



# Maryland Aviation Administration

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## MEMORANDUM

**TO:** Distribution

**FROM:** Peter Charles, Manager *P. Charles*  
Division of Architecture  
Office of Design and Construction

**DATE:** April 6, 2015

**SUBJECT:** Design Standard (DST) 2015-01, New Section 11.9.5 Adult Change Room Doors

Effective immediately, the following modifications shall be made to the MAA Design Standards Manual, dated January 2015:

**Insert the attached new Section 11.9.5, Adult Change Room Doors.**

Consultants listed herein are required to distribute this design standard to their respective staff and sub-consultants. If you believe the above standard conflicts with any other codes or regulations, or if you should have any questions regarding this matter, please contact the Manager, Division of Engineering at 410-859-7768.

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**MARYLAND DEPARTMENT OF TRANSPORTATION  
MARYLAND AVIATION ADMINISTRATION**

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Supplement 2015-01 to the MAA Design Standards Manual

***Insert the following new Section 11.9.5, ADULT CHANGE ROOM DOORS***

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11.9.5 Adult Change Room Doors

- 11.9.5.1 General: Comply with the minimum requirements included herein for entrance doors to Adult Change Rooms. Entrance doors are to provide user privacy, and enhanced accommodation, which exceeds accessibility requirements included in ADA Accessibility Guidelines and ICC ANSI A117.1. In-swinging type doors are preferred.
- 11.9.5.2 Automatic Door Operator: Provide low-voltage electro-hydraulic type automatic door operator. Door operation included in this Standard requires that automatic door operator comply with manual door closer reduced opening force.
- 11.9.5.2.1 Door Operator Characteristics: The electro-hydraulic door operator, in simplest terms, is a motorized manual hydraulic door closer. Since it contains a manual closer, it can be adjusted to fully comply with the accessibility requirements for reduced opening force of a manual closer. Other features of the operator are to include the following:
- Obstruction detection on opening and closing cycles.
  - Adjustable door opening and closing force.
  - Adjustable hydraulic backcheck valve to cushion door speed if opened violently.
  - Three-position switch, ON/OFF/HOLD-OPEN, with cover plate to prevent tampering, if available from manufacturer specified.
  - Rigid type closer arm and slide track.
  - Tested to UL standards for automatic closing door, UL 10B and UL 10C; ADA-compliant; certified by BHMA to meet ANSI A117.1 and A156.19.
- 11.9.5.2.2 Door Operator Installation: Door operators and track arms are to be through-bolted to hollow metal door frame heads and doors (wood or metal) with sex bolts. Heights of frame heads are to be designed to provide a minimum 4-bolt attachment of operator to frame. Refer to door and frame requirements 11.9.5.8 below.
- 11.9.5.2.3 Quality Control: Installer must be trained and approved by automatic door operator manufacturer for installation and maintenance of product. Include testing and inspection of installation by an inspector certified by the American Association of Automatic Door Manufacturers.
- 11.9.5.3 Electric Strike: An electric strike is necessary to permit the lockset latch to pass through the door frame when the automatic door operator is used, and the lockset lever is not turned. Door sequence of operation must be set to release the strike

prior to activation of the door operator to protect the operator motor. Provide fail safe type strike.

- 11.9.5.4 Mortise Lockset: Privacy mortise lockset with tubular lever of type that returns to door face; Best Access Systems interchangeable core lock cylinder (Ref: Article 11.7 LOCK SYSTEM) with thumbturn; indicator (Vacant/Occupied outside, Secure/Unsecure inside). Standard mechanical lockset is to be custom pre-wired at the factory with a switch, operated by turning the thumbturn or key. Lockset functions include the following:

- Latchbolt by grip either side, unless outside grip is locked.
- Outside grip locked or unlocked, and outside door operator press wall switch deactivated or activated, by key (outside) or thumbturn (inside).
- Operating inside grip, closing the door, or using key unlocks outside grip, and activates outside press wall switch.
- Inside grip always free, and inside press wall switch always activated.
- Auxiliary latch deadlocks latch.

Lockset manufacturer will likely require that modification to mechanical lockset be reviewed and approved by their engineering department prior to release for fabrication. Coordinate with specified manufacturer(s) for procedure, and information to include in door hardware specifications.

- 11.9.5.5 Continuous Hinge: Provide geared aluminum, edge-mount (mortise), continuous hinges for adult change room doors equipped with automatic door operators. Hinge may be electrically modified, or prepared for power transfer hinge required for electrified mortise lockset.
- 11.9.5.6 Miscellaneous Door Hardware: Provide miscellaneous door hardware required for project, including boxed power supply, kickplates, saddles, wall stops, and similar items.
- 11.9.5.7 Hardware Finishes: Provide standard MAA-approved door hardware finishes and base metals.
- 11.9.5.8 Doors and Frames: Hollow metal doors and frames to receive automatic door operators are to be fully welded, and internally reinforced to receive surface-applied door hardware. Reinforce frame heads with channel type reinforcing for full height of frame head and depth of frame. Reinforce frame hinge jamb and door hinge edge full height for continuous hinges. Where wood doors are used, coordinate door blocking requirements with door manufacturer(s) to ensure adequate reinforcing (blocking) is specified for door hardware.
- 11.9.5.9 Hardware Set: The following is a sample door hardware set and sequence of operation. *Note: This is NOT a standard specification. Designer shall tailor the hardware set(s) to suit individual project requirements.*

#### Sample Door Hardware Set and Sequence of Operation

- A. Basis of Design Manufacturers: Names of the following basis of design manufacturers are abbreviated in the Schedule as indicated:

1. Best Access Systems; Div. of Stanley Security Solutions, Inc. (BAS).
2. Corbin Russwin Architectural Hardware; an ASSA ABLOY Group company (CR).

3. HES, Inc.; an ASSA ABLOY Group company (HES).
4. McKinney Products Company; an ASSA ABLOY Group company (MCK).
5. Norton Door Controls; an ASSA ABLOY Group company (NOR).
6. Pemko Manufacturing Co.; an ASSA ABLOY Group company (PMC).
7. Rockwood Manufacturing Company (RMC).
8. Securitron Magnalock Corporation; an ASSA ABLOY Group company (SMC).

#### B. POWER-OPERATED OPENINGS

HW-01 Door Nos. AT213, Dx201	M x M		
Item	Deescription	Mfr	BHMA
1 continuous hinge	MCK-25HD x 83"	MCK	628
1 power transfer hinge	EL-CEPT	SMC	630
1 wiring harness	ElectroLynx QC-C1500P (power xfer-junction box)	MCK	---
1 electrified lockset (privacy)	ML2068 x M92 x M105 x M19VN x LWA 24VDC	CR	630
	-- indicator (vacant-occupied)		
1 wiring harness	ElectroLynx QC-CXXX x lgth. (pwr xfer to lockset)	MCK	---
1 mortise cylinder	1E74	BAS	626
1 electric strike (fail safe)	1006 x 1000-KM x 2004 x 2005 x 24VDC	HES	630
1 wiring harness	ElectroLynx QC-C1500P (strike-junction box)	MCK	---
1 door operator	6010 x 120VAC x 668S	NOR	689
2 press wall plate switches	505	NOR	630
1 kickplate	10" x 2" LDW x 0.050" 4BE CSK	RMC	630
1 mop plate	4" x 1" LDW x 0.050" 4BE CSK	RMC	630
1 wall stop	409 (gray)	RMC	630
1 threshold (AT213 only)	190 drilled for countersunk fasteners	PMC	Alum
1 set seals	S88 BL x DOWxDOH	PMC	---
1 power supply (above ceiling)	BPS-24-1	SMC	---

#### Sequence of Operation

- Entry to the restroom by rotating the corridor side lever or by use of the corridor side press wall switch.
- Corridor side press wall switch to activate the electric strike and then the automatic door operator.
- Person entering the restroom rotates the indicator turn piece locking the corridor side lever and deactivating the corridor press wall switch.
- Rotating the restroom side lever unlocks the corridor side lever and reactivates the corridor side press wall switch via the request for exit (RX) switch.
- Use of the restroom side press wall switch activates the electric strike and then the automatic door operator.
- Use of the restroom side press wall switch reactivates the corridor side press wall switch and with the closing of the door unlocks the corridor side lever.

11.9.5.10 Maintenance and Occupancy Adjustment: Prior to including in project specifications, review with MAA any requirements for the Installer to return to perform post Substantial Completion maintenance and occupancy adjustment for the automatic door operator.

11.9.5.11 Demonstration and Training: Include in project specifications for MAA Maintenance personnel.