SPRING DALE FARMS

AN ENVIRONMENTALLY SENSITIVE DESIGN OF A RETAIL NURSERY/GARDEN CENTER

L.A. 404  Comprehensive Thesis Project

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ABSTRACT

STATEMENT

Human's have loved and had a strong connection with plants from the beginning of time. This can be seen throughout history, from paintings left on the walls of caves, to the hanging gardens of Babylon, to the elaborate gardens of royalty. It was this love that motivated early man to begin the cultivation of plants. Plant cultivation began with simple nutritional needs, in the form of gardens, and evolved into the more sophisticated cultivation of ornamental plants, which, in turn, has become the nursery industry of today.

The nursery industry has taken the skills of early cultivation and developed them into a profitable business that sells plant material to the general public. However, the industry has forgotten the original feelings of love and respect man had for plants and the environment. The nursery industry, in fact, is developing an attitude of total disrespect for the landscape and plants.

This attitude can be seen in most nursery/garden center establishments across the nation. However, how can the surrounding community? To change these attitudes, the landscape architect can demonstrate how a nursery/garden center can be designed with respect for the landscape. Therefore, serving as an educational facility, while, at the same time, meeting its commercial needs as a nursery. The new attitudes developed in the industry and communities will lead to enhanced enjoyment of the landscape for everyone.

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SECTION 1:
IDENTIFYING THE PROBLEM
AND
THE PROJECT
CHAPTER 1

INTRODUCTION
BACKGROUND

Landscape architects have often been referred to as Stewards of the Land. The American Heritage Dictionary defines steward as: one who manages another’s property, finances or affairs. Inherent in this definition is the struggle that many landscape architects have dealt with through time. For years, landscape architects have struggled to deal with the concept of managing the land. The profession of landscape architecture, in general, has had a great respect and fear of nature. Landscape architects have respected nature because of its beauty and strength, and also for its ability to sustain itself. They feared Mother Nature because they saw what effect her storms, earthquakes, and other natural forces could have on the landscape. They also saw what happened when man attempted to dominate her. The projects usually ended up hurting not only nature, but also man. Therefore, landscape architects became naturally cautious when it came to putting a design into the landscape. Yet, the role of landscape architecture had previously been defined as a profession that managed the land. This meant controlling the shape of the land and the environment. Thus, landscape architects, historically, have had to learn to maintain a degree of respect for the land and nature during their design process.

Unfortunately, not all people hold the same reverence for the environment as most landscape architects do. Many forms of man’s manipulation upon the landscape are present in the world today. The nursery/garden center industry is a prime example of this manipulation. The nursery owners have become masters of manufacturing plants. This skill has been acquired at nature’s cost. The sites where the nursery/garden centers are located are typically graded into a flat site for easy implementation of "cookie-cutter" designs. Plant material is placed in orderly rows and
community.

When landscape architects are involved with the design of the nursery/garden center, there is an opportunity to demonstrate how this establishment can be designed to operate as an efficient business while remaining sensitive to the landscape. With this demonstration, industry and community attitudes and methods of operations can be changed to reflect the respect that nature rightly deserves.

Many people visit their local nursery/garden center to get advice and ideas for landscaping their private gardens. The nursery becomes an educational institution for much of its surrounding community. If the customers visit the nursery and draw directly from what they see at the establishment, this dominance of the landscape will be continued into the personal realm of the community. In today's world, with the nursery industry configured as it is, the dominance of the landscape is being repeated throughout the

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CHAPTER 2

THE PROBLEM
PROBLEM STATEMENT

Man’s association with plants and the living environment could be seen throughout time. Paintings and drawings left on stones and walls depicted the love of plants that seemed to be inherent in human beings. It was this love that motivated people to begin cultivating ornamental plants for their personal enjoyment.

The nursery industry has grown from these early forms of cultivating only a few prized ornamental plants to the efficient manufacturing of great numbers of plants. Unfortunately, the direction of growth the industry has taken is not one that reflects early man’s love for plants. Instead, the nursery industry has become the prime example of human’s manipulation over the landscape with no respect for nature.

The landscape architect can start to alleviate this problem by demonstrating how a nursery/garden center can be designed with respect for the landscape. With this design, the nursery can serve as an educational facility, while, at the same time, meeting its commercial needs.

1. To determine how engineering could be designed to be effective while maintaining respect for the landscape. This subproblem involved issues such as grading, circulation, drainage, soils, and utilities. Certain questions had to be answered in regard to these issues. These questions were:

a. How could grading be accomplished to allow efficient business operations with

SUB-PROBLEMS

Inherent in this overriding problem were several sub-problems. These sub-problems were outlined with a list of questions related to each sub-problem.

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minimal impact on the land?

b. What kinds of circulation (both pedestrian and vehicular) standards were needed for this type of establishment?

c. What type of drainage patterns were present and how would they need to be altered?

d. What soils were present on the site and what type of soils were needed by certain types of plants?

e. What utilities were present on the site and what types would have to be added?

2. To design a nursery/garden center that would meet all of the legal restrictions and still remain a creative design. This included ordinances, laws, and zoning regulations. The questions that related to these factors were:

a. What were the ordinances that related to this industry, and the site, and how did they apply to the proposed development?

b. What were the laws for the region, state, and county where the site was situated and how did they affect the design of the nursery/garden center?

c. What zoning regulations were present on the site and what changes might be required to allow the development of a nursery/garden center?

3. To resolve how the landscape architect could design the layout of a nursery/garden center to be an efficient business

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operation. Certain questions had to be answered in this sub-problem. These were:

a. How could the growing of the plant material be done in an efficient manner to allow for the nurturing of the plants while growing, and then for the final movement of the plants to where they would be sold?

b. How could the landscape and the structure of the retail garden center be incorporated to demonstrate sensitivity towards the land?

c. How could the placement of the garden center on the site be oriented to allow for delivery (in semi-trucks) of plants from wholesalers to the establishment?

4. To specify how the design could incorporate the natural elements of the land and display sensitivity to the environment and the landscape.

THE HYPOTHESIS

The hypothesis, as stated earlier, was: The landscape architect could demonstrate how a nursery/garden center could be designed with respect for the landscape, therefore serving as an educational facility, while responding to the commercial needs of the nursery. By accomplishing this demonstration, industry and community attitudes could be changed through their gained knowledge.
ASSUMPTIONS

1. The nursery/garden center operations that were studied in the texts were efficient and viable business operations.

2. It was possible to design an efficient nursery/garden center that maintained sensitivity towards the landscape.

3. The art and science that was involved with horticulture could be combined into a design for a nursery/garden center.

4. The landscape architects interpretation of what was sensitive and respectful to the landscape and environment was correct.

5. The community and industry attitudes could be changed.

6. The existing designs of nursery/garden centers did not display respect for the landscape and nature.

7. An unlimited budget was in existence for this project.

8. All zoning and other legal restrictions were met, with the design.

DELIMITATIONS

1. The detailed plant palette of the nursery/garden center would not be defined and laid out in a detailed planting plan.

2. Not all scientific aspects of the nursery operations would be covered (example: plant propagation).

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3. Only a limited number of nurseries within the United States would be studied. This research would focus on the Midwest for information and examples.

4. The specific economic success of the nursery/garden center would not be discussed (example: the profit in dollars expected to be generated by the establishment).

5. No construction documents, including a grading plan, would be done for this project. However, the existing topography and how it would be changed would be an important consideration during the design process.

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**DEFINITION OF TERMS**

**Nursery/garden center** - a retail establishment that grows plants for sale in the related garden center; also active in the sale of products relating to landscaping (installation, maintenance, and revitalization).

**Efficient nursery/garden center operation** - a nursery/garden center operation that serves as a retail outlet for the purchase, by the general public, of plants and related landscaping supplies; the business must earn a profit and operations should run in a smooth and logical manner.

**The Landscape** - the land and its environment in their natural state.

**Natural** - occurring in nature or the environment without the constant manipulation of humans.

**Garden Center** - a retail establishment that obtains all plant material and supplies directly from a supplier or from a wholesaler for sale to the final consumer.

**Sensitive Design** - a design that places elements on the landscape in a manner that preserves the existing characteristics of the site; a design that places plants in the landscape in a way that reflects how they might grow in natural surroundings.

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CHAPTER 3

RESEARCH
REVIEW OF THE LITERATURE

"Always question what seems too obvious to question (Leedy, 284)." This statement explained the motivation for this project. The nursery/garden center industry needed to ask a question similar to this. Perhaps as simple as, "Why?".

Nursery/garden centers had been designed in a certain fashion for many years. Why? Because it worked, and it usually worked well. In the many years of nursery/garden center development had there been a designer that had asked, "How can it be different?". The answer to this question seemed to be, very few. In the nursery/garden center industry it had become all too common for the design development to be applied as a formula, a standard way of organizing the layout regardless of the site. In order to change this attitude, a design had to first be developed to demonstrate how a nursery/garden center could use the standards, but in a more creative way.

To accomplish this demonstration the landscape architect (designer) needed to understand, more clearly, some specific issues. First, the history and evolution of the nursery/garden center industry had to be understood. Second, the methods of operations that were utilized in the nursery/garden center industry needed to be understood. Finally, the ability to design with the landscape and nature had to be understood.

"But opportunities exist, in the spirit of landscape architects past and present, to coax and educate. When all is yelled and done, the process of creation and the unfolding of nature's delights may bring even 'material' clients to a direct enjoyment of their new surrounds." (Cutler, 55).
The first recordings of man taking a plant and growing it for personal reasons could be found in writings from early Mesopotamia thousands of years before Christ. These were the records of early agriculture. In the Old Testament of the Bible, there was mention of improved fruit trees and vines in parables. In the New Testament, grafting was mentioned. Egyptian wall paintings illustrate noble families in elaborate gardens. The hanging gardens of Babylon were known as one of the Seven Wonders of the World (Fleming, 5).

The nursery industry found its way to the New World in the form of favorite lilac and rose bushes. The nurseries that concentrated on growing fruit trees also grew these favorite plants. At the end of the 19th century production of ornamental trees and garden plants could be seen in nurseries along the East Coast (Fleming, 61). In 1937, the first commercial nursery in the United States (Prince Nursery of Flushing, New York) was established. This was the beginning of an industry that was continually growing (Davidson and Mecklenburg, 14).

Since these early beginnings, the industry had learned to grow plants more efficiently. This industry had also learned to cultivate thousands of varieties of plants. With a history almost as long as agriculture, the nursery industry had evolved into a complex production of an extremely wide range of plants.

"The row is the oldest and simplest method of planting nursery stock on level terrain" (Davidson and Mecklenburg, 82). This organizational pattern was the one typically found in nurseries across the nation. Unfortunately, not all of the sites the nurseries were located on were originally

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flat. In fact, there were many layout options, each one designed for a different set of site conditions. Different sites should be evaluated to determine which of the layout options was most appropriate. The types of layout were: square, offset square, rectangular design, rectangular-square system, interplanting design, equilateral triangle-hexagon design (Davidson and Mecklenburg, 82).

In addition, many more operations-oriented decisions had to be made, such as: management decisions, circulation and parking decisions, public display area decisions, field production versus container production issues, and off-season uses (Davidson and Mecklenburg).

"Such imaginative landscaping literally, brightens their outlook, enhances the peace and tranquility of their living environment, and creates an ongoing communion with the great outdoors" (Meister, 32). When designing a nursery/garden center the landscape architect should begin the design process by looking at the site as it existed. The designer should attempt to allow the design to exist with the land versus dominating the land. The design should be, "essentially an adaptive outgrowth and refinement of the myriad shapes and forms suggested by the look and the lay of the land itself" (Meister, 33). In development of a nursery/garden center, the designer should be careful not to be limited by the way things are meant to be, or "ought" to be (Moore, 31). Instead, the design should be guided by nature. This is not as easy a task as might first be thought. "Reflecting the subtleties of pure naturalistic design requires both a keen understanding of nature and an ability to discern the architectonic qualities of nature" (Supnik, 16). When nature became the ultimate source of inspiration for designing, the nursery/garden center that was developed would begin to accomplish the goals required of a nursery/garden center that displayed sensitivity towards the landscape.

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GOALS OF THE DESIGN

1. To influence the nursery/garden center industry attitudes by demonstrating their role as an educating facility for the community.

2. To influence communities to change the way the landscape was shaped (and therefore the environment) adjoining the nursery/garden center establishment by providing information to the community through the nursery/garden center.

3. To transform the nursery/garden center into a model to demonstrate how a more naturalistic landscape could enhance the environment and improve the quality of life.

4. To increase the success of the businesses by providing the industry with an example of a nursery/garden center that demonstrated respect for nature and the landscape, and operated as a profitable retail establishment.

"In naturalizing, one guideline distinguishes this step from traditional approaches the site should be accepted as it is".

J. Diekelmann and R. Schuster

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DESIGN PRINCIPLES

Personal Values

The design principles that were utilized in this project were largely influenced by the designers' personal values. In order for this project to be replicated a brief description of my personal design principles and values were outlined. I believed that as landscape architects we directly affected how the environment and the landscape was shaped. Through design and design implementation, landscape architects could also shape the attitudes of persons that came into contact with the finished product. Therefore, landscape architects served as educators to the general public as to how environments could be shaped without disrespecting the landscape. I believed that landscape architects could gather design principles directly from the environment and nature. These principles included patterns and rhythms present in nature, the entire ecological system that had been created, and the integration of different spaces and land uses in a manner that created a unified picture. These principles allowed the designer to create spaces and areas that were more sensitive to the environment. It was these types of areas that we humans were drawn to and were comfortable in.

Community Values

The community design principles were largely influenced by the legal environment that was present in the community. These included ordinances, zoning, laws and regulations. In addition to the legal environment, there were certain unspoken values that were present in every community. These values were things such as relation to neighbors, effect on the surrounding land uses, social aspects of any new development, safety issues associated with the new development, and general aesthetics associated with the new development. The researcher needed to be aware of the community values within which the site was located in order to be effective as an educator to the community.

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Scientific Values

Scientific design principles were associated with any type of project that had been studied before. In the nursery/garden center industry there were many scientific design principles which had been established. These could be seen in the standard methods of operations that were present in nurseries across the nation. Horticulture was the basis for a nursery, and horticulture was referred to as a science. Unfortunately there was another aspect of horticulture that had been left out of the equation. this was the plants association with the natural environment. In order for the nursery to be developed and designed in an efficient (in relation to the business side of the operation) and sensitive (in relation to the environment) manner, there had to be an integration of both scientific values and natural values.
SECTION 2

THE SITE AND DESIGN
CHAPTER 4

SITE LOCATION
U.S.D.A. PLANT HARDINESS ZONE

The site was located within plant hardiness zone 5 (See U.S.D.A. Plant Hardiness Zone Map). This zone had average temperature lows between -20 to -10. The plant hardiness zone that the site was in helped to determine the plants that would be sold in the nursery. The zones also gave an indication of the types of plants that would occur in the surrounding area.

Plant material would normally do well in the lowest zone for which it was rated. Plants could also live in zones rated higher because these zones had higher average temperatures. Occasionally, plants could survive in a lower zone than they were rated for. This occurred only if the plant was in a microclimate that met the requirements for the higher zone. However, the U.S.D.A. plant hardiness zone map did give a general plant palette to be used on the site.

SITE LOCATION

The site was located in southern Indiana (See Location Map), approximately twenty miles north of Louisville, Kentucky and about forty miles south of Columbus, Indiana. Interstate 65 was approximately twelve miles east of the site along state road 160. Interstate 65 ran north to south through most of Indiana and Kentucky and offered a convenient link to many other interstates. This made the site easily accessible to virtually the
whole nation, especially in terms of reaching wholesalers that might service the nursery operation. This location also offered convenient access to customers and other visitors to the site.

Salem, the nearest town, was located approximately eight miles west of the site along state road 160. The red circle on the location map illustrated a twenty mile radius from the site. The green circle illustrated a fifty mile radius from the site. This demonstrated the wide customer base that was available to the site within both a twenty minute and an hour drive. Much of Indiana and a good portion of Kentucky could reach the site within a reasonably distanced drive.

FEASIBILITY STUDY

The feasibility map and charts illustrated the population change of some of the counties located in proximity to the site in southern Indiana. The site was located in Washington county. Other counties that were involved in the study were: Clark, Crawford, Floyd, Harrison, Jackson, Jefferson, and Scott counties. The population of these counties was gathered from the 1960, 1970, 1980, and 1990 census. These data were then analyzed to show the population changes that occurred between these census years. The amount of growth in these counties was used as a basis to determine the feasibility of a viable nursery operation being located on the site.

The feasibility map illustrated the counties that had negligible growth, those that had a moderate amount of growth, and those that had a sizable amount of growth as compared to the surrounding counties (See Feasibility Map). As the map shows, the counties that occurred along interstate 65 appeared to be experiencing growth in population. This growth in population could also be seen in the amount of development that was occurring in these counties at the time of the study. The apparent cause of the decrease in population in the counties near the Ohio

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River was due to the migration of people from these counties into the areas directly to the north where a more rural atmosphere existed.

The charts that were constructed from the census populations showed over an 8.5% increase in population in Washington county. This increase was second to only Harrison county within the counties that were studied. This percentage demonstrated, again, the amount of growth that was occurring around the site at the time. The feasibility study illustrated that this part of the state was growing, and that the county that the site was located in was experiencing a greater amount of growth than even the surrounding counties. Thus, the site was determined to be a feasible location for a nursery and garden center.
CONTEXT OF SITE

The site was located directly off of State Road 160. Conway Church County Road was on the west side of the site. The area around the site consisted of largely agriculture fields. These fields included a variety of crops. Some of these crops were: corn, soybeans, and tobacco. There was also a considerable amount of wooded area surrounding the site. This was caused by the rolling topography of this part of Indiana. The areas that remained vegetated were those areas that could not be farmed because of the slope of the land and the wet areas that were created.

Conway Community Church was to the northwest of the site. To the west of the church there was a cemetery and to the west of the cemetery was a county water tower. There were three residences located to the north of the site along State Road 160. These were the only structures that were visible from the site.
CHAPTER 5

SITE INVENTORY AND ANALYSIS
INVENTORY

The site consumed an area of approximately fifty acres. The majority of this acreage was being used for agriculture production. There were two main agriculture fields (See Site Inventory Map) which were used to grow corn, soybeans, and tobacco. The remainder of the site was used for hay production where the topography would allow.

The topography of the site was much like the surrounding area in that it could be characterized as rolling hills (See Site Photographs). There were four main topographical features on the site. Three of these were the drainage swales that directed all of the runoff of the site into lower collecting areas. The drainage of two of these swales was to a pond located in the southwest corner of the site. The other swale drained to a low point south of the site.
Another dominant feature of the site was the vegetation. Like the surrounding area the vegetation that existed on the site was largely due to the topography and the constraints that it imposed on agriculture production. A thin band of vegetation was present along the east and south property lines of the site. The main area of woodland existed around the pond and up the middle drainage swale. The vegetation consisted of primarily beech, sycamore, oak, hickory, and some cedar. The vegetation appeared to be in the second stage of succession, as well as, in the mature stages.

There were two types of soils present on the site. These were Bedford Silty Loam (BdB) and Crider Silt Loam (CoC2). Both of these soils were well suited for growing trees, but they would need a reinforced base for roads and structures.

There were several views into and out of the site. The first of these views was within the site. Views from the top of the hill overlooked the pond, a large portion of the site, and the water tower to the northwest of the site. The second set of views were much like the first except in their vantage point. This viewpoint was on a hill overlooking the pond which allowed views over the pond, the north portion of the site, and State Road 160 could be gained. The third set of views occurred on the south side of the site. Views over the southern portion of the site could be seen from this vantage point.
A clear view of the farmstead could also be seen from this point. A fourth view point was from the state road. Clear views over most of the site could be seen from the road. The fifth, and final, view occurred from outside of the site. Intermittent views of the site could be seen through the line of vegetation along the east property line.

Access to the site was limited by a deep ditch that occurred along the state road and the county road. The ditch along the county road was not as deep as along the state road, however, access was still limited along this property line.

The structures on the site consisted of a group of buildings comprising the farmstead. These buildings were: a farmhouse (vacant), two barns (used only for storage of farm equipment), and three silos (used to store the grains produced in nearby fields). There was also a small house that sat on the west side of the site at one time. However, this house no longer existed, and there were no visible signs of it left on the site.

The existing utilities available to the site were electric and water. The electric lines ran along the west property line, in addition, access to the utility could be gained from a hookup located in the area of the old homestead. The county water lines ran from the water tower located the north of the site along the west side of the county road. A water line to the site had already been established in the same area as
access to the electric lines. Another hookup to these same utilities also existed in the area of the farmstead.
ANALYSIS

After an inventory of the site was taken an analysis of the site features was conducted (See Analysis Map). This analysis was done with the end use of the site becoming a nursery/garden center operation.

The water tower to the north of the site would possibly need screening to keep this structure from becoming an eyesore. When possible, views to the site for the neighboring residence should be kept open. (1)

The county road that ran along the west side of the site was three to four feet below the grade level of the site. As mentioned earlier, this could possibly cause problems with access to the site from this road. If access to the site was desired in points other than those indicated on the map as possible points grading would need to be done to allow entry onto the site. (2)

Adjacent to the southwest corner of the site there was a large expanse of woodland. This woodlot created good views and atmosphere to this portion of the site. The type of atmosphere created would help to dictate the types of uses that were established in

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this area. (3)

Connection to the existing water lines and electric utilities could be made at the location of the old homesite. This location also offered good views over the pond and the north portion of the site. Access to the site was also possible in this area without grading. These factors made this a possible location of any structure that might require hookup to utilities and access to the road. (4)

The pond that existed on the site offered many opportunities. This area was surrounded by a thin line of scrubby, thorny undergrowth. This undergrowth would need to be cleared out in areas to allow access down to the pond. There were also a number of environments that could be created around the pond. The variety of wildlife habitats that could be created around this area offered another opportunity. The pond would then become more than just a visual amenity for the site. (5)

In the southwest portion of the site there was a field that was surrounded by woods to the north and south. This area had a very secluded and private atmosphere that was created by the enclosure of the trees. In addition, the pond further separated this area from the north portion of the site. (6)

In this same area of the site a possible location for the garden center was identified. This location had good views overlooking the pond, the south portion of the site, and the existing farmstead. (7)

One of the drainage swales occurred in the southeast agriculture field. This swale drained to a low
spot south of the site. This swale was a possible location of a wetland habitat. The swale was noted as an area that should not be destroyed or built over. (8)

The southwest agriculture field was a possible area to locate the field production areas for the nursery. This was because of the relatively flat area and also because of the nature of the agriculture field. The fact that the land could support agriculture production was seen as an indication that the soil was still able to support the needs of growing healthy plants. (9)

The north agriculture field had the same possibilities as the southeast field. In addition, the north field had more of an opportunity for access by vehicles such as tractors and other equipment needed by the nursery operation. (17)

Along the east property line there was a thin line of vegetation. This allowed limited views into the site during the winter season. This advantage of limited views could be carried out through the other seasons by simply thinning out this line of vegetation in certain areas along the property line. (10)

The existing barns that were in the old farmstead could become the location of the equipment storage for the nursery. Another option for this area would be to locate the garden center uses in the structures. Yet another option became the establishment of an educational type facility in the existing structures. The available utilities and access from the state road made all of these options feasible. (11)

In about the middle of the site a vantage point across most of the site could be obtained. This became another possible location of the garden center. Access from the state road to this area of the site could be achieved with minimum impact. (12)

There were two drainage swales other than the one previously mentioned. These swales drained to the pond and carried the majority of the runoff from the site to

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the pond. These swales were also dictated as possible areas to establish natural wetlands. The structure of these swales began to dictate the uses that could occur in and around the swales due to the instability that was caused by the drainage. (14, 15)

State Road 160 ran along the north property line. This road was important because of its connection to the interstate and any nearby towns. Along this road there was a ditch which limited access to the site to only a few points along the road. This is an important feature to remember when entry roads are created. (16)
SITE STRENGTHS

From the analysis map a site strengths map was developed. On this map the main features of the site were highlighted. These features became the driving force behind the design of the site. The drainage swales became the dominant natural feature on the site. These swales were designated to be preserved, not only because of the limitations involved with development in this type of area, but also because of the opportunities they could also become important in the control of drainage and site runoff.

The farmstead was important as a historical feature, especially in light of the trends in development. These structures were outlined as elements on the site that provide in the form of natural areas.

The pond was important because of its value as a visual feature and also as a potential area for establishment of certain wildlife habitats. The pond should be maintained. The character of the farmstead was also identified as a feature that should be maintained.

On the west side of the site there was previously an old homesite. There were no remaining fragments of this.
home site, however, this area could be important historically. Additionally, this area of the site had many good views overlooking the pond, the drainage swales, and the site in general.

The vegetation on the site was a strong amenity for the site and was determined to be important enough to be preserved as much as possible. This vegetation was also important because of the development trends that were taking place in the surrounding area.
CHAPTER 6

GOALS AND PROGRAM

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CLIENTS AND USERS

1. Customers of a Nursery/Garden Center
   a. Buying plants
   b. Buying landscape plans
   c. Buying both plants and landscape plans

2. Nursery Owners

3. Garden Center Owners

4. Nursery/Garden Center Owners

5. Community Members

6. Schools-Field Trips

7. Salesmen-Wholesale Nursery and Garden Center Suppliers

8. Landscape Enthusiasts

9. Nursery/Garden Center Industry

10. Physically Challenged and the Elderly

11. Park Visitors

12. Nature Enthusiasts

13. U-Pick Visitors-Seasonal Interest Users

GOALS

1. To create a nursery/garden center that will demonstrate how a nursery can be designed to reflect sensitivity towards the landscape (with the main focus on the garden center area).

2. To design a nursery/garden center that is an efficient and effective business operation.

3. To design a master plan for a nursery/garden center that demonstrates how a more naturalistic landscape can enhance the environment and improve private landscapes.

4. To provide a year round use plan for the establishment.

5. To develop areas to educate the public toward the use of plants.

6. To develop a plan that will facilitate long-range planning and future growth.

"The beauty is there from the first. It is not created, it is merely allowed to express itself in a louder voice and in plainer terms."

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Teiji Ito

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7. To provide a design that has a cohesive theme carried throughout the design.

8. To not disturb the surrounding area with new uses of the site.

9. To provide a destination point on the site to draw people to the nursery.

10. To provide a master plan that preserves the existing naturalistic features of the site.

"What artist so noble... as he who, with far-reaching conception of beauty and designing power, sketches the outlines, writes the colors, and directs the shadows of a picture so great that Nature shall be employed upon for generations, before the work he has arranged for her shall realize his intention."

Frederick Law Olmstead, Sr.

PROGRAMMATIC STATEMENT

Retail Operations

1. Garden center structure (3,000 sq. ft. minimum)
   a. offices - L.A.
      and nursery operations
   b. restrooms

2. Display areas for plant sales
   a. deciduous trees
   b. deciduous shrubs
   c. evergreen trees and shrubs
   d. perennials
   e. annuals
   f. groundcovers

3. Parking area*
   a. 80 parking spaces - with overflow parking: 150 parking spaces total

4. Greenhouses (3) **
   a. sales
   b. production
   c. education

5. Water source/irrigation

6. Mulch bin

7. Recycling bins

8. Topsoil bin (soil mix)

9. Areas for sales of related items
   a. stones for planting beds
   b. fertilizers
   c. retaining wall systems
   d. paving blocks
   e. statuary
   f. other related items

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10. Entrance plantings
11. Signage to identify plants in display areas
12. Lighting
13. Utilities
   a. water
   b. electric
   c. telephone
   d. sewage
14. Security measures
   a. limited access to site
   b. lighting
   c. access to water in case of fire
15. Plant display areas to show proper use of plants
16. Employee facilities (lunch room)

Production Operations

1. Production fields (10-15 acres)
2. Composting area
3. Storage area for supplies and equipment
4. Water source/Irrigation
5. Recycling bins
6. Water clarifying system
7. Potting areas
8. Seed beds
9. Tool and supply storage
10. Holding and staging area

Educational Elements

1. Outside display areas
2. Outside gathering/classroom areas
3. Inside rooms
4. Greenhouse
5. Park area
6. Restrooms
7. Benches (wooden)
8. Picnic Tables
9. Trash receptacles
10. Drinking water
11. Pathways
12. Plantings that demonstrate sensitive design
13. Signage to identify plants and microenvironments that are created
14. Recycling bins ***
15. Composting bins ***
16. Establish pond
17. Establish a habitat in pond and surrounding area around pond
18. Use vehicular visual access along state road 160, county road, and entry drive as educational tool (through the use of display areas)

Vehicular Elements

1. Entry drive
   a. for retail

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customers
b. for educational
park area users
2. Service drive
a. for deliveries
to garden
center
b. for equipment
used in the
nursery field
production
3. Signage to identify
entrance
4. Plantings to identify
entrance
5. Plantings to indicate
to vehicle users the
theme of the
nursery/garden center
6. Garage/Barn to store
equipment in

Notes:

* Parking area will be
large enough to
provide for the needs
of both the retail
operations of the
nursery and garden
center as well as the
park area.

** Greenhouses will
accommodate limited
year round production,
overwintering of
tender plants, limited
indoor house plants,
and seasonal products
(Christmas, Easter,
Halloween, etc.)

*** May occur in the
same location as the
bins used in the
nursery production

All areas must be wheelchair
accessible.

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CHAPTER 7

FUNCTIONAL DIAGRAMS
HISTORICAL DIAGRAM

There were three types of historical influences on the site. These influences were: structural, agricultural, and natural. The structural influences on the site consisted of the old homesite and the farmstead. The historical diagram was organized around these strong influences. When possible, program elements that occurred within buildings should be located in these areas. However, these structures (when new ones were built) and program elements (when existing structures were used) must give proper respect to the historical aspects that helped to shape the existing site as it was at the time of the design.

The historical use of this site for agricultural production was also an influence in the organization of this diagram. Theoretically, the existing location of fields would become the future location of the production fields. The pond was an important feature in the organization of the natural areas of this diagram. Natural program elements would occur around the pond and in areas with existing vegetation on the site.

NATURAL DIAGRAM

The natural diagram used the natural features of the site as the main focus. The features that dictated the relationships between elements on the site were: the pond, the vegetation, and the drainage swales.

Structures that would occur in this plan would be placed in areas outside of those designated as natural areas. The production fields would also occur outside the natural areas. The most important part of this diagram was the role of nature that was portrayed. In this diagram nature became the designer.

HARMONY DIAGRAM

This functional diagram was developed to show how the many program elements could be combined. This diagram was also developed to bring the elements together in a way that was not detrimental to the site features. The program elements that were shown were: the structures, the natural areas, and the nursery production areas.

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CHAPTER 8

CONCEPTUAL PLANS

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CONCEPTS

The functional diagrams and the relationships that were established were further developed with the site in mind. Two conceptual plans were developed for each of the functional diagrams.

HISTORY 1 -- HOME SITE

The focus of this concept was on the historical aspects of the site. A new structure would be built for the garden center. This structure would be located in the area of the old home site. The structures that were present in the existing farmstead would be used to store equipment and other supplies that were used in the nursery operations. The pond was maintained as a historical and natural attraction for the site. The production fields were located on the level terrain of the existing agriculture fields.

There were many advantages and disadvantages to this concept. One major advantage was the preservance of the homesite. In fact, the history of the home site was celebrated by placing the garden center in the same location. The good views that could be obtained from this location were also

LEGEND

- CIRCULATION
- GARDEN CENTER
- PARCELS
- SCREENHOUSE
- GARDEN HOUSE
- DISPLAY GARDEN AREA
- PRODUCTION - 20 ACRES
- U-PICK AREA
- STORAGE AREA
- PARK AREA
- WILDFLOWER PATCH

SCALE: 1" = 200
NORTH

Spring Dale Farms 47
taken advantage of by placing the garden center on the hill overlooking the pond.

The separation of the U-pick fields from the garden center created a draw for people to explore a large portion of the site. This increased the amount of education that the visitors would be exposed to. Rides provided to the U-pick fields could possibly expose people to an even larger portion of the site. The U-pick fields in this concept, as well as some of the other concepts, became a destination point to draw people to the site. In addition, the U-pick wildflower fields became a visual amenity for the site, to be enjoyed by visitors.

Along with the advantages to this concept there were some disadvantages. One such disadvantage was the organization of the program elements on the site. They were not placed on the site in a way that would have minimum impact on the landscape. The program elements appeared to be separated from each other. There was no clear connection or cohesion between the elements.

Another problem with this concept was the treatment of the drainage swales. This plan did not allow these main features of the site to dictate the layout of the elements. Any structures or other elements that were located in these areas ran the risk of failing because of the amount of drainage running through these swales. The only way for the site to be productive with this scheme would have been with a large amount of grading.

The opportunity of visual access into the site from the state road was not taken advantage of. This is an obvious disadvantage. There appeared to be no attempt to use sight lines and views to draw people into the site. The circulation from the state road into the site also appeared to be forced. A substantial amount of grading would, again, need to be done for this concept to be feasible.

HISTORY 2 -- FARMSTEAD

The farmstead conceptual plan was developed with the focus on the farmstead portion of the site. This was done by locating the garden center in the existing structures of the farmstead. The barns were utilized in the storage of equipment used in the nursery operations. The natural features that were present on the site were taken advantage of by placing a large park area around the pond and vegetation. The areas that were being used for agriculture would become field production areas.

The farmstead concept presented some opportunities and constraints. One of the opportunities was the historical aspect of the farmstead being preserved. The garden center operations would be located in the barn. This concept demonstrated how existing structures could be utilized by placing program elements within the farmhouse and barns.

Access to the site

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would be gained by way of the existing driveway that was already on the site. This entry into the site would allow display areas to be established along the drive. This gave plant material a greater amount of exposure to people visiting the site. This remained true regardless of whether the visit was for U-pick activities, to go to the park, or to attend an activity within the educational center.

The placement of the program elements on the site was done in a way that would encourage people to walk through the site. This presented the opportunity for people to be exposed to activities and environments that were on the site that they were not aware of. Thus, people would be drawn back to the site multiple times. The natural areas along the drainage swales began to demonstrate the proper treatment of these areas.

Although there were many opportunities that were taken advantage of with this concept there were also many constraints. One of these was the short entrance drive. This would only allow limited amounts of display areas to be planted along the drive. Also the location of the garden center in the northeast corner of the site, began to crowd too many uses into a small area. The historical aspect that was attempting to be saved in this plan could possible begin to be lost due to the commercial nature of the garden center and related sales areas.

Another problem with this layout was the
organization of the production fields. The fields were spread out over a large area which might have caused the operations to become less efficient. These fields also began to act as a separator between the garden center and the rest of the site.

Although the U-pick fields began to draw people into the site they were still not encouraging people to explore the southern half of the site.

The natural area which was located in the south portion of the site would not get the attention that it was meant to.

Along with this, while the drainage swales were beginning to be addressed, the layout of the natural areas were still not being used to their fullest potential.
NATURAL 1 -- PARK

The park concept plan was focused on the natural features of the site. The pond and surrounding vegetation became the main attraction for the site. This park area also reached up through the site by way of the drainage swales. The garden center was located in an area that would allow for many views across the site. The farmstead area was, again, used to store equipment and supplies of the nursery operations. The field production area became a secondary use in this plan. This was because of the large park area that was planned. The U-pick fields were nestled on the edge of the park area.

A positive feature of this plan was the use of all of the natural features on the site. Not only were the existing features preserved, but in many cases, they were expanded on. This would create a park area on the site that could serve as a community park.

Another advantage of this plan was the organization of the program elements. All of the features were wrapped around each other. This created an opportunity for many different environments to be created along these edges.

The location of the garden center allowed for visitors to have a central

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staging area. This also presented many opportunities for the business side of the garden center. The garden center became the gateway for all activities on the site. This brought everybody through the sales areas. Impulse purchases of any products located in and around the garden center would be increased.

Although there were many good points to this conceptual plan, there were also some disadvantages. One such disadvantage was the location of the U-pick fields. Both of the U-pick fields were located on the west side of the site. This did not encourage people to explore the rest of the site. The proximity of the garden center to both of these fields could also add to this problem. A short, and easy, path from the garden center to the fields was provided. A major disadvantage related to this problem would be if the park area was not used.

Another disadvantage to this concept was the amount of area that was designated for field production. This might not have been enough area to provide an adequate number of plants to sell in the garden center area. This could also limit the number and variety of plants that could be sold on the site. The location of the garden center and the equipment storage in the farmstead area could begin to present some problems. This brought most of the traffic into and out of the site, essentially, through one entrance. This could have become a problem when heavy machinery and equipment began to conflict with people visiting the site. This also would have begun to become a problem when the visual aspects of trying to create an entry statement were considered.

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NATURAL 2 -- WOODLAND

The vegetation surrounding the pond became a strong organizational influence in this conceptual plan. A park area engulfed the pond and the vegetation around it. The existing vegetation would be expanded on to create a larger woodland area. The garden center was located on the site of the old home. This gave the garden center a clear view over most of the site and especially across the woodland area that would be created. The equipment used in the nursery operations would be stored in buildings that existed in the farmstead area. The field production areas were located in the area of the existing agriculture fields. The U-pick fields were located to the north and south of the production fields.

The location of the garden center in this plan was a positive. The proximity of the county road to the garden center location would allow for convenient access. This location also offered many good views over the natural park area that would be created.

Another advantage of this plan was the distance between the U-pick fields and the garden center. The
separation of these two uses encouraged people to see more of the site.

An advantage was regular vehicles.

The size of the production field area allowed for a large number of plants to conceptual plan did not seem to take the drainage swales into account. Although the park area does extend up the

LEGEND

- CIRCULATION
- GARDEN CENTER
- U-PICK
- GREENHOUSE
- POT GROWING AREAS
- DISPLAYABLE AREA
- PRODUCTION AREA
- U-PICK AREA
- STORM WATER AREA
- PARK AREA
- WILDFLOWER PATCH

scale. T = 200

achieved in the woodland conceptual plan by locating the equipment storage in the buildings of the farmstead. This began to separate the visitors to the nursery from the workers of the nursery. This helped to avoid conflicts between heavy equipment and be grown on the site. This was an advantage because of the financial savings that could be achieved by producing more of the plants that would be sold. This also allowed for a greater variety of plants to be grown.

The layout of this middle drainage swale, the other two drainage swales were built over. Situating the production fields over one of these swales could cause problems with growing. Limited types of plants would be able to be located in this area. This area would also

Spring Dale Farms 53
have problems with drainage when a new use is located over the top of the swale.

The production fields became the dominate feature in this plan. This did not seem to indicate a concept that was centered around nature. Although an attempt was made to give the site a large natural area, this area did not appear to be located with the existing landscape in mind. The park area seemed to be forced and contained.

HARMONY -- INTEGRATED

The garden center was located in a central location on the site in this plan. There was a separate structure incorporated into this concept for an educational center. This building was located on the old homesite. The equipment storage was again located in the farmstead area. A large area began to cover most of the site by following the three drainage swales and the existing vegetation. The production area was separated into two areas. A long entry drive between the garden center and the educational center was established.

The entry drive became an opportunity that was presented by this plan. Display areas could be planted along the entire length of the drive. This would allow people to be exposed to a variety of plants by simply entering the site.

The large park area is another advantage of this concept. The park area was

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LEGEN

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CIRCULATION
GARDEN CENTER
PARK

GREEN-SLEES
SHOWERING AREAS
DISPLAY PALETS AREA
PRODUCTION AREA
NEEVET AREAS
PARK AREA
WIND BREAKS
ESCALATION AREA

SCALE 1" = 200
NORTH

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able to preserve all of the natural areas on the site. This offered a large area that could create many different environments to further the educational aspects of this part of the site.

The strongest idea in this concept was the integration of uses that began to happen. All of the different uses were placed on the site to allow for the minimum impact on the land.

Although the integrated concept did have many advantages, there were still some disadvantages to this plan. One major disadvantage occurred with the location of the field production in two separate areas. This could cause inefficiency in nursery operations. Special consideration for location of plants would have been necessary if this concept was used.

Another disadvantage to this concept was the use of two new buildings for the garden center and the educational center. This meant that two separate structures would have to be maintained. The separation of these uses might also require two separate parking areas, which is another financial cost.

The elimination of U-pick fields from this plan might also have been considered a disadvantage. The U-pick fields were important in their ability to draw people to the site. Not only did they draw more people to the site, but they also drew a different type of clientele, such as families. This was a group of people that would not normally be exposed to a nursery.

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**HARMONY 2 -- INTERTWINED**

The intertwined conceptual plan began to combine all of the advantages of the previous concepts. A large park area was designed around the pond area and up the drainage swales. The production field was located in one area where an agriculture field had previously existed. The garden center was located in a central part of the site. A long entry drive ran to the garden center off of state road 160. The main focus of this concept was, again, on the natural features of the site.

The main advantage that this concept had was the large park area. The park area could offer a range of educational opportunities in the form of wildlife habitats and environments. This area also addressed the strengths of the site.

The location of the garden center was an advantage in its ability to act as a staging area for all uses on the site. It was a convenient location in terms of access for the visitors and in terms of efficient nursery operations.

Although there were many strengths to this plan there were still a few constraints that had not been eliminated. One of these was the lack of U-pick fields on the site. Again, the U-pick fields could have become an...
important asset to the nursery. It could also have a direct affect on the financial success of the nursery.

The field production area in this concept was small. This could have become another constraint. The area would have been big enough to produce only a limited number of plants. This would require a large amount of the plants to be transported in from other nurseries. This could increase costs and limit the variety of plants that could be sold.

Another disadvantage of this plan was the oversight in locating the educational center. The educational center provided another unique set of uses that could be brought into the nursery setting. The opportunity to educate children at an impressionable age could also have began to change attitudes of the next generation towards the environment and the landscape. Obviously this is a major constraint and opportunity that would be missed if this concept was used.

The opportunities and constraints of all of the concepts were taken into account and weighed. The advantages of each concept were taken and applied to the site with the development of the master plan. Pieces of each of the concepts could be seen in the final master plan.
CHAPTER 9

MASTER PLAN
MASTER PLAN

Before the final master plan could be developed, the site strengths map needed to be studied. The most important features of the site needed to be preserved as much as possible. These features were, again, the vegetation on the site, the pond area, the farmstead, the topography, and the three drainage swales.

When looking at the site strengths map and the master plan the importance of these site features could be seen. The vegetation was not only preserved, but added to. The pond area had been developed in the natural area of a park. The lines of the U-pick strawberry fields, the nursery production rows, and the U-pick pumpkin rows replicated the topography lines, as shown on the site strengths map. The drainage swales were also preserved in the natural area. These swales were developed as prairie and wetland habitats. A comparison of these two maps illustrates how the site strengths influenced the final layout of the master plan.

The educational center was established in the existing buildings of the farmstead. Offices would be located in the farmhouse. The barn would contain classrooms. These classrooms would be used for demonstrating and teaching school children when

To begin the exploration of Spring Dale Farms, a guided tour through the site will be given. Reasons for the development of the plan will also be explained. There was one entrance drive into the site. When entering off of state road 160 on the east end of the site, the first area that was reached was the educational center. A more detailed plan of this area can be seen on the next page.

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they visited the farm. In addition, evening classes could be given for the surrounding community. These classes would range from crafts to educational seminars on organic gardening and also specific lectures on nature.

The second barn of the farmstead was used for an exhibit hall. This barn would become a type of interactive museum of nature. Exhibits of insects and their habitats, as well as plants and their environments were displayed in this barn.

Around the three farm structures a path system through an outdoor environmental experience was established. This path system took students and other interested visitors through a variety of environments. On the east side of the house and exhibit barn an arboretum was placed were several varieties of trees could grow. To the north of the exhibit barn an area for plant succession demonstrations was planned.

This area would show the visitors how nature can take a bare piece of ground and turn it into a forest in a matter of years. This area would also demonstrate the different types of wildlife that typically exist within the different stages of plant succession.

On the south side of the exhibit barn a series of garden plots were present. These plots would be for the students of area schools. Each student would have a plot to plant as a garden or to do planting experiments with. These students would return to their garden plot at least once a month. The effect of the seasons and other environmental factors could be learned by the students. This type of learning has been proven worthwhile. Students learn more by actually getting outside and putting their hands in the ground. They also learn more because they are interested. This increased interest is caused by the interactive nature, and also by the feeling of ownership that each student has for their particular plot of land.
The next area that is reached along the path is the farm exhibit area. This area is located around the three silos on the farm. Small farm exhibits were displayed in this area. There was a field of past methods of agriculture, present agriculture, and the future forms of agriculture that were being experimented with. This area was very important in the preservation of the history of this site. The site was a farm before Spring Dale Farms was established. This was an important influence on the site, and of the area. Therefore, the museum type atmosphere of this area attempted to reflect upon this historical use.

Just outside of the east door to the classroom barn was a prairie patch. This area demonstrated another habitat of nature. The fact that much of Indiana was historically prairie land was noted in this area. Special signage of the wildlife that existed in prairies was in this area.

The final area along the educational center pathway was the environmental impact area. This was another interactive area. Experiments would be done in this area to show the impact that humans could have on the environment. For instance an area could be designated for trash to be thrown on. The students would return and see the direct affects that they caused by throwing trash on the area.

There were two growing greenhouses. perennials, annuals, groundcovers, and tender plants would be grown in these greenhouses. The greenhouses were also used for overwintering plants.

Two seed beds and two shade houses were located in this area. These structures were used for the growth and propagation of plants. An additional storage shed was located next to the shade houses for additional supplies to be stored in.

The location of this area close to the east entry /exit for the site allowed the nursery equipment to get in and out of the nursery without disturbing customers. The location of this area next to the educational area also provided an opportunity for education in the operations of a nursery.

Continuing through the site, to the south of the growing area was a U-pick pumpkin patch (see master plan). There was a small shed to the west of the pumpkin patch. This could be used for shelter if an unexpected rain shower (or snow shower)
were to pop up. The U-pick pumpkin patch offered a unique opportunity for Spring Dale Farms. During the month of October it could be an annual event for the whole family to come to Spring Dale Farms to pick out a pumpkin. Hay rides from the garden center and parking areas would be provided out to the pumpkin patch. Other events would be planned for the farm during this season. This additional draw of people would add to sales of plants in a season that was typically slow for the nursery industry.

The park area began to reach up the drainage swale that was located to the west of the U-pick pumpkin patch. This area was designated as a wetland environment. The park continued to the west property line. It reached up the other two drainage swales into the site.

These areas of the park were, again, wetlands. The park area went from a fairly low growing prairie, to a more vertical edge type of planting, into the very vertical plantings of the woodland. Within the park area there were a variety of habitats and environments created. A wildlife corridor was established along southern boundary of the site. This corridor was established with the surrounding context of the site in mind and the flow of animals from these areas through the site. The main reason for this corridor was to deter the animals from the production fields were the trees and shrubs were grown for sale.

A variety of wild berry
patches occurred along this wildlife corridor. These berries would have signage to indicate that were edible. This area would become another form of U-pick area. This again provided another reason for people to visit the site. In addition, teachers or guides taking children through this area could talk about how Native Americans would gather fruit for food.

Another type of U-pick area was located in the park area. The persimmon U-pick area was located to the east of the pond. Persimmons were very popular in this area. It was already an annual event for people to hunt and find a persimmon tree to raid during the time of year when the persimmons were ripe. By providing the persimmon patch within the park area, people would have a place to come and pick the site. This shelter contained bathrooms and an area of picnic tables. The shelter provided an area for

A covered shelter was

persimmons. This, again, provided an extension to the seasons of the nursery.

A covered shelter was

children and park visitors to gather. This particular portion of the site was a location where outdoor demonstrations would take place, especially to school children on field trips. The instructors located in the south portion of could talk about many

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different topics such as wildlife habitats and natural habitats. The change of the seasons could also be easily observed in the park area.

The park area continued up the property line along the county road. In this part of the park there was a large area of evergreen trees. This created another habitat and environment in the park area. The different types of plants that grew in an area dominated by evergreen would be highlighted in this area. The evergreen trees also provided some screening for the large water tower located just to the north of the site. Gaps were left in the line of evergreen trees to allow people driving along the county road to see into the nursery and park.

Another U-pick operation was located in the northwest corner of the site. This was the strawberry U-pick area. The strawberry fields were divided into patches. Wildflowers were growing in between these patches. The fields were broken down into smaller patches to avoid a wide expanse of land that was fairly bare during the majority of the year. The wildflowers were intermingled with the strawberry patches to create a more pleasant atmosphere. The wildflowers would become another form of U-pick activity.

Although in a much less formal manner than the other U-pick areas. The wildflowers also add an attractive aesthetic to this area. The wildflower patches would be interspersed throughout the site to continue the visual aesthetic that was created in this area.

A large prairie/wetland area extended up one of the
drainage swales occurring to the east of the strawberry fields. This area was a continuation of the park area.

The nursery production fields were located to the east of the strawberry patches and to the west of the pumpkin patches. The larger of these two areas was the production field beside the pumpkin patch. The two fields together comprised approximately twelve acres of production area. The production fields were the areas where the trees and shrubs were grown for final sale to the customers.

The larger field was subdivided into four areas. These sections were: deciduous shrubs, deciduous trees, evergreen shrubs, evergreen trees. The rows were arranged in a large, gentle curve. This, again was done to match the topography lines that can be seen on the site strengths map. An interplanting system was used in this production field. By placing smaller cash crops in between the rows of larger trees, the land can begin to draw a profit sooner than if the trees were the only product sold. The cash crops would be small shrubs and vegetables such as corn or beans.

The other, smaller production field would contain smaller ornamental trees. This production was located near the garden center to allow customers to easily go out to the field to see the trees.

The last main feature of Spring Dale Farms was the garden center area. A detailed plan of this area was done and can be seen on the following page.
The parking area for Spring Dale Farms was located to the north of the garden center. There were 80 parking spaces with 9 handicap parking spaces. To the west of the paved parking lot a large grass area was kept to allow for overflow parking. This extra parking might be needed during certain seasons and on special occasions. With the overflow parking the total parking area could contain approximately 150 vehicles. In addition, there were 4 parking spaces planned for bus parking. This parking was located near the educational center. As can be seen on the master plan, the parking lot did reach to the educational center area, therefore one parking lot could service the needs of the entire site. The parking lot was broken up by occasional islands with trees. These islands were created to keep the naturalistic atmosphere of the site continuous even through the parking lot.

The main structure in this area was the garden center. The garden center was a barn that would either be reconstructed on the site, or a new barn would be built. The reason the garden center was a barn was because of the historical use of the site as a farm. This would also help to connect the new structure of the garden center with the old structures of the educational center. A covered porch wrapped around all sides of the garden center. This was done to allow people to sit on the porch and look out over the sales area. The typical products of a garden center were programmed for this garden center. These were things such as fertilizers, seeds, potting soil, topsoil, pots, and insect deterrents.

The area around the garden center was the location of the actual plants that were being sold. However, this area was not designed as a typical sales area might be thought of. The sales area of Spring Dale Farms was created as more of a botanical garden. The sales areas were intermingled with display areas. The plants that were being sold in the sales areas would be planted in the ground around and near to the area where they were being sold. This would make it easy for a customer to locate a plant, and for the customer to
see what the plant might look like in the ground. However, the displays would be planted in a manner that reflected how plants might be found in nature. The display areas would not contain just one type of plant, like what might typically be found in other nurseries. For instance, an area selling spirea would have spirea combined with other plants in the display planting.

The area around the garden center was divided into zones. The water zone was located to the southwest of the garden center. This area had a small pond with a deck area that extended from the garden center. The plants in this area would be plants that were found in wet soil and around wet areas such as pond. This area would contain a limited amount of aquatic plants in addition to the typical wet area plants.

Moving east to the south of the garden center, was the shade zone. Some of the larger trees could be displayed in this area. There were also displays of typical plants that grow in the shade. The location of the shade area to the south of the garden center would also help with temperature control in the garden center. The shade of the trees would help to cool the building in the summer and in the winter when the leaves fall off, the warming effect of the sun could reach the building.

The next zone, which was located to the southeast of the garden center was the bird and butterfly garden. This area would contain plants that attract birds and butterflies. The bird and butterfly garden was located next to the shade garden because there were some smaller ornamental trees which could be used in both areas. These ornamental trees also helped to provide a transition between the two area. A small bird bath was located in this garden.

The sun garden was located to the north east of the garden center. This area would contain plants that like hot sunny areas. This garden also contained a shade structure which would demonstrate how comfort
could be provided in the conditions that were present. Several varieties of bright flowering plants would be located in this area.

The final zone was the seasonal display area. This area was located to the north of the garden center between the garden center and the parking lot. This area contained plants that were of specific interest during certain seasons. By locating the seasonal plants on the direct path from the parking lot to the garden center impulse purchases would be increased. The visual attraction that these displays could provide was an additional bonus.

The path system around the garden center was designed with a hierarchy in mind. Main paths were five feet wide and made of a paved surface. The minor paths were not as wide and would be gravel based. The plant sales areas also had a gravel base. This was done to keep the area neat but informal. The smaller paths wind in and out of the small gardens around the garden center.

A service drive was located around the garden center area. Two pull-off areas were located on this service drive. These areas were provided for the customers to easily load plant material into their vehicles. These parking areas would be especially valuable when loading larger balled and burlapped material.

A greenhouse was located to the south of the service drive. This greenhouse would contain perennials, annuals, and groundcovers. The greenhouse would also be used to store select plants during the winter season.
The larger plant material, such as trees and large shrubs, were located to the southwest of the greenhouse. This was where the balled and burlapped material would be displayed.

The circulation around the entire site was provided by what was being called the old farm drive. This was because of the appearance of the path. Two tiny lines could be seen with a patch of grass growing up between them. There would be hay rides and other tractor rides that would provide transportation across the farm. The number of tractors and rides would have to be increased during the seasonal times, such as the strawberry-picking time or pumpkin-picking time. Shelters were located around the farm at key points to act as staging areas for the tractor rides. The main shelter was located to the southeast of the garden center area. A tree lined alee was created through the shade garden of the garden center to this shelter.

A path system through the site was also provided. A variety of paths could be taken and a variety of environments could be experienced.

The master plan for Spring Dale Farms combined many activities on one site. However, these activities were placed on the landscape in a manner that was sensitive to the site. A variety of activities were provided on the site to draw people to the nursery. The U-pick activities and the park area would become a destination point for people in the community and surrounding communities. These draws would help to establish the name of Spring Dale Farms as a nursery. The destination activities that were provided would demonstrate how a nursery and garden center could be arranged to educate people on the proper use of plants. It would also demonstrate how education in this manner could be fun. The outlook and attitudes about nurseries could be changed in a major way.
CHAPTER 10

CONCLUSION
The design for Spring Dale Farms was approached as an environmentally sensitive design of a retail nursery and garden center. To do this the first task was to look at the existing site and take note of what it had to offer. The particular strengths of the site were notes. These strengths were not just recorded on a map and then forgotten. This map became the criteria by which all ideas where measured against.

Another important aspect of the development of this plan was continual visits to the site. This had to be done to get the true feeling of the site. The atmosphere that was picked up during these visits can be seen in the master plan. The combination of the wildflower and prairie areas and the wooded park area were very reminiscent of the existing character of the site.

The most important aspect of the design of Spring Dale Farms was nature. To design an environmentally sensitive nursery, nature had to be studied. The patterns and rhythms that are present in nature were replicated as close as possible by human hands. In all designs the natural habitat of plants must be employed. If they are not the plants will suffer and so will the owners of these plants. By providing a park area on the same site as the nursery, the customers can learn directly from nature. The hope is that the environments that are found in the entire community benefits. Not only do the plants grow better, but they also require less maintenance. The ultimate source of inspiration for landscape architects should always be nature. She is the true and ultimate teacher in the design of the landscape.
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