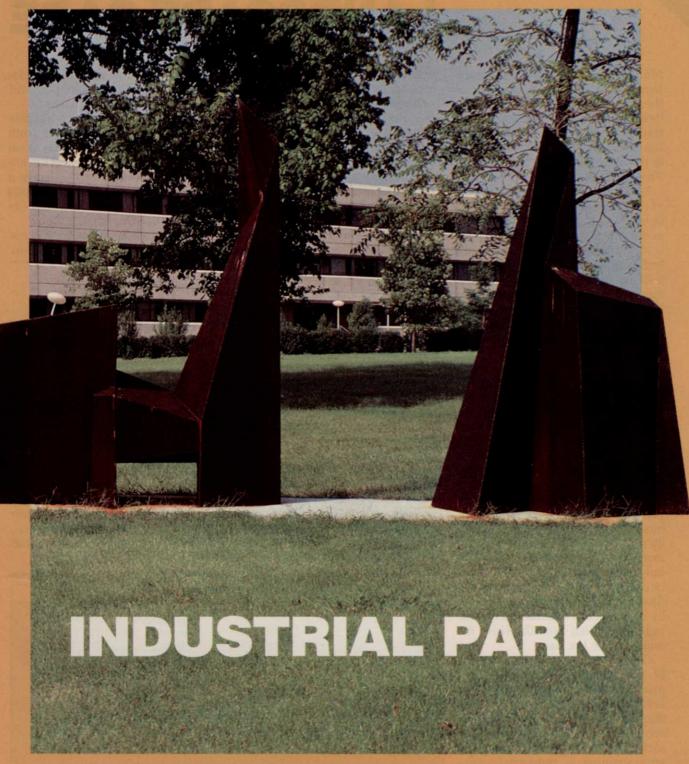
LANDSCAPE MANAGEMENT



WEEDSTREESETURF

THE FUTURE IS BRIGHT FOR INDUSTRIAL PARK LANDSCAPE CARE

Management of industrial park landscapes is more a function of the individual tenant within the development, or a landscape contractor hired by the tenant, than the developer or owner, according to the most recent survey by Weeds Trees & Turf magazine.

More than two thirds of the survey respondents indicated total control over landscape planning and maintenance by tenants. Typically those parks where each building has a number of tenants will be managed by the owner's agent. Those parks where entire buildings are built and owned by individual companies will be less involved in landscape decisions.

Nearly half the industrial park representatives indicated their parks are not fully developed. Combined with the attractiveness of other ventures due to high interest rates, industrial parks may face a lag of investors in the near future.

Despite a temporary slowdown, industrial park development is a practical alternative to older, more expensive buildings in urban centers. The idea took off in the late 60's as the U.S. Highway System made suburban industrial parks not only accessible to truck transportation, but closer to employees. Industrial parks were often supported by chambers of commerce to provide controlled growth while increasing the tax base.

One industrial park developer in St. Louis told Weeds Trees \mathcal{F} Turf private industrial parks are often sold to tenants five to ten years after development. Many have been sponsored by private investors who seek a five to ten year payback. The attractiveness of industrial parks as an investment faded slightly under high interest rates, when investors were guaranteed 12 to 15 percent without great risk. As money rates fall the industrial park once again becomes attractive.

Other industrial parks operate like residential developments, where streets, utilities and rightsof-way are taken over by the city after the development is built. Whether private or public, industrial parks face zoning regulations often slanted toward "clean" industry.

Survey respondents said companies pay for landscape maintenance in a monthly maintenance fee, directly to a landscape contractor, or separate payment to the park staff. Each represents a third of the survey. The park staff may contract out all or a portion of the work. Two of the property management firms in the survey had landscape divisions.

In addition to the multi-company park, a larger group of single-company, campus style offices exist in suburban areas near major cities. Distinguishing between the two types of facilities for this report would have limited value. Considerably more research is needed to quantify the market. Projections from data we have would suggest there are more than 3,000 industrial parks in the U.S. Add the singlecompany industrial campus and the total approaches 10,000.

Landscape maintenance budgets of our respondents ranged from \$3,000 to \$1.2 million. The most common figure \$18,000, and the average was \$30,350. Projection to a universe of 10,000 facilities results in landscape maintenance expenses exceeding \$200 million.

Park size ranged from four acres to 5,000 acres. The most common

Tenants have considerable control over landscaping of their buildings.

size was 25 acres, but the average was 200 acres. Half the industrial park respondents indicated acreage for future development exists in current parks. This would reduce the area intensively landscaped. Overall, maintenance cost ranged from \$150 to \$720 per acre.

Nearly two-thirds of the respondents are responsible for both interior and exterior maintenance. They have an average full-time staff

Table 1

Planning and Buying by Industrial Park Managers.

Month	Percent Planning	Equipment Percent Buying	Chemical Percent Buying
January	55	65	30
February	35	65	50
March	40	55	100
April	25	65	70
May	15	30	50
June	25	5	10
July	40	20	5
August	60	20	0
September	75	30	25
October	50	25	5
November	35	5	15
December	25	5	30

of 6 with part-time and seasonal help of 2 to 5.

Chemical purchases per year averaged \$4,250 for herbicides, \$3,000 for fertilizers, and \$2,075 for insecticides.

Industrial parks had an average of 6 push mowers, 3 riding mowers, 4 hand carried compressed air spravers, 2 chain saws, and 3 pickup trucks. Larger spray units were owned by more than half the respondents and a third had turf aerifing devices. Roughly half the parks had some form of irrigation to serve less than half the acreage. Almost two thirds of the irrigation systems were provided by the developer.

Local landscape supply distributors are used by three quarters of the respondents. More than a third bought some chemicals or equipment from local retail suppliers. A

Two thirds of the survey respondents are responsible for both interior and exterior maintenance.

fifth bought some materials directly from the manufacturer.

Summary

As interest rates drop, not only will investors see industrial parks as more attractive, but companies seeking more efficient offices will become tenants or owners. The amount of undeveloped space in industrial parks may absorb the initial recovery, but the concept of suburban industrial parks remains an effective alternative to rising leases in urban centers.

As tenants take over parks from developers more landscaping work will be available to contractors. The fact that some property management firms are creating landscape divisions reflects the profitability and potential for this market.

Suburbs will continue to encourage development of clean, planned industrial parks to moderate the tax burden on homeowners. The motivation for future expansion of industrial parks exists today and will continue to grow. WTT



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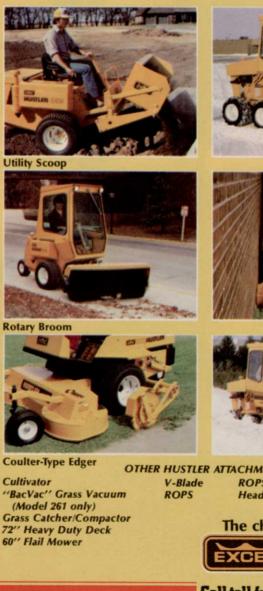
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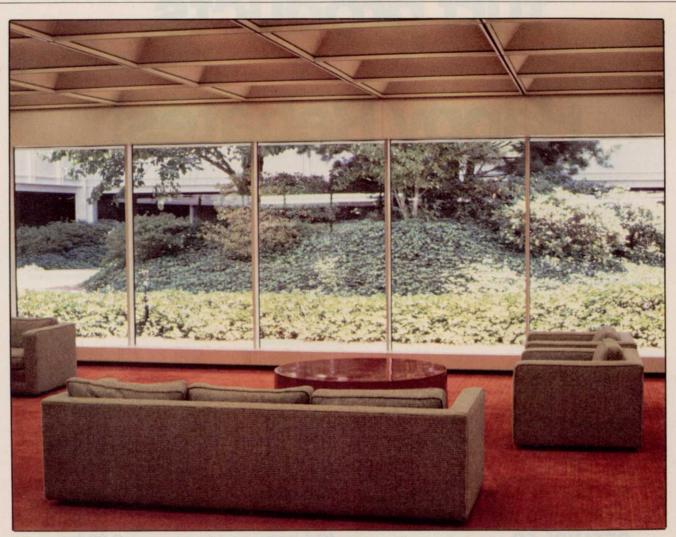




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GE SUPERINTENDENT HAWKS SPECIFICATIONS FOLLOWING EARLY TURFGRASS DISASTER



View makes you feel like your in the headquarters of one of the country's largest corporations.

Two years after Elmer Toth accepted the job of superintendent of grounds and facilities for General Electric's corporate headquarters in Fairfield, CN, he could drop a quarter and not hit a blade of green grass. As you can imagine, GE's appreciation of proper maintenance skyrocketed.

The original turf failed because the topsoil left by construction crews was poor and the turfgrass used was not winter hardy. One cold winter and one hot summer wiped out acres of turf. Since Toth joined GE following construction he could only try desperately to

Toth's main job is to decide how specifications should be altered from one year to the next.

save a poorly specified turf.

Those days are just a memory now. Visitors at GE are tempted to bring along a three wood to tee off the fairway-like lawns. All of the 45 acres maintained are handled by contractors under the supervision of Toth. Specifications are his keys to control.

Outside contracting, according to Toth, has worked out just fine. "We're very happy with our contractor, Michael Labriola Inc. They take a lot of pride in their work and that is very important to me." He admits that there is a big difference between contractors and in-house staff. "With outside contractors I follow a 'hands off' policy unless they stray from the schedule," said Toth. "You must be very careful in who you pick. The lowest bidder might not be the best choice." In dealing with contractors, Toth pointed out that one of the most important elements is well-written specifications. Toth wrote both the contract and the specs so he is intimately familiar with their contents. Every spring Labriola submits a schedule that details just how and when his firm will perform all the tasks outlined in the specs. One of Toth's main responsibilities is to decide just how the specs are altered from year to year.

The specs are divided into three areas: grounds maintenance, landscape maintenance and lawn maintenance. Grounds maintenance incorporates sweeping and snow removal duties, lawn maintenance details the fertilizing, irrigating and mowing of all lawn areas, and landscape maintenance pertains to ornamentals, trees, ground covers and other areas.

Winter is a particularly busy season at GE due to the harsh weather. The maintenance crew plows continually when it snows, not giving the snow a chance to build up. The roads are also covered with a sand/ salt mixture. Since its opening GE has only had to close the office once due to untravelable roads.

Spring is the toughest season for the crew, due to the number of jobs

One cold winter and one hot summer wiped out GE's turf

that have to be done. Any damage that was done during the winter has to be repaired. This is also the time that all planting, trimming, pruning, and in general, preparation for the growth season takes place.

Mowing and keeping the lawn green are the two basic tasks during the summer. A lot of irrigation and fertilizing goes into maintaining the green color.



Toth (left) and contractor Labriola (right) plan five years ahead for GE.

Fall is the only relatively slow period at GE. Leaves are removed from lawn areas with air brooms and Toro Groundmasters. A snow fence is erected to battle the harsh winds which would otherwise dump snow on the driveways. During the fall the trees are checked for problems and additional pruning is done if necessary.

In maintaining a good relationship with his contractors, Toth noted that chemical application timeliness is one area that he keeps a watchful eve on. "When I see the contractor's schedule I have to decide on the accuracy of the chemical applications," said Toth. "The fluctuating weather always makes this difficult and we sometimes disagree on which dates will provide the best control." He points to the application of crabgrass herbicide this year. It was very warm in May, which foretold of an early spring. Following the herbicide application the weather got cold and rainy and the crabgrass failed to germinate until July. Meanwhile the herbicide was diluted and ran off with the drainage. The result was more crabgrass at GE than usual, although it was not a devastating problem. Toth pointed out that with insect and weed control he is opting for less than

100% if he can significantly cut down on his chemical usage. All the chemicals eventually drain into a number of holding ponds and Toth believes it is environmentally sounder to move towards an IPM (integrated pest management) ap-

The lowest bidder might not be the best choice

proach rather than overusing chemicals. This will be a gradual process, however.

One of the reasons Toth is vigilant on chemical application is because of the results when there is an error. "I make sure the spraying is done on schedule because if you miss, you might not have another chance to control the insects, weeds and disease," said Toth. "With exterior work you may have to live with your mistakes for a year before you can rectify them. Do it right the first time so you don't have to do it again." Toth had a mite and lacebug problem on his pieris and rhododendron. This caused a vellow mottling on the leaves that can't be remedied this season.

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Trimming and all other landscape tasks are performed by Labriola's crew.

The landscape maintenance contract is very inclusive of the many areas that make up a corporate headquarters. One of the few duties that is not in the contract is the replacement of trees. Toth forecasts future budgets as much as five years ahead and tree replacement is one of the areas that he leaves out. By forecasting so far ahead Toth is able to secure funds for projects ahead of time and also be cost effective in his maintenance. While his forecast for 1983 is detailed, his forecast for 1987 is much more vague. He adds more detail to each upcoming year and always stays five years ahead. He told Weeds Trees and Turf that this was difficult for the first five years of the contract period but now it is mostly fine-tuning. The contract is budgeted at approximately \$200,000 for 1982 and that includes funds for emergency projects that are necessary but don't appear in the specs. The contract is increased yearly, usually around 10-15% according to the ravages of inflation and the increased scope of the contract.

Being at GE since its opening in 1974 has been a big asset to Toth, particularly in detailing the specifications of maintaining the landscape. "To be plunked down on a property with no prior experience is very difficult," said Toth. "It takes at least a year to see how the property reacts to the four seasons. The experience helps because I've learned that nothing happens twice quite the same way." Toth regrets not being at GE during the construction period because there are some things he would have done differently. It is no wonder the original grass failed when you realize it was planted on a poor topsoil foundation and it was quickgerminating but not winter-hardy. When Toth was installing the irrigation system he decided to topdress and reseed everywhere and his efforts paid off. The foundation is a predominately tight clay soil and aeration twice a season is a must.

Curiously, because Toth can control the moisture levels on the grounds he does not look forward to nature's inconsistent rainfall. It also wrecks havoc on the mowing schedule. During the summer the grass is mowed once per week and it can take two to three days for the crew to finish all the lawn areas. Even with its large water usage, GE was not restricted during the Northeast water crisis. GE uses city water, which is preferable due to the lack of silt and other particles but Toth is making plans for future conservation so he won't be caught short. The company policy is to keep as much lawn area as possible so in a crisis situation the lawns would get high priority.

One of the unique areas at GE is due to the building design. Described as three square doughnuts, each of the three buildings contains a three-story, 75-sq. ft. atrium. In each atrium is a circular compilation of shrubs, trees and ground cover bordered by a path, which is in turn surrounded by a strip of shrubs, hedges and ground cover. The atria are inaccessible but provide a pleasing vista for employees who border them. The weather conditions vary considerably from the lawn areas and are much more greenhouse-like. There is much less air circulation and it is warmer. The plants have suffered from wilting, leafspot and aphids but the spray program and syringing have helped battle any large infestations.

Toth regrets not being at GE during construction

Since he brought the grass back in 1976-77 Toth has battled infestations at every front and won more than his share. And he did it in a suit and tie without having to push a mower or squirt a sprayer. Armed with detailed specifications as to what he wants done and fortunate to be affiliated with a conscientious landscape maintenance contractor, Toth has maintained General Electric grounds to golf course standards. **WTT**

INDUSTRIAL PARKS LURE TENANTS WITH ATTRACTIVE LANDSCAPES

By GEORGE L. ZEIS



Streiler adds dazzle to his properties to give tenants that special sense of pride.

Prior to the 1950's, most of the industrial and business establishments in St. Louis County were inner city. Anyone buying land 20 miles west of St. Louis for an industrial development was considered foolish.

Today, the area alongside Interstate 270, west of St. Louis, is almost completely filled with thriving industrial parks and downtown St. Louis is forced to try harder to keep businesses from moving out.

"The value of commercial and

industrial park acreage in St. Louis County, and those under construction, runs into the hundreds of millions of dollars," says Roger Grow of the St. Louis County Planning Department. According to Grow there are more than 70 industrial complexes in the County, with acreages ranging from two-and-ahalf to 1,000. "An average park is 20 to 30 acres."

It wasn't until "campus" developments began in the outlying areas that business executives saw the need to improve the appearance of their business establishments. There was more space. The new buildings were attractively designed and required proper landscaping. Perhaps most important, industrial parks were competing with each other for tenants and attractive landscaping was a powerful lure.

Sylvester Streiler supervises more than \$30 million worth of commercial property in St. Louis *Continued on page 38* County for Windsor Management Corporation. His title is vice president - property management. The corporation manages a total of five industrial parks, office buildings, and shopping centers.

"Landscape maintenance and beautification are of primary importance to our company," claims Streiler. "With the valuable property we manage, it behooves us to keep it attractive and appealing to our renters."

Streiler's \$60,000 landscape budget is a sensible investment for the \$3 million of rental income generated by the properties. "Our operating expenses amounted in 1981 to approximately 50 percent of gross income," Streiler figured. "We have special projects each year as our budget grows roughly ten percent annually. Each complex is charged separately for landscape work."

Budget planning for 1983 takes about three months with plans fairly well finalized by the end of September.

Four full-time employees are on the payroll. Most of their work during the summer months is landscape maintenance. Fall, winter and early spring activities involve snow removal, repair work both inside and out and other work activities as they arise.

There are more than 70 industrial complexes in St. Louis County.

Six extra workers are employed during the summer months. Their pay is based somewhat on previous experience, how much time they had worked previously for the Windsor organization and their alertness to daily responsibilities. The pay rate is about \$4.25 per hour.

Streiler has two full time landscape employees reporting directly to him. But he also makes periodic visits with his part-time workers. And the employees are fully aware that the "boss" may appear at any time. While it is well to "inspect



Thirty acre campus in west St. Louis County.

what you expect", Streiler feels that it should be a two-way street. Men on the job may have a new approach to performing a certain task and they want to pass it on first hand. It gives the employee a sense of responsibility that they might not have otherwise. Periodic inspections also stop any sloppy or poorly handled work loads before they become habit-forming or have a negative effect upon tenants.

No large equipment is owned as it relates to landscape maintenance or landscape work by this company. "We use the services of an outside contractor to do heavier work or to mow large areas," Streiler pointed out. "This means we have no investment in trucks, large mowers or other large equipment.

"From our experience, we have found it more practical to have larger areas mowed by an outside contractor. However, our staff does all the trimming. It is this last five percent of the job that really shows, the well trimmed shrub or walk area that seems to attract attention. This we want to have direct control over."

Windsor buys at least six trim mowers at a time and they are available at a moment's notice. "We know mowers will break down, sometimes rather quickly," Streiler said. "If this should happen, all we have to do is pull a replacement out of storage and no time is lost. This is important to us, particularly when weather conditions change rapidly."

No herbicides are used. Occasionally Diazinon is used to control grub infestation.

A 12-12-12 fertilizer is applied two times a year. Hand spreaders are used for distribution. Fertilizer is purchased just prior to application to avoid storage. Approximately \$1,200 is spent on fertilizer each year.

A combination of Bluegrass and ryegrass is used for spot seeding. Approximately \$500 is spent on seed each year.

An underground irrigation system was installed at one of the building sites to overcome a problem created by sunlight reflected from glass windows. "Shortly after the building was completed and occupied," Streiler said, "we had an unusual problem. Grass wouldn't grow. We finally determined that the reflected sunlight was more than the grass could stand. Now, the sprinklers are turned on at night, whenever extra water is needed, and the problem has been solved."

It is evident that Streiler likes color. One building area is bright with color from plantings of tulips, marigolds and chrysanthemums. These flower plantings are usually along walk areas. Bright and varying colors are there during the entire summer and fall seasons. Approximately \$1,000 is spent on the purchase of tulip bulbs annually. WTT