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## BUILDINGS BULLETIN 2011-023

### OTCR

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**Supersedes:** None

**Issuer:** Alan Price, P.E.  
Director, Office of Technical Certification and Research

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**Purpose:** This document establishes acceptance criteria for urbanSHED, an alternative sidewalk shed design which encourages improved pedestrian experience, provides increased light and air to the sidewalk, and enables easy access to building entrances.

<b>Related Code/Zoning Section(s):</b>	BC Chapter 16	BC 3307.6
	BC 2606.4	AC 28-104.7
	BC 2606.5	AC 28-113.2.3

**Subject(s):** Sidewalk, shed; Overhead protection, shed; urbanSHED; Shed, decking, light-transmitting plastic; Shed, load requirements

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**Background:** In 2009, the Department of Buildings launched the urbanSHED Design Competition to foster new thinking with regard to sidewalk sheds. The competition sought to encourage designs that would not only meet the practical needs of providing code-mandated overhead protection to the public during the construction and alteration of buildings, but also to provide a positive, contemporary addition to New York City's urban landscape. In particular, the competition sought sheds that:

- Improve the pedestrian experience;
- Increase light and air to the sidewalk;
- Complement different streetscapes - residential, retail, industrial and commercial settings;
- Control or guide pedestrian traffic;
- Enable easy access to entrances;
- Improve structural connections;
- Improve details of fastening and features of supporting elements;
- Provide elegant, energy efficient sidewalk lighting;
- Utilize green materials;
- Minimize energy usage;
- Maximize daylight;
- Protect existing trees and foliage; and
- Incorporate proper rainwater drainage.

**Description:** urbanSHED sidewalk sheds meeting the standards in this bulletin are deemed Department-recognized sheds that provide a better pedestrian experience through the transmittal of natural light and by increasing available space below sidewalk sheds.

**Uses:** urbanSHED sidewalk sheds are used to improve quality of life, increase natural light and air, reduce construction impact on businesses and building owners, and increase available space on sidewalks.

**Evaluation Scope:** 2008 NYC Construction Codes

**Evaluation Criteria:** **Light-transmitting Plastics**

Chapter 33 of the Building Code does not recognize certain materials essential to designing sidewalk sheds consistent with the principles outlined above. Specifically, section BC 3307.6.4, Item 4, requires planking material for the construction of sidewalk shed decks, and does not recognize light-transmitting plastics that could be used as structural decking.

Therefore, pursuant to section AC 28-113, the Office of Technical Certification and Research (OTCR) recognizes light-transmitting plastic used as structural decking and parapets for urbanSHED sidewalk sheds that meet all of the following requirements:

- Section BC 3307 for loading requirements of decking materials.
- Section BC 2606.4 for self-ignition, smoke-developed and combustibility requirements.
- Section BC 2606.5 for structural requirements.
- Tested to ensure the material can sustain, without breaking, the effect of standard brick free falling 300 feet. The test procedure shall be approved by the OTCR. This test shall be required for any light-transmitting plastic used as decking, and test conditions shall consider actual span lengths of plastic over the frame of the sidewalk shed.

Acceptable light-transmitting plastic decking material shall be tested for compliance to all required standards by an approved testing agency in accordance with section AC 28-113.2.3 and shall comply with the conditions of this bulletin.

**Conditions of Acceptance:** To be recognized as an urbanSHED, the sidewalk shed shall be designed, installed and maintained in accordance with the 2008 NYC Construction Codes and the following applicable provisions:

**A. Design**

1. The shed shall be designed by a NYS licensed design professional in accordance with section BC 3307.6.3.
2. The shed shall be designed to meet applicable load requirements of Chapter 16 of the Building Code, including design for wind as a partially open structure.
3. The decking and parapet shall be light-transmitting plastic material and shall be designed to meet the performance requirements of section BC 3307.6.
4. In addition to code required loads, the structure shall be capable of sustaining a horizontal live load equal to 2% of its vertical live load.
5. The design of the light-transmitting plastic material shall include an anti-slip walking surface integral to the material or as an applied coating.
6. LED lighting shall be used to satisfy the requirements of section BC 3307.6.5, Item 2.
7. The engineered design shall not include any bracing or struts placed below a height of 8 feet above the sidewalk.
8. The design shall insure that under no load combination, the resultant of the forces will collapse the underlying sidewalk.

**B. Installation and Filing Requirements**

1. An urbanSHED sidewalk shed shall be filed by a NYS licensed design professional as an OT-EQ work type.

2. The application shall include details and calculations demonstrating compliance with provisions of the NYC Construction Codes and this bulletin, per section AC 28-104.7.
3. A work permit shall be required before the erection of the shed, per section BC 3307.6.
4. Installation requirements shall be in accordance with site conditions, the conditions of this bulletin and if applicable, the suppliers instructions.
5. Installation of multiple panels of light-transmitting plastic decking material shall be laid closely and made tight in accordance with section BC 3307.6.4, item 4.

**C. Maintenance**

1. Material and debris shall not be stored on Department-recognized urbanSHED sidewalk sheds.