

BUILDING THE NEXT GENERATION OF ADVANCED HEALTHCARE FACILITIES FROM THE GROUND UP

Compromise is never an option when it comes to the care you give your patients. The same goes when planning and building your healthcare facilities. Gilbane's mission on every healthcare project is to build an enhanced medical and care-giving environment by implementing critical planning and ensuring quality and speed to market to meet the agreed schedule for first patient treatment.

We delivered our first hospital project in 1898, giving us a long legacy of healthcare knowledge. We've been building on our ground-up hospital experience ever since and we understand the formula for seamlessly delivering your project. The below guide details the advanced delivery tools, approaches and technology that are implemented to achieve a successful ground-up hospital construction project.



COST ADVISOR

Our unique interactive tool for conceptual cost modeling quickly and accurately analyzes project budgets for a proposed program before project costs have been allocated. Our database of completed healthcare projects allows Gilbane to provide precise cost predications from our historic construction data. The process works in collaboration with owners and designers to develop construction and total project costs, while allowing flexibility for modifications, escalation impacts, phasing options or other potential scenarios.



EXTENSIVE PRECONSTRUCTION EFFORTS

Preconstruction is a vital step in evaluating master plans, creating greater departmental adjacencies, increasing hospital efficiencies and achieving value engineering. A vital component of preconstruction success is maintaining the same project team from the beginning of preconstruction efforts through to the completion of construction, to benefit from continuity and a depth of project knowledge.

Our Schedule Risk Analysis services provide quantifiable data on the health of a project by identifying, assessing and mitigating schedule risks. These preconstruction efforts can identify alternative phasing, recognize methods for schedule acceleration and highlight opportunities for significant cost savings, providing clients with cost and schedule efficiency and certainty. Preconstruction is also an opportunity to purchase materials in advance to freeze the cost of planned and agreed elements of a building, such as the structure or foundation. This pre-planning allows a construction team to value engineer the schedule and budget by purchasing for core and shell construction elements, while simultaneously finishing the fit-out design.



EFFICIENT CONSTRUCTIBILITY AND DOCUMENT REVIEW PROCESS

Gilbane's Interdisciplinary Document Coordination (IDC) process identifies, tracks and communicates document coordination issues to the design and project teams prior to procurement and construction. IDC reduces unnecessary requests for information, change orders and project delays, improves relationships amongst owners, architects, engineers and contractors and enhances the quality process by allowing design teams to provide collaborative feedback. On average, clients can expect a 10:1 return on the cost of avoided change orders versus initial review expenditures.



THE USE OF INTEGRATED PROJECT DELIVERY / LEAN APPROACHES

Gilbane utilizes Lean principles and integrated project delivery (IPD) components to drive value for our clients through an unwavering commitment to collaboration and transparency. Early establishment of performance metrics, interactive planning sessions and the development of early target costs are a few of the IPD approaches we implement. Our approach to “focused collocation” brings together relevant trades and consultants for a concentrated period of time or phase to resolve a specific issue together, rather than requiring team collocation for the complete duration of the project.



DESIGN ASSIST

Design Assist can be implemented to achieve Lean preconstruction. Involving trades during design is a collaborative approach to identifying current trends, material availability, best practices and lowest costs. Trades are not committed and operate on a consultancy basis during the pre-bidding stage, which has no impact on future bidding, but is proactive in eliminating redesign and rework later in the project.



A COLLABORATIVE APPROACH

In addition to the design team and facilities staff, it's important to collaborate with the medical staff that will occupy the building to ensure a space meets their functional requirements and allows for the provision of a high-level of patient care. Gilbane believes in a flexible and respectful approach that helps our clients and design partners realize their vision, while maintaining quality, budget and schedule.



INCREASED EFFICIENCY THROUGH STATE-OF-THE-ART TECHNOLOGY

Leveraging Virtual Design and Construction (VDC) technology during the design phase maximizes value and minimizes waste. Gilbane's VDC team has the capability to take a leadership role in all aspects of Building Information Modeling (BIM) support, from laser scanning existing conditions, to creating a 3D model, to enhancing integration of facility management and systems integration. The use of VDC helps healthcare administration and clinical staff to visualize a project's design by providing a lifelike rendering to review, instead of trying to interpret 2D construction drawings. The imaging includes the positioning of furniture, equipment and MEP elements to obtain client feedback and approval based on the detailed mock ups, to then implement these designs during the construction phase. This conceptual support results in a clear client understanding of the end product, eradicating confusion and minimizing field changes after implementation.



A FOCUS ON QUALITY

Hospital projects need a proactive quality program based on prevention rather than correction. Gilbane's quality plans and innovative methods address the requirements of the design and construction phases, while considering a project's unique issues. To ensure quality goals are achieved, Gilbane utilizes a Robotic Total Station (RTS). After the completion and approval of the virtual design, an RTS is implemented to layout work in the field, based on specifications from the 3D model. The RTS intricately calculates positions for excavation, formwork and MEP installation with total accuracy, saving time and resources in the set up process and eradicating the expense of fixing errors later.



DELIBERATE PLANS FOR WORKING ON OCCUPIED CAMPUSES

Logistics plans that address the unique challenges inherent to building on hospital sites are critical. Careful consideration must be given to existing conditions, the anticipation of hidden conditions, pedestrian safety, traffic control, protection of adjacent buildings, and sequencing of critical milestones. This results in a detailed phasing and logistics plan that mitigates disruption to surrounding operations, patients, staff, visitors, and maintains safety, air quality and emergency procedures.



EXPERIENCE WITH COMPLEX MEP COORDINATION

The demanding requirements of modern healthcare necessitate extensive MEP infrastructure. Facilities within active campus environments require a comprehensive focus on investigation work, shut-downs, and cut-overs to ensure all systems remain online and hospitals stay fully operational throughout the life of a project. Gilbane has expertise in completing phased, multiple MEP shut-downs and demanding infection control programs on active campuses, including IT and infrastructure upgrades.

To achieve minimal disturbance and maximize schedule reduction, offsite assembly of the building's components, otherwise known as prefabrication, is the most favorable option. The prefabrication of items such as risers, horizontal run-outs and mechanical electrical rooms all increase efficiency and save time over the life of a project. Components are prefabricated offsite, including the structure and skin, and are fully fit-out with controls, lighting and sprinklers, before being transported to site and installed faster than traditional onsite construction.



TRANSITION PLANNING AND MANAGEMENT

Our Transition Planning and Management (TPM) team are experts in providing a successful transition. Their focus is on the creation and implementation of a logical, achievable plan that limits downtime and impact to a hospital's operations, project schedule and budget. Our TPM portfolio includes over 60 million square feet of healthcare administrative, research and clinical space in both the public and private sectors.

To find out how we can use these techniques and tools to ensure your next healthcare project is successful, connect with our VP of healthcare, [Peter Mulcahey](#).