

## Striping and Lining

by Mike Andresen

Striping, lining and logos are the finishing touches on your playing field. Safety and playability must come before aesthetics, but aesthetics are a very important aspect of a sports turf manager's job.

### Accuracy

In striping and lining, accuracy is essential. Games are won or lost by inches, and many of those inches are marked by what you've painted, and how precisely you've painted it.

If you're getting a new logo stencil, put the extra time and money into getting one that's detailed. Invest in quality paint and quality painting equipment, it will pay for itself in the long run. Don't be afraid to try out new paints and to work with your paint supplier to get the paint you want.

Logos are more than a pretty design. They project the image of your organization and your team. They're also a marketing tool. A great logo sells those shirts, hats and other paraphernalia that help fund the program.

### Speed

After accuracy, your second priority is speed, because crew time is precious. The biggest factor in fast and accurate

field painting is in-ground markers. Placed at strategic points, these markers eliminate the need to establish base measuring points each time you paint. They may be purchased or made, and the type required will vary with the game.

ground with the top of the PVC pipe approximately 1/4-inch below the grass line.

For soccer, the in-ground markers are located within the playing area. We use a store-bought, ground-socket marker that has a cap on top. When sunk into the ground, the top of this marker is right at the soil line.

The covered top eliminates the chance of a player sinking a shoe spike into the open center of the marker. The cap comes off so we can slip in a purchased peg that has string on it to run the lines. The sleeve is also used to hold the flags that mark the field corners.

### Football

When painting the lines on our football field, we set our string lines and run the painter right down the center of the string. We paint two inches on each side of the string. Others paint a four-inch band at the edge of the string. Overall, their lines will each be two inches 'off' of our lines, but it's the consistency within the field that's

important.

We paint the white lines on the field with a Jiffy model 8000 self-propelled, walk-behind line painter with a 12-gallon tank. We mix our paint with water



**The quality of field painting at Jack Trice Field demonstrates the pride Mike Andresen's team puts into their work. Their efforts won them STMA's College Football Field of the Year Award in 1996.**

*Courtesy: Mike Andresen*

For football, all of our in-ground markers are located off the playing area of the field. We cut 1-1/2-inch PVC pipe into sections six to eight inches long. We sink these into the



1.



2.



3.



4.

Logos are complex; most are copyrighted, and all must be accurate. These images demonstrate the painting process, as the crew at Sec Taylor Stadium in Des Moines, Iowa, prepares the logo for the 1997 AAA All-Star Game.

*Courtesy: Mike Andresen*

to a 1:1 ratio, and it takes approximately 50 gallons of mix to paint the lines.

When temperatures drop in late fall, we add a little alcohol to the paint. The ratio differs, depending on weather conditions. The alcohol sucks the moisture out of the paint and allows it to dry before it freezes. Alcohol is hard on the grass, but our turfgrasses are dormant before we need to use it, and the rates are very small.

We paint all of the five-yard lines first, and then paint the sidelines so the painter won't run over fresh paint. An in-ground marker is located at each five-yard line on both sides of the field. They are placed just outside the three-foot border that the NCAA requires around the field. The string line is stretched across the field from marker to marker.

The NCAA requires a four-inch gap between the yard lines and the sidelines, so the sideline string lines need to be stretched out when the yard lines are painted. We place a four-inch piece of aluminum beneath the "X" made by the sideline string and the yard-line string to set the space.

The sideline markers are located outside the three-foot border. They are placed at the end of the field to set the horizontal line, and at the end of the endzone to create the vertical line.

Once line painting is complete, we break into two crews: a logo crew and a field crew. Our field crew goes straight to work on the inside hashmarks. We have an in-ground marker on the back side of each endzone, and we run a string from endzone to endzone to prepare the line for the hashmarks. We use an aluminum stencil and paint with an airless sprayer placed on the back of a small golf cart. 100 feet of hose allows the cart to run off the field, along the sideline. The angle of the slack in the hose keeps it from dragging through the paint.

Once the hashmarks are painted, we move the two string lines to the top point of the newly painted lines to position the numbers. An in-ground marker nine yards off the sidelines verifies the placement. We use NFL style number stencils made of heavy vinyl. They're mounted on an aluminum frame to keep them stretched out and in good condition. The crew

starts at one end of the field and works to the opposite endzone.

Once the numbers are painted, the field-painting crew brings the hashmark stencil back out and paints the sideline hashmarks. They proceed to paint the kickoff "X" on the 35-yard line and on the three-yard PAT hashmark line. This completes the white paint on the field.

The sideline strings remain down until the paint is dry. They are then moved out to paint the white three-foot border on each side of the field. There are in-ground markers at each end of the field on both sides to set these strings three feet out from the sideline.

While those two strings are down, we take the shorter sideline string and measure to make the coaches boxes and team areas. We don't have in-ground markers in those areas,

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because wear is extensive and we don't want any exposed PVC pipe.

Now the field-painting crew switches to an airless sprayer with an 18-inch-wide nozzle. They fill in the white paint in the three-foot border, and in the six-foot-wide team area and coaches box.

Our logo crew's motto is: "measure twice and spray once." Rules require a four-foot space between the sidelines and painted areas. Because the endzone is 30 feet deep, we've designed all of our logos 22 feet high. The center endzone logo is 71 feet long.

We draw a tape measure across the back of the endzone from sideline to sideline and run a string line. We measure and



**In-ground markers eliminate the need to establish base measuring points each time you paint.**  
Courtesy: Mike Andresen

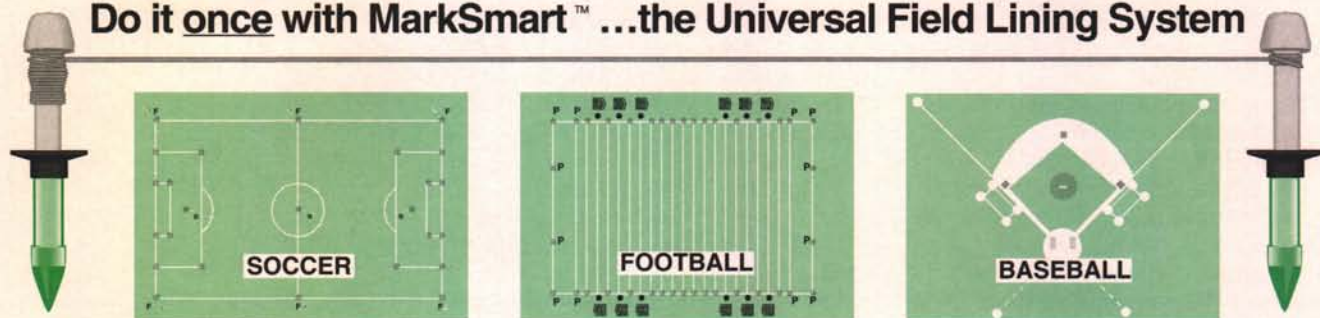
put a string line on the center of the endzone lengthwise. To get the exact center of the logo's dimensions, we measure and run a string line perpendicular to these lines, from the front of the endzone to the back of the endzone. This method is more accurate than measuring from the goal post.

Our logo stencils are made of vinyl and have small holes punched in them. The appropriate color paint is sprayed through the hole to create a dot of paint on the field. With the vinyl removed, outlining the logo becomes a connect the dots exercise.

We start at the center of the logo and work out. In the heat, the vinyl will stretch. We don't want the stencil to be on the field any

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longer than necessary to avoid building up excessive heat beneath it and yellowing of the turf. We work on one logo at a time, and finish it completely before starting the next one. Logos are complex; most are copyrighted, and all must be accurate. We keep a copy of the logo on the field as we paint.

We start by using aerosols of each of our colors to paint any unique features or small details prior to coding out our logos. Then we paint with the airless sprayer equipped with a 4-inch wide tip.

We select one color first and paint all of that color before moving on. We always finish with white, so we can repair any mistakes. We only cover the tip of the grass plant with paint. Up close on the field, you can see green under the paint. That's what we want to

maintain for the health of the turfgrass.

Lowering sprayer pressure won't keep the paint from pushing the grass down and working down into the turf. It's better to raise the pressure. You will get finer droplets that dry quicker and stay in place.

We paint all the endzone logos first, and then move to the field logos. For each one, we establish a center point using the crossed string line method to ensure accurate placement.

When we installed a natural grass field, we changed from a center logo to two side logos to reduce additional stress on the high-traffic zone. It has been effective.

Rules state that you can paint over the line markings - *if* the referees can see the lines clearly. The 25-, 30- and 35-yard lines bisect our on-field logos.

We don't paint over the lines. Instead, we paint our logos around them. It's our subtle way of emphasizing that the field exists for the game.

Our field-painting crew finishes by stringing and painting the yellow restraining line for the press. It runs six feet outside of the three-foot border on the sides, and nine feet beyond the endzone. It extends all the way around the field. It's there for the safety of the players and the working crews - the chain gang and the referees.

We try to paint on Wednesday and Thursday, and touch up on Friday for Saturday games. The team has a 2-1/2-hour Thursday afternoon practice, so any paint must be dry by noon. If weather conditions look poor for drying, the painting schedule is moved forward.

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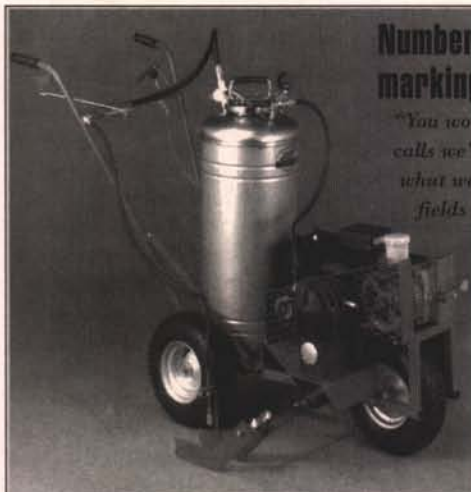
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## Soccer

On a soccer field, one in-ground socket is placed at the very center point of the field. We remove the cap, drop in the string peg, and run the string out to the correct distance. We walk around this string 'circle,' dotting the line with an aerosol can of paint. Then we go back and connect the dots.

Other in-ground sockets are placed at the corners of the field, at the lengthwise sideline center points, and at the outer point of the penalty area on the sidelines. We don't put in-ground markers around the goal because it's a high-traffic area, so we must measure and line for the goal arcs and square out from the goal mouth.

### Keep the perspective

If the press and the public see that your field looks great, they'll



Crossing two string lines allows paint crews to accurately line the field and center the logos.

Courtesy: Mike Andresen

think it is great. That's one bonus of aesthetics. You can consciously use this to your advantage to draw the eye to the logo instead of the hashmarks and other wear areas. Damage isn't quite as noticeable.

We do tend to think of field presentation as primarily a "fan thing" or a "media thing," but don't discount the effect it has on the team. They do notice that presentation, and they do appreciate it. □

*Mike Andresen is athletic turf manager at Iowa State University, Ames, Iowa. He is a board member for the Iowa Sports Turf Managers Association and is chapter relations chair of the national STMA.*

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