MINO Mill
    - Fume Exhaust Foundations
  - 6 Annealing Furnaces
  - Leveling Line
  - Heavy Duty Slabs for Coil Storage
  - Tied Building into Existing Facilities
- Equipment and process piping installation
  - Mechanical installation of the MINO 4 high, 2200mm Cold Rolling Mill
  - Mechanical installation of the Air Wash System
  - Mechanical installation of the Athader Leveler
  - Mechanical installation of the Itapac Wrapper
  - Piping supply and install included coolant, pneumatic, hydraulic piping systems
- Self-performed all building and process electrical
- Start-up and Commissioning





## U.S. Steel/Kobe Steel Joint Venture PRO-TEC No. 2

*Leipsic, Ohio*

Hot-Dip Steel Galvanizing Facility  
360,000 square feet

### H&M Scope Summary:

- Added #2 CGL to Existing #1 CGL without interference
- Designed and built 360,000 square foot building - turn-key
- Designed and built all equipment foundations
- Performed all Construction Engineering for Process Installation
- Installed 600,000 tons per year automotive quality continuous galvanizing line including equipment installation, process piping, process electrical and instrumentation
- Provided labor and support for commissioning
- Involved SMS equipment





## Atlas Tube

a Division of Zekelman Industries

Blytheville, Arkansas

Steel Tube Mill - 448,000 square feet  
Continuous ERW Tube Mill - 600,000 square feet  
Galvanization Line - 118,548 square feet

### H&M Scope Summary:

- Full Design and Construction Services
- Except for packaging and plant equipment, the smaller forming and galvanize line used existing equipment shipped in from a facility that was shut down. This required multiple site visits and careful engineering coordination.
- Self-performed the plumbing, HVAC, electrical & equipment installation of both forming and galvanizing lines:
  - Mechanical installation of the 28" diameter, 1" wall thickness Continuous ERW Tube Mill - Heaviest pick was over 500,000 lbs.
  - Piping supply and install included coolant, pneumatic, hydraulic piping systems
  - Electrical included power and controls to all equipment
- Start-up and commissioning



## Wieland North America Recycling

*Shelbyville, Kentucky*

Copper and Copper Alloy Recycling Facility  
120,000 square feet

### H&M Scope Summary:

- Full Design and Construction Services, including Process Foundations and Utility Distribution of the following:
  - 44,000 square foot Shred and Sort Building line for separating dissimilar metals, which includes a crusher, conveyors, and bag-house. Equipment furnished by American Pulverizer.
  - 32,500 square foot Process Building including a furnace, caster, refined finished goods shipping area, compressor room and slag holding room
  - 20,000 square foot Dry Goods Storage Building
  - 10,000 square feet of Offices, Locker Rooms and Breakrooms





## EJ Group

*Ardmore, Oklahoma*

Gray and Ductile Iron Casting including Manhole Covers and Drainage Gates, and Other Manufactured Iron Products  
250,000 square feet

### H&M Scope Summary:

- Full Design and Construction Services
- Site Development Services
- Design of Process Equipment Foundations
- Design of Primary Utility Service Distribution for Process Equipment



Advanced Clean Rooms  
3-D Modeling of Structural and Equipment Applications  
Specialized Electrical, Mechanical, and Piping Engineering  
Painted and Structural Steel  
Advanced Coatings and Polishing for Specialized Floor Applications  
Advanced Climate Controlled Environments, Etc.

