

Jesse H. Jones Hall for the Performing Arts

Roof Investigation and Repair Design
Houston, Texas



CLIENT

City of Houston

CHALLENGE

The modified bitumen roof membrane on this performing arts center exhibited severe granule loss and widespread deterioration, including splits, voids, and debonded seams. The owner wished to extend the life of the failing roof system until funds were available for reroofing.

STRUCTURE

Jones Hall is a three-thousand-seat performing arts center in downtown Houston. Constructed in the mid-1960s, the structure is 120 feet tall. The roof system consists of a mechanically attached base sheet, three plies of roofing felts, and a granulated modified bitumen cap sheet adhered in hot asphalt.

SOLUTION

WJE performed a detailed investigation of the existing roof membrane and all associated flashing details. This included test cuts combined with visual and other evaluation techniques. Based on the findings of this work, we prepared recommendations for both repair and replacement of the roof and also provided associated cost estimates. The owner selected the repair option, for which we prepared the necessary drawings and specifications. Our design included the use of a catalyzed PMMA (polymethyl-methacrylate) resin to encapsulate a layer of polyester fleece over the existing roof. The finished application was fully reinforced, seamless, and provided enhanced resistance to UV, foot traffic, mechanical abuse, and many environmental contaminants.

