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AT AMERICAN AXLE & MANUFACTURING



*KIRCO MANIX CONVERTS VACANT PLANT
INTO AAM'S ADVANCED TECHNOLOGY
DEVELOPMENT CENTER*

KIRCO MANIX Construction LLC recently delivered 350,000 square feet of construction for American Axle & Manufacturing, Inc., Detroit. American Axle & Manufacturing enlisted the construction services of the Troy-based firm to convert one of its vacant former manufacturing facilities into a \$30 million Advanced Technology Development Center. As construction manager, KIRCO MANIX assisted the design team of IBI Group, Inc., Southfield and Gala & Associates, Beverly Hills, throughout the project, helping to expedite design decisions and construction solutions for this exciting new revitalization of a former plant.

This massive space had sat unused and unmaintained for nearly seven years prior to the start of the project. KIRCO MANIX transformed much of the building's 80-year-old finishes and furnishings into this state-of-the-art research and development facility for American Axle & Manufacturing. This re-invented facility, located almost directly across Holbrook Avenue from American Axle's global headquarters, now houses several of the company's departments, including advanced manufacturing, advanced information technology, gear development, corporate manufacturing, next-generation prototype builds, warranty analysis and competitive assessment.

PHOTOS COURTESY OF JASON KEEN /
TREVOR LONG PHOTOGRAPHY



KIRCO MANIX crafted this gleaming corporate lobby out of the raw space of a vacant former manufacturing facility.

KIRCO MANIX successfully managed the three main construction challenges of this \$20 million project:

- In Phase I, KIRCO MANIX's team of subcontractors and suppliers completed work and accomplished the desired design intent for the two-story Administration Building and Garage Area. Work in the main lobby proved to be the most challenging part of the project, because the lobby was completely renovated using only a rendering. All impacted trades coordinated their work based off of only renderings, shop drawings and material submittals. This team effort successfully accomplished American Axle's vision for the facility.
- In Phase II, KIRCO MANIX transformed the vacant manufacturing space into a state-of-the-art R & D facility to support American Axle's continued pursuit of engineering excellence. The work involved lead and asbestos abatement and removal in advance of demolition work, along with the sequencing of the R & D area renovation to support American Axle's equipment move

and installation. The logistics of coordinating the demolition and renovation work were challenging. KIRCO MANIX had to isolate certain areas from the balance of the demolition and renovation work. This work included cleaning all of the remaining overhead steel, process piping and the roof deck in order to apply new paint. Other work involved replacing all the existing fire suppression heads and piping, and completing the prep/placement work associated with the new epoxy floor system.

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The north wall (left) is the Patent Wall showcasing the many patents American Axle & Manufacturing holds. The south wall (right) contains the mission statement of this dynamic company.

- Phase III of the project included replacement of the Administration Building's curtain wall system. This phase, completed while the facility was fully occupied, was executed with minimal disruption to the facility and personnel operations.

Today, American Axle & Manufacturing's new Advanced Technology Development Center is a place of gleaming epoxy industrial floors, newly painted steel, light-filled office space and a well-appointed corporate lobby. New glass-partitioned offices offer an open work environment filled with natural light, and restoration of the building's original decorative precast façade makes for an inviting exterior presence along Holbrook Avenue. KIRCO MANIX completed the building's transformation from vacant plant to advanced technology hub in early March 2017. ♡

Information Courtesy of KIRCO MANIX



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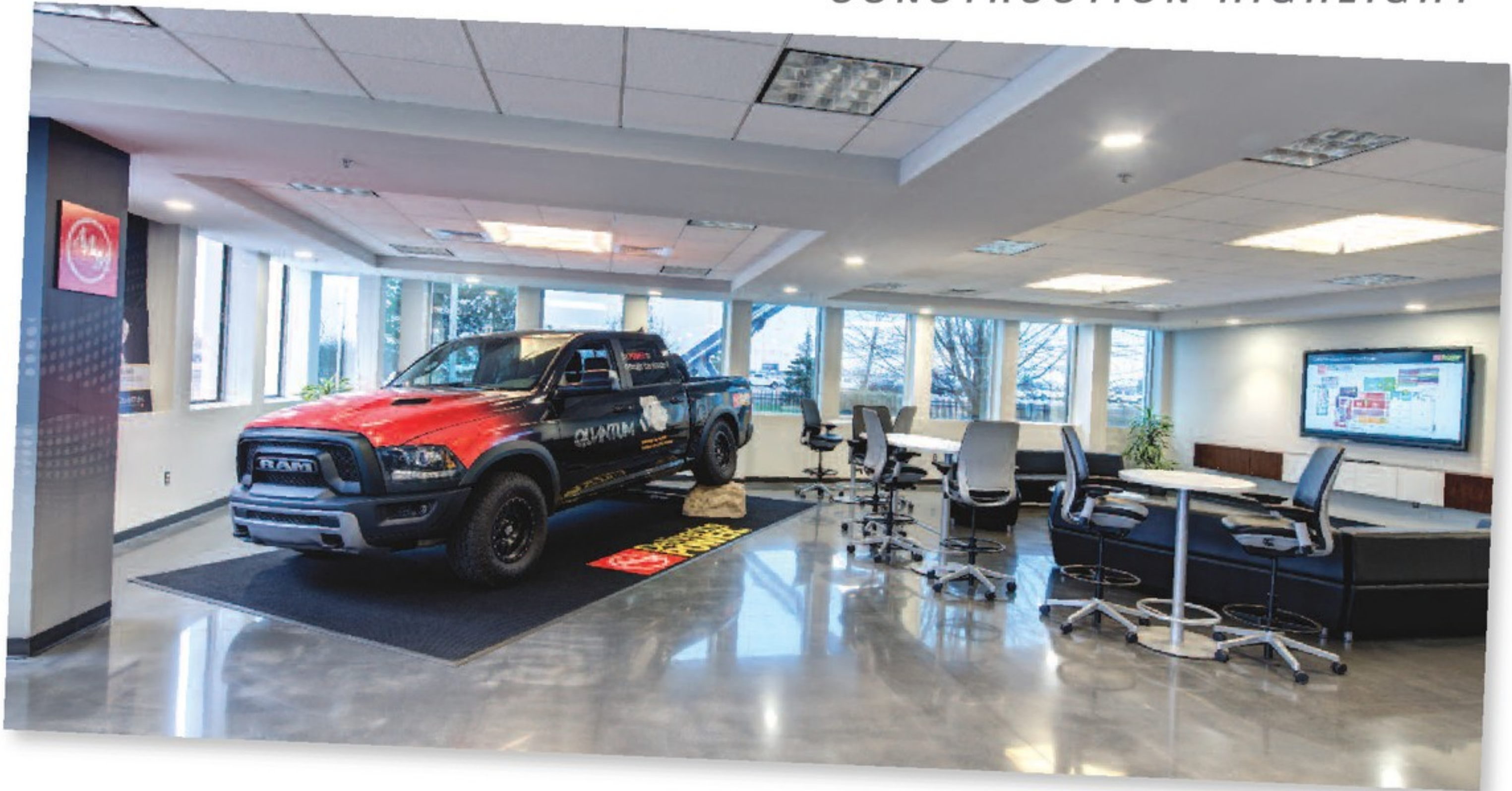
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KIRCO MANIX created a fitting product display showroom that celebrates excellence in this state-of-the-art research and development facility for American Axle & Manufacturing, a global leader in design, engineering, validation and manufacturing of driveline, metal forming, powertrain, and casting technologies for automotive, commercial and industrial markets.



Replacement of the Administration Building's curtain wall system was part of Phase III of the project.



Paving the Way for Success

A Solid Plan and A Solid Approach



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In the gear lab, epoxy industrial floors and newly painted steel add a polished glow to American Axle & Manufacturing's new Advanced Technology Development Center.

About the Companies

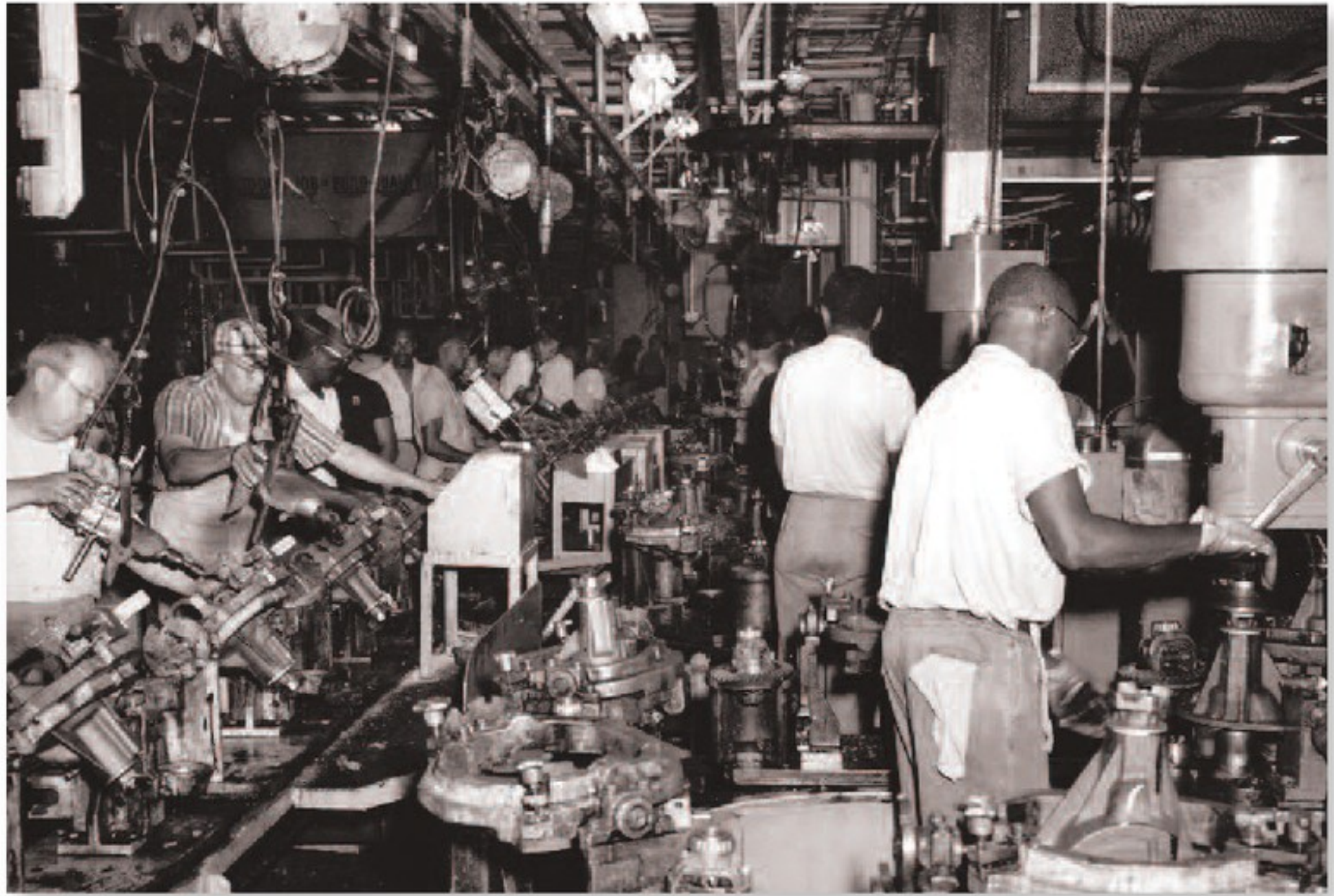
American Axle & Manufacturing is a premier, global leader in design, engineering, validation and manufacturing of driveline, metal forming, powertrain, and casting technologies for automotive, commercial and industrial markets. AAM has over 25,000 associates operating at more than 90 facilities in 17 countries to support its customers on global and regional platforms with a focus on quality, operational excellence and technology leadership.

KIRCO MANIX Construction LLC provides a unique, full-service approach through every phase of a project: design, engineering and construction. KIRCO MANIX now accounts for over three billion dollars of successful construction projects, and has a geographic footprint in Michigan, North Carolina and Ohio.

The following consultants and subcontractors contributed to American Axle & Manufacturing's Advanced Technology Development Center:

- Civil Engineering – Environmental Engineers, Inc., Southfield
- Testing – G2 Consulting Group, Troy
- Structural Engineer – Paradis Associates, Rochester
- Commissioning Agent – Sellinger Associates, Livonia
- Service/Supply Outhouses – Brendel's, White Lake

- Asphalt Paving – Asphalt Specialists, Inc., Pontiac
- Earthwork/Site Utilities – Blaze Contracting, Detroit
- Demolition – Blue Star, Inc., Warren
- Paving – Hutch Paving, Inc., Warren
- Fences & Gates – Shamrock Fence, Southgate
- Concrete Flatwork – Albanelli Cement Contractors, Inc., Livonia
- Masonry – Masonry Developers, Inc., Rochester
- Steel Erection – Judd Industrial Contracting, Detroit
- Steel – Service Iron Works, Inc., South Lyon
- Carpentry – Brinker Team, Detroit
- Millwork – Sobania, Inc., Detroit
- Metal Siding – Associated Print/APMS, Inc., Madison Heights
- Midwest Metal Walls, LLC, Trenton
- Roofing – Corporate Roofing Company, Detroit; Lutz Roofing Company, Inc., Shelby Township
- Doors/Hardware – A & C Builders Hardware, Inc., Warren
- Overhead Doors/Dock Equipment – Overhead Door Company of Toledo, Toledo
- Glazing – Pearl Glass & Metals, LLC, Oxford
- Glass and Glazing – Universal Glass & Metals, Inc., Detroit
- Ceramic Tile – East Side tile & Marble Co., Inc., Harrison Township; Griffin Marble Restoration, Romeo
- Epoxy Floorcoating – Hoover Wells, Toledo



- Painting – Midwest Pro Painting, Inc., Livonia; T & L Painting, Warren
- Carpet – SCI Floorcovering, inc., Romulus
- Paint/VWC – Technical Specialties & Applications, Inc., Pontiac
- Toilet Partitions/Accessories/Lockers – Rayhaven Group, Inc., Livonia
- Elevator – ThyssenKrupp Elevator, Livonia
- HVAC – Covenant Environmental, Howell
- Plumbing – Falcon Mechanical, Allen Park
- Fire Protection – Professional Sprinkler, Inc., Wixom
- Electrical – G & B Electric, Ferndale
- Environmental – Lead Abatement – BBEK Environmental, Warren

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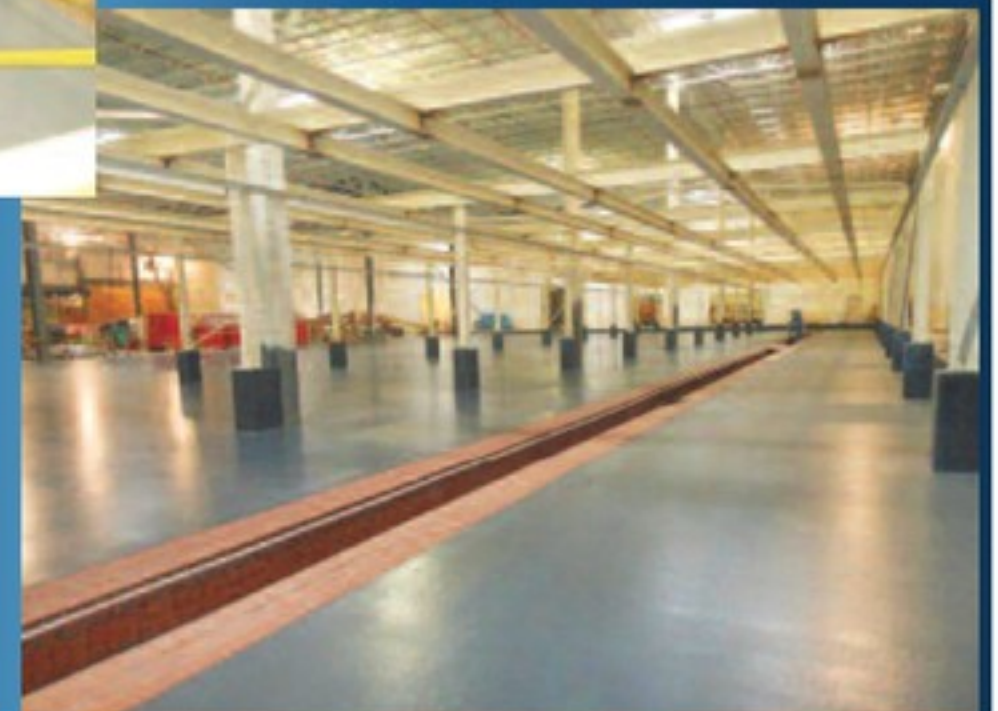


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