

# The first “pitch” at Busch Stadium

**I** NEVER IMAGINED that in my lifetime I would have the privilege of doing the first pitch at Busch Stadium in St. Louis for a crowd of more than 48,000 fans. But that is exactly what happened last May.

Busch Stadium hosted two of the most storied teams in English premier league soc-

cer, Chelsea and Manchester City. It was a sellout crowd for the first non-baseball sporting events held at Busch Stadium since the venue opened in 2006. There were 48,263 fans in attendance, which is the largest crowd to ever attend a sporting event at Busch Stadium.

Bush Sports Turf was chosen to collabo-

rate with Busch Stadium head grounds-keeper Billy Findley and vice president of stadium operations Joe Abernathy to convert the stadium from baseball field to soccer pitch—and then back to baseball field—in a 6-day timeframe. Our mission was to squeeze a 100 meter by 65 meter soccer field into Busch Stadium. It would require removing the pitcher’s mound and infield clay, and sodding these areas along with the four corners of the field, which would be on the warning track, and then quickly turning the pitch back to a baseball field.

There was a forecast for scattered thunderstorms forecast on every day leading up to the match, so immediately after the Cardinals played an afternoon game May 19, Findley and his crew removed all of the conditioner from the infield dirt and covered the infield with the tarp. Without any extra time to work with, it was critical that the dirt not get saturated. With 48,000 fans attending the Thursday game, the field simply had to be ready. To throw us a curveball, they added an exhibition practice to Wednesday night, meaning the field would essentially need to be done a day earlier than the original plan called for.

## PRE-GAME

We had been planning this conversion for months, and had decided to use thick-cut, 1.25-inch, sand-based sod from Heath Sod Farm in Wisconsin. We chose Heath in part because they were a regional supplier, which would save time and cost related to transportation. We also wanted a turf similar in color and density to the rest of the field, and that was grown on a sand-based root zone. We were concerned that using a native-soil sod could give us problems if it rained. As another measure for avoiding problems, we put a 6-mil, fiber-reinforced plastic under the sod to keep the infield dirt underneath from getting wet. This would also allow any excess water to reach the edges, where it could get into the sand rootzone.

Our crew moved in first thing Monday morning and started removing the infield dirt. Findley and I were determined to provide a smooth playing surface without any noticeable transitions. We decided to take 1.25 inches of infield material out in



▲ **Top: THE FINISHED PRODUCT.** Photo by Taka Yanagimoto. **Above Left: REMOVING THE INFIELD** with a Terraplane rotor. Photo by Taka Yanagimoto. **Above Right: REMOVING THE PITCHING MOUND.** Photo by Taka Yanagimoto/St. Louis Cardinals.

order to match the thickness of the sod. This would allow for an easier installation and a level finished surface. To do this, we used a Koro Field TopMaker 1200 with the new Terraplane Rotor, which is similar to a wood planer: it has cutting blades that leave a clean, even surface. This is one of the first two machines in the US to have this rotor. The machine arrived from Holland a week before the project. It's actually the same machine used to level the clay courts at Wimbledon.

We mounted a laser receiver on the machine so we could monitor the depth of the cut and make sure we removed the exact amount of clay. The clay was hauled out of the stadium using a fleet of workmen. We removed less material in the middle of the infield skin, creating a slight crown in order to help any excess water that hit move toward the edges of the field and into the rootzone. The base lines were then cut and removed using a sod cutter set at 1.25 inches.

All of this work was being done under the watchful eye of Chelsea Football Club

head groundsman Jason Griffin, who was quite impressed with the method we were using to remove the clay and prepare the field.

"This isn't new to us," he said of playing soccer in baseball stadiums. "But the process that they're using out here is a new way of doing it. It's very good. It is going to be nice and flat, which is what both teams want."

The pitcher's mound, which had been in place since the field was built in 2006, was being removed at the same time as the infield. It took the power of an excavator to get the tightly packed clay broken up so the mound could be hauled out. Like the base lines, the mound area was taken down 1.25 inches below grade as well. The mound clay was kept in one pile, and the infield clay was kept in another. Both piles were watered to try and keep the clays hydrated. We did not want them to get too dry, as this would make it hard to get them compacted and firm when we reapplied them to the field.



▲ **Top: JASON GRIFFIN**, Chelsea's head groundskeeper, and Steve Bush confirming dimensions on an iPad. Photo by Taka Yanagimoto. **Bottom: BASELINE** with clay removed. Photo by Steve Bush.

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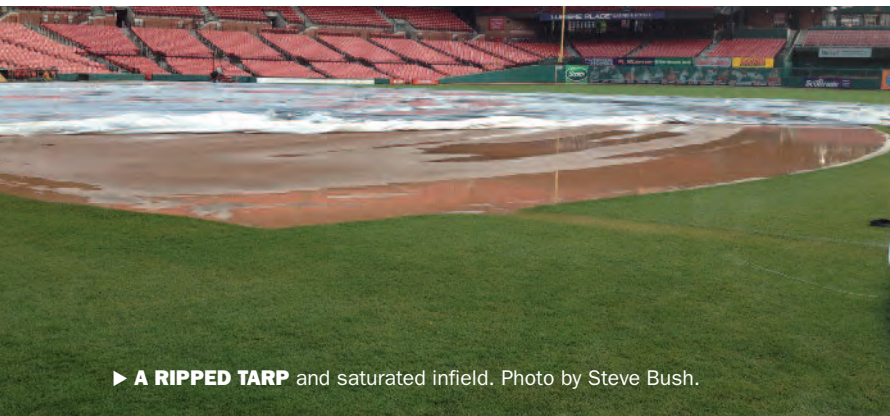
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▶ **A RIPPED TARP** and saturated infield. Photo by Steve Bush.



▶ **BILLY FINDLEY**, left, and Steve Bush, right, painting turf.



▶ **PUTTING ICE** in the rolls of sod. Photo by Steve Bush.



▶ **INSTALLING SOD** and tightening the seams. Photo by Steve Bush.

When the sod arrived, we did everything we could to keep the rolls cool and in the shade, so we took advantage of Busch Stadium's gigantic ice machines. We filled Gators with ice and hauled it outside to the staging area. We then used a special scoop we built to pack ice into each of the tubes in the sod. This lowered the temperature in the middle of the rolls of sod, where they usually are prone to overheat and burn out.

By the end of the first day, we had all of the clay removed and had installed sod at home plate, the baselines and the pitcher's mound. The 1.25-inch thick sod lined up perfectly with the existing grass. The 6 mil plastic was installed under all of the sod, and the seams were sealed with tape. We had to make sure the clay beneath the sod did not get wet, as this might make the areas unstable, and make it difficult to reassemble the field after the game.

With heavy rain predicted, we covered the entire infield with tarp at the end of the day.

Everything was going smoothly, and we were on schedule.

### WHEN IT RAINS...

That night, severe thunderstorms tore through the St. Louis area. I was awake in the middle of the night, listening to the thunder and watching as it poured outside. I was glued to the weather radar on my iPad while the storm dumped 1.5 inches of rain on the field.

At that point, I wasn't terribly concerned, since we had covered the field with the infield tarp.

But when we showed up Tuesday morning, the situation was a little damper than my outlook. The strong winds that accompanied the storm had ripped the field tarp, and the first base side of the skin was full of water.

Without wasting a minute, the Cardinals' grounds crew started doing everything they could to get rid of the water and wet clay. They used pumps, squeegees, rakes, brooms, shovels and conditioner. Some of the clay had to be completely removed, as it was totally saturated, and we did not have time to wait for it to dry. Simultaneously, our crew began working on the portions of the skin that were still dry enough to work with. A pass with a laser box blade was made on everything to confirm the grade and smooth out any minor imperfections. The plastic was then laid down and taped, and sod was installed.

By afternoon, the first base side had dried enough that it could be graded and sodded as well. To ensure tight, unnoticeable seams, the thick-cut sod was pushed into place using our Sod Slider. The Slider is a hydraulic, tractor-mounted device that pushes or pulls sod into position. We developed the Slider in 2011 when we were installing more than six acres of sod at Halas Hall for the Bears. Tight seams are critical, especially in soccer, as a bad seam can have a dramatic impact on the ball roll. The sod was rolled with a 2-ton vibratory roller, and we were pleased with the smooth, even surface we had achieved.

Once the infield was completed, the entire field was mowed and turf paint applied to help blend the old sod with the new. They were nearly identical in color, but some of the new sod was stressed and had yellowed very slightly. Normally, it would grow out of it, but we only had one day to work with. All of the newly installed sod was hand-watered, so as not to get too much water on top of the plastic. Once the paint dried, the infield was covered with the tarp for the night.

First thing Wednesday morning, we sodded the corners on the warning track. We left this for very last to avoid cutting off access to the field. Once the corners were installed, the field literally extended from wall-to-wall at Busch Stadium.

The warning track material was removed and tapered away from the field. Plastic was put down, mostly to keep the sand from contaminating the warning track material. It was starting to get really hectic as they were setting up for the practice game; the band was

moving in with their equipment for the post-practice concert, and there were people everywhere. The field was mowed to establish the pattern and the signature arch.

Shortly after noon, the field still needed to be stripped. It was a group effort to get this done. Findley and his crew, our crew and Griffin (from Chelsea) set up the string lines around the perimeter of the field. Using several tape measures and triangulation, we established the goal boxes, penalty boxes and the other markings. After some minor paint machine problems the field was finally painted and the goals were installed. Once a little more field paint was applied to the sod on the warning track, the pitch was ready.

More than 10,000 fans attended the practice game that night. Despite all of the cutting and turning during the practice, the sod stayed in place and played remarkably well. The practice was as much (if not more of) a test of the field's endurance as the main game would be, as the drills concentrated the activity in the areas we had sodded. But the field withstood it all, and the night ended with the turf unscathed.

And the next day, soccer left its mark on Busch Stadium.

The final score was Manchester City - 3, Chelsea - 4, in front of a record-setting crowd. And on top of that, the teams, coaches and players were all pleased with how the field looked and played.

## BACK TO BASEBALL

Friday morning, we started the whole process in reverse as we began literally "throwing out" the first pitch. The beautiful, thick-cut sod was quickly removed, hauled out of the stadium, loaded on semis, and hauled off-site to be composted. The plastic had done a nice job of keeping the clay dry under the sod, as well as keeping it clean.

Next, the challenge was to rebuild the baseball infield so that it was firm and had smooth transitions. Once the sod was removed, the entire infield clay was lightly tilled with a Rotodairon to help the clay bond, rather than form a shear plane. As the infield material was brought in, moisture was added, it was rolled and laser graded. One thing we learned was that we should have added more moisture to the clay when taking it out.

Next, the base lines and home plate circle were filled in and leveled off. A form was set for the mound plateau, and the old clay was brought up in lifts and compacted around it. The mound was finished off with new clay on the plateau in the landing area. By the middle of the day Saturday, the field was put back together, and the warning track was cleaned up and ready for baseball.

It was an intense week, but an unmatched experience. Working with world class groundskeepers (Billy Findley and Jason Griffin) was an incredible honor, and building the first world-class soccer pitch at Busch Stadium is a project I will always remember with great pride. It was hard work, and had its challenges. But someday, I'll be telling my grandchildren I got to do the first pitch at Busch Stadium, and that is priceless. ■

*Steve Bush, CSFM, CFB (Certified Field Builder) is an agronomist and president of Bush Sports Turf.*



▲ **Top: REMOVING** the thick cut sod. Photo by Steve Bush. **Above Left: LASER GRADING** and leveling the baselines. Photo by Steve Bush. **Above Right: A soccer pitch** in a baseball cathedral, Busch Stadium in St. Louis. Photo by Steve Bush.

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