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Levi + Wong successfully uses BIM for South Cove Manor

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The client, South Cove Manor (SCM), operates a nursing home dedicated to servicing the cultural, language, and dietary needs of the Asian community of Boston. After outgrowing the current building in Boston, SCM has chosen to relocate and expand, and is building an 88,000 s/f, 141-bed replacement facility in Quincy. The nursing home will have 3 nursing units, 1 per floor, each of which is divided into 2 smaller "neighborhoods" with resident rooms overlooking a central activity and dining area. This new emerging "open social" approach to senior care will be the first of its kind in the Quincy and South Shore area. The new facility will be LEED Silver certifiable as required by the Mass. Department of Health Determination of Need requirements.

Levi + Wong Design Associates, Inc. (Levi+Wong) a 35 person multi-disciplinary design firm specializing in acute, physical rehabilitation, senior care and living, corporate, and technology projects, is serving as architects, landscape architects, interior designers, and planners for the new South Cove Manor Nursing and Rehabilitation Center project. To ensure a smooth design and construction process, the design team worked almost exclusively in Building Information Modeling (BIM) software. The team's advanced BIM processes created a virtual 3D building, including all infrastructure systems. This checkable resource helped to resolve issues during design that are normally found during construction, thereby reducing design conflicts, budgeting and scheduling problems.

The design team consisted of: Levi + Wong, a 15-year user of ArchiCAD, which itself is one of the earliest programs using parametric object 3D modeling optimized for architects; Odeh Engineers of Rhode Island, structural engineers and is a regional pioneer in high-tech, computer-assisted design; and SED Associates, MEP/FP Engineers of Boston. Midway through schematics, the owner and Levi+Wong selected Suffolk Construction of Boston as construction manager. Suffolk has developed its own well-advanced IT and BIM department, which it uses to plan and manage construction on many of its projects. Each firm's commitment extended to the use of the BIM Cost Estimating (5D) and Trade Sequencing and Coordination of MEP Systems (4D) components. The project's cost estimating process began early with Levi + Wong using the BIM (5D) quantity take-off reporting method, while Suffolk simultaneously applied the traditional, paper, process of gather quantities. Suffolk's comparison of the two methodologies showed they were closely inline on many select items.

The design and construction integration process was driven by Suffolk, which, for several months at the project's outset, chaired weekly meetings with selected subs and the design team in its BIM Theater. Most of the coordination and compromise was among the MEP subs and MEP Engineers, with the architect and structural engineer participating to make minor coordination adjustments. The architect also remained involved through remote participation during major systems coordination phases in the contractor's weekly sub-contractor BIM coordination meetings via the Navisworks

platform.

Did it work? Yes. As of this point, the building is halfway through construction; as a result of the ongoing and open collaboration between design and construction, RFI's have been minimized between Suffolk, subcontractors, and Levi+Wong - saving time and money.

Thomas Levi, AIA, is president of Levi + Wong Design Associates, Concord, Mass.

New England Real Estate Journal - 17 Accord Park Drive #207, Norwell MA 02061 - (781) 878-4540