

## SP-3 SITE – GATES/SALLY PORT

### 1. SCOPE

This section outlines requirements for vehicle and pedestrian access and egress control for institutions with a secure perimeter as at medium, maximum and multi-level institutions.

Access and egress control for open minimum institutions involves signage and reporting to a 24 hr Duty office but does not include fencing and gates. Refer to A-12 Control posts for functional requirements as well as the CSC Accommodation Guidelines.

It is imperative that all Gate projects, on either perimeter or interior fences, are submitted to the office of the Director Facility Planning and Standards at NHQ for review and approval.

### 2. RELATED SECTIONS

#### **7.3 Technical Criteria Document sections:**

SP-1 – Site Development

SP-2 – Fences

A-6 – Hardware

A-10 – Contraband Control Systems

A-12 – Control Posts and Dedicated Security Routes

#### **2.1 National Master Specification Section**

01 35 13.16 – Special Project Procedures for Detention Facilities

08 34 56 – Security Gates

32 31 13 – Chain Link Fences and Gates

32 31 13.53 – High-Security Chain Link Fences and Gates

34 71 13 – Vehicle Barriers

34 71 13.16 – Vehicle Crash Barriers

34 75 13.13 – Active Vehicle Barriers

#### **2.2 ASTM Standards**

F2656-07 – Standard Test Method for Vehicle Crash Testing of Perimeter Barriers

### 3. ACCESS CONTROL SECURITY REQUIREMENTS

**3.1** All new institutions equipped with a fenced perimeter shall have one entrance point for pedestrian and vehicle traffic, referred to as the Principal Entrance.

**3.2** Because the Principal Entrance may at some time be inoperable, one Emergency Vehicle Entrance shall be provided, to be located at a point convenient for vehicle access. This Emergency Vehicle Entrance can have either a Sliding Gate (Section 5.1) or a Swing Gate (Section 5.2).

**3.3** Vehicle access shall be provided into the area between the inner and Outer Perimeter Fences for snow clearing and maintenance of the Motion Detection System (MDS). Snow build up between the fences can adversely affect the operation of the MDS.

## 4. PRINCIPAL ENTRANCE

### 4.1 *Definition*

The Principal Entrance is formed by a Gatehouse for pedestrian traffic control and an open air chain-link fence compound with inter locking gates for vehicle traffic control (vehicle Sally Port). The Gatehouse contains the Principal Entrance Control Post and a reception station from which staff supervise all traffic in and out of the institution and operate by remote control all gates and doors. For detailed requirements see A-12 Control Posts and Dedicated Security Routes. At institutions where a separate vehicle service entrance Sally Port exists, Sally Port gates are remote operated from an adjacent tower or a post within the Sally Port. The tower or ground post officer also observes the inspection of vehicles and assures the safety of the vehicle inspection officer.

- 4.1.1 All vehicle Sally Ports shall be equipped with sliding gates. The sliding gates shall be remote controlled from the Principal Entrance control post and interlocked to prevent simultaneous unlocking. The sliding gates control must provide for the opening of one of the gate only when the other gate is in its latched position. Both gates shall be also capable of manual unlocking and opening.
- 4.1.2 Vehicle Sally Ports shall be sized to include an inspection area, to facilitate a thorough inspection of vehicles, which can hold in width two van type trucks (8.5 m min.), and hold one semi trailer truck in length (23 m min.).
- 4.1.3 In order to prevent forced drive through of vehicles, the exterior gate of the vehicle Sally Port shall be equipped with a crash barrier (see section 4.4 and Plates SP-3-6 to SP-3-8). The width of the Sally Port shall be sized to accommodate the crash barrier in the open position.
- 4.1.4 All Principal Entrance pedestrian traffic shall be physically separated from vehicular traffic.
- 4.1.5 Where vehicle access into the area between the perimeter fences is provided from the vehicle Sally Port, the gates shall be swing type, manually operated and lockable with a padlock.
- 4.1.6 All pedestrian traffic through the Principal Entrance, including traffic between the vehicle Sally Port and the pedestrian Sally Port, shall be through swing gates. Principal Entrance pedestrian gates shall be remote unlocking, self closing and locking, and capable of manual unlocking.
- 4.1.7 To allow continuous CCTV coverage of the area between the perimeter fences while maintaining a minimum number of cameras, the Gatehouse building shall be sited on the outside of the Outer Perimeter Fence with one face of the building flush with that Outer Perimeter Fence.
- 4.1.8 See Plate SP-3-1 for a typical Principal Entrance layout.

### 4.2 *Crash Barriers*

- 4.2.1 Crash barriers for Sally Port sliding gates shall be connected to the interior side of the exterior gate or the rack and pinion rail depending on the gate operator type and shall be operated simultaneously with the remote operation of the gate.

- 4.2.2 In order to resist vehicle impact, crash barriers shall be made of a steel I-beam or rectangular tubing supported on anti friction rollers on heavy uprights. In a test equivalent to the US Department of State K4 certification<sup>10</sup> (6 804 kg @ 48.3 km/hr or 15,000 lbs @ 30 mph) the vehicle must be inoperable after hitting the crash bar; disabling the vehicle being the main purpose.
- 4.2.3 Three heavy engineered uprights support the crash barrier and as well serve as bollards protecting the adjacent fence and gate posts. In either open or closed gate position, the crash barrier is supported by 2 uprights.
- 4.2.4 If crash barriers are used for emergency gates on the perimeter, they shall be made of a simple beam or rectangular tubing with a counter weight mechanically lifted and lockable in closed position with the use of a security padlock.
- 4.2.5 Gates having integrated crash bar or crash cables system are acceptable if they meet M30 designation of *ASTM F2656-07*<sup>11</sup>, K4 certification of the US Department of State (see footnote 1) or the European equivalent.
- 4.2.6 See Plates SP-3-3 to SP-3-5 for typical Sally Port crash barriers.

## 5. FENCE GATES

### 5.1 *Vehicle Sliding Gates*

- 5.1.1 The size of each gate shall provide for a 4 m wide x 4.5 m high clear opening.
- 5.1.2 Gate chain link fabric shall match perimeter fence. (See section SP-2, Fences).
- 5.1.3 Gate framing members shall be 73 mm O.D. pipe weighing 8.6 kg/m welded and drained.
- 5.1.4 Motorized gates shall be capable of moving at a speed of 150 mm/s.
- 5.1.5 Gate shall have three point locking (top, bottom and middle) or be locked by way of rack and pinion mechanism and a vertical channel to clasp the gate.
- 5.1.6 Locking column shall be equipped with an emergency manual control mechanism located for easy access.
- 5.1.7 Operator and track shall be protected and electrically heated to ensure all weather operation. In rack and pinion system (or “drive rail” operator) the teeth of the rack can be unprotected provided that they are on the lower side of the rack and visible to the operator.
- 5.1.8 Outer perimeter gates with connected crash beams shall be designed to take the additional weight into account.
- 5.1.9 For gates operated by an overhead chain drive system, a guide shall be provided at the bottom of the gate running in a channel.
- 5.1.10 Motors shall be located low to the ground to facilitate maintenance
- 5.1.11 All gate components shall be galvanized.

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<sup>10</sup> US Department of State SD–STD–02.01, Revision A , March 2003, Test Method for Vehicle Crash Gate Testing of Perimeter Barriers and Gates

<sup>11</sup> ASTM F2656–07, Standard Test Method for Vehicle Crash Testing of Perimeter Barriers, M30 Designation: Medium-duty truck (M) 6800 kg @ 50 km/h

5.1.12 All security hardware shall be in accordance with chapter A-6, Hardware of the present document. All other components shall be in accordance with the Fences section of this criterion.

5.1.13 See Plates SP-3-2 and SP-3-3 for a typical gate installation.

## **5.2 Vehicle Swing Gates (Perimeter and Internal Fences)**

5.2.1 Gates shall consist of a pair of 2 m wide by 4.5 m high sections, for an opening of 4 m wide X 4.5 m high, except where municipal by law or sufficient height and width for local emergency vehicles (fire trucks) dictate otherwise<sup>12</sup>.

5.2.2 The swing direction of gates shall be based on road access design and snow removal constraints.

5.2.3 Any gap between the bottom rail of a gate and the ground shall not exceed 125 mm. Where gates are located on a fence equipped with a ground barrier, this barrier shall be continuous.

5.2.4 The chain link fabric for gates shall match that of the fence (see section SP-2, Fences).

5.2.5 Gate framing shall be as per item 5.1.3 above.

5.2.6 There shall be three gate hinges and they shall be of standard quality. Foot, mid height, and top locking shall be accomplished with either detention grade cremone lock or engineered mechanism and locked with the use of padlocks.

5.2.7 Plate SP-3-7 illustrates a typical design for vehicle swing gate.

## **5.3 Pedestrian Gates (Perimeter and Internal Fences)**

5.3.1 The size of each swing gate shall provide for a 1.2 m wide x 2.1 m high clear opening.

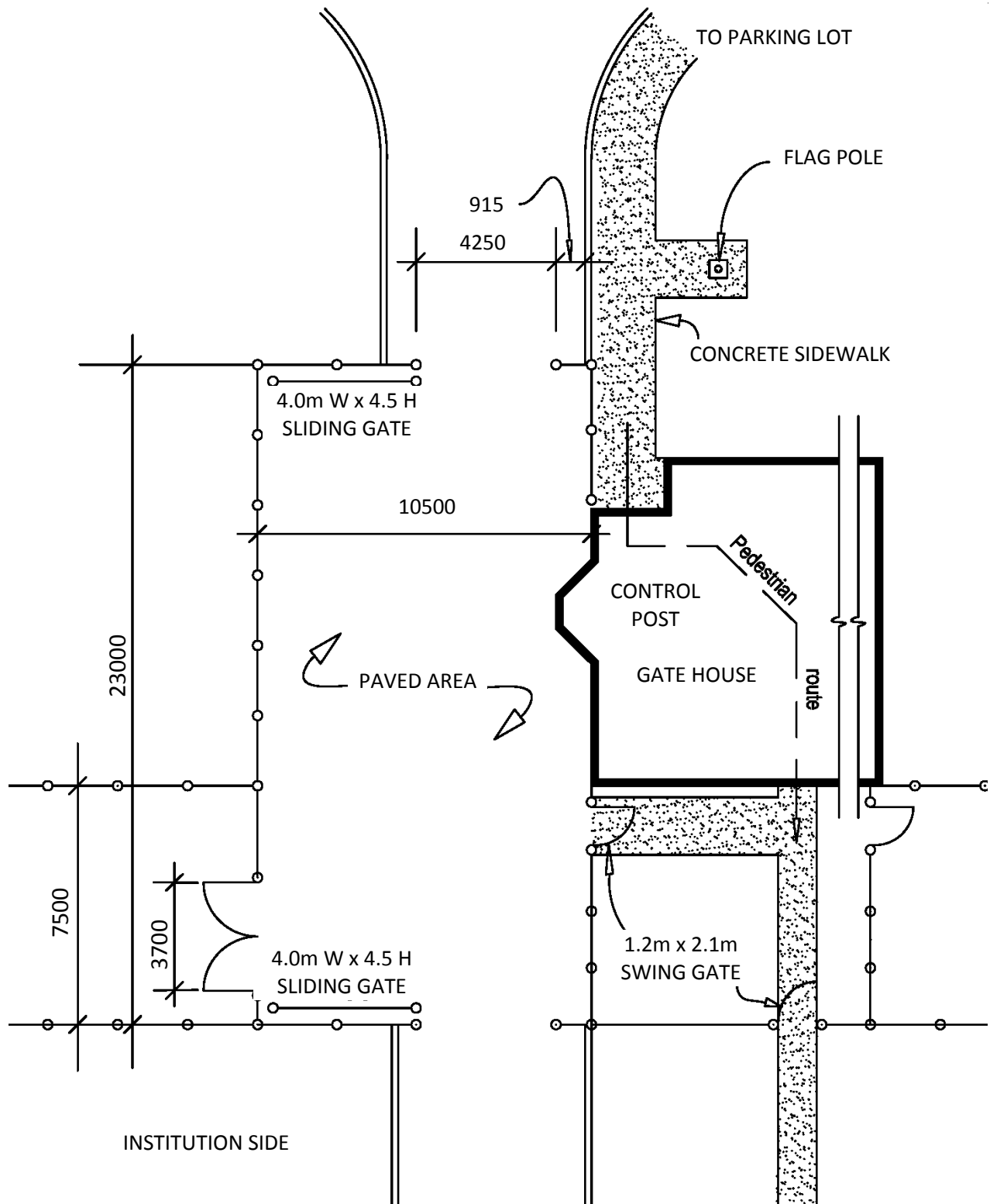
5.3.2 Items 5.2.2, 5.2.3 and 5.2.4 noted above for vehicle swing gates shall apply.

5.3.3 Swing gate framing members shall be 43 mm O.D. pipe weighing 3.4 kg/m.

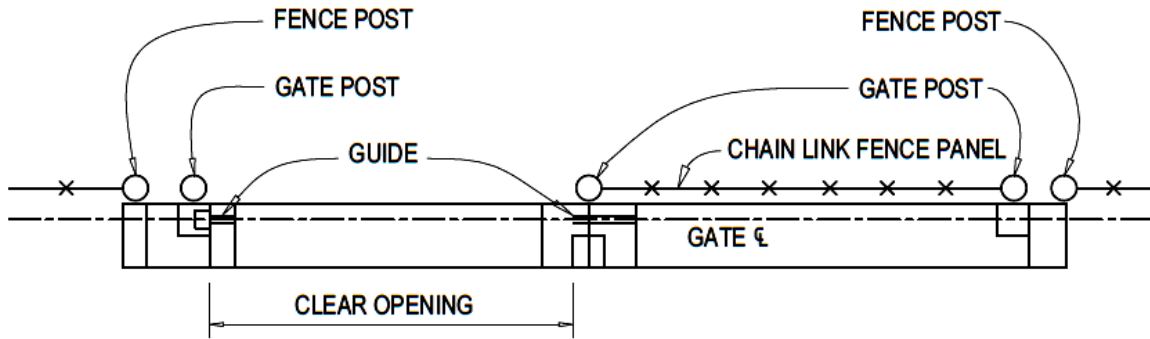
5.3.4 Swing gates shall be manually operated with security key locks when gates are used daily. Principal Entrance gates shall be remote unlocked and equipped with closers. Infrequently used gates shall be security padlocked.

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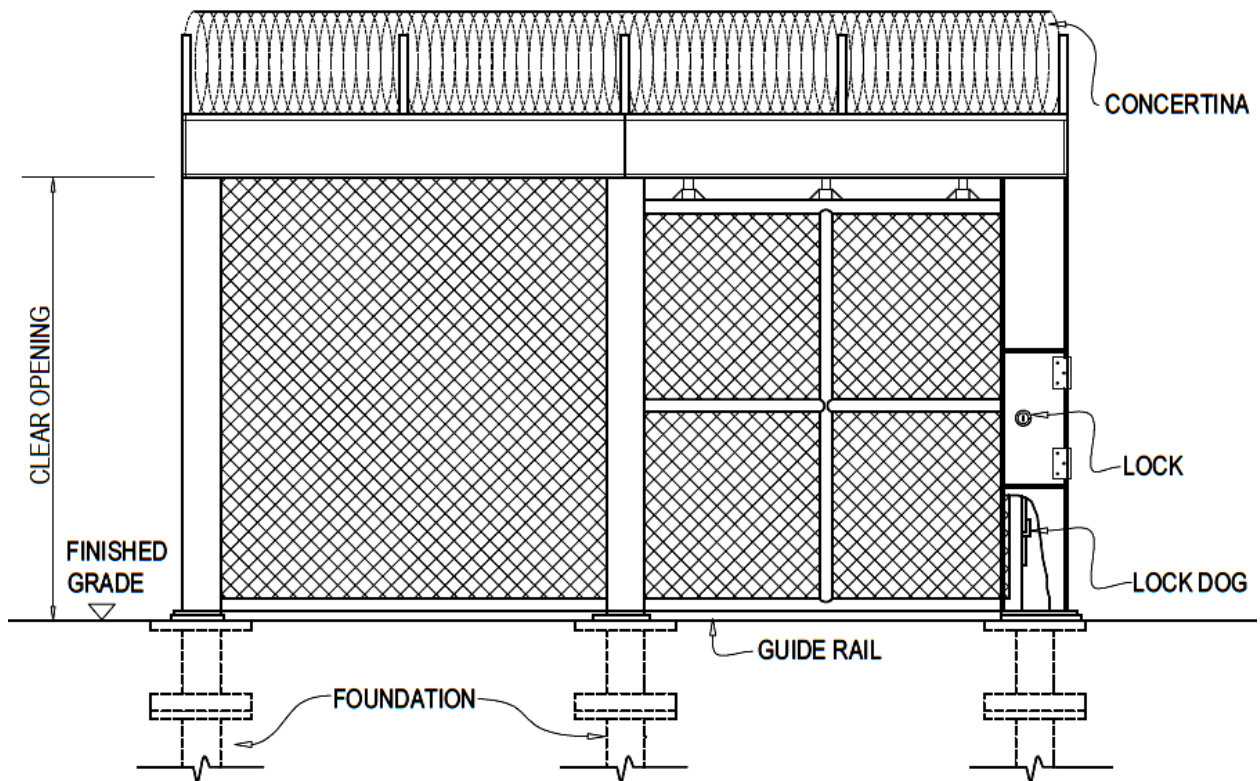
<sup>12</sup> For example, in Ontario the *Highway Traffic Act* Section 109 stipulate a maximum height of 4.15 m by a width of 2.6 m, which is similar to the 13'-6" (4.12 m) by 8 (2.43 m) in USA.



**PLATE SP-3-1 – TYPICAL SALLY PORT ARRANGEMENT**

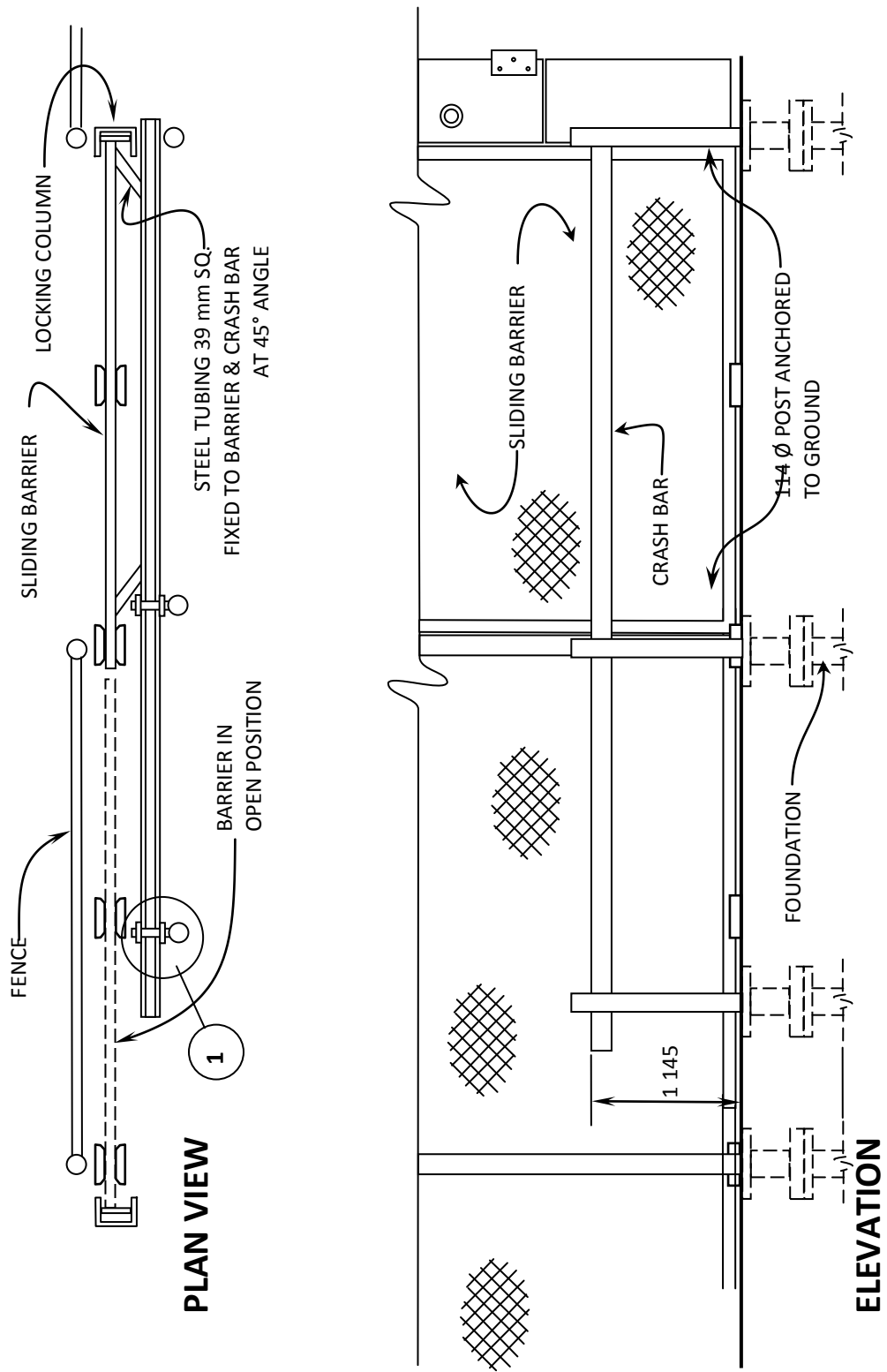


TOP VIEW

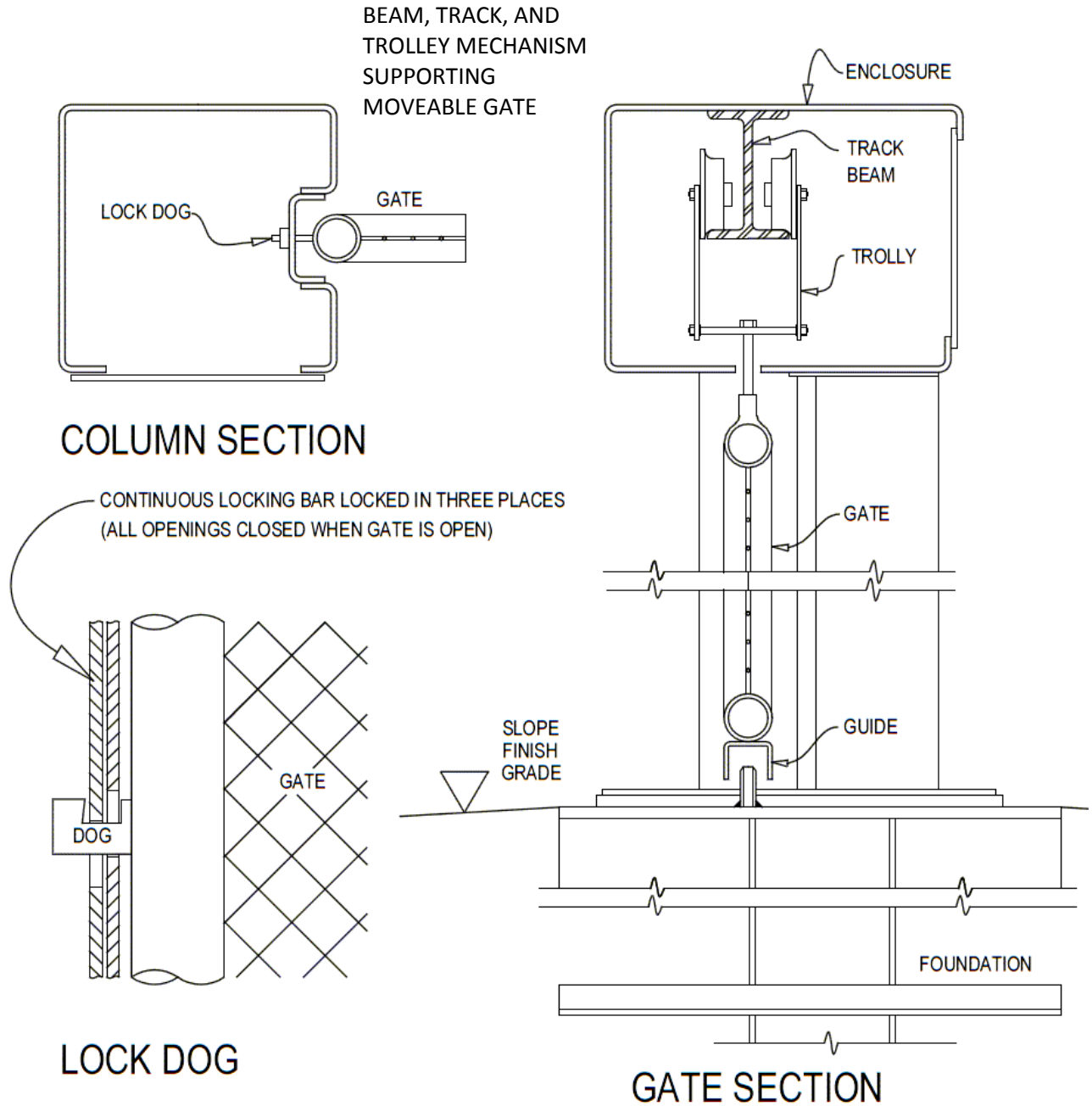


FRONT VIEW

**PLATE SP-3-2 – FENCE GATE WITH OVERHEAD CHAIN DRIVE**  
**INNER PERIMETER FENCE**

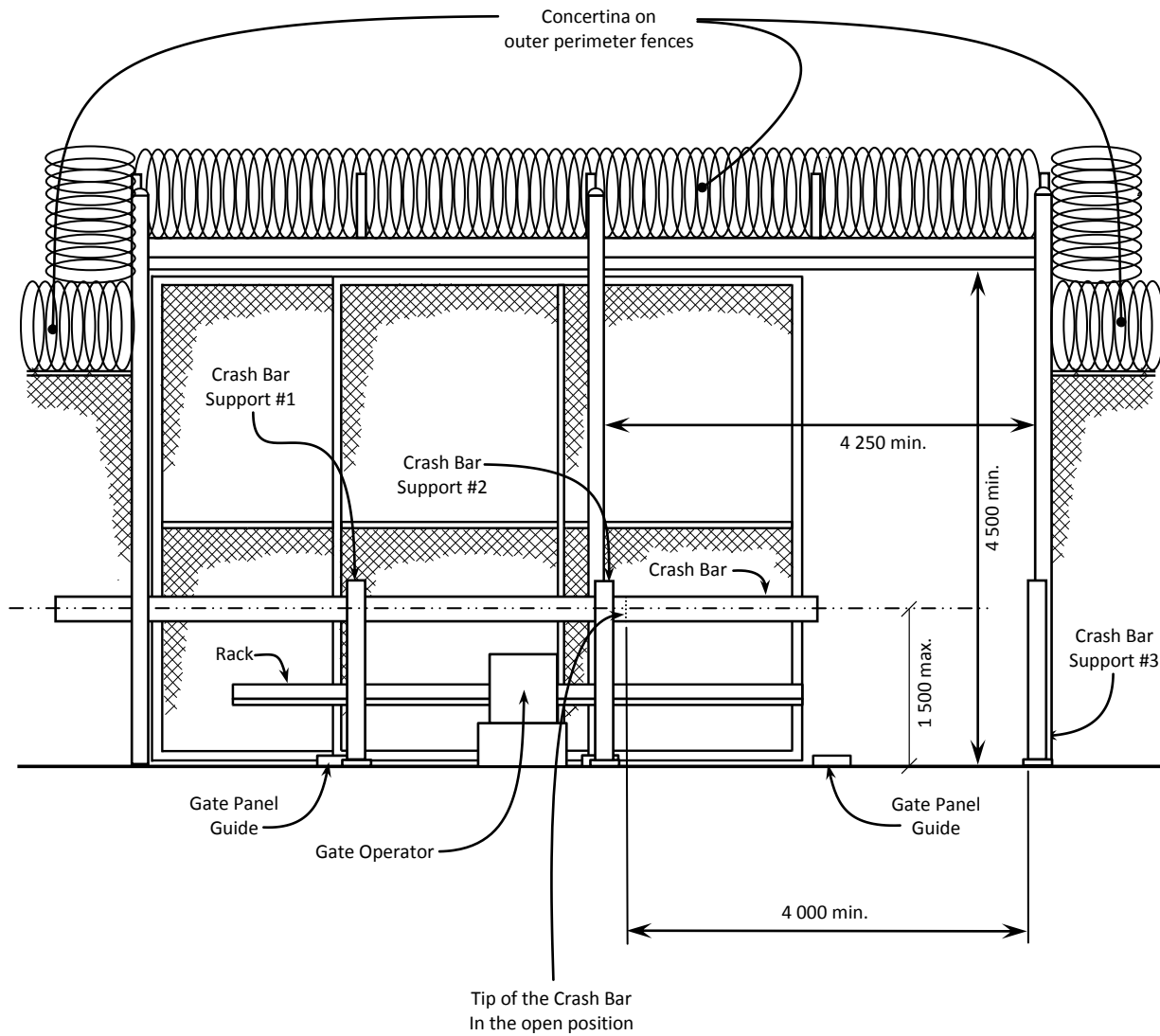


**SP-3-3 – FENCE GATE WITH OVERHEAD CHAIN DRIVE  
OUTER PERIMETER FENCE**

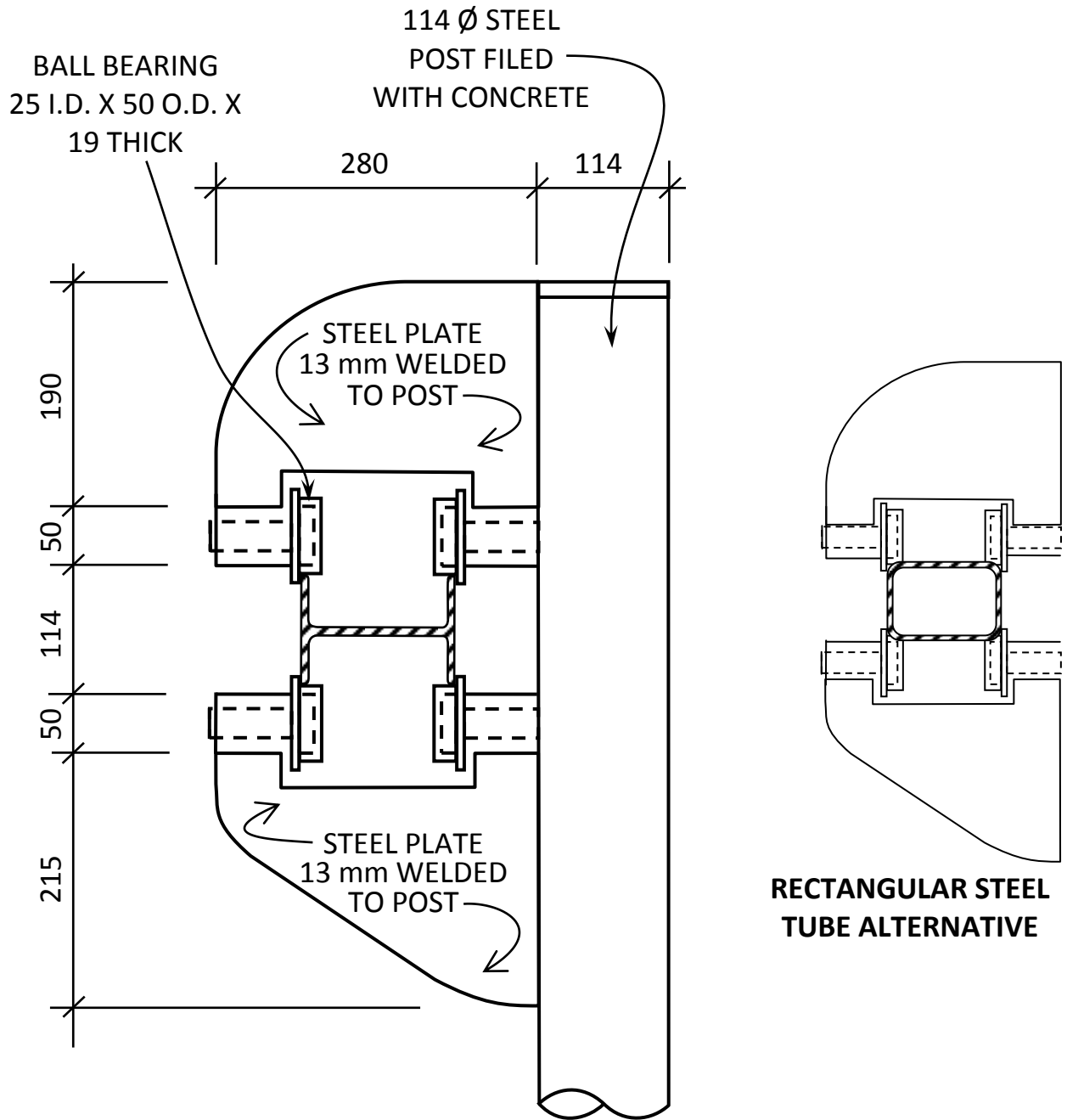


**PLATE SP-3-4 – FENCE GATE WITH OVERHEAD CHAIN DRIVE – DETAILS**





**PLATE SP-3-5 – FENCE GATE WITH RACK & PINION –**  
**INSIDE ELEVATION OUTER PERIMETER FENCE**



**PLATE SP-3-6 – CRASH BAR DETAILS**

