

## DESIGN CRITERIA

1. Related Sections: See related Division 08 Design Criteria, Commissary Door Schedule in Appendix "A", and related Design Standard Plates.
2. Sliding automatic entrance doors are typically provided at all customer entrances and exits. Depending on egress requirements, either full-breakout or fixed sidelight door packages shall be provided. Perform an exiting analysis to determine which type is required.
3. Provide sliding automatic door packages with transom panels, unless conditions prevent the use of transom panels. Standard door package size, with transom, is 10' 0" 10'-8" wide (medium stile frame with 48" clear door opening) by 10' 0" high.
4. In new facilities with entrance carpet tile equip interior and exterior door openings with continuous tapered extrusion square by bevel threshold with bevel on non-carpeted side.
5. On addition / alteration projects with entrance carpet tile at vestibules, a threshold is required at interior and exterior doors. If continuous split track/threshold exists, replace just the threshold under the sliding panels. If continuous track exists, replace entire track. Equip interior and exterior doors with continuous tapered extrusion square by bevel threshold with bevel on non-carpeted side.
6. Exterior sliding automatic door package glazing shall be laminated type and secured using structural sealant to comply with current force protection requirements.
7. Entry, Exit and Cart Return Vestibule sliding automatic door systems, including sidelight frames and transoms, shall be designed for security protection in accordance with UFC 4-010-01 DoD Minimum Antiterrorism Standards For Buildings, (latest issue), Standard 12.

DeCA standard is to design commissary facilities so that both interior and exterior sliding automatic entrance door systems (operable doors, sidelights, and transoms) are positioned such that they will not be propelled into inhabited spaces, or provide other means to ensure they do not become hazards to building occupants. Sliding automatic entrance door systems glazing must comply with glass type and minimum frame bite provisions of Standard 10. The typical approach DeCA utilizes to ensure that the doors are not a hazard to building occupants is to include a wall between the automatic sliding doors and the inhabited portion of the building (usually the Sales Area). Design this wall with enough strength to stop the doors if they are blown off of the frames and fly into the building in a blast event. Typically the wall is of 8" CMU construction, with all cells filled, and with reinforcing as required for the height of the wall and the standoff distance. Ensure that the top of the wall is restrained as well, unless wall is designed to cantilever from the footing. Use SBEDS to calculate structural engineering requirements.

8. Compliance with the window and door requirements in Appendix B of UFC 4-010-01 (latest edition) and UFC 4-020-01 shall be required if one of the following is true:
  1. The facility has an identified Design Basis Threat (DBT) and a level of protection (LOP). The ATFP planning team for the installation and the building being designed/renovated shall determine if the facility has an identified DBT and LOP, and notify the AE of their findings. When a project has an identified DBT and LOP, the building shall be designed to specifically counter the identified DBT(s) and provide the required LOP, as well as the baseline requirements of the current version of UFC 4-010-01, whichever is more stringent. The building is not required to comply with additional requirements in UFC 4-010-01 Appendix B, (latest edition) and UFC 4-020-01 that are unrelated to countering the identified DBT.
  2. The facility is located outside the Installation Perimeter as defined in UFC 4-010-01. Installation Perimeter is now defined as "any demarcation identifying the limit of DoD property and directly or indirectly indicating that unauthorized access is prohibited".

It will be critical for projects that fall within either of these categories to have a clear assessment and determination established of the DBT and LOP for the facility prior to design start.

For assistance in the design of vestibules, catch walls, use of SBEDS, determining requirements and solutions, and determining when Vestibule Sliding doors are not required to be Blast Rated, or if the design of a Vestibule is required to include Blast Rated doors per UFC 4-010-01, contact the Omaha COE PDC (Protective Design Centers) at <https://pdc.usace.army.mil/whowere/contacts>. Plans can be sent to the PDC via email, and they can assist in the design and analysis to ensure compliance with UFC 4-010-01. When analysis is required, the AE shall include on their team an engineer that is competent in designing structures to withstand blast loading.

9. Drawings shall graphically indicate the direction of travel at sliding automatic doors. Customer entrance and carry-out return doors shall have motion detectors that will activate doors allowing one-way only traffic flow into the commissary, when doors are in the closed position. Customer exit doors shall have motion detectors that will activate doors allowing one-way only traffic flow out of the commissary, when doors are in the closed position. Deviations from the above requirements shall be discussed during project design and documented in the Project Design Analysis. An exception to the above requirements would be at facilities sharing a common entrance from an adjacent exchange mall or possibly at a commissary with only one customer entrance, where two-way traffic flow is desired.
10. Provide door signage on both sides of each sliding automatic door package, identifying intended use of door (i.e., entrance, exit, emergency exit, carry-out return) based on which direction a person is approaching the door. Locate signage on center horizontal muntin.
11. Provide stainless steel protection plates on traffic side of exit doors/sidelight panels and carry-out return doors/sidelight panels to protect against impact damage from shopping carts. Do not provide stainless steel protection plates at entrance doors, unless shopping carts are stored on exterior of commissary. In addition to stainless steel protection plates, provide protection posts to guard leading edge of all sliding automatic doors. Protection posts on exterior side (breakaway side) shall be placed a minimum of 36" in front of doors to permit emergency breakaway door swing.
12. Provide 10" high door bottoms on automatic sliding doors and sidelights, to match that required by ANSI A117.1 on manual swing doors and storefront systems.
13. Indicate maintenance proximity from Installer's place of business to Project site to suit Project location.
14. If project requires no exterior sliding automatic door systems, edit specification section deleting requirements for security protection.
15. If hurricane resistant sliding automatic door systems are required for Project, add performance requirements to specification section.

END OF SECTION