

Designs on Quality

Building a new cancer center? Five tips can help protect your budget and timeline. **By Daniel S. Chang, AIA, NCARB**

In the excitement of planning a new cancer facility, center administrators and doctors focus on finding the right site, choosing the best equipment, designing the center and staying within the budget and timeline—but often don't consider how these factors interconnect.

The following points will help ensure that your selected technology, design preferences and site will work with your financial considerations and expected opening date:

1. Understand site restrictions. A steep slope or narrow lot pose significant challenges, which may require specialized adaptations to your vault or even restrict the equipment that can work in your facility. Similarly, the need to keep surrounding offices or facilities operational during construction can also increase time and cost, particularly if work must proceed at night or on weekends, or in phases that minimize disruption to other activities.

For instance, Treasure Coast Radiation Oncology of Stuart, Fla., built a cancer center within the footprint of a former seafood restaurant in an active shopping center, prompting the need to examine traffic patterns and safety of other patrons. Understanding building restrictions during the planning phase kept the need to reconfigure or adapt on the fly to a minimum.

In addition, the weight and size of some oncology equipment requires reinforced floors, thick shielding walls and specific protective distances between other buildings or public spaces.

2. Involve equipment manufacturers upfront. Newer equipment requires much more robust electrical and HVAC systems than previous treatment technologies. If you are rebuilding on an existing site,



DESIGNED TO MATCH its suburban surroundings, the Kirklin Center is a University of Alabama at Birmingham outreach cancer center. *photo/courtesy AE Design*

do not assume that your current systems will support your new equipment's needs. Working cooperatively from the start with your designers and equipment manufacturers will ensure that you have the systems in place when and where you need them—and at the lowest cost for installation.

3. Include a contingency factor in your budget. Extended delays in zoning or certificate of need approvals can markedly drive up costs. Prices for building materials may rise and the cost of carrying the land will also impact your budget. If your opening date is firm, you may also incur costs for rush deliveries, accelerated construction schedules and redesign to accommodate any unexpected delays. Working with your architect in the early stages of planning can keep more options open, even as the time available for construction shrinks. Phased building in which construction begins while plans are being drawn for the next stage can reduce the time needed and keep costs under control.

4. Build flexible vaults. This will reduce future costs of renovation and equipment upgrades. While your new center will have current equipment, in a few years technology and market pressure will demand consideration of new equipment or modalities. It is much less expensive to build flexible vaults initially than to renovate and redesign space later.

Vaults in the Community Cancer Center of North Florida, for example, were designed with additional shielding conduits and utilities to enable easier upgrades in the future. The space also allows for another vault without the need for substantial renovation costs.

5. Identify the facility's nonclinical needs and purposes. The University of Alabama at Birmingham (UAB) built an outreach cancer center in the city's suburbs. Called the Kirklin Center, UAB's facility needed to attract attention from the highway while still blending in with its residential environment. In addition, it needed meeting rooms for education and community use. The initial design had to weigh each of these factors, all of which affected the look, size, materials and cost of the center. Early identification of all the purposes your center will serve can ensure you get the best design at the lowest cost. Adding more rooms or a soaring profile in the initial design is much easier and less expensive than adding them later.

Perhaps the most important tip is this: Working with your architect and equipment manufacturers as a team from start to finish will help result in a center that meets your needs—on time and within your budget. ■

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