Referee Randy Eckley called the action as the Clinton Cowboys and the Clinton Bandits played the first game at the new soccer park. Photos courtesy of the Clinton Daily News.

Oklahoma Town Rallies Around New Soccer Park

Soccer is the world's most popular sport — except in the United States. Although youth soccer is very big in this country, most Americans leave it behind with their childhood when they grow up.

Bearing that in mind, it's a small miracle that the 10,000 residents of Clinton, OK, buffeted by one of the worst oil-price depressions in memory, still cared enough about the sport to build a soccer park with seven playing fields for their youngsters.

In doing so, they proved that improved sports fields need not be limited to big park districts, wealthy cities, private schools or professional sports. They can be built wherever the people involved care enough to fight for them.

Clinton is a small oil town located in the dry, western Oklahoma plains, 80 miles southwest of Oklahoma City. The residents of Clinton live with the understanding that water is a limited commodity and should not be wasted. They also live for sports and back their teams to the hilt. Recently they found a way to provide their kids with a new seven-field soccer park and conserve water too.

Soccer in Oklahoma? That's right. Nearly 300 children from the ages of four to fourteen jump into their soccer shorts and cleats every autumn and spring in Clinton to play the most popular sport in the world. That's a lot of kids for a city that doesn't have a varsity soccer team at either the junior high or high school level. Furthermore, another 80 children join the Clinton Soccer Club each year.

Clinton competes against 27 other soccer clubs in the Great Plains District of the Oklahoma Soccer Association, a member of the United States Youth Soccer Association. While most of the other clubs in the district have suffered from the recent depression in the oil industry, Clinton's program is growing, due largely to its new soccer park.

"Clinton has been known as a football town," says assistant city manager Robert Johnson. "We've sent more than our share of teams to the state finals. The soccer club..."
The new Clinton soccer park was inaugurated Sept. 13, 1986. Nearly 300 children play on the seven fields every weekend.

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existed for years before the community started to notice there was another sport in town beside football and baseball. With the opening of the new soccer park this fall, everybody in town is beginning to take part. It's a real community thing now."

Jammie Holland, president of the club, receives much of the credit for generating the excitement over soccer in Clinton. Like many parents, he got involved because, as a bystander, he couldn't stand to see his kids lose. "I just decided one year to coach a team to see if I could get the kids to play real soccer. You have to understand, everyone is a volunteer, from the referees to the grounds crew. It's a lot of work for a coach to teach kids their positions and pass the ball around."

Holland never played organized soccer. Like everyone else in Clinton, he played football and baseball. "During a football game in junior high, I got hit hard and was sore for weeks," he recalls. "I just wasn't big enough to take the punishment that's part of football. Looking back on those days now, I wish I had played soccer instead. Some-

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One who is coordinated and fast can be a star in soccer without being 225 pounds and over six feet tall.

Since the club plays both a fall and spring season, kids playing football and baseball can also play soccer to maintain their endurance, to work on their agility and to develop team skills. "That doesn't mean that the football and baseball stars are stars in soccer too," says Holland. "It's one sport where the smaller kids can beat the big kids."

Until this fall, Clinton's teams played on an unimproved "cow pasture" loaned to the club by the Clinton Public Schools. "It was rough and had more weeds than grass," says Holland. The school told the club it could use the land for three years, but then they wanted it back.

"Nobody was going to spend much money on fields that had no future," Holland admits. "We did what we could within reason. In a way, the fields made the kids tough. Since they were used to controlling the ball on bumpy, uneven fields, they were great when we played teams on nice, smooth fields. You can imagine what visiting teams thought of our fields. One season, two of our teams made it to the district finals. We were starting to get somewhere, but we only had the fields for two more years."

That year, Holland was elected president of the club. It became his job to find new fields—and fast. As a service representative for Pitney Bowes, Holland knew a few of the members of city council from servicing their postal meters. "One night after a council meeting I spoke to the council and city manager James Luckett about our problem and inquired about any city land that could be used as a site for soccer fields."

Holland reinforced this idea by finding out that the district would hold every third playoff at Clinton—if it had a new facility.

After further discussion, a 20 acre site near the Clinton Airport was mentioned as a possibility. "That afternoon, I drove out to the airport for a close look, made a few notes, and spent the next two days sketching out a design at my kitchen table. The soccer park would have seven fields in a stair-stepped design for good spectator viewing. It included small fields for the kids under ten and regulation fields for the older kids. Holland showed the design to the council and they gave Luckett the go-ahead to do an engineering study.

Holland had kept the Booster Club informed of negotiations with the city. When the city showed interest, the club quickly offered to finance as much as it could and to take care of all scheduling and opera-
tions of the fields. The council approved $30,000 for the project.
The soil on the site was rich clay loam since the area had previously been cultivated farmland. The fields were graded and perforated drainage lines were installed on both sides of each field and backfilled with gravel to the surface. "Each field is four feet higher than the next field," says Roberts. "With drain lines between the fields, the moisture level in each field can be different.

Water was a definite concern. There was one well on the site which had to meet the needs of the irrigation system, as well as drinking fountains and future water needs. The city did not want the added expense of major changes to the well or existing water main.

"When the job was published in the Dodge Report (a construction newsletter published by McGraw Hill)," says Johnson, "we got a call from Don Cotten of Submatic Irrigation Systems in Lubbock, TX. He raised some good points about irrigating the fields. His product, a subsurface irrigation system, is popular around town for landscaping. Surprisingly, not a single company called us about a conventional surface irrigation system for the job."

Cotten's proposal was to have city crews install a network of Dripline hoses eight inches deep across each field. The hoses have built-in drip emitters every 24 inches. Each emitter releases one-half gallon of water per hour at 20 PSI. The hoses were installed with a vibratory pipe puller in rows 36 inches apart. With each emitter covering an area of six square inches, a little over a tenth of an inch of water can be added to the soil per hour.

This design is intended for heavy soils like those at the Clinton park. The emitters should be closer together and not as deep for lighter or sandy soils.

A pump, filter system and valves could be installed without major changes to the well or existing main line. The system would allow the fields to be irrigated individually or in groups. The low pressure (30 psi) and volume of water needed for the system was well within the capacity of the water supply.

Holland, Luckett and Roberts liked the idea since they could irrigate the fields during day games, avoid any water loss to evaporation, and maintain water levels in the fields separate. They also didn't have the staff to keep a close eye on sprinkler heads for proper operation.

The primary concern with subsurface drip systems is clogging of the emitters. To prevent such clogging Submatic developed a one-piece enclosed turbulent flow emitter with built-in strainer. It is made of the same polyethylene as the tubing to which it is permanently welded. Water pressure in the lines needs to be 30 psi or greater to create a small void in the soil around each emitter to help prevent particles from being sucked in by negative pressure when the system is shut off. Water from the source should also be filtered to remove particles that might be suspended in it.

Sub-surface drip systems need to be purged regularly with a diluted solution of hydrochloric acid (1 part acid to 100 parts water). The weak acid cleans out any organic materials (such as algae) that may become lodged in the emitters. Twice a season is the recommendation, especially following long periods where the system has not been used. "During long periods without irrigation, the roots seek moisture anywhere in the rootzone," says Cotten. "As a result, small root hairs can grow into the emitters. The weak acid solution will purge any root hairs as well as any salts that accumulate in the line." Oklahoma soil is alkaline, so the mild acid solution also serves to improve soil pH.

Also, there is the problem of knowing when enough water has been applied. Man basically believes what he sees, and if he
can't see water on the surface he keeps irrigating until he can. With sub-surface irrigation, if you wait until you see water on the surface of the soil, you watered too much, says Cotten. "The optimum wetness is called field capacity. That's when soil particles are just damp enough to stick together when formed into a ball. If water is coming to the surface from sub-irrigation, that means water has replaced all the valuable air in the soil pore spaces."

Cotten recommends installing moisture sensing devices called tensiometers 12 inches deep into the soil. Weather and soil conditions are so different, he states, that no single guideline can be set for how long to irrigate. "Part of the turf manager's art is knowing by observation when the field has been watered enough," says Cotten. "This skill is the same whether he uses surface or sub-surface irrigation." But, Cotten will make a recommendation based upon a tensiometer reading (when the tensiometer reading falls below 18 millibars, the soil is too wet).

To Clinton, the water and labor savings were worth the risks. Submatic provided an on-site technician to oversee the installation and to teach a maintenance man hired by the city just for the soccer park how to operate the system.

The system for each field was installed, tested and operated long enough to bring the moisture level up to field capacity after the final ground preparation. The fields were sprigged with Midland bermudagrass and the systems were operated two to four hours daily until the turf became well-established. A longer, less frequent cycle was initiated following establishment in order to encourage the development of a deep root system. The systems are operated manually at the present time, but may be automated in the future, says Cotten.

"We can irrigate one field with just the pressure from the well pump, or two or more fields by using the system pump," says Roberts. In the future, the city can install a proportioner/injector to add the acid and liquid fertilizer to the irrigation water. If one field was used more than others, the amount of fertilizer to that field could be increased. An automatic controller connected to moisture sensors could be added to operate the system with minimal labor. Maintenance would then be reduced to mowing and marking the fields.

Before Clinton can add an injection system or the weak acid solution it will have to install backflow prevention devices to make sure the materials do not enter the water going to the drinking fountains.

The season opened on the new fields in mid-September. "We're hoping to have the district finals within the next two years," boasts Holland. "Now, visiting teams like to play at Clinton and the coaches ask me how we did it with the oil business in such bad shape. While some clubs in our conference have lost up to 50 players, we gained more than 80."

New concession stands and rest rooms are now on the drawing boards. The Booster Club donated new bleachers for the fields as well as goal posts, nets and line marking equipment. But, most important of all, soccer has caught on in a big way. "Varsity soccer is now a real possibility at the high school within two years," says Holland. "We'll have a great team when it happens. Our club teams in the 12-14 year old bracket took first and second place in the district last year on the old fields. Imagine how good they'll be on the new ones."