# REQUEST FOR PROPOSAL (RFP)

Jackson LLC

## PROJECT OVERVIEW

Name: Indust Richardsonview Facility Upgrade
Type: Facility Upgrade
Location: Richardsonview, DC (Factory Complex)
Industry: Manufacturing
Value: $8,701,408
Complexity: 2/5
Date: April 09, 2025
Disciplines: Industrial Automation, Electrical Engineering
Regulations: ASME Standards, ISO 9001

## SCOPE OF WORK

**Scope of Work: Automated Pallet Handling System Upgrade**

**Project Goal: Upgrade the existing pallet handling system in a manufacturing facility to improve efficiency and reduce manual labor. This will involve automation of the palletizing and depalletizing processes within the existing warehouse layout.**

**Discipline: Industrial Automation**
1. PLC Programming and HMI Design: Develop a Rockwell Automation PLC program (using RSLogix 5000) to control the automated pallet handling system, including conveyor belts, robotic arm (Fanuc R-2000iB), and pallet dispensers. The HMI (developed using FactoryTalk View SE) will provide real-time monitoring and control of the system, displaying critical parameters such as cycle times and error codes. The completed program and HMI design will be thoroughly tested and documented.
2. Robotics Integration and Programming: Integrate the Fanuc R-2000iB robotic arm into the system, programming its movements for precise pallet handling using the robot's proprietary programming language (R-30iB controller). This includes creating pick-and-place routines for both palletizing and depalletizing operations, adhering to safety standards (e.g., speed limitations in proximity of humans). Thorough testing will ensure accurate and safe operation within the defined workspace (10m x 5m x 3m).
3. Safety System Implementation: Implement a comprehensive safety system conforming to ANSI/RIA R15.06-2012 standards, utilizing light curtains, emergency stop buttons strategically placed throughout the system, and interlocks to prevent accidental access to hazardous areas during operation. This will involve creating a safety PLC program and interfacing it with the main PLC, creating a fully documented safety plan.

**Discipline: Electrical Engineering**
1. Power Distribution System Design: Design and implement a 480V, 3-phase power distribution system for the automated pallet handling system, ensuring sufficient capacity for all components. This includes specifying and procuring appropriate circuit breakers, transformers (if required), and cabling, all adhering to NFPA 70 (NEC) standards. Complete schematics and wiring diagrams will be provided.
2. Control System Wiring and Cabling: Install and terminate all control wiring and cabling for the PLC, HMI, robotic arm, and other system components. This will be done in accordance with industry best practices and relevant safety standards, using appropriately sized and rated cables (e.g., 12 AWG for control circuits). All wiring will be clearly labeled and documented.
3. Sensor Integration and Calibration: Integrate and calibrate a range of sensors including proximity sensors, photoelectric sensors, and encoders. These sensors will be used for feedback to the PLC, ensuring accurate detection of pallet positions and system status. Calibration procedures and sensor specifications will be documented, and test results will be recorded.
Cross-Disciplinary Tasks:
1. System Integration and Testing: Both Industrial Automation and Electrical Engineering teams will collaboratively integrate all components of the automated pallet handling system, performing rigorous testing to ensure proper functionality and safety. This will include functional testing, load testing, and safety verification, documenting the results of each test.
2. Documentation and Handover: Jointly create comprehensive system documentation, including as-built drawings, PLC programs, HMI screens, safety plans, and operating manuals. This documentation will facilitate future maintenance and troubleshooting.
Complexity Impact Note: The project's complexity is rated 2/5 due to the relatively straightforward system design and integration, given the existing warehouse layout and availability of standard components.

## REQUEST FOR QUOTATION

Request for Quotation (RFQ): Indust Richardsonview Facility Upgrade

**Project Title: Indust Richardsonview Facility Upgrade - Automated Pallet Handling System Upgrade**

**Issued By: [Your Company Name]**

**Issued Date: April 09, 2025**

**Email: procurement@manufacturing.com**

**Project Location: Factory Complex, Richardsonview, DC**

**Industry: Manufacturing**

**Project Goal: Upgrade the existing pallet handling system to improve efficiency and reduce manual labor through automation (palletizing and depalletizing). Existing warehouse layout will be utilized.**

**Scope of Work: This project encompasses the design, integration, and implementation of an automated pallet handling system incorporating a Fanuc R-2000iB robotic arm, conveyor belts, and pallet dispensers. Work includes:**
* Industrial Automation: PLC programming (RSLogix 5000), HMI design (FactoryTalk View SE), robotic arm integration and programming (R-30iB controller), and safety system implementation (ANSI/RIA R15.06-2012 compliant).
* Electrical Engineering: 480V, 3-phase power distribution system design (NFPA 70 compliant), control system wiring and cabling, and sensor integration and calibration.
* Cross-Disciplinary: System integration and testing, comprehensive documentation (as-built drawings, PLC programs, HMI screens, safety plans, operating manuals), and project handover.
Project Complexity: 2/5

**Qualifications: Minimum 3 years? experience in manufacturing automation projects, demonstrated regulatory compliance (NFPA 70, ANSI/RIA R15.06-2012).**
Proposal Requirements: A comprehensive proposal including:

**1. Detailed technical designs (1-2 pages max).**

**2. Comprehensive cost breakdown.**
Evaluation Criteria: Technical Approach (50%), Cost (30%), Relevant Experience (20%).

**Timeline:**

*** RFQ Release: April 09, 2025**

*** Questions Due: May 07, 2025**

*** Proposals Due: May 14, 2025**

*** Project Start: June 07, 2025**
* Project Duration: 6 months

**Contract Type: Fixed Price**
Workspace Dimensions: 10m x 5m x 3m

## CONTACT

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## TIMELINE

Include key dates such as submission deadlines, inquiry deadlines, and project start dates.