

*SPEC NOTE: This section includes suggested numbering to the MasterFormat 2004 classification system.*

*SPEC NOTE: This Section specifies the modular, site assembled Alpha series electronic, cantilevered vehicular access gates. The gates are supported by guide wheels mounted on structural portals. Single gates can control entrances up to 40 feet (12 meters) in width; double gates can be used for entrances up to 80 feet (24 meters) in width. Gates have variable frequency drive systems and require single-phase 115 or 240V power supply.*

## **PART 1 GENERAL**

### **1.1 RELATED DOCUMENTS:**

- A. Section 01 33 13 - Submittal Procedures.
- B. Section 01 78 00 - Closeout Submittals
- C. Section 01 79 00 – Demonstration and Training

### **1.2 RELATED WORK SPECIFIED ELSEWHERE:**

- A. Section 03 30 00 - Cast-in-Place Concrete: Structural portal foundations.

### **1.3 SYSTEM DESCRIPTION**

- A. Modular automated cantilevered vehicular access gate for closure of vehicular access routes and regulation of traffic flow. Unique construction completely eliminates the cross bracing commonly used on cantilever gates, which is both unsightly and compromises security, by providing a foothold to climbers. Always supply a separate pedestrian entrance when foot traffic is anticipated near an automated gate. Section includes the following components:
  - 1) Aluminum Cantilever sliding gate
  - 2) Electric gate operator
  - 3) Gate support posts (structural portals) and rolling hardware.
  - 4) Gate operator accessories including safety and reversing devices. Excluding access controls, see section 028000 – Electronic security

### **1.5 SUBMITTALS**

- A. Product Data
  - 1) Gates and hardware.
  - 2) Gate operator including operating instructions, motor name plate data, ratings, characteristics and mounting arrangement.
- B. Shop Drawings:

- 1) Submit shop drawings in accordance with Section 01 33 13 - Submittal Procedures.
  - 2) Gate Operator: Show locations and details for installing operator components, switches, and controls. Indicate motor size, electrical characteristics, drive arrangement, mounting, and grounding provisions
  - 3) Wiring Diagrams: Power and control wiring [and access controls if applicable]. Differentiate between manufacturer-installed and field-installed wiring and between components provided by gate and gate operator manufacturer and those provided by others.
  - 4) Provide detailed diagrams of all gate components.
- C. Installation instructions:
- 1) Submit two copies of manufacturer's written installation instructions.
- D. Test reports:
- 1) [If requested] Submit affidavits from the manufacturer demonstrating that the gate mechanism has been tested to 200,000 cycles without breakdown.
  - 2) ISO 9001 Compliant manufacturer.

## 1.7 QUALITY ASSURANCE

- A. Manufacturer: A company specializing in the manufacture of gates and electric gate operators of the type specified, with a minimum of ten years experience.
- B. Installer Qualifications: an experienced installer who has completed fences and gates similar in material, design, and extent to those indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- C. Source Limitations for Gates operators and Gates: obtain each color, grade, finish, type, and variety of components for fences and gates from one source with resources to provide fences and gates of consistent quality in appearance and physical properties.
- D. Electrical Components, Devices, and Accessories: listed and labelled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

- E. UL Standard: Provide gate operators, tested and listed by a nationally recognized testing laboratory to comply with UL 325 5<sup>th</sup> edition
- F. Emergency Access Requirements: comply with requirements of local authorities having jurisdiction for automatic gate operators serving as a required means of access.
- G. Installer: A minimum of three years experience installing similar equipment and approved by manufacturer

## 1.8 WARRANTY

- A. Provide a two-year warranty against all defects in material and workmanship.

## PART 2 PRODUCTS

### 2.1 CANTILEVERED ACCESS GATE

- A. Manufacturer:
  - 1) Wallace International  
Model: Alpha Gate with Kinetic gate operator  
Contact Wallace International:  
T. 866.300.1110 F. 204.284.1868  
[www.wallaceintl.com](http://www.wallaceintl.com)

### 2.2 MATERIALS

- A. Electrical components: CSA/UL approved.
- B. Power Supply: 115 or 240V, 50/60 Hertz, single phase, field selectable.

### 2.3 COMPONENTS

- A. Cantilevered Gate:
  - 1) Gate:
    - a. Modular design, featuring field replaceable sections.
    - b. Site tensioned backbone comprising an immensely strong 205mm x 285mm section, corrosion resistant, aircraft grade hollow aluminum extrusion of unique profile, incorporating high-tensile steel tensioning rods.
    - c. Pre-galvanized 1 5/16<sup>th</sup> " steel pickets [OD 30mm x 1.5mm] are inserted vertically through the main beam and secured to top and bottom rails with roll pins at each picket.
    - d. Galvanized 0.3 inches [8mm] diameter internal tension rods.
    - e. Serrated –anti climb, aluminum top strip 2 3/8<sup>th</sup> " x 1 5/16<sup>th</sup> " [60 x 30mm]
    - f. 9 Gauge chain link infill.
  - 2) Standard gate widths are:
    - a. 20' [6100mm] clear opening, 30' [9144mm] overall
    - b. 24' [7315mm] clear opening, 36' [10,972mm] overall
    - c. 30' [9144mm] clear opening, 45' [13,716mm] overall
    - d. 40' [12,192mm] clear opening, 60' [18,288mm] overall
  - 3) Standard gate heights are:
    - a. 6' [1800mm] plus 1' [304mm], 3 strands of barbed wire

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- b. 8' [2400mm] plus 1' [304mm], 3 strands of barbed wire
  - 4) Guides:
    - a. Welded structural gate posts (portals) with guide wheels and running wheels.
    - b. Galvanized after fabrication to ASTM 123M
    - c. 2 3/8" x 3 1/8" x (selected gate height \_\_\_\_ + 20") support posts, connected at the top, form rigid frames to support the gate. Flanged for securing to foundation.
    - d. Sealed bearing, nylon polyamide 6 5/16" [160mm] maintenance free, enclosed roller sets.
    - e. Catch post (portal) with run-on plate for secure closure.
    - f. Gate support posts feature integral mount for gate operator, ensuring correct alignment for the life of the system
    - g. Included standard "reach through guards" per ASTM F2200.
  - 5) Fasteners: Concealed, stainless steel.
- B. Kinetic electronic gate drive:
- 1) Electric microprocessor controller unit with many standard logic sequences, provisions for dedicated, labeled accessory inputs and outputs. Alert, Fault, Error logging for simplified troubleshooting and remote diagnostics.
  - 2) Limit Switches: motor output shaft embedded encoder with 1/32<sup>nd</sup> " resolution to determine gate full open, full close, partial open, acceleration and deceleration points.
  - 3) Variable Speed (field selectable speed +- .25fps) rack and pinion drive mechanism with nylon polyamide drive gear/rack hardware. Select 1 or 2 foot per second gate travel speed based on site's UL 325 5<sup>th</sup> edition classification.
  - 4) Integrated un-interruptible power supply (U.P.S)
  - 5) Field selectable, fail safe or fail secure operation upon AC power loss.
  - 6) Field selectable 110V/240V single phase input power.
  - 7) Super energy efficient design, optimised for solar applications
  - 8) Adaptive inherent entrapment sensor with "ice breaker mode"
  - 9) Built-in multi-level power surge and lightning strike protection using opti-isolation technology
  - 10) Tested and Listed for all UL 325 usage classes 1-4. Speed greater than 1 foot per second approved only for use on UL325 class 3 and 4 sites.

## 2.4 ACCESSORIES & OPTIONS

- A. Vehicle obstruction devices
- 1) Inductive loop vehicle detectors: Micro-processor based, digital type, with sensitivity to detect a wide variety of vehicle sizes. Built in frequency counter and automatic frequency assignment to prevent any possibility of 'cross talk'.  
Inductive vehicle Loop: select either 'pre-formed' type or 'saw cut' field constructed type. Size, location and construction type should be shown on drawing.
- B. Safety Devices: (Note: The word "Safety" only applies to devices intended to reduce likelihood of a gate striking or injuring a pedestrian. See 'obstruction devices' for vehicular reversing options).
- 1) Through- Beam photo cells
  - 2) Radio transmitting 5' gate contact edge and radio receiver
- C. Notification or instructive Devices:
- 1) Audible beacon
  - 2) Strobe or flashing light indicating gate in motion or pending motion.
  - 3) Traffic indicator lights (8" Green arrow / Red "X" typical)

- D. Access control devices, see section 028000 – electronic security devices including access controls.
- E. Gate panel options
  - 1) Substitute 3 strands of non-barbed wire top

## **2.5 FINISHES**

- A. Visible surface color: Aluminum beam and rails with galvanized steel components

## **PART 3 EXECUTION**

### **3.1 INSTALLATION**

- A. Install cantilevered sliding access gate to manufacturer's written instructions.
- B. Install structural post (portals) in concrete foundations; completely level both horizontally and vertically.
- C. Test and adjust complete system for proper function and leave in perfect working order.
- D. Install vehicle detection loops and lead-in-wires per manufacturer's instructions.
- E. Supply and install other electrical wiring, conduit junction boxes, transformers, circuit breakers and auxiliary components required for complete installation. Conform to CSA/NEC and local requirements.

### **3.2 FIELD QUALITY CONTROL**

- A. Test gate operators through ten full cycles and adjust for operation without binding or scraping.
- B. Owner or owner's representative, shall complete "punch list" with installing contractor prior to final acceptance of the installation and submit completed warranty documentation to manufacturer

### **3.3 CLEANING, MAINTENANCE AND DOCUMENTATION**

- A. Perform cleaning and maintenance procedures in strict accordance with manufacturer's written instructions.
- B. Train owner's personnel on how to safely shut off electrical power, release and manually operate the gate. Additionally, demonstrate the general maintenance of the gate operator and accessories and provide copy of "Installation and Maintenance Manual" for the owner. Manual will identify parts of the equipment for future procurement.
- C. Maintain logbook of repairs and maintenance.

**END OF SECTION**