

Layout & Striping of Athletic Fields

by Mike Hebrard, Athletic Field Design

Congratulations! Because of your years of loyalty and your high degree of intellect, you have been selected to lay out and stripe the athletic fields this season.

Now for the hard part, where does the measurement of the lines begin? The middle of the line, the inside or the outside? Actually, all of the above are correct depending on which sports you are laying out. With the outside lines for football, the measurement is from the inside of the line along the goal line, with all of the yard lines being measured from the middle. But, in soccer and baseball, the line is in play so the measurement is from the outside of the line. Education is a GREAT thing to have. Keep on file drawings of the dimensions for the sports that pertain to you as well as to others. That quick reference source will come in handy.

FIELD LAYOUT

The easiest way to lay out a field is to start from the center of the field. With football, always start in the middle of the goal posts. Remember, not all of the goal posts are the correct distance apart, nor are they in line with each other. The width never changes -- with a couple simple guidelines, everyone should have the sidelines at the same spot. The trick is to know where to start the length. Measure between the goal posts to obtain the center of the field. If you have single pole goal posts, run a string the entire length of the field, from the middle of each goal post. From that spot, measure 80' to each sideline -- and since 80' can be used as one of our multiples in the 3-4-5 method -- you can spray an arc with an inverted spray can at 100' at each sideline. Do this at both ends. After stringing the sideline, measure back from the 100' arc (which, by the way, is the 10 yard line) 60' to obtain the corner pins at each corner.

The same method can work for soccer by using half of the width and dividing it by 4, then multiplying it by 3 & 5 to get the other measurements.

With baseball, I like to put the homeplate so that it sits in the middle of the backstop and the apex is at a round number such as 15' or 30'. By triangling the backstop or using a transit, establish the middle of the field. A quick way to check or lay out a field is to measure the distance to 2nd base in line with the center, marking the pitcher's rubber at the same time. Then, by holding the combined distance of 1st to 2nd at that spot, and placing your finger at the proper base distance, mark that spot at the 1st base location, then flip the tape to the 3rd base location and mark accordingly.

MARKING

There are many products available for marking the

field. My personal preferences may not appeal to you so, if you don't already have a personal favorite, shop around, ask your peers, check out ads, and find what YOU like.

STRING

I like to use a 1/8" nylon cord on a reel that I can wind up with a cordless electric drill. Cotton can be used but it tends to lose its strength over a period of time and can break. Builders string is also good for marking short distances as it absorbs the paint better and is less likely to mark the grass when moving the string. Make sure the string is tight enough and that the holding pins won't pull out easily, even in soft ground. It's a good idea to paint any and all marking devices with a bright color so that you can find them easily when you are finished. By lifting the string, snapping it, and rolling it off your fingers, you can get the line as straight as possible.


STENCILS

With a little clever planning and construction, anyone can make their field look like the "Game of the Week." You can get your stencils pre-made or make them yourself out of plywood or other materials. Some of the plastic stencils tend to re-dilute the paint if used in

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GREEN

in an instant!



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drizzle or rain and make for a messy job. If using a prepared stencil with different colors, use the proper color with an aerosol can when applying so you know what dot goes where.

All the marks of the field aren't just for show, there are some underlying advantages that also take place. Besides building up atmosphere and excitement among the players and student body, there are statisticians, announcers, coaches, fans, radio, TV and game officials that value these markings to help with the overall administration of the game. Also, I like to use a standard football helmet stencil in the middle of the field. That's where most of the turf damage takes place and sometimes a big logo right there can cover some of that wear. By outlining any logo or letter with a pin line up to 4" in a contrasting color, definition is improved. You also might try painting the school or team colors on each side of the 20 and 50 yard lines. This gives a much better perspective of ball location.

PAINT

There are several paint manufacturers that specialize in athletic field paint. As with any equipment used on your fields, there are several things to consider when looking for paint. Availability and service support are certainly something to consider -- what good is the paint on Monday if the game was on Friday? Does the supplier offer technical support and accessories? Compare prices too -- sometimes a company with the best price for white can't even come close to matching other companies for red, etc. Different colors can have drastic price differences according to the quantity and ingredients. Check the labels carefully. Some colored paints can kill the grass if not intended for that application. Aerosol cans are fine for layout and quick striping but can't give the clarity for the cost that a properly applied mixed paint solution can.

There also are several different ways to mix your paint. My favorite is a string trimmer with a curved shaft (remove the shroud and line holder. This gives you a fast and thorough mix. You also can try bucket to bucket, or a mixing paddle on an electric drill. Be sure to have an MSDS on file for any paint or chemical you apply to the field.

PAINTING

It's best to paint in a light coat first and let it dry if you have the time. This will act as a primer base and allow for a brighter line. There are several ways to apply paint to the field -- the standard is

a powered painter. I feel the most professional method of application is with an airless type painter. This allows you to atomize the paint during application for a quicker drying time, allowing a second coat or different color to be applied quicker. The easiest and quickest method is to paint directly on the string. Or, you could use a 4" paint brush along a string, and a 20' long aluminum stencil board like that used by George Toma's Super Bowl Grounds Crew and other crews.

Spray nozzles also come in different shapes and sizes. Fan tip nozzles are the most popular and have several patterns and angles to choose from. I have also had some success with a twin type nozzle that sprays out of two orifices, painting on both sides of the grass in one pass. Be sure to use a filter to prevent clogging. Replace nozzles when the spray pattern becomes distorted. Always remove the nozzle after painting, as some of the paint residue may still be in the line and settle in the nozzle.

As with any job you do, there are going to be challenges -- rain days, last minute adjustments, etc. But, we ARE sports turf managers and everybody loves a good challenge, right!?

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