



NEW YORK CITY HOUSING AUTHORITY CAPITAL PROJECTS DIVISION

90 CHURCH STREET, NEW YORK, NEW YORK 10007

OFFICE OF DESIGN STANDARD NOTICE CPDDESIGN2015001

TO: All CPD and Design Professionals
FROM: Scott Groom, Director
Vesna Hadzibabic, Deputy Director for Engineering
Bruce Eisenberg, Deputy Director for Architecture
DATE: October 23, 2015
REF: N/A
SUBJECT: **Roof Parapet Replacement With Railings**

This *Standard Notice* addresses the Procedure and Criteria to be considered for the removal of brick masonry parapets and replacement with steel roof railings.

INTRODUCTION

Ongoing brick masonry maintenance comes at a substantial cost to NYCHA. The elimination of brick masonry from the NYCHA portfolio will reduce future expenses associated with brick repointing and replacement, increase durability, decrease maintenance of the façade, and installation and maintenance of expensive sidewalk sheds. The following Code references shall be considered during the design and installation of roof railings:

- 2014 NYCBC Section 1509.8
- 2014 NYCBC Section 1012
- 2014 NYCBC Section 1607.7

DESIGN TO REPAIR APPROACH

The NYCHA standard detail as suggested in the attached detail drawings proposes the attachment of railing posts to the roof level spandrel beam with resin anchors. The posts consist of two steel pipe components, i.e., the base, which attaches to the building structure and the main post portion which bolts to the base. The base portion penetrates the roofing system and shall be sized to allow for flashing as per roofing manufacturers requirements for warrantable penetrations.

The horizontal top and bottom rails consist of steel piping as well sized to resist the code mandated hand rail loads. The area between the horizontal rails is filled either with smaller, welded, vertical steel pipes or prefabricated panels made of a steel angle frame and expanded metal mesh infill. The infill could be any other material such as metal weave or chain link. The railing system design shall consider wind loading criteria accordingly.

All steel components shall be galvanized. The contact between dissimilar metals shall be avoided.

Three conditions shall be considered.

- A. Parapet removal/replacement at a building with existing roofing in place
- B. Parapet removal/replacement at a building with a recently replaced roofing
- C. Parapet removal/replacement as part of roofing replacement

Replacement of parapet with railing at a building with existing roofing stays in place will be required for parapet walls found with extensive damage reported per TR6 report per Local Law 11 or as found otherwise.

Where a roof was recently replaced, the designer shall coordinate the rail replacement details with the roofing manufacturer such that the roofing warranty is not voided. An installation sequence shall be developed and proposed by the designer which will maintain the roofing warranty as well as protect the building against water infiltration at all times during construction.

Replacement of parapet with the railing as part of the roof replacement shall be preferred.

Attachments: (3) – Drawings; S-001, S-002, S-003, S-004

*****End of Standard Notice CPDDESIGN2015001*****