

Planning and Design of a New Facility

Planning

Planning a new facility is a unique opportunity to redefine or reaffirm the direction of the school. It is a chance to not only think about “Who are we?” but also “Who do we want to be?”

The goal of the initial planning, often called “Pre-Design”, is to establish the basis for the design of the new school. To do this, it is necessary to establish the goals for the project, the educational and community experience the school seeks to create, the type and amount of space and amenities required, and the regulatory context that will guide development of the site. These items are documented in the Program Brief, a document that establishes a common understanding between all team members, setting the table for a successful project.

The Program Brief includes:

- Definition of Project Goals
 - *Educational*
 - *Design/Regional Context*
 - *Environmental*
 - *Community*
 - *Growth/Size*
 - *Financial*
 - *Schedule*
- Educational Specifications
 - *The “Ed Specs” are written by the school’s educators or an educational consultant. They describe the educational program, its philosophy, organization, teaching style and space requirements.*
- Space Program
 - *Based on the Ed Specs, the space program compiles all of the space and amenity needs for the project including number, type, adjacencies and special environmental requirements. Outdoor facilities are included.*
- Preliminary Budget
 - *Using the totals from the Space Program and unit cost data from local resources, a preliminary project budget can be established including both hard (construction) and soft (architectural/engineering, legal, permit, furniture, etc) costs.*
- Regulatory Context
 - *Develop understanding of applicable land use, zoning, and building code regulations. Identify permit milestones and timelines.*

Design

Good design transforms the programming information into “concrete” design proposals that meet the space requirements and capture the spirit of the school in its local and regional setting. At the outset, multiple design schemes are developed for review. One scheme or combinations of schemes are selected and refinements are made for the final concept design. An outline specification is developed describing the materials and systems to be utilized in the school.

In many international school projects, an educational design architect spearheads this effort. Many schools find this approach valuable, as they can work with an expert who speaks their language: education. The design architect is knowledgeable about current teaching paradigms and their manifestation in facility design. The right consultant is a proactive collaborator who understands your goals at a deep level and can offer creative options to assist you.

In this model, the local architectural and engineering team implements the design. They assure that the design meets all local codes, is buildable given local markets and skills, and prepares the technical documents required for permitting, tendering and construction. As the project progresses and becomes more technical, their involvement increases while the design architect decreases. Many clients find it valuable to retain the design architect throughout the process, however, to ensure the project is built according to the original design and the Owner’s wishes.

The Owner’s Project Manager coordinates the consultants’ work, ensuring that the Owner has the full scope of services covered by their consultants.

Getting Organized

Most schools establish a facilities committee for construction projects. Often a board subcommittee, the committee usually includes several board members, school director, facilities person, and parents. Although some directors have significant autonomy, the facilities committee’s responsibility is to oversee the process and ultimately bring a recommendation to the full board for approval

Other key players include the Owner’s Project Manager, and the local architect and engineer (a/e). The PM develops schedules and budgets, recommends the delivery approach, and coordinates the work of the consultant team. Many have professional cost estimators on staff. Initially the local a/e team reviews the design for compliance with local codes and norms. As described above, their involvement increases as the project moves towards a more technical nature.

Summary

To summarize, the design process proceeds from the global to the specific, growing increasingly technical and detailed in nature. We generally recommend a two-step process for design. The first step is Concept Design in which the initial design is conceptualized. This is often the first milestone when an accurate estimate is possible, and therefore represents an excellent time to evaluate the project cost. There is still much work for the design architect, particularly in the interior, which takes place in the next (Design Development) phase.

A summary of the project phases is as follows:

Phase Name	Activity	Design Architect	Local Architect/Engineer
Pre-Design	Planning	95%	5%
Concept Design	Overall Design	90%	10%
Design Development	Exterior and Interior Design, Integration of Building Systems	70%	30%
Construction Documents	Technical Documentation	10% (Periodic Review of Documentation)	90%
Tendering	Competitive bidding of project to multiple contractors	0%	100%
Construction Administration	Monitoring Construction Activities	10% (Periodic Site Visits)	90%

These are the broad-brush strokes of the process. We customize our process given the needs of the project, and provide detailed proposals outlining our proposed scope of work. When the time is right, we would love to provide one for the Lincoln School project.

With some schools, we negotiate an agreement before we begin and once finalized, travel to the school. Other schools fly us to their school to meet the school team, learn about the project and begin working right away. In appreciation, we generally discount our services for that kind of trip and prepare a proposal when we return.

The Program Brief and Concept Design portion of the work (aka Masterplanning) often constitute the work included in the first agreement. Generally we include two visits to the school for this work but that is flexible. The first trip is to gather information for the programming effort. For the second trip, we return with the initial concept sketches and review those with the school. We then return and put together a Concept Design booklet with rendered plans and 3d visualizations of the project.

During our first visit, we can provide one or all of our presentations developed for the school community. They are:

- The ABC's of Pre-Construction Planning - *explanation of the planning process and how to get started.*
- High Performance Learning Environments – *sustainably designed schools.*
- Design for the Whole Child – *how schools can address the social/emotional, physical, academic and community needs of our students.*

We hope that you find these useful. Please don't hesitate to contact us with any questions re your project or our firm. We are here to help.

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