



# FIELD MARKING AND PAINTING: COMPLETING THE GREEN CANVAS

*By Matthew Trulio*

Top: Final mowing after painting, prior to game day, at Jack Murphy Stadium, San Diego, CA.  
Bottom: Using number and arrow templates. All photos courtesy Steve Wightman.



**T**ry to name a field sport played without boundaries, and you'll come up blank. For that matter, try to name any competitive sport without boundaries. Even skydiving competitions have certain lines that competitors are not allowed to cross or they'll be out of the game, perhaps permanently.

Boundaries in field sports are vital. They often make the difference between a double or a foul ball, between first-and-10 or fourth and long. But field marking and painting have applications beyond defining the field of play, as Steve Wightman, STMA board member and stadium turf manager for Jack Murphy Stadium, in San Diego, points out.

"Of course, field painting and marking provide boundaries in which to play the game, but it can also be used to help promote the team or institution," he says. "Teams use markings to help run plays. And they help announcers call games."

Field parameters, marking, and painting vary with the level of play, from Little League to Major League Baseball, from Pop Warner to the National Football League. The good news is that regardless of the playing level at the field you tend, you can create crisp lines, marks, and eye-catching logos without breaking your budget.

#### Selecting Your Tools

There is a variety of paint machines, chalkers, paints, stencils, and even paint brushes to fit most budgets. Painting machines come in a wide price range, with

various features, from less than \$1,500 to more than \$8,000. David Frey, director of field maintenance for Cleveland Stadium, says quality and durability are top priorities to consider when choosing a paint machine.

"A good machine will last almost indefinitely," he notes.

Pre- and custom-manufactured stencils are available, and fit most budgets. However, carefully "homemade" stencils can fill the job when funds are lacking.

Says Frey, "Stencils for logos and hash marks can be made in-house—it's no big deal. You can make them out of half-inch plywood. The only problem with super-lightweight stencils is that they make it hard to get a good crisp edge with your painting."

As for the paint itself, both Frey and Wightman see water-based latex as vital. Water-base is the key word. While all paints will retard grass growth to some degree, Wightman asserts, oil-based paints are likely to kill the turf they cover, and are extremely difficult to remove. In addition, he suggests using only water-based paints that are specifically formulated for natural turf painting.

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## Field Marking

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"Most field paints started out as inexpensive latex," says Frey. "Over the years, companies have worked to enhance their brightness. If you have multiple events on the same surface, there are now paints that wash out really well."

Choosing chalk is equally important. Long-used hydrated lime has been banned for field marking in many states, says Frey. Ground marble is one alternative.

String is also vital for field marking. If you want straight lines, you need straight string, or so the axiom goes. Wightman suggests selecting something "very strong, that can be stretched very tight," such as 1/8-inch nylon. And because this string may be used in lengths as long as 400 feet, some type of reel is a good idea.

Last, but certainly not least, is the simple paint brush. An ample supply of four-inch paint brushes will always come in handy, particularly in touch-up and fine detail work.

### Establishing Routines Pays Time Dividends

Because Jack Murphy Stadium is home to the Padres, Chargers, and various other teams, the field is painted every week of the year. In the case of late season professional baseball and early season professional football, sports that require completely different field markings overlap. The painting task is always a challenge, but to help things run smoothly Wightman has streamlined the process as much as possible. He emphasizes simplicity and *routine*.

Timing, says Wightman, is integral to the final "game day" look, as well as actually getting the job done in time for the game. They try to schedule painting so that the field markings and logos will be "bright" on Sunday. This often translates to "touch-up" on Saturday.

"But you don't want to wait too long in the week to paint, particularly in northern climates," advises Wightman, who before coming to Jack Murphy headed the field crew at Mile High Stadium in Denver. "In colder climates, you have to schedule your painting earlier. If you waited too long, then had a snowstorm during the time you scheduled to paint, you might run out of time. You have to be very aware of prevailing weather conditions."

"Because we're in a warm, stable cli-

mate, we try to delay painting as long as we can so we don't have to come back and do too much touch-up," he continues. "Another thing to keep in mind is that if you paint too early in the week, then mow as scheduled at your normal height, you can mow off all the paint. One way to avoid that, especially early in the season, is to raise the mower height for the cutting following painting. That way, you get the aesthetic value of a good mowing without cutting off all the paint."

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At the beginning of each Charger season, Wightman and his crew measure the field for football, starting with the four corners inside the end zones of the field in relation to the goal posts. This is the only time in the season they will use a tape measure on the field. They make sure these corners are exactly 90 degrees, since almost all there other measurements will be based on these. Using strings, they set the sidelines from these corners.

"You don't want any trapezoids," Wightman laughs. "Before the first game of the season, we go out along the sidelines with tape measure, and every 15 feet we drive a penny nails with a flag on it, outside of the field of play. That gives us our five yard marks."

From there they determine hash mark and number stencil locations, using penny nails and different colored flags to create season-long setting points.

"Using a stencil or a template is a must because they enable you to get the job done in a reasonable amount of time," Wightman asserts. "Without them, you'd have to go out and remeasure every time you painted the field. We have a 15-foot aluminum hash mark template we

use that fits between each five-yard line.

"The reason for setting marks for everything at the beginning of the season is saving time," he continues. "You don't have to constantly remeasure. You already know where your marks are located, outside the perimeter of the field, and if you lose them you can find them with a metal detector, because they're metal nails. We use different colored flags for each type of mark. The idea is to make things as simple as possible."

### Painting Process Tips

The actual painting process for professional football at Jack Murphy Stadium takes two days. Before they begin, they mow the field so they have an even surface on which to paint.

On the first day, they paint the perimeter, hash marks, and numbers. In general, they dilute the field paint in a one part paint, one part water ratio. The dilution rate can be even greater, Wightman explains, depending on the specific paint, manufacturer's recommendations, and weather. The more you dilute a paint, he says, the quicker it dries. However, dilution dulls brightness.

"Once again, you have to take the time of year into account," he advises. "You might get by with two parts water, and one part paint in the summer, because the days are warmer and the paint will dry more quickly. If you have a lot of surface area to cover, one-to-one seems to be the ratio that has worked best for us. For touch-up, you can sometimes go as high as five-to-one with certain paints."

They paint the six-foot border around the field, required by the NFL, and the end-zone logos on the second day. Ninety percent of their painting is done with an airless wand-type sprayer. However, when time gets tight, Wightman's crew often resorts to four-inch brushes. Using brushes can be faster than mixing the paint, getting the paint machine ready, and cleaning it. And they always use brushes for touch-up work.

Although the Chargers' management would like them to paint logos at midfield, says Wightman, they do not because of the high-traffic that area receives.

"We limit decorations to the end zones, which don't get a lot of traffic," he explains. "We don't put a logo on the 50-yard line because if we painted this field every week, by the end of the season there wouldn't be any grass there."

Our goal is try to keep the turfgrass as healthy as we can, and in this case we do that by *not* painting. Paint and traffic do not go hand-in-hand. If you're painting every week there will be a certain amount of grass growth retardation, especially, it seems with colored paint. That's acceptable in the end zone, but not in the area of the field that receives the most play."

When it comes to baseball, they paint every line on grass, after first "stringing out" the lines to ensure straightness. Baselines are done in chalk—they don't paint dirt, says Wightman, because paint is more difficult to remove than chalk.

To overcome the football/baseball overlap at Jack Murphy Stadium, the crew uses chalk rather than paint for the lines on grass during the first three or four Charger games. Two weeks prior to the first Charger practice game, they chalk the left foul line and coaches box, which they would normally paint for the Padres.

"If we painted, those lines would be visible during the football games," explains Wightman.

One tip both Wightman and Frey suggest is "shadowing" the numbers on

the field with team colors. Four-inch brushes are the right tool for this job, they say.

Marking and painting are the icing on the field cake. However, Wightman and Frey emphasize that regardless of how

proficient you become in these techniques, turf quality must come first.

"Aesthetics can be enhanced by painting," concludes Wightman, "but the real beauty of any field comes from the aesthetic value of the turf." □

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