

**WVU DESIGN GUIDELINES & CONSTRUCTION STANDARDS**  
**DIVISION 07 – THERMAL AND MOISTURE PROTECTION**

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**SECTION 070100 – PLAZAS AND DECKS OVER OCCUPIED SPACES**

**PART 1: GENERAL**

1.1 Scope of Standard

- A. The scope of this standard includes recommendations for the design and maintenance (retro-fit) of plazas and decks over occupied space(s). In general, plazas and decks over human occupied space are not recommended.

1.2 Related Standards

- A. Refer to Exterior improvement, Division 32, of this document

1.3 General Requirements

- A. All plazas and decks situated over occupied space(s) shall have a redundant, bi-level drainage system to protect the occupied space(s) from water infiltration and damage.
  - 1. The primary drainage system shall be at the top wearing surface exposed to weather and traffic.
  - 2. Secondary drainage shall be provided below the wearing surface, at the membrane level, to drain any moisture that infiltrates down below the primary level protection at the wearing surface. The secondary drainage shall be provided by a pre-fabricated drainage grid, paver pedestals, or other method as required to provide free flow to the drains at the secondary level.
  - 3. Where possible, provisions for overflow should be incorporated to account for clogged drains.
- B. It is preferable to select a system that allows water to flow both on top of and below the wearing surface.
  - 1. A closed joint system generally consists of concrete surfaces or individual paver units with gaps filled with porous grout or sand, or the individual paver units placed in a lean mortar setting bed.
- C. Paver units are preferable to large, monolithic concrete sections because pavers enhance drainage at the secondary level and long-term maintenance is simplified due to accessibility of the substrate (both the structural deck and the waterproofing system).
- D. Provide a sloped substrate to insure adequate drainage at both the primary and secondary levels. Tapered insulation, sloped structural deck, variable pedestal heights, or other method(s) shall be used to accomplish this goal.
- E. The design of plazas and decks situated over occupied space(s) should be

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considered early in the design development of a project since the effect on the structural design and overall cost can be significant.

- F. Walking surfaces shall be designed to be nominally level. Abrupt changes in elevation of walking surfaces shall not exceed ¼ inch. The slope in the direction of travel shall not exceed 1 in 20. The slope perpendicular to the direction of travel shall not exceed 1 in 48.

#### **PART 2: PRODUCTS**

##### 2.1 Paver System

- A. Paver system: Color and pattern should be related to existing building materials or other campus pavers located in the proximity.

##### 2.2 Monolithic Concrete System

- A. Paver systems are preferred. However alternatives can be reviewed with the project representative.
- B. Where a monolithic system is required, the monolithic concrete sections shall be designed in such sizes as to be removable for future repair of the substrate, including jointed, sealed sections with lifting inserts, or other method as may accomplish this goal.

#### **PART 3: EXECUTION – NOT USED**

END OF SECTION 070100