



LANDMARK CONCERT HALL STUDY

KLEINHANS MUSIC HALL

Acoustic study to 2,800 seat music hall which serves as home to the Buffalo Philharmonic Orchestra evaluated the hall's acoustic integrity in the context of recent facility renovations. The \$12M spent on renovations had been implemented without particular focus on the Hall's acoustics and prompted musician concerns that the hall sounded too dry.

Sound measurements were collected, analyzed and options explored to better align architectural aesthetic upgrades with acoustic expectations. The study addressed challenges of interior refreshments, preserving its National Historic Landmark ambiance and supporting its reputation as one of the world's most acoustically perfect halls. AD explored the potential benefit of orchestra risers, the impact of carpeting in the audience seating area and interior wall finishes. The study included a brief evaluation of the sound reinforcement system which is used by the orchestra for their Pops programs and by outside organizations that rent the Hall for graduations, presentations, comedy performances, etc.

Because of the landmark status of Kleinhans, changes to the interior shape to improve the acoustics were not possible. An enhancement system which electronically changes the architectural shaping of the hall was recommended as a means to accommodate the Hall's expanded use for non-concert events. While this recommendation was not adapted, implemented suggestions included replacing sound absorbing perforated wood wall finishes with sound reflective finishes and removing carpeting to increase reverberation. These adjustments accommodated preferences for more reverberant conditions that existed when the hall was empty compared to more dry conditions when an audience was present. AD's team was later engaged to provide bid documents for a new sound system.

CLIENT

Kleinhans Music Hall

LOCATION

Buffalo, NY

PROJECT TYPE

Study / Renovation

COMPLETE

2010

COST

\$7.5 M

SEAT COUNT

2,800

ARCHITECT

HHL Architects

THEATER CONSULTANT

Schuler Shook

CONTACT

Daniel Hart
Buffalo Philharmonic Orchestra
716.885.0331

SCOPE

Acoustics
Audio