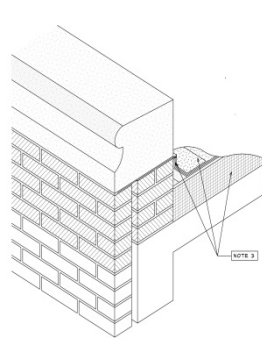


## Massey Hall Roof Repair & Replacement The University of Tennessee Knoxville, Tennessee

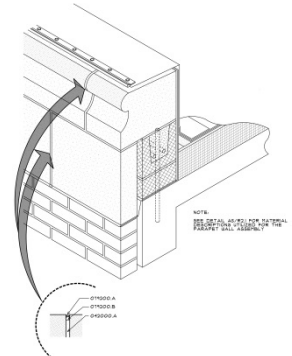
Roof Replace/Restore	17,015 s.f.
Construction Cost	\$285,380
Cost/s.f.	\$16.77
Parapet Wall Rebuild	\$158,620
Completion Date	2011



The scope of work identified for the roof replacement included a complete roof system tear-off and replacing it with a new cold-applied 2-ply SBS modified bitumen roof with new tapered insulation. Additional work identified in the construction documents included a total rebuild of the perimeter parapet wall, refurbishing rooftop equipment, new prefinished metal flashings, conductor heads/downspouts, repointing penthouse masonry joints, and installing metal wall panels around the steam room penthouse.

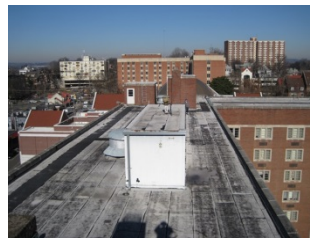


Existing Parapet Wall



New Parapet Wall Rebuild

Massey Hall is one of the older coed occupied community residence halls on the UTK campus. The building is a 9-story "high-rise" structure originally constructed in 1961. The original roofing was a built-up coal tar pitch roof on concrete decking. This roofing was replaced in 2000 with a 3-ply hot-asphalt applied modified bitumen roof over tapered insulation. Architects Weeks Ambrose McDonald was retained by the University in 2010 after previous investigations by the University's Maintenance Department confirmed there were significant amounts of water trapped within the roofing system which they thought had been entering into the roofing system at the parapet walls.



Before



After



Existing Parapet Wall



Existing Roofing System



Parapet (Work in Progress)



Parapet (New Precast Band)

An on-site meeting and further investigation of the roof was conducted by Architects Weeks Ambrose McDonald, the roofing manufacturer, and with University personnel. The investigation revealed that the existing parapet thru-wall flashing had been installed too low to the roof and ponded water could possibly enter into the roof system around the perimeter of the building. Other issues identified during the investigation included: improperly flashed overflow scuppers, blistering of the roof membrane, open 'fishmouth' laps, loose metal counterflashings, membrane granule loss, and open masonry joints around the elevator/stair penthouses.



The New 2-Ply Modified Bitumen Roof System (Leak Free)