A Continuous Improvement Process in Grounds Maintenance
Annual and Perennial Flower Bed
Framing the Entrance to the Duke Clinic.
Photo by Les Todd, Duke Photography

The Hanes School of Nursing Walkway Garden. This area received Duke’s first QAP designation.

A CONTINUOUS IMPROVEMENT PROCESSES
The Grounds Services Unit at Duke University has implemented a new program that involves a process of self evaluation, which embraces the concept of perpetual and continuous improvement. The Quality Appearance Program (QAP) embellishes and expands upon the Quality Assurance Program concept, but with a twist to grounds management improvement strategies.

Over the years, the Grounds Unit has employed and utilized many practices aimed at elevating the appreciation level of our campus grounds. Some of these practices bore a technical focus, while others came from more traditional management conceptualizations. We have devised grounds standards, conducted peer inspections, established exhaustive training plans, formulated work measurements and metrics, and won national grounds awards.
Yet, if you walk around the Duke campus, there are areas that just don’t look as good as they should. These landscaped areas may have been installed as intended and plant materials may be thriving and properly maintained, nevertheless, the areas simply do not look very pleasing. This new QAP initiative is an attempt to address this visual disconnect more acutely.

So, exactly what is this QAP and how does it work? This program began as the collective creation of the supervisors in the Duke Grounds Unit. It was determined early on that such a program should be a full-circle process.

With an understanding of how the program should conceptually work, it became necessary to define what a quality grounds area should really look like. Three descriptives were chosen and defined.

1. Beautiful. The landscape must capture the eye, stir the imagination, and prompt momentary pause. As we designed our landscape, we needed to realize this may be the only opportunity to create an unforgettable memory.
2. Appealing. The landscape must attract favorable and pleasant attention to the campus and must maximize the tantalization of human senses.

QAP Rubric Chart

<table>
<thead>
<tr>
<th>Turfgrass Management</th>
<th>Landscape Management</th>
<th>Landscape Design</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turf is in exceptional visible health. Species are properly matched to environment. Turf is free of weeds, debris, disease, &amp; pest injury. Outstanding color, density, &amp; uniformity. Borders are edged and kept crisped.</td>
<td>Plants are vigorous with no symptoms of pests, disease, or infertility, and are thoroughly pruned using proper methods. Beds are weed free, definitively edged and freshly mulched to proper depth with appropriate materials. Irrigation is working and programmed for optimum effectiveness.</td>
<td>Landscape exhibits rich diversity of plants well suited to the local micro-environment. Design is appealing and cohesive in form and function with thought given to management issues and mature size and spacing.</td>
<td>Maintenance strategy shows high level of success in overcoming high levels of usage, soil compaction, poor soil profile, and harsh microclimate through efficient optimization of resources.</td>
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<tr>
<td>Turf is in good overall health. Good uniformity in species, color, and appearance. Very limited number of weeds. Minimal signs of stress from drought, insects, disease, or wear. Borders kept crisped &amp; edged.</td>
<td>Plants are healthy overall with sporadic symptoms of pest or disease, adequately pruned to achieve neat appearance. Beds have occasional weeds that do not detract significantly. Mulch is sufficient to conserve water and suppress weeds. Irrigation is working effectively.</td>
<td>Landscape meets functional requirements of site. Plant material is sufficiently suitable to achieve viability but lacks some diversity. The design allows for reasonable management inputs.</td>
<td>Moderate success has been achieved through sound management practices with varying degrees of soil compaction, moderate to heavy use, and less than ideal climatic conditions.</td>
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<tr>
<td>Moderate signs of damage from insects, disease, traffic or drought. Non-uniformity is present in species, color, height and overall appearance.</td>
<td>Plants exhibit some signs of pests or disease. Pruning is somewhat inadequate or incorrect. Beds are not uniformly edged. Mulch is not fresh and weeds are visible throughout. Irrigation may not provide adequate water at all times or may be inefficient.</td>
<td>Landscape does not meet all functional criteria. Plant materials lack diversity or are inappropriate for site. Design causes management to be unnecessarily challenging.</td>
<td>Visible signs of a highly thought out and executed management strategy. Although site is aesthetically pleasing, few obstacles were overcome to achieve high level of success— i.e., ideal soil profile, low usage rates, and ideal growing conditions.</td>
</tr>
<tr>
<td>Significant evidence of poor turf health. Turf is lacking color, density, and quality appearance. Significant levels of irreversible damage from insects, disease, or mechanical injury.</td>
<td>Plants have significant damage from pest or disease. Pruning is inadequate or incorrect to the point of being detrimental. Weeds are rampant and mulch is insufficient. Irrigation is inoperable and ineffective. Landscape is unappealing. Debris and dead material is present.</td>
<td>Landscape is neither functional nor cohesive. Plant choices and design show no consideration of management issues or sustainability. Overall affect is unappealing.</td>
<td>Site is aesthetically poor. Management plan has not been executed due to less than ideal growing conditions. Site is compacted, has constant use and the utilization of resources is minimal.</td>
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</tbody>
</table>
3. Diverse. The landscape is an assorted, multifarious view that offers a richly distinctive and exciting world—creating the stimulation of good design, colors, and shapes.

The next essential exercise was to develop a systematic way to assess and weigh the worthiness of a project seeking QAP designation and recognition. A rubric chart was created to rate areas based on a set of conditions—that when met—would effectively integrate and visually display the best qualities of the three descriptives.

The intent of the QAP was not to correct all the ills and misfortunes that produce landscape eyesores on campus, nor was it intended to force the landscape design process to move in one direction or the other. It is simply another measure to add to our existing arsenal of initiatives for the purpose of reaching excellence in our Grounds Services Unit.

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The ultimate goal of the QAP is to take a landscape space—in whatever form or with any set of inherited problems—and make it visually rewarding as possible and a beautiful addition to our entire campus landscape.

Identify: Locate the landscaped area for consideration
Analyze: Determine shortcomings and deficiencies
Effectuate: Implement improvement measures
Evaluate: Monitor and document success of upgrades