10 THINGS TO AVOID
ON A COMMERCIAL PROJECT

1. POOR SITE SELECTION

"Does my project fit on the site? Is there room for future expansion? Is this the best site?" These are just a few of the important things you'll need to consider at the start of any project. Establishing program goals that define not only the site, but the type of building and its intended use is essential. Once goals are established, it's very beneficial to bring an architect and a civil engineer on board for pre-design services. **Pre-design services address issues such as zoning, code compliance, soil bearings, etc.**

There are limitations to how much of a site can be developed. Knowing the square footage of your building and the required parking spaces can be determined in a **programming and conceptual phase** with your architect. Program goals are outlined and discussed, and the architect establishes the size, location, and relationships between all the spaces in the concept phase. A quick design sketch incorporating elements of the program, as well as zoning constraints will give you a clear idea as to how to move forward with the design.

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2. POOR SOILS

Don't wait until you close on a property before investigating the soils or subsurface conditions. Be sure to arrange for a **geotechnical analysis** by a licensed geotechnical engineer. Soil borings and test pits (minimal disturbance and most economical for shallow testing) are drilled or dug to determine what's below grade. Your geotechnical engineer will recommend what type of soil boring should be used specifically for your site.

Soil samples provide data about potential contamination in surface soil (0 to 3 feet) that may affect animals and people in residences, and in subsurface soil (3 to 15 feet) that may affect utility, construction, or excavation workers. Soil borings and logs will allow the engineer to determine the bearing capacity of the soil at footing depth. Poor bearing capacity can lead to larger mat style footings, over excavation, and stabilization or expensive footing designs incorporating piles. Other pitfalls may include rock (may require blasting), buried debris, or previously disturbed soils. Performing a preliminary geotechnical investigation will ensure you make an informed decision and prepare a budget for your site work.

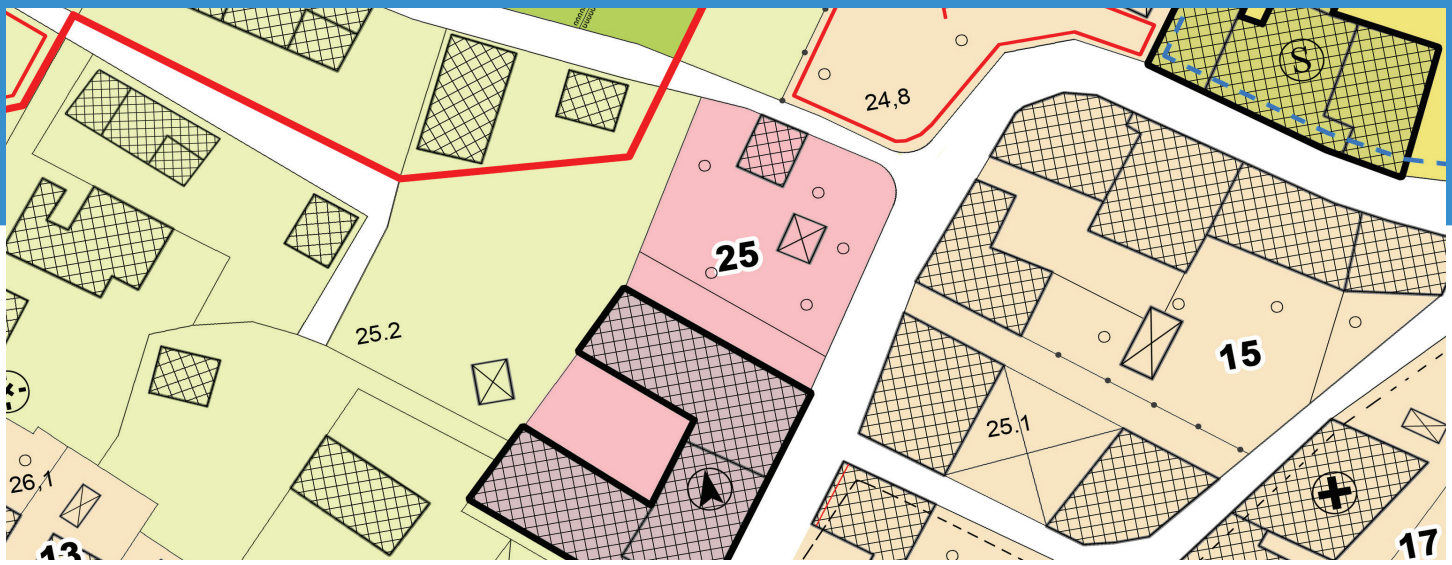
Another important factor to consider is **storm water management** (the reduction of rainwater, melted snow and ice into streets, lawns and other sites, as well as contamination) and the type that will be required for your site. Knowing where rainwater and snowmelt flow on your property when it doesn't get absorbed into the ground is a great first step. Implementing best management practices to reduce runoff and to make sure that it's clean when it leaves your property is the next step. Involving the services of an expert in this field will be paramount to the success of your project.

3. ENVIRONMENTAL ISSUES

Pristine sites are few and far between. Sometimes the site's prior use will have contaminated the ground. Or older building materials may have created an environmental issue due to hazardous materials such as asbestos or lead. Asbestos can be found in floor tile, plaster, caulk, roofing, pipe insulation, and building panels. Lead paint was used prior to 1978 and requires remediation. Lead may also be found in piping and fixtures leading to water and soil contamination.

Remediation will generate lead-contaminated dust and should be done by an environmental engineering firm. Mercury and PCB's (polychlorinated biphenyls) are sometimes found in materials like flooring, oil-based paint, electric parts, hydraulic fluids, fluorescent lighting & plasticizers. PCB's were manufactured between 1929 and 1979 when they were banned due to harmful effects on human health and the environment where they bind strongly to soil and sediment. Mercury was also used in paint and as a fungicide until 1991 when its use was phased out.

How can you avoid buying a "hot mess"? Engaging the services of an environmental engineer for a **Phase I Report** will do research into a site's former life and look at surrounding areas and any nearby contaminated sites for potential impact to your property. Onsite investigation and observations will culminate in a report identifying any potential environmental issues. If there are areas of concern, further testing can be part of a Phase II investigation. These issues don't necessarily render a site unusable but through monitoring and/or remediation, can allow for use of the property. Education will allow you to incorporate the associated expenses into your negotiations or project budget.



4. ZONING ISSUES

A crucial piece of the puzzle is zoning. It's a puzzle because each town has its own rules (and definitions) when it comes to regulating land use. You'll want to know if your proposed use is allowed on the property you plan to develop. If not, a variance process may allow you to develop to your specifications.

The development or re-development of a site will almost always require a public hearing with the **planning board** or **zoning board of adjustment**. One exception is tenant fit-outs or existing building use without exterior modifications. These types of development projects usually just require building permits and won't be required to go through a board approval process.

A planning board approval can add a significant amount of time to a project. These applications can run from 4 to 18 months or more. If your project is on undeveloped land, you should budget approximately 12 months for approval. Consulting with an architect and/or civil engineer will help guide you through this process. Should a variance be required, a land-use attorney is a valuable asset as he will represent you before the planning board or zoning board of adjustment.

5. UNREALISTIC BUDGET

We all cringe when we hear the "B" word. However, in the design process, **the budget** is your best friend. Establishing a realistic budget usually comes after **the wish list**. It's critical to share how much money you want to allocate to a project with your architect. If they don't ask in the first meeting, run!

A competent architect should have a reasonable handle on what construction costs are for the building type. A detailed construction cost estimate, or take-off, is required if the project encompasses renovations. There are a couple of ways to accomplish this: 1) your architect can hire a professional estimator as a consultant to get a preliminary cost estimate early on in the schematic design phase. This estimate can be updated in the design development and construction document phases to ensure things have not gotten off course as the design progresses. Or 2) your contractor is involved during the design. Early on, this team approach can facilitate a smoother project and keep the project on budget. There are a number of other methods for doing this including construction design-build, cost-plus contract, or simply hiring the contractor for estimating services.

Once the probable construction cost is established, you may need to make adjustments. Increasing the project funds to meet the estimate, or decreasing the scope of the project, is one example. Phasing the project may be another method allowing for the financing of the project over time. Architects can be your advocate in the process of reviewing and discussing contractor bids so you can make an informed decision.

In summary, have an honest and open dialog with your architect about your goals and finances. Listen to your team when they provide real world numbers and adjust if necessary.

6. UNREALISTIC SCHEDULE

When it comes to designing and building, setting an unrealistic schedule can yield disastrous consequences in every phase of the project. Rushing design professionals can lead to mistakes like missing design elements, lack of coordination, and lack of review time. If a short timeline is given during schematic design (the very first phase of design), not enough time will be dedicated to looking at the space from a functional or operational standpoint.

Allow ample time for coordination to ensure aspects of the design won't interfere with one another (i.e. MEP, structural, etc.), and for review time by a registered architect. If your construction documents are missing details during the bidding process, or contractors don't have enough time to source and price materials and labor, it will cost you more when the contractor needs to issue change orders.

Owners often push an unrealistic construction schedule in order to start operations on a specific date. A realistic schedule that is agreed to by ALL parties is critical. If the general contractor is under the gun from the beginning, he'll be rushing and cutting corners to try and hit the deadline. This is not good for your investment. A better motivator is creating a bonus structure for finishing early.

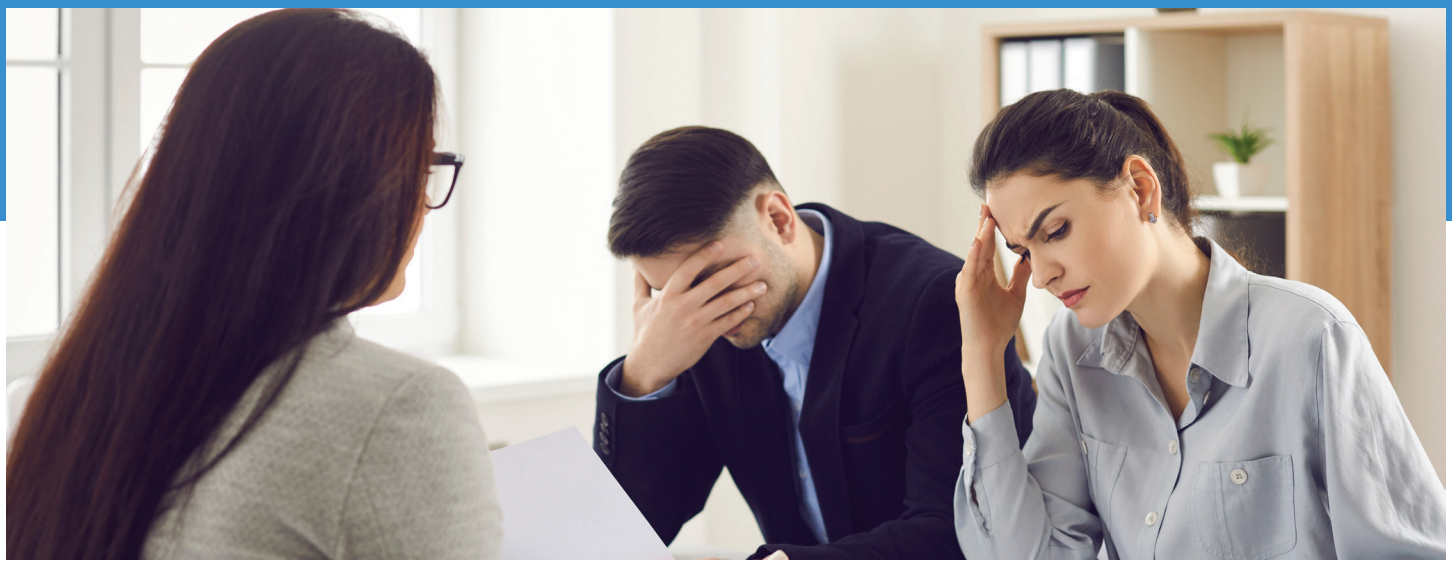
So how do you set a realistic schedule? **Communicate with your team early.** Work with your architect to establish a complete project schedule from design through occupancy. Developing a Gantt chart (a bar graph) schedule is a valuable tool for understanding a complex schedule of interconnected activities.

7 THE WRONG CONTRACTOR

Selecting the right contractor for your project is essential for a successful project! Selecting the wrong contractor (like choosing the wrong spouse) can make your life "hell on earth." Why? Essentially, you will be "married" to that person (company) for a year or more and will have to live the rest of your life with the consequences. Scared yet? You should be.

On the other hand, picking the right contractor can be "heaven on earth." Do your research. A great place to start is by asking your architect. Architects will have experienced the construction of projects that went smoothly and some, not so smoothly. They'll inevitably remember which contractors were great to work with while providing high-quality construction.

During the design process, your architect will get to know you well. Like a professional matchmaker, they'll know a few contractors that would be a good match for you, both from a project type and personality perspective. We often provide two or three contractor referrals and recommend that our clients meet with and tour some of their completed projects, as well as, projects under construction. This will give you time to get to know them personally, understand their communication style, view their quality of work, and possibly have the opportunity to speak with current and former clients. Reference checks directly from a contractor's client are ideal. Choosing a contractor early (see unrealistic budget above) will also help avoid making the wrong choice because you'll have the opportunity to interact with the contractor for a period of time before construction actually begins. This allows for a course correction if needed.



8 SIGNING THE WRONG AGREEMENT

The wrong contract is a pitfall to avoid in any transaction, but especially in construction. **Never, never, ever let a contractor provide you with an agreement to sign.** An initial proposal and bid are fine, but not a contract. These types of agreements are inevitably written to protect the contractor and their interests, not yours. As the owner, it's your project and your money. The contract should protect you, and you should be able to dictate the terms that are most important. It should also be fair to the contractor. Courts do not look favorably at unrealistic clauses in contracts. The industry standard is a series of contracts developed by the American Institute of Architects (AIA). These contracts and supporting documents have been developed over decades and tried in courts throughout the world. Your architect and legal counsel can advise you on the appropriate agreement and make any necessary modifications for your specific project or situation.

The two most often utilized documents are:

- The Standard Form of Agreement Between Owner and Contractor
- General Conditions for Construction

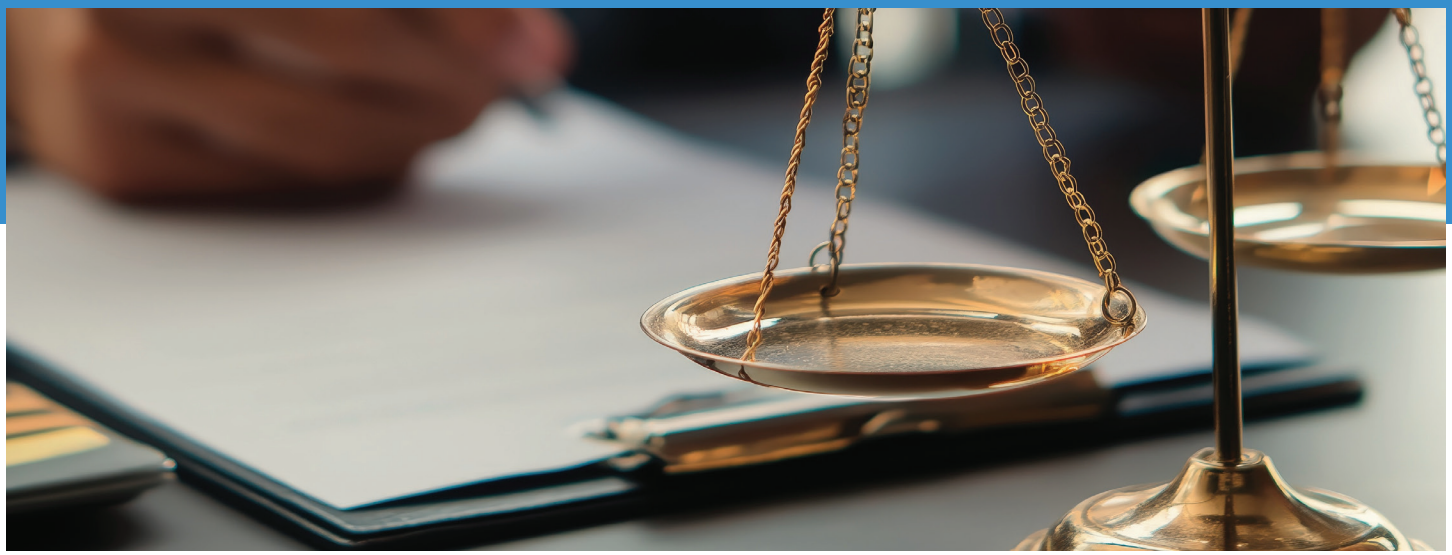
These can be used in conjunction with other standardized AIA documents that protect all parties. These tried and true agreements are the bedrock of most construction projects and can be relied upon to create a fair and equitable agreement that is clear and concise for all parties involved. There are other options available, such as the Design Build Institute of America that may be appropriate for certain projects. Consult with your attorney before executing any agreement.

9 BUILDING THE WRONG TEAM

Construction is a team sport. Picking the wrong team is not going to win the game and it will likely go into overtime. A great football team is always led by a greater quarterback. When it comes to construction, your architect is your quarterback. **An architect is the only team member who has the training and expertise to conceptualize an idea, design and document all the pieces, coordinate all the disciplines and guide the process through construction.** The architect is your advocate in the process! The architect will typically know a number of quality contractors who will be able to execute the plans as designed (the design you paid for) in the field.

During design, your architect can help build your team which often includes a number of engineers: civil, structural, mechanical, electrical, environmental, geotechnical, audio-video/ security and acoustical, along with interior designers, lighting designers, landscape architects, kitchen and bath consultants, and any other specialty necessary for your project.

Architects are generalists by training but should not be created equal even though they possess the same license. It is talent, experience and service that make each one unique. Hiring an architect that you met on the soccer field or who designed your friend's house might seem like a good idea, but you want to find an architect who has expertise in your specific building typology. An architect who has only residential design/construction experience will not be your best choice for a commercial building project. Conversely, if you're building a home, you'll want to find one who has residential experience. Let your quarterback build and lead your team to a successful completion of your project!



10 LAWSUITS

Lawsuits are no fun for anyone involved, except for, perhaps, the lawyers. They're a huge waste of money and emotional energy. Litigation can be avoided in most instances.

Good communication is the key to any vital relationship. Good, clear and concise documentation (such as AIA Construction Agreements) is also an integral component of the contractual relationship. These contracts allow you to select options before litigation takes place such as arbitration or mediation. Mediation is an option that uses a third party to assist in reaching an amicable resolution. This option leaves the door open so you can proceed to litigation if you are not satisfied with the outcome. Arbitration is binding and you may waive your right to litigation if you selected this option in your agreement. Consult with your attorney as to which options are best for you and your project. The best way to avoid a lawsuit is to take heed to the previous 9 points.

Now that you know about the ten things to avoid on a commercial project - ready to learn about the correct ways to approach your upcoming project?

Visit us online at www.tm-architects.com or
give us a call at 732.262.0046 today.