Designing and Providing Effective Pedestrian Entrance Control (PEC) Systems

(Turnstiles 101)

Physical Security Council

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Why we are here:

Are you presently considering the design of a turnstiles pedestrian entrance control system in the next 12 months?
TURNSTILES 101: TODAY'S DISCUSSION POINTS

- Risk Assessment in Pedestrian Entrance Control (PEC) Design
- Financial Benefits
- Types and Features of PEC’s
- Select technologies and design features
- Ideal number of Lanes
- Other criteria: UL, IP, MCBF, and warranties
- ASIS Resources Available
- Case Studies available
An important aspect of physical security design is a comprehensive risk, threat, and vulnerability assessment.

- A risk assessment helps to identify the risk(s) to be mitigated.
- Creates a risk based justification for the mitigation
- Establishes the context for funding
- Assists in the design of the risk mitigation
RETURN ON INVESTMENT (ROI)

Reallocation of resources

- Reduce coverage during off-peak hours
- Flexibility of workforce to mobilize, provide security services and respond to incidents

Optimization of convenience and control

- Increasing throughput without compromising security

Integration with existing Security infrastructure and resources

- Leverage current investments and technology
- Integrate technology with human resources
SOME TYPES OF TURNSTILES (PEC’S)

- Full Height Mechanical
- Security Portals/Revolving Doors
- Waist High Mechanical Tripod
- Pure Optical Turnstiles
- Optical with Retracting Barrier
- Optical with Swinging Glass Barrier
Mechanical Turnstiles in use (video)
Retracting Glass Optical Turnstiles in use (video)
Swing Glass Optical Turnstiles in Use (video)
SYSTEM DESIGN CONSIDERATIONS

i.e.;

Type of Barriers & Barrier Height.
Footprint Available.
Closing off surrounding area?
IP Connectivity & UL Requirements.
Satisfy Egress Requirements?
ADA Wheelchair Compatibility?
Finish: Stainless Steel or Natural materials?
Logos/Corporate Branding?
SYSTEM DESIGN CONSIDERATIONS—custom finishes & features
SYSTEM DESIGN CONSIDERATIONS
(high security environment)

- Applications
  - Banks and Insurance companies
  - Government buildings and Institutions
  - Office buildings, corporate headquarters and administrative sites
  - Sensitive sites; R&D offices, pharmaceutical buildings, Data centers and Airports

- Ideal for
  - Access control management and securing access to restricted zones

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TRANSIT SYSTEM USE CASE

Selecting the best system for the operational environment.

- Knowing the operational environment, facility culture, and risks are critical to success design and acceptance.

Use Case

- Historic facility with very old architecture
- Desire by the agency to have an open versus closed system
- High levels of vandalism from criminal activity and homelessness
- Optical turnstiles consistent with current architecture
INTEGRATION WITH AUTHENTICATION TECHNOLOGIES

Wide array of available technologies
- Standard badges, QR/Bar Codes, Biometrics, Bluetooth, etc.

Evaluate current process and technology
- Avoid ‘shiny object’ syndrome
- Master the basics

Authentication technology must match desired application
- Different personnel require different authentication (Visitor, Contractor, Employee)
- Facility type considerations (high-rise, industrial, shared work space, etc.)
Smartphone Bluetooth Reader Integration (video)
Hand Wave Identity Reader Integration (video)
Facial Identity Reader Integration (video)
DETERMINING THE NUMBER OF PASSAGE POINTS

Population
- Cost of delays
- Public, Private, Visitors or all of the above?

Security Goals
- Closed facility or open facility
- Visitor and contractor lanes
- Employee and Executive lanes

Integrated Authentication Technologies
TSA- Normal, Pre-Check, and Clear
SIMPLE METHOD FOR ESTIMATING NUMBER OF LANES (PASSAGE POINTS)

➢ A = How many cardholders at the building/campus
   ➢ Includes employees, contractors, average # of visitors

➢ Divide by 500

➢ C = ideal number of lanes to be employed
   ➢ (adjust for additional side entrances if necessary)

➢ This allows for normal in/out traffic, lunch/smoke breaks, etc.

\[
A / 500 = C
\]
UL – assures safety – both electrical and mechanical. Satisfies local jurisdiction concerns.

IP – future proofing, immediate or future tie in with company networks and information systems

MCBF – independently tested under controlled verifiable conditions – ensures life of the product.

Mfr confidence in MCBF is demonstrated by their warranty (1, 2, 3 or 5 years)
ASIS RESOURCES

Available Standards, Guidelines, and Reports

• Risk Assessment (RA)
• Security Management Standard: Physical Asset Protection (PAP)
• Facilities Physical Security Measures Guideline (FPSM)
• Crisp Report, From the Ground Up, Security for Tall Buildings
CASE STUDIES AVAILABLE

➢ YMCA
  ➢ control membership
  ➢ Improve security
  ➢ increase revenue
  ➢ Decrease hourly staffing

➢ Publishing Company HQ
  ➢ Increase security
  ➢ Improve employee experience
  ➢ More efficient use of elevators (dispatch screen built in)
  ➢ Architectural lobby enhancement
  ➢ More efficient use of security resources

➢ Major Downtown Office Tower
  ➢ Improve marketing to tenants (safe environment)
  ➢ Architectural lobby enhancement
  ➢ More efficient use of security resources
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