The desire for an improved acoustic environment at St. Mary of the Hills Church was occasioned by the church’s purchase of a new Lively-Fulcher pipe organ. The English cottage style building had a too low Reverberation Period for the enhancement of music rendition or for the support of the congregation in sung and spoken liturgy. The room is not large enough, or with sufficiently tall walls to achieve a truly “live” reverberance, but it was also not functioning at its maximum potential. Primary challenges were the thin finish wall material, the unsealed soft-wood ceiling deck, and the presence of heavy wood trusses that obstructed sound distribution down the Nave.

A related but separate issue was the partial bowing of side walls from the weight of the roof truss structural system.

Acoustic renovations included the hardening and sealing of the wood ceiling deck, the stiffening of side walls with double layers of gypsum board, and the replacement of the roof trusses with those of reduced girth and higher mounting in the overhead space. Further, walls and ceiling in the organ case/chamber and choir areas were strengthened with three layers of glued and fastened gypsum board to reinforce and reflect musical sound energy. Discrete ceiling mounted reflectors were also placed above the Choir to project tone down the long nave. Insulated and laminated glass was specified to attenuate the noise of exterior mounted HVAC equipment from transmitting into the worship space.