

Planning, Designing, and Building your Sports Field

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Over the past 20 years with the high quality, complex design, high-use demands on athletic facilities, **sports field design and construction** has emerged as a specialty craft that takes years of experience and investment in people and equipment to develop. Yet time and again owners turn to landscaping, grading, or civil contractors for their sports field construction needs, often tacking on an athletic field to a larger campus construction project. Anyone can grade a field and grow grass...right? With the introduction of automatic laser controlled grading systems, tolerances are lower and expectations are greater. Even though a grading contractor may use laser guided equipment, they most likely don't have the custom built equipment of the weight and size to get within the tolerances expected for athletic fields (standard is ¼" over 50ft.). Equally as important is that the field be designed with the proper grade and layout, consistent footing and drainage. The most successful sports field projects consistently involve a qualified field designer and field contractor. This holds true for **synthetic turf** as well as **natural turf** projects.

Planning - The All Important "P" Word

Planning can make or break any project, and sports field construction & renovations are no exception. Start by identifying design firms and sports field contractors (some contractors do both). Pre-qualify these firms based on experience and references. Field builders can be found through organizations such as STMA (Sports Turf Managers Association) or AFBA (American Field Builders Assoc.). Discuss your project with them to get ideas.

The next step in effective planning is a site evaluation. At a minimum this should include evaluation of grading & land use issues, site drainage, soil conditions, neighbors, lighting, pedestrian flow and parking, available space, traffic flow, truck and maintenance equipment access, water sources, and current and potential use needs.

Continue to consult with a sports field contractor and designer as you go through the planning process, asking for informal quotes for "ballpark" pricing. Developing a budget and understanding maintenance capabilities should be part of the planning process as well. Meeting with the end users (coaches & field managers) will help to understand what the expectations will be for field performance and level of use.

Field Design

The design phase is when interviewing of design or design-build firms should begin. Many firms may be well qualified to design an entire site or facility, but lack the knowledge or expertise to design and write specifications for sports fields. Oftentimes the decision to hire a design firm is driven by the procurement process. We usually see

three types: design-build, design-bid-build, or Request for Proposals (RFP). In the design-build scenario, it is wise to interview sports field contractors and sports field design firms. Again, some sports field builders have in-house CAD capabilities, and can turn-key the design-build project. In the design-bid-build scenario, very detailed specifications and field contractor qualifications should be included in the project bid documents. You may want to consider pre-qualification of field contractors: experience & references, % of work self-performed, financial stability, bonding capability, insurance program, Certified Sports Field Manager (CSFM) on staff, owned equipment list, length of time in business, etc. The pre-qualification process becomes more valuable in a RFP scenario. The benefit of an RFP process is the wealth of knowledge gained from the interview/presentation process. The challenge is trying to compare proposals as you would be able to in an “apples to apples” bid situation.

One of the biggest mistakes we see in the design is the drainage system, if included at all. We have received bid packages for sports fields where the design firm (lacking the necessary experience) designed the field with a foundational drainage system. This may work on roads, but not athletic fields.

Construction

Adequate time should be allowed for the design & permitting process. Depending on the scope of the project, this process could take up to 4 months. This includes erosion control, surveys, soil analysis, materials selection and testing. Cost outside of the field such as water source, should also be considered. The best case scenario is to have the field builder already on board to work together with the field designer.

Even in a negotiated RFP scenario, the owner still needs to require materials testing and submittals (sand, infield mix, rootzone, irrigation heads, etc.) on the front end of the project. This will help avoid questions about materials used versus proposed materials as the project progresses.

If at any time during the construction process you don't feel right about something, certainly ask the question. One of the benefits of a design firm is they can assist with quality control, inspecting installation and materials in relation to design and specifications. At the conclusion of the project, make sure the contractor is required to provide as-built drawings, especially helpful when irrigation systems are installed.