

SECTION 11 14 00

PEDESTRIAN CONTROL EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. High performance automatic pedestrian swing gate for railway crossing applications.

1.2 RELATED SECTIONS

- A. Section 03 30 00 - Cast-in-Place Concrete: Concrete mounting pads.
- B. Division 16 - Requirements for electrical connections.

1.3 SUBMITTALS

- A. Submit under provisions of Section 01 30 00.
- B. Product Data: Equipment list, system description, electrical wiring diagrams for installation, and manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Shop Drawings: Submit shop drawings showing layout, profiles, and product components, including anchorage, edge conditions, and accessories.
 - 1. Operation, installation, and maintenance manuals including wiring diagrams.
 - 2. Risers, layouts, and special wiring diagrams showing any changes to standard drawings.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging with labels intact until ready for installation.
- B. Schedule delivery of any additional required equipment related to the installation of the railway pedestrian gates.

1.5 QUALITY ASSURANCE

- A. Perform installation by factory authorized contractor specifically trained in gate operation systems of the type found within this section.
- B. Provide documentation of maintenance and repair service availability for emergency conditions.
- C. Provide maintenance as required following Substantial Completion of the Project.

1.6 WARRANTY

- A. Manufacturer's standard warranty for two years after commissioning.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Magnetic Automation Corp, which is located at: 3160 Murrell Road; Rockledge, FL 32955; Tel: 321-635-8585; Fax: 321-635-9449; Email: info@magnetic-usa.com; Web: www.gatesandbarriers.com
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.

2.2 HIGH PERFORMANCE RAILWAY PEDESTRIAN GATE

- A. Magnetic Automation Corp MRG Automatic Railway Pedestrian Gate: Approximately 90 degree swing gate with an open/close time of 5-7 seconds, up to 30 operations per hour, single gate up to 8 feet in length (includes post dimensions).
- B. Construction: Highly robust to resist intentional damage by vandals and manufactured from hot dip galvanized RHS steel; low maintenance hinges consisting of greased bushings and stainless steel pins; low maintenance self aligning couplings for the mechanical lever arms; drive system mounted inside a lockable weather proof housing on a detachable plate for fast exchange if required; motor shaft mounted on heavy duty maintenance free bearings and heavy duty springs to absorb shock loads.
- C. Drive Unit:
 - 1. Magnetic direct drive GTA torque motor with protective indexing clutch and built-in shock absorbing springs to prevent internal damage if forced in opposite direction during opening/closing; torque motor must be able to be stalled in any position without overheating or suffering any damage; torque drive must produce certain degree of heat to prevent risk of freezing or condensation build up – even in cold climatic conditions; built-in thermo overload (212 deg F).
- D. Electrical:
 - 1. 110V AC, 50 Hz power supply is required for the drive and Sonalert audible alarm, rail mounted terminal blocks provided for simplified wiring connections and terminations.
- E. Additional Required Features:
 - 1. Low power consumption in stalled open position – full power consumption only during opening or closing (2.6 amps during normal operation) and high MCBF (designed for approximately 3,000,000 cycles).
 - 2. Sonalert audible alarm device to signal approaching train, followed by closing of the gate to prevent access across the tracks while exposing the emergency exit. After train passes, Sonalert stops and the gate opens under power to once again expose walkway permitting access across the tracks at the same time closing off the emergency exit.
 - 3. Upon power failure conditions, swing gate must automatically close under spring tension to prevent pedestrian traffic (NOTE: Sonalert will not work in this instance due to power loss).
 - 4. Direct drive operation resulting in condensation/corrosion resistance, extremely low maintenance, ability to be stalled in any position without risk of damage, problem-free operation in cold climatic conditions and overall extended service life – no drive technologies using belts, pulleys or chains will be accepted as alternatives.
 - 5. Modular construction for simplified exchange if required.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions including the following:
 - 1. Mount directly to concrete pad, firmly secured, plumb and level.
 - 2. Mount to mounting pedestal; provide base plate.
 - 3. Wire in accordance with National Electric Code.
 - 4. Enclose all splices in easily accessible junction boxes or on terminal boards.
 - 5. Tag and identify all cable runs in all junction boxes.
- B. Test system and adjust to assure components and accessories are properly connected and in working order.

3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

3.5 MAINTENANCE

- A. Monthly preventative maintenance checks are highly recommended – adjust return spring and micro switch cams if required; check and tighten all nuts and bolts as needed.

END OF SECTION