

BY SUZ TRUSTY

**H**awks Field at Haymarket Park of the University of Nebraska-Lincoln earned the Sports Turf Managers Association 2003 Baseball Field of the Year honors in the College/University division.

In 1999, three partners came together to plan and build Hawks Field at Haymarket Park. The University of Nebraska, The City of Lincoln, and NEBCO all agreed to share the construction costs of a \$32 million, 4,500-seat baseball stadium that includes an upper deck and 18 luxury suites. The stadium is home to University of Nebraska Baseball, Lincoln Saltdogs professional baseball (Northern League), and numerous city-sponsored events throughout the year.

Dan Bergstrom became Athletic Turf Manager for the University of Nebraska in November of 2000 with Haymarket Park his prime area of responsibility. It had been projected that the new field would be completed and sodded at that point. Instead, he was on hand for the entire field construction.

"The ability to be on board throughout the project was extremely beneficial," says Bergstrom. "Knowing what took place during construction helps in understanding what goes on under the field. Besides the playing field and the turf side of it, the extra time allowed me to develop relationships with our user groups as the field was constructed. As construction progressed, I was able to correlate what they were see-

groundskeeper 8 months later. Under his management, Shively Field at Cliff Hagan Stadium of the University of Kentucky earned the STMA - Beam Clay - SPORTS-TURF Diamond of the Year award in the College Division in 1999.

Bergstrom says, "The field construction had three subcontractors working under the stadium contractor, instead of one general contractor. They did an outstanding job of working together to produce a quality field. And it wasn't an easy project. The stadium construction subcontractors needed to be on the playing surface for construction of the upper and lower seating bowls and the concrete walls. The field was built through the winter, starting while the crane constructing the upper deck of the stadium was positioned on what would become the infield. Because we were racing the clock to meet the spring opening date, the field was actually built in thirds: first left field, then the infield, and finally right field. This meant the contractors needed to match each element of construction within each third to insure the field would function properly as a unified whole when completed."

Once a third of the field was graded and subgraded, installation began. The entire profile is 15 inches. The 2-inch choker layer and 3-inch gravel blanket layer use a much larger rock than usual in order to create additional pore space to facilitate the SubAir air handling system that operates through the drainage system. There are two 36-inch header pipes that run across the field. The 6-inch lateral drainage lines are on 10-foot centers.

This is topped with the 10-inch soil profile consisting of 90 percent sand and 10 percent Dakota reed sedge peat. The irrigation system consists of 22 zones, serving

# HAWKS FIELD AT HAYMARKET PARK EARNNS FOY HONORS

ing with details of how the system interacts to impact the field. Having the same administrative team on hand over the past 4 years has allowed us all to grow that relationship."

Bergstrom brought a strong academic and experience package to the project. He earned his BS degree with a major in turfgrass management from Iowa State in 1995 and served as assistant groundskeeper with the Cleveland Browns from 1995 to 1996. In 1996 he joined the staff of the University of Kentucky and moved to head

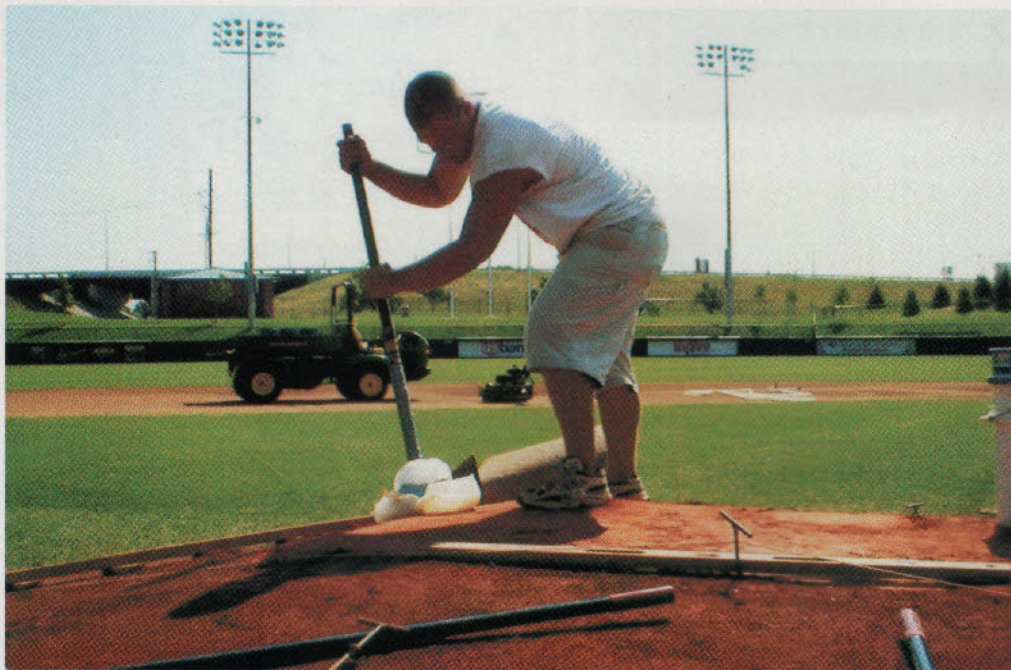
the outfield, infield, and skinned area. To get the red color the Huskers wanted for the skinned area, the material was shipped in from Southern Athletic Fields in Tennessee. It consists of 44 percent sand, 14 percent silt, and 42 percent clay, which is conditioned with vitrified clay.

Bergstrom says, "The field was sodded with bluegrass consisting of NuGlade, Freedom II, Arcadia, and Award cultivars. The sod was grown in Colorado on a soil profile closely matching that of the field. Sodding took place in three stages over a 3-week period beginning in April. It followed the same progression as the field construction, first left field, then the infield, then right field. We had 4 weeks from the installation of the right field sod and the mid-May opening.

"Though field construction had been the last group of contractors to begin their segment, they were the first group completed. We had the field up and running for a month before the stadium was fully operable. While all of the irrigation components were complete, the electrical system for the controllers wasn't ready. We managed the grow-in irrigation by manually turning on valves.

"A stand of evergreens serves as the batter's eye and is functional for the park. Seating berms behind the outfield wall can accommodate 4,000. The third base side bullpen is at the end of the seating berms; the other bullpen is outside the fence in left field. Batting cages have been constructed in the bullpens. The field lighting is a six-pole Musco lighting system. The Daktronics scoreboard contains a video board and several advertising panels."

Billed as a park within a park, the facility is a fan-friendly environment. A large concrete walkway wraps all around the ballpark. Playground and picnic areas are plentiful. There are more than 2000 trees and shrubs and numerous flowerbeds throughout the 32-acre Haymarket Park, along with 10 acres of non-irrigated turf and parking





area for more than 2000 vehicles. The complex also houses the softball stadium that serves as the practice and game field for the Huskers' team and hosts other softball team and city-sponsored events. Bergstrom and his staff are responsible for maintenance of the two fields and the grounds for the entire complex.

#### Field use

"Hawks Field at Haymarket Park is scheduled for at least 213 events over a 10-month period each year," says Bergstrom. "Our year begins in mid-January and continues through late October. This is the site for practices as well as games for the Husker team. In a typical season, they'll have 15 to 20 workouts on the field in January and February. Weekend games during February are road trips to warmer climates. March, April and May bring the meat of the Husker baseball home schedule. We anticipate play into the post-season, aiming for a slot in the College World Series in June.

"During the first week in May, the Saltdogs professional team begins their 16-day spring training with the typical drills, batting practices, and scrimmages. The agreement between these two major field users gives the Huskers first choice of on-field time. Because of class schedules, this is usually afternoon or evening. So generally the Saltdogs do their workouts from 9 AM to noon. The Huskers either use the 2-5 PM slot for practice or have a 7 PM game. On Thursdays, before a weekend of Friday and Saturday night games and a Sunday afternoon game, the Huskers will work out in the afternoon; the visiting team will hold their workout from 7 to 9 or 10

# ARKET PARK

PM. In the case of pro practice and a college game on the same day, we try to allow try to schedule 3 hours between the events to allow for a complete cleanup and repair of the playing surface."

Early June is double scheduled as well, with Husker post-season play. Once the Husker season is finished, the Saltdogs move into a typical professional team schedule. In the short-season Northern League, that can include up to 96 games with 48 of them played on the home field.

Bergstrom notes, "By mid-August, the Husker baseball team is returning from summer break, which puts their informal workouts on the field. September brings the professional post-season and the start of the Husker fall practice season. The Saltdogs end play in September. The Huskers continue to late October with the typical 4-hour college practice for a roster of 40-plus players."

Of the 213 events on the field in 2003, 205 were baseball. Along with all of the above, there are high school tournaments and the standard major college recruiting tournaments involving 6 to 8 select teams. The summer camp program is designed to spread baseball knowledge to the younger players and plant the seed for consideration of a slot on the Nebraska team. It involves 6 days during the summer, 2 for hitting clinics, 2 for pitching, and 2 for "the stars of tomorrow," involving high school underclassmen.

"We also have the fan-pleasing events of the pro baseball circuit such as fireworks on 4th of July and overnight campouts with the Boy Scouts and then the Girl Scouts pitching tents on the field," notes Bergstrom. "So far the City of Lincoln, as the third partner in this venture, has used their 15 days at the park primarily for what we call 'parking lot events,' outside of the actual baseball stadium. This is both by chance and by necessity, due to the already extensive field use. The City owns the land for the park in a 30-year lease arrangement, part of the overall agreement with the two primary field users. The big picture for the City comes with the boost attendees bring to the local economy and the long-term economic development connected with Haymarket Park."

#### January 2004

Though it seems surprising, during normal winters Lincoln has several periods of 40 degree, sunny days, despite stretches with highs of only 10 or 20 degrees. The expectation of the Husker coaches and administration is that practice should take place on the field any day that is 40 degrees and sunny.



Bergstrom says, "With the subsurface heating system we can pump heat into the field using an 800 million BTU natural gas furnace for our heat source. But there is no roof on the field and the sand-based profile is designed to be porous, so much of that heat escapes if the field isn't tarped. Still, we can normally get in 15 to 20 on-field workouts during January and February.

"Instead of the typical 2-3 inch snows, spread throughout the winter, most of our 2003-2004 seasonal snowfall came in a couple of January snow events stacked back to back. That put 17 inches of snow on the field. The all-time record for Lincoln is 18 inches. That 17 inches added up to an incredible amount of snow spread over our 2-1/2 acres of playing surface. Finally, a day in the 10-day forecast called for sunny and 40 degrees or warmer for February 17-18. The team had been practicing indoors and needed to hit the field for some live action.

"Prior to this year, we've been able to clear any accumulation of snow with our tractor equipped with a rubber blade. This time, we rented a large Bobcat on tracks for a low psi pressure on the field, set the bucket down to within 1/2-inch of the grass, and started our normal practice of pushing snow from the center of the field out to the warning track. We then used our tractor-mounted snowblower to blow the snow up into the seats or out of the park onto the grass berm areas. The removal process took the majority of 4 days to complete. Luckily the temperatures stayed cold, so the snow remained powdery and easier to remove. Once we're down to a 1/2 inch or so of snow, the sun and subsoil heat provide quick removal on the sand-based field."



## Temperature management

Subsurface heating also can keep the ground temperature up to the point where the March and April snowfall melts quickly. Bergstrom's experimentation with the system during the first season helped him develop a program of moderation. He says, "We can't bring the soil temperatures up to May or June levels early in the season or a cold snap will set back the tender turf and we'll lose ground instead of gaining it. A lower temperature to stimulate root growth and a somewhat earlier green up works best."

"The cooling factor is important too, since summer temperatures here are generally hot. It's not unusual to get 3-5 days in a row of 100 degrees or more. When night temperatures drop into the 60 degree range, we've found we can cool the soil profile 10 to 11 degrees by combining irrigation with forcing the cool night air through the underground system."

"The wind always blows in Nebraska. It's a huge asset, both for cooling, and for reducing disease pressure on the turf. Because of the field use schedule, we're forced to do the majority of our irrigation at night. Even if the system shuts off at 3 AM, the grass blades will dry due to the overnight winds."

## Management strategies

Buck Beltzer Stadium, the Husker's former baseball facility, had an artificial turf infield with a baseball cutout, and a grass outfield on native soil. The beautiful new facility is a great recruiting tool, especially in combination with the Huskers' winning baseball program.



"We know we're always on display, with the coaching staff making a walk on the field surface and view of the stadium the first stop for a new recruit," says Bergstrom. "The Saltdogs, the city, the community, and the Nebraska fans also take pride in the complex, so aesthetics are very important to the program. But the top priorities for my staff and I is always safety and playability. They'll do whatever it takes to produce the playing conditions we want to achieve and we strive to keep the field at the major league level."

With the two different teams and styles of play sharing the field for much of the year in the ever-changing Midwest climate, Bergstrom is constantly adjusting and fine-

tuning the management program. The strategy works. Haymarket Park has been named "Northern League Field of the Year" for the three consecutive seasons. He says, "I came into this project with a pretty aggressive maintenance plan and have bumped it up a few levels to meet field needs. We took tissue tests every 3 days during the first season and coupled those results with our soil test results to study just what was happening throughout the soil profile and the grass plant. We now do tissue testing 3-4 times a year to monitor conditions. The field receives some type of spoon-fed liquid fertilizer application every 5-7 days, with granular applications every 2 weeks. We'll back off on the nitrogen in the summer to reduce stress. But nothing is set in stone; it's all based on turf appearance and performance."

"We've also adjusted the program to concentrate maintenance in the high use areas. We core aerate the infield four to six times a year and the outfield only once a year. The first two seasons we removed the cores. Even though the sod had closely matched our soil profile, we didn't want that 10-20 percent of silt and clay to cap it off. We're now showing more uniformity to the top of the profile, so we're dragging the core material back in. We topdress once a year with 1/8 inch of material matching the profile. We mow at 7/8-inch, wall to wall, year round, with only one exception. We'll drop down to 1/2 inch before the first of March to remove any brown tips from overwintering."

Bergstrom believes in having seed in place for germination during the growing season and will broadcast seed in the wear areas for cleating in whenever the field is in use. He uses a bluegrass blend in the spring, but will add some perennial ryegrass later in the season. There are a couple of wear spots he watches closely in the right outfield, where every age group plays from nearly the same position, but to date, no re-sodding has been needed there. He's reduced re-sodding around the plate by expanding the home plate circle to 32 feet from the original 26 feet, which he calls "more realistic" for the park. He'd anticipated the need to re-sod the steeply sloped berms twice a year, but has adopted an aggressive aeration and fertilization combination that has kept good turf coverage without re-sodding.

He says, "While some college baseball fields are unable to use pesticides due to budget constraints, we choose not to use pesticides for environmental reasons. A prudent IPM program is important at every facility, but we take our program to the next level in that we simply have not used a blanket application of any pesticide on the field to date. Only a couple spot treatments with a fungicide have been absolutely necessary in the past 3 years. We closely monitor cultural practices and modify them as weather conditions warrant to alleviate turf stress."

Bergstrom credits the ability and commitment of his two assistants, Jennifer Roeber and Geoff Humphrey, for making the management program work. He says, "They are tops in performance and dedication. We've developed a rotation to handle the spring season when baseball and softball are in full swing and the surrounding landscape needs attention too. We'll bring in an intern during the spring baseball season and 4-5 part-time staff to work during the Husker games. For the Saltdogs game season, we'll bring in three interns and run an 8-person part-time crew."

"The way everyone works together here is exceptional, especially the two major field user partners. We all communicate, bringing our perspective on the field and facility together with the coaches' perspective and the administrators' perspective to develop and maintain the most beneficial program for all involved. That total cooperation is what has made the whole Haymarket Park project such a success." **ST**

*Suz Trusty is director of communications at the STMA and a member of our Editorial Advisory Board. She can be reached at 800-323-3875.*

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## Maintenance Program for Hawks Field at Haymarket Park

### January/February

Begin heating the field to 45 degrees F to allow practices  
Plow/melt snow from surface to allow practice  
Manage infield rain tarp to allow practice  
Irrigate turf as necessary to prevent winter desiccation  
Maintain subsurface heating system  
Attend STMA Annual Conference

### March

Warm field to 55 degrees to prepare turf for home games  
Begin biweekly liquid fertilization program to jump-start turf  
(30-0-0, micronutrient package, biostimulant, and wetting agent)  
Core aerify infield and foul areas to alleviate compaction, drag cores back in  
Begin mowing turf daily  
Overseed wear areas with bluegrass/ryegrass seed  
Irrigate turf as needed

### April/May

Core aerify infield and foul areas to alleviate compaction, drag cores back in  
Fertilize biweekly with 17-0-34 at rate of 1/2 pound Nitrogen (N) per 1,000 square feet  
Apply extra fertilizer to wear areas as needed  
Overseed prior to several events to allow "cleating in" of seed  
Continue liquid fertilization program biweekly  
Mow turf daily to 7/8-inch height using walk behind reel mower in infield, triplex ride on reel mower in outfield  
Irrigate as needed

### June/July

Reduce amount of N applied to field to help disease control  
Continue liquid fertilization program biweekly  
Irrigate/syringe/hand water based on turf needs and game schedule  
Aerify infield and foul areas to alleviate compaction  
Mow aggressively, but cut back in extreme heat  
Continue to overseed wear areas of the field  
Operate air management system to aerate and cool the rootzone

### August

Mow turf daily to 7/8-inch height  
Fertilize with liquid and granular products biweekly  
Irrigate/syringe/hand water based on turf needs and game schedule  
Core aerify infield and foul areas to alleviate compaction, drag cores back in  
Overseed wear areas as needed  
Operate air management system to aerate and cool the rootzone  
Spot-treat diseased areas of turf if necessary following standard IPM procedures

### September

Increase amount of N applied to field to reduce fall baseball practice season wear  
Add starter fertilizer to wear areas to assist in seed germination and recovery  
Continue biweekly liquid fertilization program  
Irrigate/syringe/hand water based on turf needs and playoff/practice schedule  
Overseed wear areas as needed  
Mow field 4 to 5 times per week to 7/8-inch height

### October/November

Core aerate the entire field with 5/8-inch hollow tines at the rate of 25 to 30 holes per square foot  
Topdress field with 90:10 sand:peat mix to match rootzone  
Overseed infield and foul areas with bluegrass blend at rate of 5 pounds per 1,000 square feet  
Continue granular and liquid fertilization programs  
Repair worn areas as needed  
Mow as needed  
Irrigate as needed

### December

Prepare equipment for upcoming season  
Take vacation

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