

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

SPEC NOTE: This Section specifies the modular, site assembled Delta series electronic, cantilevered vehicular access gates. The gates are supported by guide wheels mounted on structural portals. Single gates can control entrances up to 8.5 metres in width; double gates can be used for entrances up to 17 metres in width. Gates have frequency drive systems and require single-phase 240V power supply.

PART 1 GENERAL

1.1 RELATED SECTIONS

- .1 Section [01330] [01 33 13] - Submittal Procedures].
- .2 Section [01355] [01 74 20] – Construction Waste Management and Disposal.
- .3 Section [01780] [01 78 00] - Closeout Submittals].
- .4 Section [_____] - [_____]: Fencing
- .5 Section [03300] [03 30 00] - Cast-in-Place Concrete: Structural portal foundations.

SPEC NOTE: Coordinate the following paragraph with electrical sections to ensure electrical supply is provided to suit the gate requirements. Normally the electrical power supply to terminal box in each unit is specified in Division 16. All remaining electrical work is specified in this Section.

- .6 Section [___] – [_____]: Electrical service and connections.

1.2 REFERENCES

SPEC NOTE: Vehicular control by means of road signage, lane markings, lights etc. must meet the requirements of TAC and local jurisdictional requirements. Edit to suit provincial regulations.

- .1 DIN 50976 – Hot-Dip Batch Galvanizing.
- .2 Transportation Association of Canada (TAC)
 - .1 Manual of Uniform Traffic Control Devices for Canada.

1.3 SYSTEM DESCRIPTION

SPEC NOTE: Specify in the following article descriptions to suit Project requirements.

- .1 Modular cantilevered vehicular access gate for closure of access routes and regulation of traffic flow.
 - .1 Modular lightweight construction with tensioned gate design.
 - .2 Low-resonance operation through guide wheels mounted on structural portals.
 - .3 Microprocessor electronic control using single-phase 240V power supply.
 - .4 Standard and optional colour combinations available.
- .2 Access control:
 - .1 Operation: Activated by [vehicle detector unit with sensing loop] [and] [magnetic card] [manual key switch] [electronic key] [pushbutton] [hand-held transmitter].

- .2 Attention Device: [Traffic lights] [Flashing lights] [audible warning signal].

1.4 TRAFFIC CONTROL REQUIREMENTS

SPEC NOTE: Traffic control devices such as pavement markings, signage, signals etc. must meet the requirements of the Manual of Uniform Traffic Control Devices of Canada or governing provincial traffic control requirements. Edit the paragraph below to suit provincial requirements if other than the Manual of Uniform Traffic Control Devices of Canada.

- .1 Colour and design of traffic control signs, signals and markings intended to regulate, warn or guide road users to be in accordance with [Manual of Uniform Traffic Control Devices for Canada] [_____].
- .2 Bilingual marking: Make message on signs and notices bilingual, with [English] [French] language text preceding [French] [English] language text.

1.5 SUBMITTALS

- .1 Shop Drawings:
 - .1 Submit shop drawings in accordance with Section [01330 - Submittal Procedures].
 - .2 Indicate electric power requirements, sensing [loop and lead-in wire] installation details, wiring diagrams.
 - .3 Submit markings and designs of messages on signs and notices to [Engineer] [Consultant] for approval.
- .2 Product Data
 - .1 Provide detailed diagrams of all gate components.
- .3 Installation instructions:
 - .1 Submit two copies of manufacturer's written installation instructions.
- .4 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 Drive unit shall bear a label indicating that the operator mechanism has been tested to CSA standards for all electrical components.

1.6 CLOSEOUT SUBMITTALS

- .1 Provide operation and maintenance data for gate for incorporation into manual specified in Section [01780 - Closeout Submittals].
- .2 Conduct comprehensive demonstration for maintenance staff on operation and care of gate.

1.7 WASTE MANAGEMENT AND DISPOSAL

SPEC NOTE ENVIRONMENT: Use paragraph .1 if a special section is written to construction waste management or edit following paragraphs to suit local or owner requirements for waste management and/or availability of recycling facilities.

- .1 Separate and recycle waste materials in accordance with Section [01355 – Construction Waste Management and Disposal].

- .2 Dispose of all paper packaging materials at appropriate at recycling facility.
- .3 Divert unused metal and wiring materials from landfill to metal recycling facility.
- .4 Depose of unused paint or coating material at an official hazardous material collections site.

1.8 QUALITY ASSURANCE

- .1 Manufacturer: A company specializing in the manufacture of electric gate operators of the type specified, with a minimum of ten years experience.
- .2 Installer: A minimum of three years experience installing similar equipment and approved by manufacturer.

1.9 CODES AND REGULATORY REQUIREMENTS

- .1 Perform all electrical work according to local codes and National Electrical code.

1.10 EXTRA MATERIALS

- .1 Provide extra materials in accordance with Section [01780] [____] - Closeout Submittals].

SPEC NOTE: Indicate in the following paragraph the extra components and quantities required. Check requirements with Owner.

- .2 Provide the following extra materials and quantities, and store where directed by [Engineer] [Consultant]:
 - .1 [_____].
 - .2 [_____].
- .3 Identify each component including colour, type, and location.
- .4 Deliver to [Engineer] [Consultant], upon completion of the Work in this Section.

1.11 WARRANTY

- .1 Provide a one-year warranty against all defects in material and workmanship.

PART 2 PRODUCTS

Spec NOTE: Edit for Project requirements and include more detailed information if necessary. Consult supplier before specifying model, special orders and colour combinations.

Available gate options: Delta "Heracles" - standard with serrated strip on upper beam; Delta "Atlas" – pickets extend through single upper rail; Delta "Olympus" – pickets extend through double upper rail.

2.1 CANTILEVERED ACCESS GATE

- .1 Manufacturers:
 - .1 Heras
Model Delta [manual] [electric] operation
Contact Wallace International:
90 Lawson Crescent, Winnipeg, Manitoba Canada R3P 2H8

T. 866.300.1110 F. 204.284.1868
www.wallaceintl.com

2.2 MATERIALS

- .1 Galvanizing to DIN 50976 – Hot-Dip Batch Galvanizing.
- .2 Electrical components: CSA approved and complying with local requirements.
- .3 Power Supply: [240V - single phase] [208 V - three phase], 60 hertz power supply.

2.3 COMPONENTS

- .1 Cantilevered Gate:

SPEC NOTE: 1500 and 1800 mm heights are custom orders. Standard widths are 3000, 4000, 5000, 6000, 7000 and 8500 mm.

- .1 Gate: Modular design, welded portals (posts).
 - .1 [Single] [Double] gate: [1500] [1800] [2000] [2500] [2700] mm high x [_____] mm wide opening.
 - .2 Site tensioned extruded aluminum top and bottom beams.
 - .3 Galvanized tension cables.
 - .4 26 mm diameter pickets.
- .2 Guides:
 - .1 Structural portals with guide wheels and running wheels.
 - .2 Synthetic runners screened by wheel guards.
 - .3 Stop column [locking style] [slam style] with rising plate for snug closure.
 - .4 Post and mounting devices for connection to standard fencing.
- .3 Fasteners: Concealed, stainless steel.
- .2 Electronic Gate Drive:
 - .1 Electric microprocessor controller unit, remote pushbuttons, relays and other electrical components: to CSA approval.
 - .2 Control Unit: Provide gate control by [pushbutton] [handheld transmitter] [access control card reader] [_____].
 - .3 Limit Switches: Magnetic proximity switch to detect end positions of gate when in open and/or closed. Partially open control for pedestrian access.
 - .4 Variable Speed rack and pinion drive mechanism with nylon polymer hardware
 - .5 Independent motor torque control.

2.4 MISCELLANEOUS ACCESSORIES

- .1 Vehicle Control:
 - .1 Vehicle detection loops: Micro-processor based, digital type, with sensitivity to detect a wide variety of vehicle sizes.
 - .1 Self-tuning, detection by [vehicle presence] [a pulse impulse (crossing or leaving the controlled area)] [delay before impulse].
 - .2 Loop wire: [_____] mm diameter, direct burial wire. Loop size [0.6] x [_____] m, [_____] turns] [as indicated].

- .3 Loop groove fill: [ASTM D3569 for Hot-Applied Elastomeric] [to ASTM D1854 for hot poured application in concrete] [cold poured rubberized bituminous emulsion for asphalt pavement] [to ASTM D3405 for hot applied application].
- .4 Conduit: for lead-in wire, 12 mm PVC.
- .2 Traffic lights, poles and signage:
 - .1 [_____] [In accordance with Section [_____]].
- .2 Safety Devices:
 - .1 Strobe light.
 - .2 Through-beam photocell.
 - .3 Audible warning device.

2.5 FINISHES

- .1 Visible surface colour: [Aluminum girder with galvanized bars] [Coated surface colour to be selected from manufacturer's standard range].

PART 3 EXECUTION

3.1 INSTALLATION

- .1 Install cantilevered sliding access gate to manufacturer's written instructions.
- .2 Install structural portals in concrete foundations; completely level both horizontally and vertically.
- .3 Test and adjust complete system for proper function and leave in perfect working order.
- .4 Cut grooves in road surface and install vehicle detection loops and lead-in-wires, to approved shop drawings.
- .5 Do not fill grooves until installation is approved by [Engineer] [Consultant], and tested for proper detection performance.
- .6 Supply and install other electrical wiring, conduit junction boxes, transformers, circuit breakers and auxiliary components required for complete installation. Conform to CSA and local requirements.
- .7 Erect [traffic lights], [poles], [signs] as indicated.

3.2 CLEANING AND MAINTENANCE

- .1 Perform cleaning and maintenance procedures in strict accordance with manufacturer's written instructions.
- .2 Maintain logbook of repairs and maintenance.

END OF SECTION