JOHN W. BAUMGARTEN ARCHITECT, P.C.

Integrated Design: A Marriage of Style and Substance

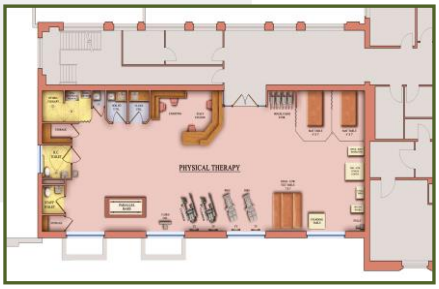
Our clients rely on us to use our experience in order to bring added value to their health care renovation projects. To this end, we have developed a multi-disciplinary approach to design which integrates the aesthetic and technical components of a project. Simply put, we seek to pre-coordinate the architectural, plumbing, mechanical, environmental, electrical, and fire protection elements during the earliest stages of design. This pre-coordination approach results in fewer costly "surprises" during the construction phase and most often allows a project to proceed along its timeline without significant delays. The result is an integrated design, delivered on-time and on-budget.

One of the keys to successful pre-coordination is developing a thorough understanding of the existing conditions within the building being altered. In other words, "you have to do your homework". Of course this goes hand-in-hand with gaining a serious understanding of the client's functional program. When you begin to survey existing conditions (the "where"), you want to do so with an almost subconscious understanding of the program (the "what"). Creating a marriage between the two is "the how". The initial part of any field survey should focus on identifying problem areas which could result in delays, added costs and/or code compliance issues. Some of these "deal breakers" include: the presence of asbestos or lead paint which require a costly clean-up, areas with low structural headroom which may make it difficult to run ductwork & piping and the presence of large, inconveniently located infrastructure elements which are too expensive or logistically difficult to move. Once the "deal breakers" are identified, we look at the client's program for general correlations with the problem areas. For example, we would seek to locate storage rooms and toilets in areas of low headroom. We might also look at functionally appropriate finish/substrate options that would allow us to encapsulate asbestos rather than remove it.

The next tier of investigation is to find possible "pathways" for new mechanical systems. These include locations for exhausts/chimneys, fresh air intake louvers/monitors and air handlers/fans & ductwork The nature of the areas above and below the space being altered always dictate the configurations of mechanical systems and ultimately the floor plan layout. For example, if a roof is located above or reasonably adjacent to the altered space, this would allow or suggest use of packaged rooftop air conditioning units. Conversely, if there are utility/service areas below the altered space, split system air handlers might work with air being fed upward into the altered space from below. If neither roof nor available space below exists, it may suggest that space for mechanical rooms must be accommodated within the client's space program.

Once the "pathways" are identified, one must look at the existing systems that the new work must tie-into. Is there sufficient primary and/or emergency power? Is there an existing chilled water, boiler plant or co-generation plant with sufficient capacity to feed the renovated space? If such capacity exists, this will dictate the use of certain equipment types and configurations.

So in this theoretical example, we have "bent" elements of the layout around areas of low headroom and around inconvenient infrastructure elements, determined how not to disturb asbestos, determined what kind of new mechanical systems will be specified and where equipment will be located, and we have done so before actually designing the floor plan. This is integrated design at its best. The resulting floor plan almost "designs itself" as the program is laid out along the line of least resistance, with its major infrastructure elements pre-coordinated and married to both the existing building and the client's program.



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