



# BULK MATERIAL HANDLING

Matrix PDM Engineering designs solutions to unload, store, handle, and load dry bulk materials. Our bulk material handling experts understand the challenges and regulations our clients face. Matrix designs meet industry standards, operations, and budget requirements. We have provided decades of engineering and deliver solutions to handle and store products via conveying, piles, silos, warehouses, and domes, as well as unloading and loading via ship, barge, truck, and rail.

Additionally, our 3D design expertise enables clients to take advantage of off-site pre-fabricated construction which allows for expedited project schedules and reduced construction costs.

Matrix PDM Engineering works hand in hand with client teams including engineering, operations, and management to deliver a collaborative project approach to deliver an integrated solution.

**A HIGHER STANDARD IN ENGINEERING.**



## In-house engineering and design

Matrix PDM Engineering and design teams encompass all disciplines as well as control systems integration. We utilize in-house engineering and design encompassing all project execution aspects from process simulation and design, plot plan development, site preparation, piling and foundations development, equipment design and specification, instrumentation sizing and specification, electrical engineering design and specification, process controls, to piping design and overall system layout.

Our 3D engineering and design services provide better project understanding and visualization of the overall design. Design reviews allow the client to explore the model in 3D to review access, clearance, operability, and maintainability throughout the design process. This allows Matrix to integrate client specifications into the design, conduct 30, 60, and 90 percent model and design reviews with the client, and jointly develop concepts, PFDs, P&IDs, layouts, design criteria, constructability, operability, and maintainability through the entire design process.

## Construction

At Matrix PDM Engineering, safety comes first and we provide quality always. We do this with our construction team led by professionals working as general contractors in a wide range of industries. We combine our team of specialty contractors and partners with our in-house safety, construction, quality, and commissioning teams. We also have the ability to leverage client preferred, local subcontractors to bring our clients a seamlessly integrated team. We safely and successfully executed and have overseen projects exceeding 300,000 construction man-hours.

## Complete facility design

- Feasibility studies, assessments, conceptual design, facility layout, and logistics planning
- Design, fabrication, and construction of conveyor equipment
- Material storage including piles, silos, warehouses, and domes
- Marine facilities including floating docks, fixed docks, and jetties
- Conveying systems including screw, belt, drag, bucket, and pneumatic
- Stacking and reclaiming
- Dust control and mitigation systems
- Crushing and screening systems
- Flow chutes
- Electrical design and installation
- Control systems integration design and supply
- Materials handled include: aggregates, grain, coal, petcoke, fertilizer, pot ash, cement, sulfur, alumina, concentrates, ores, gypsum, clinker, fly ash, urea, sorbent, activated carbon, coffee, and woodchips