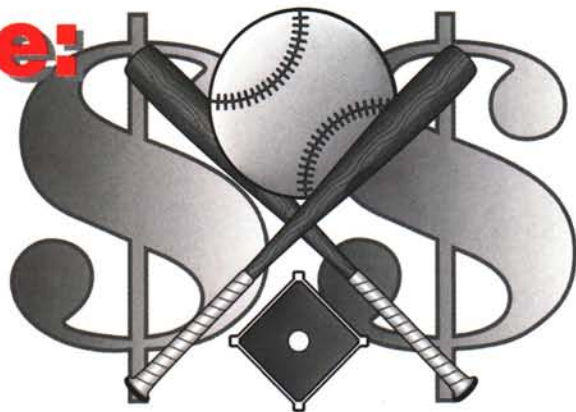


# The Bottom Line: Ballfield Budgeting



by Tim Moore

**D**o your homework!  
I'm sure every one of you remembers at least one of your parents telling you to do your homework. Well, I hate to bring back unpleasant memories, but I'm going to tell you the same thing.

You have to do your homework to establish, revise, and maintain accurate budgets for ballfield construction, renovation, and maintenance. By homework, I mean research.

The research I'm talking about involves interviewing other sports turf managers, suppliers, and contractors; and creating a great deal of documentation. You *must* keep track of everything you do.

## Construction and renovation

How much does it cost to build a ballfield?

I get asked that question all the time. I respond with a similar question: "How much does it cost to build a house?" I continue, "It depends on how big it is, and what the house has in it."

You can buy a 14-foot by 70-foot mobile home for, say, \$30,000. A vinyl-sided, three-bedroom house in the suburbs could run you \$200,000. If you're looking for a 6,000 square-foot, all-brick home on five acres, you could wind up paying \$750,000.

When developing an initial construction budget, determine



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how much the *field you need* costs, not how much you can afford. Other entities will give you that number.

Remember, as a sports turf manager, you are much more of an expert on ballfield construction and budgeting than the budget specialist or the on-staff civil engineer. They count on your input; give it to them freely. They want to see a successful project as much as you do.

Determine your needs and do your homework. Talk to area planners who determine recreation needs, ask user groups what they need, and study current trends in sports. These inquiries will allow you to determine the level of play on your new fields. You can then design appropriately for a neighborhood recreative, a league play, or a tournament play field.

Differences in these fields will be found under the turf, in the root zone, irrigation, and drainage systems. The grade will be a consistent factor in all fields. Do *not* compromise the precision grading.

Some general construction costs follow. Keep in mind that costs will vary by geographic location. I will not attempt to price professional or high-performance, sand-based systems. Dr. Dave Minner suggested some price ranges for those types of fields in an article several months ago. These general costs reflect budgeting for municipal-type fields, those that can host events from t-ball practice, to high school football and soccer, to industrial league baseball.

#### • Grading

Rough grading is site specific. It depends on the existing grade. Costs will be determined by how much earth has to be moved.

Ask some reputable local excavators for budget numbers. *They* want to make sure you budget enough as well.

Precision fine grading can run in the neighborhood of \$.25 per square foot. It will be the best 25 cents you ever spend. It's also cheaper than a sprained or broken ankle!

#### • Amendments

High-quality, organic, composted materials can cost up to \$.10 per square foot, per inch depth incorporated (mixed evenly throughout the root zone).

High-quality sand can run up to \$.15 per square foot, per inch depth incorporated.

#### • Drainage

This can be one of the most expensive ingredients in the construction mix. It can run from \$.20 per square foot for low-end sideline channel drains, to more than \$2.00 per square foot for an entire herringbone system.

#### • Irrigation

For a no-frills system, irrigation can cost approximately \$.20 per square foot, plus your initial hookup. Do your homework on the hookup charge. In the metropolitan Washington, D.C., area, hookup can cost more the system itself. Don't be caught off guard.

#### • Seeding or sprigging

This will run about \$.05 to \$.10 per square foot.

#### • Sodding

Sodding can range from \$.23 to \$.30 for locally grown, cool-season turf, installed; and from \$.25 to \$.35 for locally grown, warm-season turf, installed.

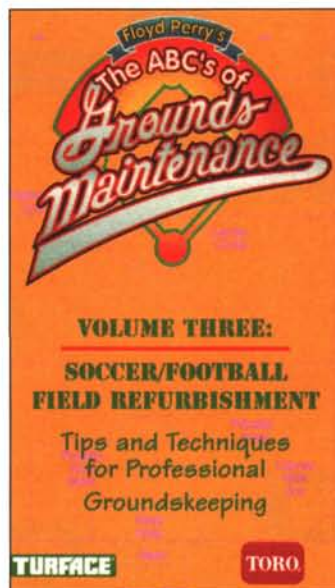
I suggest square-foot prices because they seem easier for non-ballfield people to understand. Many construction projects are budgeted using accepted square-foot costs.

When budgeting for parking lots, my organization's development office uses \$1,000 per space, which translates to \$3.33 per square foot. It sure would be nice to get that for a parks

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and recreation ballfield! And why not? People park in the lot to use the ballfield, don't they?

You could also compare field costs to lighting costs. Your field budget should request at least the same amount as the lighting budget. I know I can build a nice baseball field for \$125,000.

For \$124,000, I could build an 80,000 square-foot football field with one-inch compost, two-inch sand sideline drains, irrigation, and bluegrass sod. That translates to just \$1.55 per square foot.

A 93,000 square-foot soccer field with irrigation (\$.05 per square foot for water hookup) and sprigged with bermuda (no amendments or drains) would run \$.60 per square foot, or \$ 55,800.

Once you have some budget numbers, you can screen out some contractors. For example, I recently reviewed a sister agency's bid package for field renovation work. The low bidder bid \$6,000 to fine grade 30,000 yards. That's 270,000 square feet, or just over six acres.

If you go by the budget numbers for precision grading at \$.25 per foot, a reasonable range of 20% would give you bids between \$54,000 and \$81,000. This company can not fine grade for \$.02 per square foot, and it will probably leave you high and dry, not to mention uneven!

### Maintenance

In all fairness to those of you who are math challenged, anyone can develop a budget. If you become very methodical and detailed with your maintenance procedures, the four-letter "M" word becomes simple arithmetic.

Before we get started with some guidelines, I want to clarify the distinction between developing a budget and determining costs. Developing the budget comes first and deals with work hours, material needs, and equipment needs. Costing is much more involved, and deals with actual hours worked, materials used, equipment costs (including capital, operating, and repair), and overhead.

Once you develop a budget, you must track your labor, materials, and equipment to refine future budgets. Here I will address budgeting; costing warrants its own article.

First determine what your maintenance standards will be, and make sure they account for user expectations. Then, take all operations (mowing, fertilizing, aerating, seeding, etc.) and attach work hours to them.

### • Equipment

Most experienced field managers know how long it will take to perform any particular operation with their equipment. If you're new in the field, there are places to go for this information.

You can ask equipment manufacturers. They always have performance numbers for their equipment; that's how they sell it. They'll tell you, "This machine will cut 3.7 acres per hour," or, "You can seed 1.3 acres per hour with this seeder."

These numbers can be helpful, but they can also be dangerous. They're based on ideal conditions with experienced operators. Use them as a guide, not as your budget basis.

The best place to go for accurate, honest production times is your local STMA chapter or STMA Headquarters. The Association can put you in touch with experienced managers.

*Continued on pg. 22*

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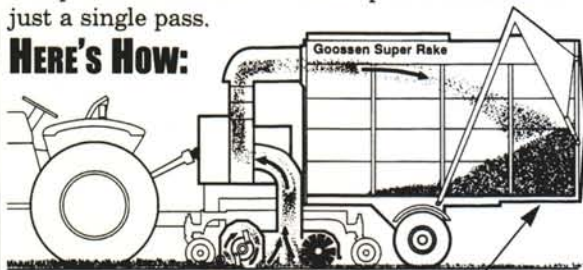
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Continued from pg. 18



#### • Personnel

To calculate the total work hours required to maintain your facilities, think of everything your people do on your fields and add up all the work hours. You'll need to adjust that number up to account for bad weather, vacations, sick days, warehousing of material, and equipment breakdowns. I use a 50 percent factor.

Proceed to divide this number by the total work hours in your organization's work year. For example, my organization's work year is 2,080 hours. You will now have a work year number, which is the number of people needed to perform at your desired standard. You then multiply your organization's personnel cost by each level of employee to compute your personnel budget. Pretty easy isn't it?

To take things one step further, you should break the figures down month by month to determine necessary personnel for peak periods.

#### • Materials

Material needs should be figured on a square foot basis. Measure your maintainable area. In many cases, this will simply involve multiplying length times width. In the worst case, you may have to remember your high school geometry.

You now have a base number for materials needed. For example, if you have 250,000 square feet (5.74 acres) and you are going to apply one pound of nitrogen per 1000 square feet in a starter formulation (say 18-24-12) in September, and five pounds of seed per 1000 square feet, you will need 28 bags of fertilizer and 25 50-pound bags of seed.

Budget for every material application, and for everything you may have to apply. These materials, multiplied by their cost will give you your materials budget.

You should increase that number by a small percentage to account for any fluctuations in price and any unforeseen circumstances. I generally use 20%, but you will want to set yours according to your own comfort zone.

#### • Equipment II

You have already determined the equipment you need. You now need to budget dollars for that equipment. First, figure purchasing costs. Obtain this information from equipment dealers, they're always willing to provide prices for budgeting purposes. Depending on the cost of the equipment, this money may come out of a capital outlay budget instead of your operating budget.

Your operating budget will generally include costs such as fuel and preventative maintenance, as well as repairs. You can determine fuel costs from manufacturers' specifications. Preventative maintenance costs can be estimated from your own program.

Equipment repairs are more difficult to budget. Consider using 10% of the original purchase price.

Depending on your level of management, you will also need to budget for such other things as administrative services, communications, and training.

*Tim Moore is park and sports turf manager for the Maryland National Capital Park & Planning Commission. He is based in the Wheaton, MD, Maintenance Facility. He's the National STMA board member for Category IV and is president of the Association's MAFMO Chapter.*