Part 1 General

1.1 RELATED REQUIREMENTS

.1 Electrical Division

1.2 SYSTEM OVERVIEW & DESCRIPTION

.1 Provide Pedestrian Control Devices as identified in the Security Drawings, the Architectural Drawings, and the following Specifications. Provide a complete turnkey installation of the security turnstiles with specified interfaces.

.2 The Pedestrian Control Device shall consist of three (3) pedestals placed in a parallel arrangement, creating controlled bi-directional pedestrian design lanes as shown on Drawings. Each lane shall be fitted with motorized glass barrier panels, hinged on vertical axis to each pedestal, providing a visual and physical deterrent to unauthorized access attempts. All lanes must incorporate multi-purpose optical beams factory programmed for user safety, passage confirmation and unauthorized access attempts. In addition to any proprietary manufacturer controllers, the Pedestrian Control Device must be compatible with most major access control systems and technologies, including the existing City of Winnipeg software and scanners below:

.1 Software: ACTIVE net, version 16.

.2 Barcode Scanner: Honeywell MS7580 Genesis USB Kit. 2D Scanner, PDF417.

.3 System Operation Outline:

.1 Typical usage of system will involve having customers scan their membership card which will active the gates for access. Desktop HMI unit to be used only for drop-in admissions or when a manual override of the system is required.

.2 System Usage Outline:

Regular Member Usage:
Admission Card -> Reader -> Computer (ActiveNet Software) -> Gate Kicker -> Gunnebo OS720 Gates

Drop-In's/Manual Over-ride of Gates:

Desktop Controller/HMI Unit -> Gunnebo OS720 Gates

1.3 ACTION AND INFORMATIONAL SUBMITTALS

.1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.

.2 Product Data:

.1 Submit manufacturer's printed product literature and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.

.2 Include all literature for Operations and Maintenance of unit.

.3 Shop drawings:

.1 Indicate equipment layout, mounting bolt locations, electric power requirements, wiring diagrams and installation details.

.2 Furnish catalogue description, illustration and specification data for each piece of equipment and accessory.

.4 Manufacturer's Instructions: submit manufacturer's installation instructions and special handling criteria, installation sequence, and cleaning procedures.

.5 Provide a floor template of turnstyles on floor. Install on floor for Contract Administrator's review prior to proceeding with any work.

.6 Manufacturer's Field Reports: submit manufacturer's written reports within 3 days of review, verifying compliance of Work, as described in PART 3 - FIELD QUALITY CONTROL.

1.4 CLOSEOUT SUBMITTALS

.1 Provide operation and maintenance data for parking control equipment maintenance for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

1.5 QUALITY ASSURANCE

.1 Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.

.2 Manufacturer Qualifications: The manufacturer of the optical turnstiles will operate a quality management system compliant with ISO 9001:2000 and will have been manufacturing optical turnstiles for at least 10 years.

1.6 DELIVERY, STORAGE AND HANDLING

.1 Packing, shipping, handling and unloading:

.1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and in accordance manufacturer's recommendations.

1.7 COORDINATION

.1 Coordinate installation of anchorages for pedestrian control equipment. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

.2 Electrical System Roughing-in: Coordinate layout and installation of pedestrian control devices with connections to power supplies, fire system and security access control system.

.3 Scan existing floor slab prior to any coring work to ensure penetrations are located within acceptable areas of the floor slab so as not to compromise the floor's structural integrity. Include proposed slab penetrations on floor template for review as noted in item 1.4. **Review proposed penetrations with Contract Administrator prior to proceeding.**

Part 2 Products

2.1 DEVICE REQUIRMENTS

.1 General:

Provide pedestrian control barrier lanes consisting of stainless steel, laminated and tempered glass pedestals with bi-directional swinging panels hinged on a vertical axis. Device(s) shall be activated by a signal from detection beams, a security access control device and/or proprietary controllers, and come equipped with provisions for activation by remote emergency signaling equipment. The device(s) must be operable with the following functions as a minimum.

.2 Barrier-Free:

All pedestrian barrier lanes designed for barrier-free accessibility, shall be installed with no loss of function or security, in accordance to all local building and safety codes as outlined by "the authority having jurisdiction" within the region.

.3 Drive Mechanism:

Passage Swing Glass Panels electronically controlled in both directions, via direct drive intelligent positioning (DDIP) induction sensor control motor with adjustable opening and closing speeds.

.4 Optical Beams:

.2 Safety photocells must prevent the barriers from closing upon an obstruction. Should the normal barrier operation be stopped by an obstruction, the controlling logic detects an abnormal condition and generates an alarm.

.3 Industrial duty infrared photoelectric beams linked to 16-bit microprocessor utilizing algorithmic pattern detection to detect tailgating with a minimum spacing of no more than 5mm (¼") between pedestrians, and avoid false alarms caused by common objects such as wheeled laptop bags.

.5 LED Status Lights:

1.97" (50mm) diameter LED display status lights flush mounted within the turnstile top. The green badge symbol is continuously illuminated indicating passage is available. Upon authorization a green arrow will illuminate in the direction of passage authorization while in the opposite direction a red cross symbol will illuminate to indicate the unit is not available for use or is already in use.

.6 Power Failure:

In the event of power failure, the barriers must push open with minimal force allowing free egress from the secure area

.7 Fire Alarm:

Input facility is available for voltage free contact supplied by others causing the barriers to fully open in direction of exit travel. Should any attempt be made to enter the lane, the alarm signal will be activated.

.8 Traffic Flow Control:

LED Way Mode Indicator - Switching red cross and green arrow to indicate the unit is available for use.

.9 Controller: HMI type, as provided by Gunnebo.

2.2 DEVICE OPERATION

.1 Method of Operation:

.1 Entry

Users will present card to Attendant to activate the barrier panels through Desktop Controller. Controller will swing open panels for a pre-programmed timed duration in the direction of travel for authorized user, after which the barrier panels will return to the closed position.

Operation to be accomplished by using a HMI Desktop Controller system locating at the Reception Desk. Scanning system to utilize a Push Button Controller provided by Gunnebo. Provide conduits in floor to pedestals and Reception Desk after scanning existing floor to determine acceptable conduit locations.

.2 Exit

For free egress, once a person enters the lane, the multi-function optical beams will detect a presence, the corresponding visual and audible lane indicators will activate and the barrier panels will swing open for a pre-programmed timed duration in the direction of travel for authorized user, after which the barrier panels will return to the closed position.

.3 Emergency Exit

Should a person not be capable of presenting a valid credential, then they can still enter the lane, create and alarm condition and push open the barrier panels in the direction of exit travel.

.4 Alarms

Any unauthorized attempts to access, tailgating or incorrect lane approach the optical beams will detect the intrusion and activate local visual and multi-tone audible alarm indicators as well as dry contact relays for external device activations.

.5 Card Stacking

The systems memory must be capable of receiving multiple authorized card reads simultaneously, and then allowing valid passage for those cardholders. Barriers must remain in the open position for successive authorized transactions. This feature is shall be available in both directions.

.2 Barrier Panel Function:

.1 The optical barrier gates shall include the following operating modes as standard:

.1 Purely Optical (Always Open) - The Swing Glass Panels are not used, and alarms will signal unauthorized access attempts or tailgating.

.2 Full Time Barrier (Normally Closed) – The barriers remain closed until a valid card is presented. Tailgaters and unauthorized entries are signaled by an alarm tone. If an unauthorized card is presented, the lanes will sound an alarm and the Swing Glass Panels will remain closed to prevent the user from proceeding further without intervention by a guard.

.3 Pop-Out (Normally Open) – The Swing Glass Panels remain retracted unless there is an invalid transaction attempted. The Swing Glass Panels never pop out for free exit transactions. Tailgaters are still singled out with an alarm condition, but will not cause the barriers to close.

.2 The optical barriers gates shall, without significant modification, accept mode selection from a remote source. In addition to these functions, all optical barrier gates shall have automatic resetting of alarms and shall be capable of providing remote access to authorized persons not in possession of a valid access card.

STANDARD OF ACCEPTANCE:

.1 2L/3P Optistile 720, manufactured by Gunnebo
Contact: Nathan Chen, Ph. (403) 899-4488

Part 3 Execution

3.1 EXAMINATION

.1 Examine substrates, areas and site conditions, with installer present, for compliance with requirements for the installation tolerances, critical dimensions and other conditions affecting performance. Scan existing floor slab prior to any coring work to ensure penetrations are located within acceptable areas of the floor slab so as not to compromise the floor's structural integrity. Include proposed slab penetrations on floor template for Contract Administrator's review.

.2 Examine rough-in electrical systems to verify actual locations of connections before commencing with pedestrian control equipment.

.3 Proceed with installation only after any unsatisfactory conditions have been corrected. Commencement of work signifies acceptance of the site conditions.

3.2 INSTALLATION

.1 Install units in accordance with manufacturer's written instructions and in compliance with approved shop drawings.

.2 Integration of security access control readers into device top lid inlays must be coordinated with security access control contractor.

.3 Core hole in existing concrete floor under pedestal and install electrical conduit. Pull wiring under slab for future connection to the reception counter. Firestop floor penetration around conduit.

3.3 FIELD QUALITY CONTROL

.1 Pedestrian Control Systems Installer to assist with wire terminations, commissioning and testing of turnstiles on site, upon installation of turnstiles on site. Installer to submit report of successful system operation to the Contract Administrator.

3.4 FINAL ADJUSTMENTS AND CLEANING

.1 Clean in accordance with Section 01 74 11 - Cleaning.

.2 Adjust pedestrian control devices to operate smoothly, easily, and properly. Confirm that locks engage accurately and securely without forcing or binding.

.3 After completing installation of exposed, factory-finished pedestrian control equipment, inspect exposed finishes and repair damaged finishes.

3.5 CLOSEOUT ACTIVITIES

.1 Demonstration and Training: Conduct comprehensive demonstration for accommodation maintenance staff on operation and care of control system in accordance with Section 01 79 00 - Demonstration and Training.

END OF SECTION