MICHIGAN CONCRETE ASSOCIATION

SPECIAL INNOVATIVE INDUSTRIAL

ALRO STEEL

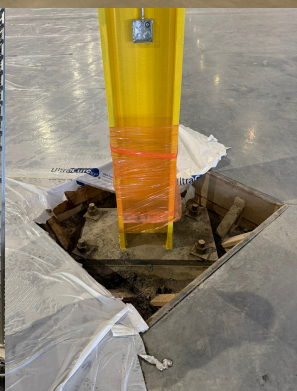
237 N. RIVER RD, MT CLEMENS, MI

Concrete Contractor: Merlo Construction
Concrete Supplier: Daytona Redi Mix
Engineer: Carnaghi Structural Consulting
Project Owner: Alro Steel

The Alro Steel project is a state-of-the-art 250,000-square-foot metal distribution warehouse designed to support high-volume storage, processing, and distribution operations on the former Gibraltar Trade Center site in Mt. Clemens, Michigan. The project reflects a highly coordinated concrete construction effort that integrated structural demands, advanced automation requirements, and challenging site and seasonal conditions.

Construction began in the fall of 2024, with Hardman Construction installing auger cast piles to support the facility's significant structural loads. Daytona provided more than 12,000 cubic yards of grout to complete the piling operations, requiring consistent material quality and precise placement to ensure foundation integrity. Following completion of the deep foundation work, Merlo Construction commenced construction of the mat foundation system designed to support an integrated robotic racking system critical to Alro Steel's operations.

The mat foundation consisted of a 24-inch-thick concrete slab that was hand placed and finished well below grade. This approach was necessary to achieve the required interior clear heights while still complying with local zoning restrictions on building height. To avoid rebar conflicts with the extensive post-installed anchoring required for the robotic racking system, the slab was fiber reinforced to enhance crack control and long-term performance, while meeting the structural needs of the project.



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As construction progressed vertically, the concrete scope transitioned into the slab-on-grade floor system. Daytona developed a specialized concrete mix utilizing a three-stone aggregate blend combined with fiber reinforcement to mitigate shrinkage concerns and maintain flatness tolerances critical for automated material handling equipment.

At both ends of the warehouse, drive-through loading bays were constructed with integrated drainage systems to manage heavy traffic and operational runoff. Exterior loading bays and other concrete pavements were placed to ensure long-term performance of the pavements under heavy loading requirements.

Collectively, the Alro Steel project demonstrates sophistication and careful execution of concrete construction to support a modern, high-performance industrial facility.