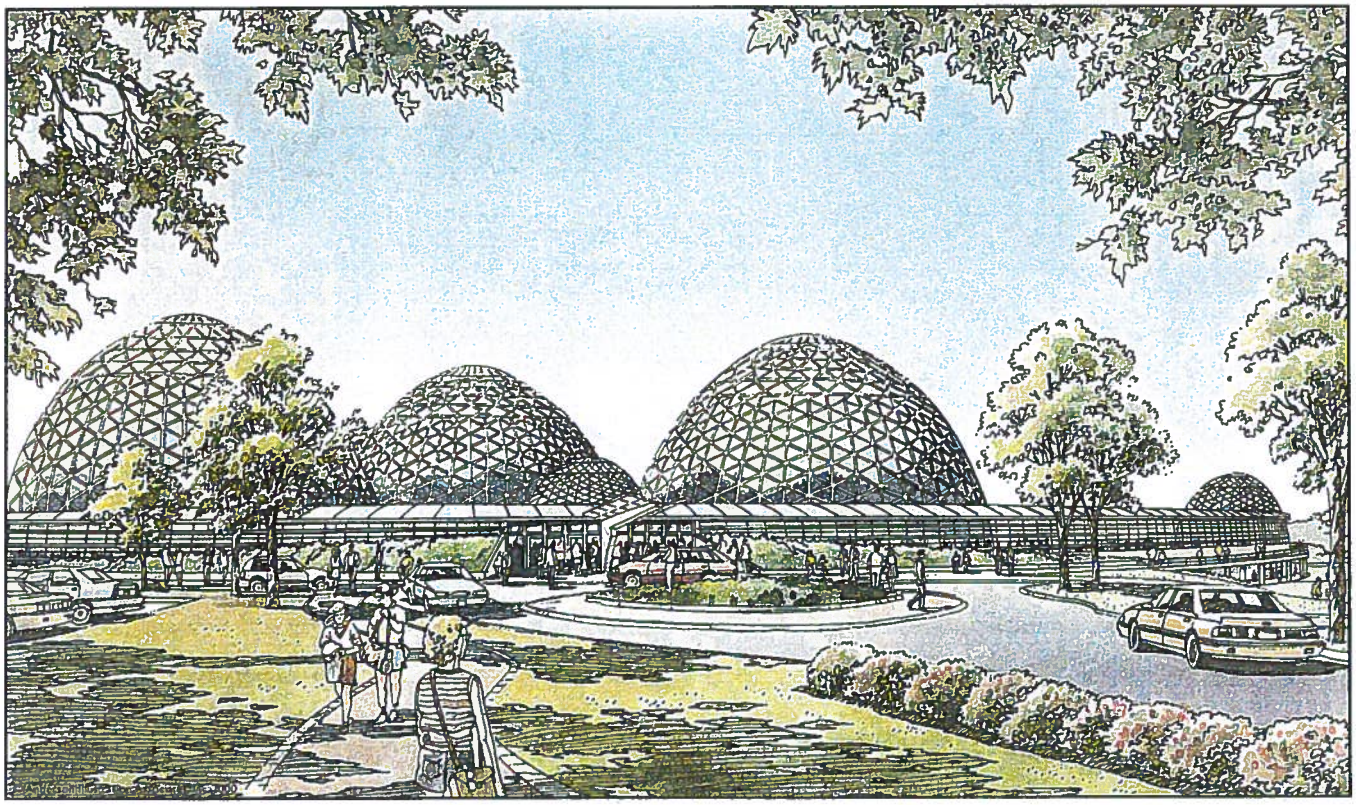
M A S T E R P L A N

MITCHELL PARK & HORTICULTURAL CONSERVATORY

MILWAUKEE COUNTY DEPARTMENT OF PARKS, RECREATION AND CULTURE



EngbergAnderson Design Partnership, Inc.

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EXECUTIVE SUMMARY

This Master Plan has been developed at the request of Milwaukee County Department of Parks and the Department of Public Works to assess the assets and liabilities of this special property which has both local and regional significance. Mitchell Park serves one of the most populous neighborhoods in the City of Milwaukee with its park amenities of play fields, lagoon, amphitheater, picnic areas, and tot lot with splash pool. It also serves the region as the site of the Mitchell Park Domes, the area's most diverse botanical collection and seasonal floral display site in the State of Wisconsin.

Planning Issues

There are two separate worlds within the same parcel of land; the park and the conservatory. One of the main objectives of the Master Plan is to propose successful merging of these two activity centers. Another objective is to develop strategies and phased-in physical improvements to encourage visitors to stay longer, spend more money, and to experience the park as a whole. Currently the average stay per visitor at the Domes is a little over an hour and there is limited merchandise for them to buy in the limited space at the gift shop. Visitors are not encouraged to roam the rest of the park because there are no obvious connections between the conservatory and grounds.

On the other hand, there is little incentive for neighborhood park visitors to see the Domes as a destination because its displays and programs seldom change and they cost money.

Objectives

The Master Plan has been developed from a new program based on visitor attendance records, extensive questionnaires filled out by visitors and neighborhood residents, advice of consultants who plan or operate similar facilities, and from the staff and administration of the Parks Department and County Administration. The objectives listed below represent the key program elements dealt with in the plan:

1. Develop recommendations that when implemented will stabilize the existing park amenities.

2. Develop a strategy to enhance and merge the amenities of this unique park and the conservato ry for both the neighborhood and the region.

3. Develop additional Public and Staff spaces to ensure the long-term viability of the Community Educational Programs, and Resources.

4. Create phased revenue-generating amenities to increase the overall use and revenue-generating potential of the facilities.

5. Design an enhanced amenities expansion plan that will successfully blend inside and outside activities at the "Domes" which encourage visitors to stay longer.

6. Plan for the eventual "self sufficiency" of the facility to propagate plant species for each dome's collection.

7. Provide a scheduled implementation strategy for deffered maintenance of the parkland and park buildings.

8. Develop an estimate of probable cost for the phased project development taking into account inflation and contingencies.

The Plan

The phased Master Plan for Mitchell Park is seen as a series of priority developments which begin with deffered maintenance issues and end with the completion of several Capital Improvements projects designed to tie the park together as a whole and make it more attractive to the many existing and potential user groups. The phased plan will take place over a seven year period with major improvements put in place in each of the years between 2001 and 2007.

Components of the Master Plan have been prioritized as follows:

1. Critical Maintenance Projects- roadways, paths, lighting, roofs, glass replacement, security issues, etc.

2. Scheduled Maintenance Projects- dome reglazing, mechanical replacements, roofs, roads and paths, parking areas, access issues, etc.

3. Required Facility Upgrade Projects- pavilion improvements, mechanical equipment replacements, additional access issues, etc.

4. Planned Additional Program Area Projects- new structures at Domes including public meeting space, research library, centralized administration, public event areas,

larger gift shop, enhanced dining area, planned storage, propagation house, labs., etc.

5. Planned Revenue Enhancement Projects- new controlled garden adjacent to expanded Domes, completion of interior specialty areas, etc.

6. Planned Functionality Enhancement Projects- completion of all new interior spaces, Domes maintenance program, fine tuning, greenhouse implementation.

7. Planned Aesthetic Enhancement Projects- completion of gardens, tree plantings, new flower and plant material exhibits.

Please see Section 5 of this report and the accompanying drawings for more detail.

Estimate of Probable Cost

The entire Phased Development is estimated to cost approximately $26,979,000 over the seven-year period from 2001-2007. This figure assumes contingency and escalation as part of the long-term cost. This figure does not include the cost of the long term glazing "replacement and maintenance" money for the Domes. See spread sheets in Appendix B for more detail.

Conclusion

When the plans set forth in this Master Planning document are implemented as scheduled, we believe that Mitchell Park will once more become one of the premier parks in The Milwaukee County Park System. The park will be come a more compelling regional attractions for residents and visitors alike. What is now unique and underdeveloped will become an extraordinary educational landmark for the long-term benefit of all the people for years to come.

- Overview and Study Process
- History of Conservatory and Park
- Conservatory Mission Statement

INTRODUCTION

Overview/Existing Conditions

In 1998 the Milwaukee County Department of Parks along with the Department of Public Works awarded the Engberg Anderson Design Partnership/Buettner and Associates team a commission to develop a Master Plan for Mitchell Park and the Mitchell Park Horticultural Conservatory. Several factors were to be taken into consideration:

1. The main regional attraction at Mitchell Park is the group of Conservatory Buildings collectively known as The Mitchell Park Domes. Few people beyond the immediate neighborhoods are aware of the compact but potentially beautiful park amenities surrounding the immediate area of the Domes.

2. The majority of the park's acreage is used pri marily by the neighborhood resident population, which is largely Hispanic. This population group utilizes the several play fields, the areas around the lagoon and its pavilion, the tot play areas, and the amphitheater areas, but does not seem to be a significant part of the user base for the Domes.

3. Most of the visitors to the Domes come from outside the area and stay for a period of about an hour to an hour and one half. There is nothing to keep them there longer.

4. The user population of the Domes has been in steady decline since 1988. Based on admission data supplied to the Study Team, total admissions (including paid, discounted paid and free admission categories) have declined from 374,166 in 1988 to 200,242 in 1999. This decline of 173,924 admissions (46.5% over 10 years) has been relatively constant year by year over the time period, which is a 4.65% annualized average decline. There are numerous reasons for this chief among them being that the collections remain much the same year to year with the exception of the Show Dome that feature changing seasonal exhibits throughout the year. On the other hand, the other amenities in the park are coming under ever increasing pressure from the neighboring commu nity that is among the most densely populated in the City of Milwaukee.

5. Although there are private events staged at the Domes, the facilities are lacking in many of the basic amenities necessary to insure growth in use and popularity of the facility. Alternatively, the community's use of the Lagoon Pavilion is quite high even though the facilities at the Pavilion are minimal and shared with staff facilities.

6. Improvements in lighting and parking have extended the use of the park for evening events such as athletic events and community musical entertainment at the amphitheater.

7. Taken as a whole, the park's infrastructure of utilities, roadways, and buildings are substandard compared to many other Milwaukee County Park facilities that have been greatly improved over the last several years. Elements of the original plan can be found, but remain in a changed condition; the Sunken Garden (which has been filled with soil) to the south of the Domes area is a good example. Other elements of the Domes are no longer in use, including the fountains and pools at the entrance area to the Domes which are in disuse and present an undesirable image.

8. All the park's physical structures appear to be period pieces and in need of updating and physical attention. Beneath the surface of the public face of the Domes, lie serious code and infrastructural problems with basic building systems. Only the Domes themselves, among all the improvements on the site give the impression of being timeless. However, as this report will show, many improvements are mandatory if the Domes are to survive over time to provide the expected level of amenity, education, and entertainment envisioned when the original buildings were razed in the 1950s.

Overview/Project Goals

In general, the project goals are to establish a Master Plan which will define, schedule, and cost out a series of improvements necessary to allow Mitchell Park to reach its full potential as neighborhood and Regional amenity. The Master Plan will define the improvements, both Remedial and Capital that are required to reach the project Goals. The following project Goals are the basis for recommendations that follow in the pages of this report:

1. Develop recommendations that when implemented will stabilize the existing park amenities.

2. Develop a plan to enhance and make accessible the many amenities of this unique park property for both the neighborhood and the region.

3. Develop additional Public and Staff spaces to ensure the long-term viability Community Educational Programs and Resources.

4. Create new revenue-generating amenities to increase the overall use potential of the facilities.

5. Design an enhanced amenities expansion plan that will successfully blend inside and outside activities at the "Domes" creating more user options.

6. Plan for the eventual "self sufficiency" of the facility to propagate plant species for each dome's collection.

7. Provide a scheduled implementation strategy for deffered maintenance of the parkland and park buildings.

8. Develop an estimate of probable cost for the phased project development taking into account inflation and contingencies.

It is the intent of this Master Plan Study to describe in words, images, and numbers how the above goals for the project can be accomplished. In addition, this plan will provide various appendices that describe in detail portions of the data used to develop the approach, the building program, and the overall rational for this Master Plan.

This Master Plan contains recommendations for both remedial work and new capital improvements work. Both will be phased into a logical implementation strategy developed by the entire team. Recommended phased remedial work related to existing facilities is based on detailed architectural, structural, and mechanical analysis of buildings and grounds. New Capital Improvements work recommended is based an assessment of needs developed by the entire project Team of County staff and professional consultants working together to form consensus.

Study Process

The team's recommendations are based on gathering information from Parks Department staff regarding user data and maintenance, user questionnaires, neighborhood interviews, feasibility reports, engineering data, and numerous planning sessions with Parks Department staff and outside consultants, and finally several review sessions with the County Executive and members of the Milwaukee County Board of Supervisors. This process has taken place over the last year and one half, and it is expected that the work will be budgeted in phases and completed over the next seven years with completion in the year 2007.

It is proposed that Milwaukee County and private sector corporations and individuals jointly fund this project. Hence fund raising as well as community consciousness raising will be required to reach the goals for the project.

History of Conservatory and Park

In 1889 the Board of Park Commissioners of Milwaukee was established and selected six sites in the City "so located as to afford accommodation to the greatest possible number and still adhere to the general scheme of having a chain of parks around the city connected by handsome boulevards." Mitchell Park was one of those six sites selected. The public parks movement, at the end of the nineteenth century, both in Europe and the United States gave expression to the social goals of improving health and moral values, providing free recreational opportunities for all, and demonstrating civic pride and public wealth. The commission, familiar with the concept of "lungs of the city" and its European precedents cited this as a model for Milwaukee to create its own "healthy breathing spots".

The movement also reflected the desire to provide places of recreation and shared social and cultural activities for the neighborhoods. In the past century, Mitchell Park has grown and developed into one of the most highly used recreational areas within the Milwaukee County Park System. Social interaction through concerts, festivals, ethnic events and recreation, both active and passive serve to promote neighborhood pride and unity. Mitchell Park remains one of the only significant neighborhood green spaces on Milwaukee's near south side. Its renaissance can help provide incentive for the redevelopment of the surrounding community.

In 1898 construction began on the impressive Conservatory building designed by the local architectural firm of H. C. Koch. The glass and iron Conservatory structure was built on the West Side of the park and included a formally planted sunken garden to the south of the building. This structure exhibited flowers in a "greenhouse" setting and served the public until 1955 when it was determined to be unsafe and impractical to repair.

The current glass and concrete Conservatory was designed in 1959 by Milwaukee architect Donald Grieb and built between 1959 and 1967. The conservatory or "The Domes" as it is affectionately known is comprised of three public viewing domes (The Show Dome, The Arid Dome and The Tropical Dome). Each dome has distinct climate and exhibits plants in their different naturalistic settings. The design of the domes was innovative at the time due to its unique parabolic "beehive" shaped concrete structure, which supports the individual glass pieces that comprise the domes' outside surface. Each dome is 140 feet in diameter at the base and 85 feet high and contains' 15,000 square feet of plant display.

Construction began in 1959 and proceeded in stages. This allowed for the building to be paid for in yearly appropriations, thus avoiding the cost of bonding. The total cost when completed in 1967 was $4.5 million.

Conservatory Mission Statement

Within Three unique envrionments under glass, the Conservatory:

- Enables its visitors to re-connect with Nature through interactions with five changing floral shows each year and living exhibits of the Earth's tropical rainforests and deserts.
- Provides visitors and students educational opportunities with living exotic plants found nowhere else in Wisconsin.
- Provides specialized horticultural and botanical information for the public.
- Protects certain rare and endangered plant species from around the world.
- Serves as an important tourist destination for Milwaukee area visitors.
- Serves as a cultural resource through its concerts and art displays.

- Overview
- Design Process
- Conceptual Design Issues
  - Entry and Parking Diagram
  - Environmental Garden
  - Pavilion and Pond
  - Recreation Fields
  - General Grounds and Picnic Areas
  - Paths and Lighting
  - Tot Play and Water Jet Area
- Conclusion
- Projected Project Costs
- Conceptual Diagrams and Existing Conditions

OVERVIEW

This Master Plan is a conceptual document, which illustrates a vision for the site's potential. It represents a vehicle for focusing and coordinating efforts for future growth and development. It is not a detailed design, but rather a layout of ultimately desirable elements, their linkages, and support. It has been produced to provide for the implementation of a cohesive strategy for the Park and Conservatory over time. The Master Plan should be consulted frequently to facilitate the following:

Individual Park Area Design
Construction Phasing
Planting Palettes
Maintenance Procedures
Infrastructure Change
Staffing and Training
Educational Programming
Fundraising

DESIGN PROCESS

Two main concepts need to be maintained to guide the development of the park to avoid the pitfalls of mediocrity and of monotony:

Each distinct park area should have distinct themes, with different environmental considerations, appropriate planting palettes, recreational uses, material selection, and construction details, while maintaining an overall unity to the park.

Educational messages should be clear, concisely delivered, and distinctive for each environmental area.

The Plan should be reviewed periodically and modified whenever changing opportunities and emerging needs present themselves. As a flexible tool, the Master Plan should enable development decisions to be made with an overall vision and also to determine if short-term decisions are consistent with the long-term context.

Design and implementation planning for any project follows a logical progression of development. Listed below are a series of steps followed during this portion of the planning process:

Analysis: Site documentation including site photographs, adjacent land use influences, natural features, and other physical conditions were compiled to analyze the site. Together with this base information, additional property surveys, aerial photos and topographical maps were used to prepared base maps.

Conceptual Design: A preliminary concept drawing illuminates a vision for the total design and locates program elements. The required program elements have been developed based upon input from you, the client as well as other consultants involved in the planning process.

Information Meetings: Many meetings were held to coordinate the efforts and direction of the design team and the staff.

Budgets: Preliminary budgets were determined based on the Master Plan drawings to help determine realistic development scenarios and phasing.

Master Plan: The Master Plan is not intended as a construction document. It is a vision of Mitchell Park's future facilities and a road map for future development potential.

Phasing Strategies: A master landscape plan coordinated with the conservatory building strategies can be implemented over time based on logical and cost efficient phases; infrastructure first, followed by "hardscape", woody plant materials, floral elements, and lastly, accessories.

Master Plan Report: This document concludes the current scope of services for the design team and is an excellent tool for all future planning, fundraising, budgeting and implementation.

The American Garden

This garden will feature the plants and culture of Native Americans. Squash, beans and corn, the "Three Sisters" that the Indians planted together for support and weed control will be displayed. The diet of Native Americans can be compared with modern American diets.

Potential Donors: Native American-themed businesses, local Potawatomi tribe.

The Latin Garden

Featuring the plants and culture of Latin America, this garden's design could reflect the influence of Roberto Burle Marx. This famous landscape architect is credited with starting the bold, colorful, contemporary gardening style that celebrated the native plants of his country Brazil. Roberto was indeed a multi-cultural individual who spoke Spanish, Portuguese, German, French and English fluently. He was an accomplished, musician, painter, botanist, and landscape architect.

Featured Plants: *Food plants* could include corn, chili peppers, potatoes, tomatoes, squash, beans, gourds, pumpkins, etc. *Floral plants* could include nicotiana, spider flower heliotrope, creeping zinnia, nasturtium, petunias, yucca, salvia, etc.

Potential Donors: Hispanic restaurants, Southwest-themed businesses.

The African Garden

Plants of ancient African and Egyptian diets include many varieties of Amaranth, a dominant grain of early civilizations, as well as common vegetables, such as yams and okra, used in contemporary African diets would be featured. Functional plants such as papyrus, which the Egyptians used to make paper, would also be included.

Many unusual plants have been domesticated from the native African species for the floral trade and for landscape use. Agapanthus, Proteas, Plectranthus, and Gerberas, considered tender bulbs or perennials in Wisconsin, could be beautifully displayed in containers.

Featured Plants: Grape Hyacinth, amaranth, papyrus, cockscomb, castor bean, foxglove, Egyptian onions, delphinium, penstemon, impatiens, ice plant, geraniums, gazania, gerbera daisy, etc.

Potential Donors: Heritage seed companies, and the floral trade.

The European Garden

Featuring the *plant* traditions of Europe rather than the gardening styles, which are very diverse, the rich horticultural history of Europe is represented by plants used for both food and decoration. Again, tender perennials and annuals such as rosemary, figs, and euphorphia could be dramatically displayed in containers.

Featured Plants: Lavender, roses, veronica, daylilies, lady's mantle, valerian, daffodils, thyme, monkshood, globe thistle, cornelian-cherry dogwood, yarrows, dill, hops, etc.

Potential Donors: Perennial growers, nurseries, plant societies, bulb growers. Jackson & Perkins and other rose growers frequently donate roses from their current catalog offerings to botanical gardens for public display.

The Asian Garden

From ancient Persia, India and China, come unique traditions in horticulture, food preservation and cooking. The ancient Persians are credited with the domestication of cucumbers and melons. The Indians have contributed the complex blending of spices to create chutneys and curries. The Chinese and Thai have always favored preparation of extremely fresh ingredients and subtle sequences of complimentary dishes.

The herbs and spices of the Orient attracted trade with other civilizations. The healthful benefits of an oriental diet and flavorful foods continue to influence modern food preparation around the world. Many mid-westerners do not recognize the Asian herbs that can be grown in their own gardens. With the long history of cultivation some of the most prized ornamental plants come from Asia.

Featured Plants: Food plants could include bok-choi, mung beans, cucumbers, bunching onions, perilla, snow peas, etc. Ornamental plants could include astilbes, coleus, hollyhocks, hostas, tree peonies, angelica, goat's beard, poppies, yews, forsythia, Pee-gee hydrangeas, etc.

Potential Donors: Asian Food Restaurants, Asian Food Stores, seed companies, homeopathic professionals.

CONCEPTUAL DESIGN ISSUES

The Master Plan features naturally divide into six subject areas.

1) Arrival and Visitor Orientation
2) Building Improvements
3) Environmental Gardens
4) Water Features
5) Environmental Garden Support
6) Recreational Amenities

1) Arrival and Visitor Orientation

The visitor orientation experience is composed of many things. Upon entering the park the visitor should be filled with energy, curiosity, and anticipation. At this time they are most receptive to learning. The opportunity should not be missed to expose them to:

Park etiquette (rules and regulations).
Way-finding.
Special features and points of interest.
Plant communities and ecology.

Park etiquette should be posted adjacent to the entry drive and repeated on the side of the public rest room building over the drinking fountain.

Signage and Graphics

The use of graphic design and signage is critical to the education of visitors who use and tour the park. Sign content is usually categorized as directional or informational. Graphic design refers to the legibility and artistic quality of the sign.

Signs should be consistent throughout the grounds and buildings with regard to:

Materials
Color
Size
Message content
Placement

The intent of signage is to convey information that may educate the visitor about biology and ecology. However, too many signs can contribute to visual clutter. Signs can also be expensive to fabricate, install and maintain. The information on the signs may also become dated over time.

There is a trend in public parks to minimize the number of signs located on-site to those necessary for safety, direction and plant identification.

The educational messages about fauna, flora, ecology, etc. are best conveyed with printed-paper pieces.

Brochures have the advantage of:

- Lower costs
- Limited editions
- Flexibility of information changes
- Flexibility in text, color, illustration, language
- User friendliness – for example, messages tailored to specific age groups
- Ready sponsorship of printing costs – often corporate sponsors will take this on
- Improved public relations - visitors can take infor mation with them

Site Arrival and Parking

In the redesign for the western portion of the site, the entry off South Layton Avenue has been shifted southward from its present location. This allows for an immediate axial relationship between the visitor just entering the grounds and the triad of glass domes ahead. This linear connection continues from the site entry through the building addition and terminates on the center dome. As an organizing element, the axis orients the visitor's path the instant they enter the site. This formal piece of the site design is balanced by the less formal, picturesque topography and planting of the park and gardens. The entry road is terminated by a lushly planted roundabout that disperses the visitor either to the building's porte-cochere or to one of the conservatory's three parking lots.

The parking lots to either side of the dedicated entry drive are screened by a variety of plantings which minimizes their impact on the park, gardens and building. In addition to accommodating cars, the south lot also provides for a tour bus lay over area once their passengers have been dropped-off at the front door. A small drive from West Pierce Street remains as a secondary entry to the site, which connects the conservatory with all the parking lots.

Presently truck traffic access to the Menomonee Valley and the Canadian Pacific Rail Line is through the same entry drive as that of the conservatory. This presents a potentially hazardous and unsightly situation for visitors. A service drive is proposed just south of the Layton Avenue Bridge that would allow truck access into and out of the valley, separate from visitor access to the conservatory.

2) Building Improvements
Issues regarding building improvements are covered in Section 4.

3) The Environmental Gardens

The purpose of developing the outdoor Environmental Gardens is threefold:

To compliment and reinforce the education messages conveyed to visitors in the Conservatory.

To provide additional sources of revenue support for the Conservatory.

To provide a focus for Milwaukee to celebrate the new millennium by creating a new urban garden that involves the multi-cultural communities that reflect the diversity of our people.

The educational themes are multi-faceted and include:

The importance of plant bio-diversity for the survival of the planet, its wildlife, and its diversity of human civilizations.

The importance of balancing population with resource capacity.

The importance of environmental protection and sustainability of natural resources.

The benefits of horticulture for human health and the economy.

The diversity of cultural influences on horticulture.

The importance of water for food production and survival.

These educational messages are important for Milwaukee County residents and as well as visitors.

Cultural Garden Themes
The suggested approach is to divide the garden up into cultural themes similar to the Folk Fair to celebrate diversity and the contributions of the various cultures that are the future of Milwaukee County. However, within the scope of the Master Plan, it is not possible to develop the specific educational messages and horticultural content of each area of the Environmental Gardens.

Some of the themes for the garden areas may be:

The Courtyard Gardens
Emanating from lower level windows and terraces and rising up the slope to meet the base of the existing domes, the gardens will be viewed from the entrance passage as well as lower level areas of the building where educational facilities will be located. A theme has not been assigned to these gardens, but one may evolve from the educational uses. Plant materials should emphasize foliage color and textures and provide year round visual interest, especially during the winter months.

The Ice Age Garden
Depicting the glacial history of much of Wisconsin, a path will descend along the east side of the building where white concrete retaining walls represent walls of ice. A stark landscape of boulders, ferns, and twisted conifers suggests those elements present at that time, and signage tells the story of the Ice Age. The diversity of plant material in Wisconsin will be demonstrated not only in the evolution of plants since the Ice Age, but also through the disbursement of plants by human populations as we collect, breed and transport plants around the world

Potential Donors: Local icehouses, refrigeration or air conditioning companies, conifer nurseries & quarries.

The Millennium Garden
While this phrase was coined as a horticultural term indicating an emerging garden style, it has profound meaning in terms of representing the ethnic origins of the Milwaukee County's citizens as they enter into this century. The garden's design celebrates unique combinations of plants, creating an attractive new style and standard of beauty. The style of this garden is very free flowing, fluid, dynamic, colorful, exciting, and imaginative. The gardens celebrate the textural differences of the hardy plant combinations throughout the seasons. As the majority of plants used are native prairie plants, this style of garden is relatively low maintenance will endure from year to year.

Featured Plants: Ornamental grasses, coneflowers, black-eyed susan, gay feather, Russian sage, daylilies, butterfly weed, beebalm, sedum, asters, coreopsis, Joe-pye weed, etc.

Potential Donors: Local nurseries and perennial growers.

World Grains Garden
Through thousands of years of domestication and cultivation, three major grains have emerged that feed the world's human population. These grains include wheat, rice and corn. Other important grains include oats, barley and millet. Today more than 70% of all cultivated land is dedicated to cereal grains. Many urban dwellers have never seen these plants that produce the food they eat. The understanding that human existence depends on a limited number of plants for the majority of food is basic to understanding the need for diversification. A diversity of plants makes the food supply less vulnerable to devastation by disease and insects. A global distribution system can insure a food supply in spite of local weather conditions and natural disasters. Political and economic stability is important for the global distribution system to function.

Featured Plants: Wild rice, ornamental corn, wheat, barley, & oats.

Potential Donors: Cereal companies or major grain processors or distributors such as Cargill, Midas, Pillsbury, Nabisco, Kellogg, etc.

The Children's Garden
The critical age for exposing children to the wonders of gardening seems to be from age four to eight. The children's garden will feature those plants with which children quickly identify on a sensory level through taste, touch, smell, texture, form or color. They enjoy flowers with whimsical shapes like pansies and balloon flowers. Children love giant plants like tall, ornamental grasses and sunflowers that can envelop them in a green "forest" & miniature plants where they become the giants.

Many children first learn about plants, insects and animals from children's literature. Familiarity with these stories can frequently begin the interest in plants that leads to exploration and greater knowledge. Scarlet runner beans in a Jack-in-the-Bean Stalk garden and prairie plants in a Little House on the Prairie garden are just two examples.

Featured Plants: Turtlehead, hollyhocks, snapdragons, lamb's ear, sensitive plants, pole structures covered with morning glories, etc.

Potential Donors: Plant societies, play equipment manufacturers, toy companies, day care centers.

Special Features
The Environmental Gardens must have some significant features that:
- Create a unique marketable identity
- Create a memorable experience
- Provide photographic opportunities

These features will fall into two categories:
- Water features
- Art features

Art Features
Garden elements that are required to provide access and comfort in a garden are often attractive as donor items. In the Environmental Garden these comfort features could include special paving, benches and arbors. Architectural elements that may distract from the strong and unique architecture of the horticultural conservatories should be avoided.

Potential Donors: Paving manufacturers, lumberyards, and garden clubs.

The Picnic Terrace
The rental garden is provided to satisfy the need for rental space within the attractive environment created by the gardens. The rental space is specifically designed not only to be colorful but also:
- To be well drained
- To accommodate a 30' x 60' tent (150- 200 guests)
- To have electrical service
- To have controlled access
- To provide a seat wall
- To have attractive views of the gardens

Featured Plants: Colorful annuals and container plantings.

Potential Donors: Catering businesses, garden centers.

Walkways
The circulation system symbolizes trade, commerce, and cross-cultural influences. The various path surfaces could include cultural symbols that represent the geographic region of each garden. A universal symbol such as a ship symbol in the walkway could represent trade and migration and indicate the division of one garden into the next.

Potential Donors: A local industry or transportation company that has business connections around the world.

CONCEPTUAL DESIGN ISSUES

Benches
Various cultures have addressed the universal human need to sit, rest and contemplate. The benches could represent the various solutions of the cultures around the world.

Potential Donors: Ethnic restaurants, folk and community groups in conjunction with furniture manufacturers or distributors.

Arbors
Vines play an important role in all ecosystems that demonstrate how a plant form has adapted to fill an environmental niche. Vines also have economic and ornamental value. Arbors offer a quick, cost effective solution to providing shade in a garden. Well-sited arbors are also ideal locations for placing benches and for viewing the garden.

Potential Donors: Lumber firms, wine companies and distributors.

4) Water Features
The unifying elements of the design are the flow of water and the system of connecting paths that represent commerce, trade, and cross-cultural influences.

The water features will consist of the following six elements:

The Waterfalls
Water as a unifying design element will begin at the entry to the newly expanded Conservatory building flowing in a shallow stream that mirrors the arc of the building until it reaches the depression that the Environmental Garden sits in. The water from the channel turns into a waterfall at this point and starts the sequence of water features in the garden.

The Vortex
Water from the waterfall will disappear into a whirling vortex, symbolizing rain and melting snow disappearing into aquifers and becoming part of Wisconsin's extensive ground water system. Educational information will be available to explain the importance of wetlands to water purification and aquifer recharge.

The Artisan Fountain
This represents the abundant and important water resources of Milwaukee County. The quality and healthfulness of our local water is an important resource, including the underground aquifer, and must be protected.

Potential Donor: A local brewery that is very dependent on the water quality of underlying aquifers.

The Geologic Stream
Tumbled boulders, cobbles and rock outcroppings along the Geologic Stream will depict Wisconsin's geological progression from the time of the glaciers to present day. The stream will be designed to demonstrate how action of flowing water as it sorts out stone and rock by size from large boulders to the finest silts and clay. Rocks within the garden will also feature ancient marine fossils found within the Niagara limestone bedrock that is found under much of Wisconsin.

The Pond
This represents the importance of Wisconsin's ponds and lakes for fishing. The bank improvements should provide some hard surface areas for fishing access. Sections of the pond require some bank restoration. The southeast side would primarily be planted with cattails and rushes to encourage the already present waterfowl population. The pond's west side could be planted with a more exotic floral display of water-loving perennials such as Siberian and Flag Iris.

Potential Donors: Seafood restaurants, fish hatcheries, and aquatic plant growers.

The Rill
This channel of flowing water symbolizes Milwaukee County's river systems and the concept of irrigation. Rivers are important for commerce and recreation, while irrigation is important for increasing agricultural abundance and bringing marginal lands into cultivation.

Potential Donor: A local shipping company that depends on river, harbor, and lake conditions for local commerce.

5) Environmental Garden Support
Perimeter Fence
Service Area

6) Recreational Amenities

Amphitheater
The existing amphitheater is one of the finest grass bowls within the entire Milwaukee County Park System. Good lines of site, natural acoustics and large seating capacity are major assets for the park. Minor grading refinements and turf restorations are the only proposed improvements.

CONCEPTUAL DESIGN ISSUES

Stage Area
The existing Amphitheater Stage Building should be demolished due to its deteriorated condition and reconstructed to meet current and projected theatrical needs. Design elements required are "universal access", provisions for sound and lighting systems, restroom and dressing room facilities for performers and general stage areas.

Pond & Water Jet
The existing pond needs to be dredged to remove organic material, increase depth, open underground springs and improve water quality. The banks also need restoration and stabilization. The bank improvements should provide for some hard surface for fishing access. Natural boulders and native semi-aquatic vegetation should encompass the majority of the shoreline to improve water quality.

A floating fountain is proposed to improve water quality, serve as a visual focal point and add the soothing sound of splashing water. The sound of the water will enhance the restful quality of the park, by masking the surrounding noises of the city.

Pavilion
The pavilion is in need of updating. The hope is that the building can celebrates its modernist (1950's) design origins rather than apply a contrary design direction. Technical updating needs to be made to the kitchens and provision should be made for a walk-up fast food window on the east end of the building. Perhaps an outside vendor could be contracted with to provide the food service upgrading with a lease of the space. An outside vendor would provide a consistent quality food service and offer the advantages of both brand recognition and national advertising.

Pergola and Café Terrace
The pergola will provide welcome shade on the south side of the pavilion and provide a welcoming environment for the pleasures of dining at an outdoor café. In conjunction with a food vendor manager, the space would be properly managed in a safe, clean and sanitary condition. The pergola would enhance the architecture of the pavilion and provide a structural and visual connection to the lagoon.

Picnic Areas
Three main picnic areas exist at the top of the hill. Each of these areas is operated on a reservation basis. Small groups can rent them individually, or a large group can rent them all including, the adjacent picnic shelter.

Picnic Shelter
A roofed shelter is proposed to accent the hill and unify the three picnic areas. During the winter the shelter would be used during the sledding season. Its location above the athletic fields and adjacent to the amphitheater should encourage both group reservation and/or food vendor use.

Volleyball
Existing sand courts have been installed near the hilltop picnic areas and are popular with picnickers.

Spectator and Sledding Hill
The existing hill has seriously eroded along the route used by pedestrian moving between the top of the hill and the lower athletic fields. This pathway should be evenly graded and paved. Several drainage inlets should be provided to channel runoff and prevent further erosion. The northeast-facing slope is ideal for holding snow. The addition of a snowmaking machine would enhance the snow quality for sledding. The toe of the slope needs to be re-graded to provide a more gradual transition to the flat athletic fields.

Baseball and League Soccer
An abundance of seating for spectators along this bank makes Mitchell Park very popular for league, tournament and championship play. County teams prefer to host visiting teams from around the country at Mitchell Park because of the beauty of the park. The view of the Milwaukee skyline is one of the best in the city.

The intensity of use of these fields presents some maintenance problems. Some sub-drainage improvements and installation of an irrigation system would be desirable. User fees should be increased to cover improvement and field maintenance costs.

Little League
A little league field would fit nicely into the north corner of the upper fields and may be considered if the local community residents would indeed support little league teams.

Youth Soccer and Softball
Soccer is the most popular youth sport within the surrounding community.
Soccer facilities in the park need to be expanded. Soccer field space is designated on the upper fields. It is recommended that a fence be built to surround the fields and keep loose balls from escaping.

Existing Basketball/Tennis Courts
The present baskedball and tennis courts are in poor repair and need to be completely repaved and re-striped.

CONCEPTUAL DESIGN ISSUES/CONCLUSION

Tot Play Area

The existing spray pool would be remodeled for multi-purpose, multi-functional and multi-seasonal use. This area should be enlarged and designed in a wheel pattern to unify surrounding areas. Soft surface treatments are recommended in the activity cells to improve safety. Various improvements include:

A Guardian Shelter – This structure provides seating for adults as they socialize and supervise young children. The roof provides shade and protection from the elements. The shelter is situated to allow surveillance of the entrance to the play area as well as ready access to a child at any of the play stations.

Climbing Station – This existing structure is valuable for helping children to develop muscular strength, coordination, and motor skills.

Balance Station – This station appeals to younger children as they develop balance skills. This type of play environment limits risks involved with falling.

Floral Feature – Children respond to color and flowers. A large elevated pre-cast planter is suggested to elevate the flowers to both protect the flowers as well as to present the flowers at a higher level for greater visibility and fragrance.

Creativity Station – This area should be furnished with child scaled tables and chairs for supervised craft activities. This program utilizes the unused space under the existing roof.

Tunnel Station – A pre-cast concrete pipe is buried beneath a grassy mound to provide active exploratory play.

Swing Station – This existing structure is well-designed and should incorporated the overall design.

Sand Castle Station – This area facilitates creativity and allows for both individual and multi-age activities. Each day can present a new slate on which to play.

Spray Pool – Use of this area for water play is limited to very warm weather conditions, therefore, the existing fence should be removed to allow access to this paved area on a year around basis. Plumbing should be renovated to enhance the variety of spray effects and to eliminate standing water.

Tricycle Track – This circular track encompasses the exterior of the tot play area.

Rest Rooms – Existing facilities should be upgraded and open to the public whenever a play area supervisor is on duty.

Perimeter Fence – The perimeter fence keeps children from darting out into the nearby street and provides three limited access points, which are visible to from the guardian station.

All improvement plans should be developed in conjunction with input from the Parks Planning Division.

CONCLUSION

The development of outdoor Environmental Gardens, reflecting the ethnic diversity of Milwaukee's metropolitan area, would greatly enhance the viability and economic sustainability of the Conservatory by enhancing visitor experience, increasing attendance and generating revenues. The Environmental Gardens will also generate community pride

Themes suggested for the Environmental Gardens will compliment and reinforce the Conservatory's educational messages throughout multi-cultural story lines.

Gardening is the most universal of human activities and the most popular hobby in the United States. This project presents a unique opportunity to bring various emerging ethnic groups in the Milwaukee County into a common cooperative effort that will benefit future generations.

PROJECTED PROJECT COSTS

The Projected Project costs for implementation of the Mitchell park portions of the Master Plan are presented in Appendix B "Cost Analysis". These costs are identified as Items "C. parking Lot, Pavilion and Pond", and "D. Tot Play Area, Amphitheater, Playing Fields, Park Lighting and Plant Material."

- Overview
- Market Analysis and Revenue Generation
- Building Program
- Conceptual Design Issues
- Existing facility Analysis and Implications
- Projected Project Costs
- Conceptual Diagrams
  - Building Diagrams
  - Entry and Parking Diagram

OVERVIEW/MARKET ANALYSIS AND REVENUE GENERATION

OVERVIEW

This study is in response to the Milwaukee County Department of Parks' request to examine the renovation and addition to the existing horticultural conservatory building. Through a process that included a study of the existing conditions, market analysis, foodservice analysis, revenue generation analysis, staff needs assessments and programmatic requirements, the design team was able to create a vision for the conservatory that rejuvenates the thirty-year-old structure as a vibrant Milwaukee tourist destination. In addition to once again becoming a tourist destination, the conservatory with its new additions would allow for staff to be housed in one building with collection greenhouses, wet labs, exhibition spaces and a propagation house, further reinforcing the mission of the conservatory. The addition to the structure would also include expanded banquet and meeting facilities, which would serve as a destination for cultural events and revenue generation. For the first time the immediate grounds and this conservatory building would be designed together so that the visitor would experience a seamless transition between parks, building and outside gardens.

The Master Plan for the building renovation and addition is similar to the Master Plan for the park, in that it is a conceptual document that illustrates a future vision for the Conservatory. As such, it represents the input of Milwaukee County Park administration, conservatory staff, neighborhood groups and hired consultants as a way of defining for the future the essential elements to be included in the project.

The major goals for the project are as follows:
Reinforce the mission of the conservatory through the design of the built environment.

Develop a strategy to increase attendance and the potential for additional revenue generation

Enhance the existing structure by developing an architecturally significant addition

Expand the visitor experience through the design of a connected outdoor garden

MARKET ANALYSIS AND REVENUE GENERATION

Unkel Marketing Solutions, LLC and Joseph Baum & Michael Whiteman Co., Inc were retained to provide market analysis and foodservice recommendations respectively. This section includes the Market Analysis Executive Summery, while the entire market analysis can be found in Appendices A and the foodservices recommendations in Appendices B.

MITCHELL PARK HORTICULTURAL CONSERVATORY AND PARK FACILITIES

MARKET ANALYSIS EXECUTIVE SUMMARY

January 25, 1999

Unkel Marketing Solutions, LLC

2239 N. Terrace Avenue

Milwaukee, WI 53202

(414) 298-9910

Market Analysis Process Overview

- Reviewed local situation relative to:
  - Population,
  - Tourism,
  - Crime,
  - Philanthropy,
  - Food Service Options
- Compared operation with other local attractions:
  - Zoo,
  - Betty Brinn Children's Museum
- Looked at benchmark facilities:
  - New York Botanic Gardens,
  - Brooklyn Botanic Gardens,
  - Olbrich Botanic Gardens,
  - Como Park Conservatory (St. Paul),
  - Foellinger-Freimann Conservatory (Ft. Wayne)
- Assessed performance to-date:
  - Attendance
  - Revenue
- Gathered visitor and community feedback:
  - Surveyed Domes visitors and neighborhood residents
- Met with stake holders:
  - Staff
  - Friends
  - County Management
  - Community Residents
- Developed recommendations to-date based on data analysis.

SUMMARY

- Population, tourism, per capita income (overall) are increasing in Metro Milwaukee area.
- Near Southside demographics are changing. Youth population has increased by 16%. Anglo share of the population fell from 62% to 39% -- Hispanic share grew from 26% to 43%. MPS school statistics from 1992 - 1998.
- Crime activity in census blocks 158 - 159 is higher than city rate. Crime in the Park and in the Menomonee River Valley is very low compared to city.
- Philanthropic support for local organizations is high and growing.
- Revenue from rental sources can be significantly increased by providing adequate facilities (size and placement).
- Other institutions achieve attendance/revenue goals through:
  - –investments in marketing (budgets, staff, marketing alliances),
  - –strong involvement of Friends organizations,
  - –support from private, corporate and state/national funding sources

DOMES SURVEY RESULTS

- Domes visitor segments represented by locals and tourists break into various subsegments of these categories -- appropriate target marketing is required.
- Survey results indicate areas of opportunity in:
  - –improvement of comfort of surroundings,
  - –opportunity to learn about plants,
  - –improvement of food service offerings,
  - –improvement of handicap facilities and
  - –improvement of gift shop.
- Domes attendance and visitor feedback does not indicate potential success of table or cafeteria food service, however snack bar appears to be a viable option.

- Survey results indicate high level of ***importance*** of:
  - audio/visual learnings,
  - gardening/botany classes and
  - gift shop.
- Domes survey results indicate high level of ***interest*** in:
  - outdoor water features,
  - outdoor changing floral shows,
  - walking paths,
  - outdoor horticultural displays, and
  - outdoor areas where children can have fun and learn about plants.

PARK SURVEY RESULTS

- Community survey results indicate the top five current uses of Mitchell Park include walking/jogging, relaxation, picnics, musical events and duck watching.
- There is significant ethnic divergence of the likelihood to utilize various park concepts. Top five concepts by ethnicity:

Anglo n = 65	Percent of HH's indicating frequent or very frequent likelihood to utilize.	**Hispanic** N = 90	
Safe Biking/Jogging Trails	49.2%	Picnics	73.5%
Look at scenery	48.4%	Playgrounds	68.4%
Picnics	43.6%	Scenery	66.3%
Carnivals	41.2%	Safe Biking/Jogging	65.1%
Farmers Markets	41.2%	Ice Cream/Snack Vendors	58.0%
African/American n = 15		**Native American** n = 3	
Picnics	76.9%	Picnics	100.0%
Ice Cream/Snack Vendors	75.0%	Scenery	100.0%
Basketball	72.7%	Safe Biking/Jogging	100.0%
Carnivals	66.7%	Restaurant in Park	100.0%
Restaurant in Park	66.6%	Basketball	100.0%

BUILDING PROGRAM

CONCEPTUAL DESIGN ISSUES

Existing Building Modifications
In-depth studies of the building's existing conditions were done both prior to this report and for this report to help determine the amount of effort and funding needed to stabilize and update the mechanical, electrical and structural systems.
A study of ADA issues was also completed to understand the necessary ramifications of making this building universally accessible. These studies can be found in their entirety in Section 6 Appendices or in the studies mentioned in Section 7 Referenced Documents.

Building Additions
There are three separate additions proposed to the existing structure that will serve future as well as existing needs. The additions include the two-story visitor and staff center to the west and the public plant propagation house and collection greenhouses to the east.

Visitor and Staff Center
The new visitor center is a minimally invasive, architecturally significant addition that provides the visitor with much-needed amenities and orientation. The architecture of the addition is as geometrically rigorous as the existing dome structures, utilizing a segment of a circle to organize the functional elements of the program. This arc extends out from the Domes to greet the visitor with a glassed porte-cochere, which leads into the public lobby. The arc visually provides a base for the grouping of domes on which to sit and unifies the composition of the old and the new. The arc is comprised of three simple architectural elements; planted berm, glass clerestory and lightly structured metal roof. These elements combine to entice the visitor with their mix of solid earthliness, transparency and light. The building is also reduced in height, from two stories to one by depressing the building one level into the ground, allowing for a less obscured view of the glass domes. The space between the existing domes structure and the visitor center addition is carved out to allow light to the lower level of the addition as well as to provide private sunken gardens and terraces for the visitor center.

The functions within this addition are divided into three segments; the staff, the public and the banquet. The northern portion houses the staff functions on both levels. Offices, open work areas, artist workshop, storage and a library are combined for greater efficiency with a private staff courtyard garden, helping to reinforce the educational mission of the institution.

The center portion of the addition is dedicated to the public functions and entry to the Conservatory. Because this center portion acts to dispense various groups of patrons, staff, or banquet goers, the lobby space needs to be of a grand scale and clearly defined. Public amenities such as stairs, elevators, admission's desk, restrooms, exhibition space and a café are all located along the center spine on the entry level leading to the three domes. There are large overlooks to the floor below allowing visual communication and wayfinding cues between the public floors. The lower level contains the educational center with wet labs, the A/V room and public restrooms and lockers.

The southern portion houses the gift shop and meeting and banquet facilities. The main banquet room at the southern end of the arc overlooks and opens up to the terrace in the Environmental Garden. The pre-function space for the main banquet room opens to a private courtyard garden between the addition and the south dome allowing for another unique space in the complex. Two catering prep areas connected via a corridor to the service entry allow for efficient, behind the scene food service to the two banquet halls.

Public Plant Propagation House
The plant propagation house is located to the east of the domes and intended as a public amenity to help engage the public in the educational mission put forth by the conservatory. This glass house will be a hands on environment allowing the visitor the opportunity to discover for themselves the different techniques of growing and caring for plants. It will also serve as the controlled entry to the environmental garden and as such will be designed as the transition point between the interior worlds under the domes and the exterior environmental gardens.

Collection Greenhouses
The collection greenhouses are anticipated to be designed in a more utilitarian manner, with the emphasis placed on function and cost. While maintaining a low profile, the arrangement of the greenhouses to the east of the domes and north of the plant propagation house helps facilitate truck access and servicing.

PROJECTED PROJECT COSTS

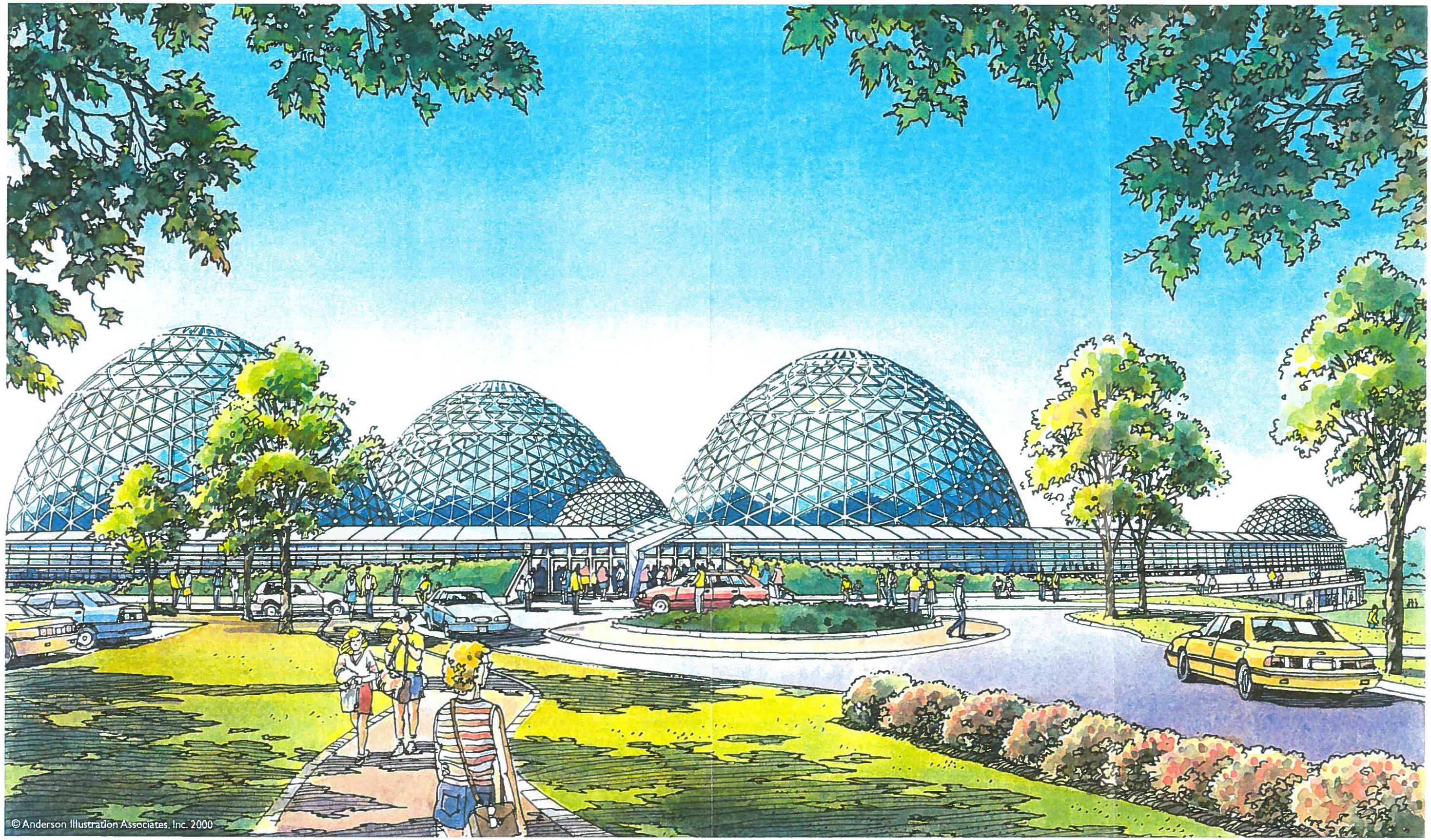
The Projected Project costs for implementation of the Conservatory and Immediate Grounds Portions of the master Plan are presented in Appendix B "Cost Analysis". These costs are identified as Items "A. Primary Dome Structures and Associated Buildings", and "B. Feature Garden".

Projected Project Costs for the "Primary Dome Structures and Associated Structure" includes the infrastructure upgrades indetified in Appendix C "Existing Facilities Analysis", the Mechanical Upgrades identified in the PSJ Engineering, Inc. Report dated 10/15/99 and the Electrical Upgrades Identified in the Venture Electrical Contractors, Inc. correspondence dated 11/5/98.

Costs for maintanence repairs identified in the GAS Report dated 2/7/94 are not included in this report and will be in addition to the costs identified herein. Additionally, costs associated with the design and construction of a movable staging system for on-going maintenance of the Dome Sturctures will be in addition to the costs identified herein.

Mitchell Park Horticultural Conservatory

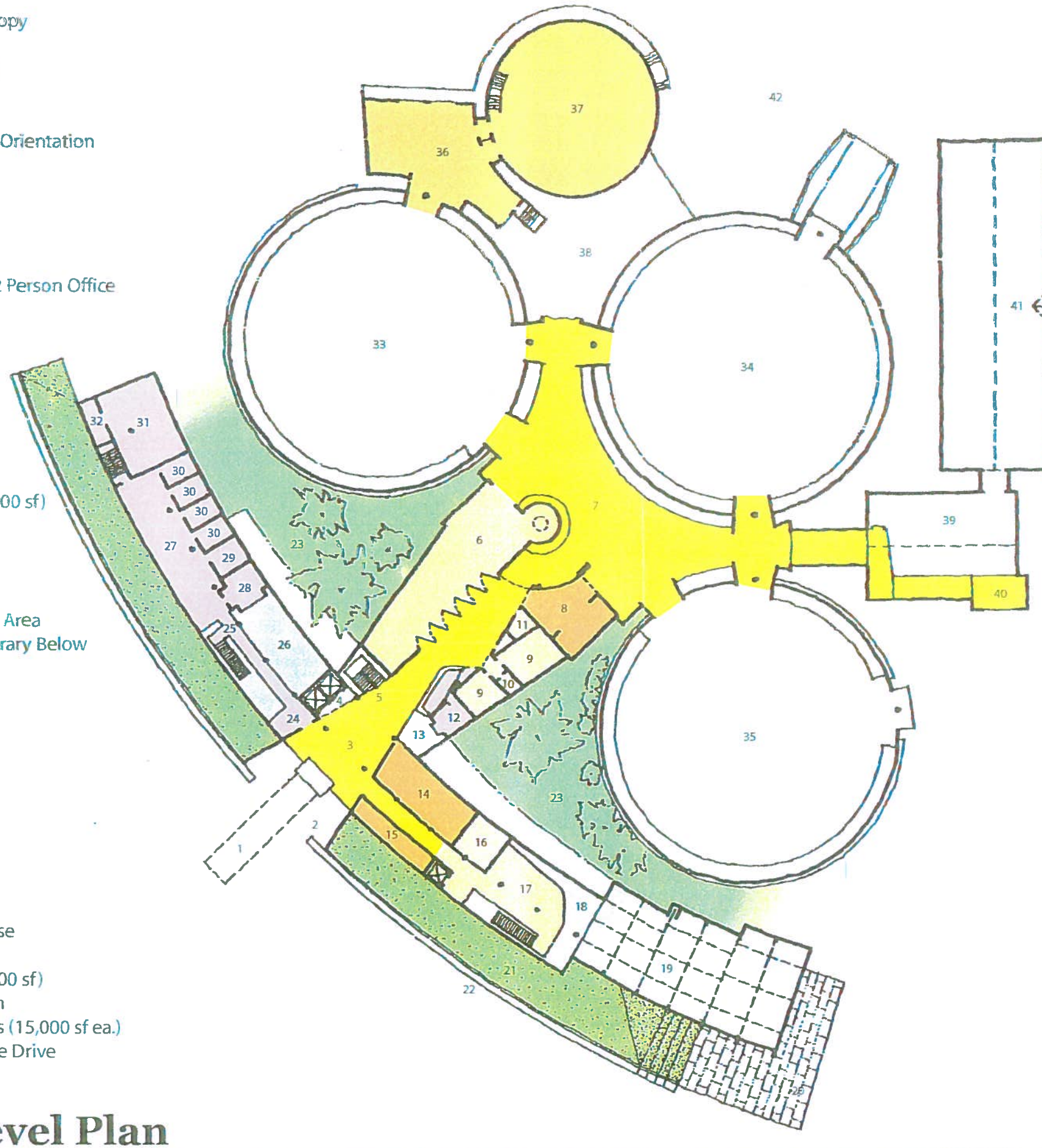
Program Requirements	R.F.P. SQ. FT.	EADP SQ. FT.	EADP Area SQ. FT.	EADP Total SQ. FT.
Educational Programming				
Coat Room/locker		290		
Restroom (in proximity to Banquet #2)		690		
Bag Lunch Area		400		
Wet Lab /Greenhouse Teaching		1,320		
Interpretive Ed. Office	200	150		
A/V Needs (66 persons @ 10sf/person)		660		
TOTAL AREA SQ. FT.	2,000		3,510	
Facility Rental Space				
Banquet Area #1 (400 seats @ 12 sf/per.)		4,800		
Banquet Area #2 (135 seats @ 12 sf/per.)		1,620		
Banquet #2 Storage		60		
Meeting/Exhibition Space (1st Floor)		3,100		
Prefunction Space for Banquet #1		2,960		
Lobby/Prefunction Space for Banquet #2		1,310		
Restrooms		600		
Coat Room		360		
Storage (tables, chairs, etc)		600		
Elevator		100		
TOTAL AREA SQ. FT.	12,050		15,510	
Catering/ Food Area				
Catering Set-Up/Prep/Serving/Banquet #1.		930		
Catering Set-Up/Prep/Serving/Banquet #2.		750		
Café/Vending Area		900		
Storage		430		
			3,010	
Horticultural Staff				
Open Office Space	750	750		
Wook Space w/ Wet Lab		300		
Library w/ Copier	2,000	1,920		
Additional Open Office Space		420		
Propagation House (w/ micro -environ)	2,400	2,400		
TOTAL AREA SQ. FT.	5,150		5,790	
Administrative Office				
Activities	500*			
Storage (fax, copier, A/V)	*			
Closet	*			
Open Work Space (copier, storage etc.)	*	475		
Director's Office	400	300		
Conference Room	*	320		
Office	200	150		
Friends Office		150		
Develp./Marketing Coordinator		150		
Horticulturist II Office	200	150		
Storage (small props., supplies)		200		
Park Artists	1,000	1,200		
			3,095	
Gift Shop				
Gift Shop		1,000		
Storage		350		
			1,350	
Visitor Amenities				
Porte-cochere				
Air Lock @ Front Entry		175		
Admissions (storage/2 staff w/ cash res.)		450		
Visitor Orientation	200	0		
First Aid Room		125		
Telephones (located within lobby spaces)		0		
Water Fountain (located in lobbies)		0		
New Grand Stair		300		
Elevator (s)		250		
***Stroller Rental (EADP Added)		40		
			1,340	
Additional Building Facilities				
Mechanical		1,400		
Loading Dock		910		
Storage		480		
Maintaince Closets		50		
			2,840	
NET TOTAL SQUARE FOOTAGE				36,445
Assume 35% Circulation				12,756
GROSS TOTAL SQ. FOOTAGE				49,201
Optional Greenhouses				
Collections Greenhouse 2@ 50x150			15,000	
**** not included in building design unless otherwise directed				
**** Crop Growing Greenhouse	30,000			
GROSS TOTAL w/ GREENHOUSES				64,201



MITCHELL PARK HORTICULTURAL CONSERVATORY

EngbergAnderson Design Partnership, Inc.

1 Vehicular Drop-off Canopy
2 Pedestrian Plaza
3 Building Entry & Lobby
4 Elevators
5 Grand Stair (down)
6 Exhibition Hall / Visitor Orientation
7 Existing Lobby Space
8 Café
9 Restrooms
10 Unisex Restroom
11 First Aid Room
12 Admission's Desk and 2 Person Office
13 Open to Below
14 Gift Shop
15 Gift Shop Storage
16 Coat Room
17 Pre-function Space w/Grand Stair
18 Open to Pre-function Space Below
19 Banquet Hall Below (4400 sf)
20 Exterior Terrace
21 Planted Berm
22 Water Channel
23 Sunken Garden
24 Entry to Administrative Area
25 Walkway w/ Stair to Library Below
26 Open to Library Below
27 Open Office Area
28 Conference Area
29 Director's Office
30 Administrative Office
31 Artist Workroom
32 Artist Storage
33 Existing Show Dome
34 Existing Arid Dome
35 Existing Tropical Dome
36 Existing Air Lock
37 Existing Transition House
38 Existing Roof Deck
39 Propagation House (2000 sf)
40 Entry to Feature Garden
41 Collection Greenhouses (15,000 sf ea.)
42 Service Yard and Service Drive



0' 10' 30' 60' 120' NORTH

Lobby

Interior Planting

Offices & Educational/Library

Cafe/Gift Shop & Storage

Exhibition/Banquet

Restrooms/Coatrooms

Service/Mechanical

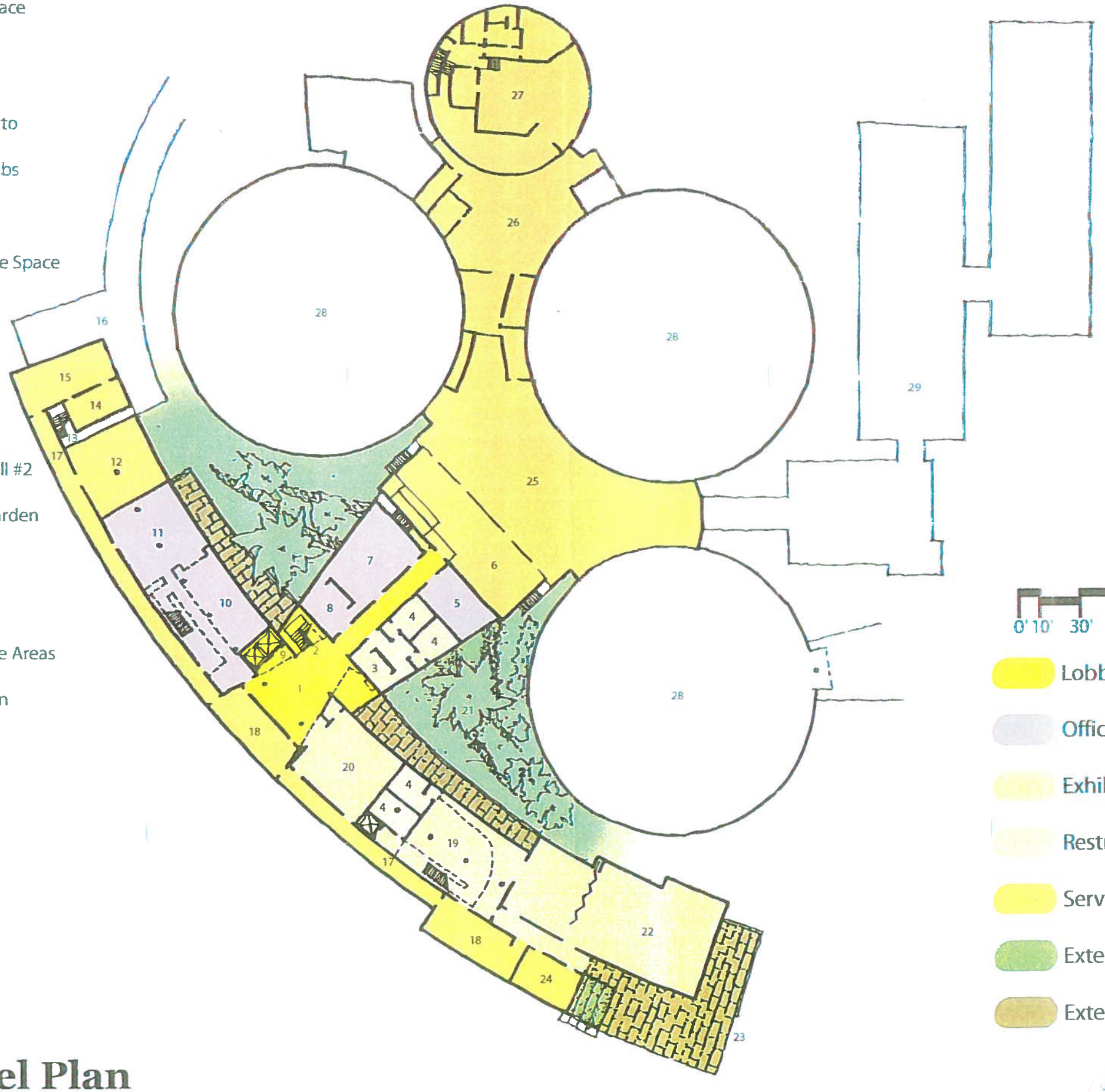
Double height space - open to below

Exterior Planting

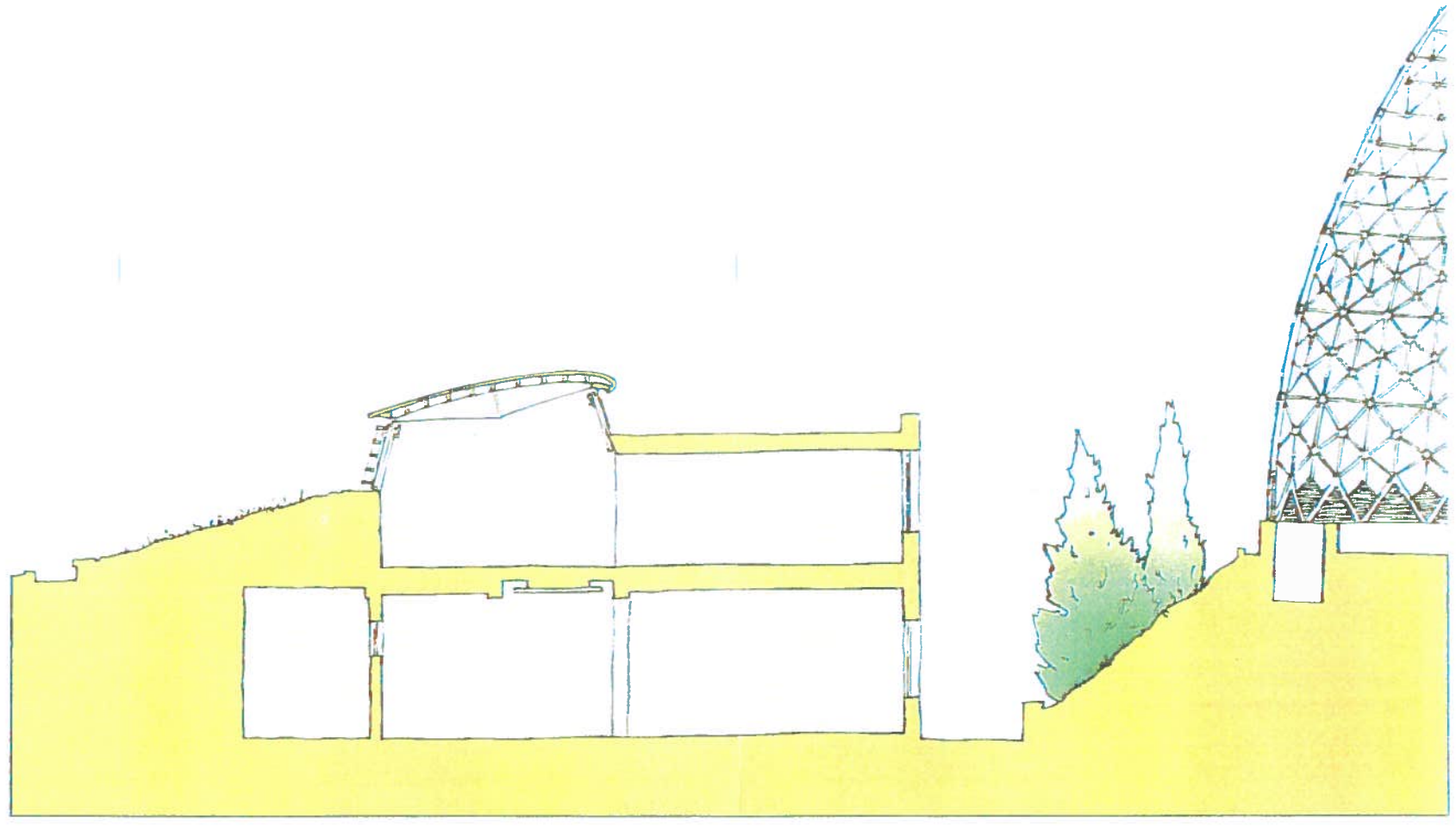
Water

Entry Level Plan

1 Lobby Space/Pre-function Space
2 Grand Stair up to Main Level
3 Lockers and Coat Room
4 Restrooms
5 Auto/Visual Room
6 Storage (connected via ramp to existing storage)
7 Educational Center w/ Wet Labs
8 Lunch Room/Class Room
9 Elevators
10 Horticultural Library
11 Horticultural Staff Open Office Space
12 Mechanical
13 Fire Stair
14 Storage
15 Loading Dock
16 Service Drive
17 Service Corridor
18 Catering Prep Area
19 Pre-function Space
20 Exhibition Space/Banquet Hall #2
21 Sunken Garden w/ Terrace
22 Banquet Hall #1 @ Feature Garden Level
23 Exterior Terrace
24 Table and Chair Storage
25 Existing Storage Area
26 Existing Mechanical Area
27 Existing Maintenance/Storage Areas
28 Existing Dome Base
29 Propagation House/Collection Greenhouses



Lower Level Plan



Building Section Through Addition and Dome

Sections

MASTER PLAN PHASED IMPLEMENTATION STRATEGY

Due to the scope of the Mitchell Park Master Plan, implementation will require the proactive and cooperative efforts of the Public and Private Sectors. This Master Plan includes required maintenance projects to all existing facilities, amenity and functional upgrades to Mitchell Park in general, as well as functional and programmatic enhancements to the Mitchell Park Horticultural Conservatory. The recommended strategy of implementation for the overall Master Plan is a phased process to occur over the course of seven years. This phased process allows for immediate implementation of Critical and Scheduled Maintenance Items while Design/Engineering Planning and Fundraising efforts are in progress for the overall Master Plan. Each of the Master Plan Components has been prioritized based on the following criteria:

- Critical Maintenance Projects
- Scheduled Maintenance Projects
- Required Facility Upgrade Projects
- Planned Additional Program Area Projects
- Planned Revenue Enhancement Projects
- Planned Functionality Enhancement Projects
- Planned Aesthetic Enhancement Projects

Recommended implementation strategy:

Overall Master Plan Design and Engineering — 2001
Complete final design and engineering for implementation of the entire Mitchell Park Master Plan. After completion of design and engineering, the various Master Plan Components can be Bid as distinct Projects as funding becomes available.

Upgrades to Existing Buildings — 2001 – 2004
Continue scheduled maintenance projects throughout Mitchell Park and implement the maintenance projects described in Referenced Document "A" "Structural Condition Study of the Mitchell Park Domes" and Appendix "C" Existing Facilities Analysis. Implementation of these Projects will prevent further deterioration of the Park Infrastructure.

Upgrades to Lighting and Paths — 2002
Upgrades to Plant Materials — 2002
Upgrades to Playing Fields — 2002
Upgrades to North Parking Lot — 2002
Completion of these Projects will provide the base for the future Master Plan Components by upgrading the general Park Environment and Functionality of Recreational Facilities.

Upgrades to Pavilion and Terrace — 2003
Upgrades to Pond — 2003
Completion of these Projects will provide the First of a Series of Revenue Generating Improvements to Mitchell Park. These Areas are in need of an image and infrastructure upgrade to enhance the potential revenue stream.

New Building Addition and Propagation House — 2004
Upgrades to Central Parking Lot — 2005
Upgrades to South Parking Lot — 2005
New Feature Garden — 2005
These Projects are the center of the Mitchell Park Master Plan and are required to ensure the future of the Mitchell Park Horticultural Conservatory. Completion of these Projects will enhance the image of Mitchell Park and provide the necessary Revenue Generating Improvements to the Mitchell Park Horticultural Conservatory.

New Collection Greenhouses — 2006
Completion of the Collection Greenhouses will enhance the functionality of the Mitchell Park Horticultural Conservatory and potentially reduce operating costs by relocating and improving this facility from its existing location on the County Grounds.

Upgrades to Tot Play Area — 2007
Completion of these Projects will enhance the general Park Environment and Functionality of Recreational Facilities allowing for increased use by the surrounding neighborhood.

Replace Amphitheater — 2007
Completion of the Amphitheater Project will enhance the general Park Environment and provide the opportunity to improve a currently under utilized recreational venue.

- A) Market Analysis
- B) Foodservice Recommendations
- C) Cost Analysis
- D) Existing Facilities Analysis

MASTER PLAN PHASED IMPLEMENTATION STRATEGY

Accomplishment the Mitchell Park Master Plan, will require the cooperative efforts of the Public and Private Sectors in the following areas:

- Improving the Image of Mitchell Park
- Improving the Recreational Facilities of Mitchell Park
- Improving the Mitchell Park Horticultural Conservatory Infrastructure
- Improving the Mitchell Park Horticultural Conservatory Marketing Program
- Improving the Mitchell Park Horticultural Conservatory Revenue

- A) Market Analysis

MITCHELL PARK AND HORTICULTURAL CONSERVATORY MASTER PLAN

MARKET ANALYSIS

October 21, 1998

Unkel Marketing Solutions, LLC
2239 N. Terrace Avenue
Milwaukee, WI 53202
(414) 298-9910

REQUEST FOR PROPOSAL
1/29/98

- "To hire a consultant to develop a master plan for the Mitchell Park Horticultural Conservatory which includes needed capital improvements, programming and market analysis. The master plan shall ensure (be geared to) increased facility utilization and functionality, while generating ancillary revenue sources and enhancing existing revenue sources. In addition, the consultant will perform research, conduct interviews, develop plans and compile a fiscally sound plan."

The plan should, at a minimum consider and address the following:

- The overall condition of the conservatory and any needed or recommended changes
- Space needs for public service, revenue generation, operational considerations and support functions.
- ***Program analysis, including both current programming and proposed programming.***
- ***Revenue generating proposals (such as restaurants and catering, marketing strategies including advertising programs and target groups, new or expanded activities such as art fairs or interactive electronics, space rentals, etc.)***
- ***Market analysis of revenue generating proposals.***
- Preliminary design work for revisions needed to accomplish the recommendations of the master plan
- Utilization of exterior space, including the reflecting pool and the old sunken gardens area and, if appropriate, other areas of Mitchell Park
- Cost and revenue analysis for all recommendations
- ***Funding sources for all the various recommendations, including but not limited to grants, sponsors, joint ventures and self supporting activities.***

OVERVIEW OF ANALYSIS PROCESS

- Start with analysis of visitor base, *both current and potential.* This is what will drive programming, pricing, communication and fund-raising opportunities.
- Consider relevant market trends.
- Follow with "competitive overview"
- Establish baseline measures.
- Determine priorities based on opportunity
- Then establish strategic objectives which will direct programming and revenue streams.

MARKET ANALYSIS: Table of Contents

METRO-MILWAUKEE OVERVIEW

- Market Analysis --Relevant Trends: Metro Milwaukee Population/Tourism/Crime/ Philanthropy/Food Service
- Market Analysis -- Comparison with other local attractions: Milwaukee County Zoo, Betty Brinn Children's Museum
- Market Analysis -- Benchmark Facilities: New York Botanic Gardens, Brooklyn Botanic Gardens, Olbrich Botanic Gardens, Como Park Conservatory, Foellinger-Freimann Conservatory

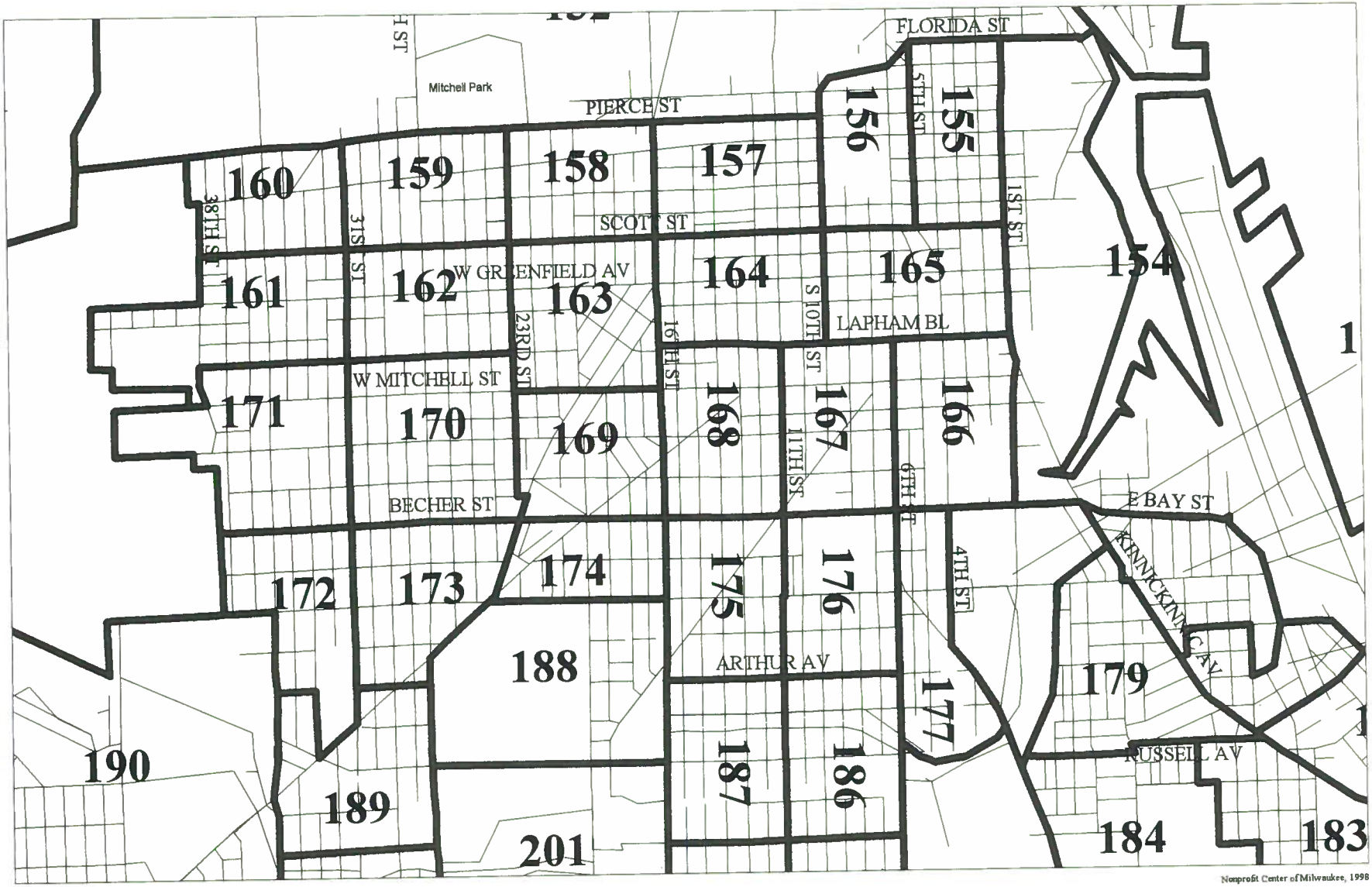
MITCHELL PARK HORTICULTURAL CONSERVATORY SITUATION ANALYSIS

- Performance to Date -- Key Internal Measures:
  - Attendance
  - Revenue
- Market Analysis -- Visitor Segments
  - » Segment Feedback
- Mitchell Park Horticultural Conservatory -- Comparative Review
- SWOT Analysis (Strengths, Weaknesses, Opportunities, Threats)
- **KEY RECOMMENDATIONS AND IMPLICATIONS FOR BUILDING DESIGN**

MARKET ANALYSIS -- MITCHELL PARK

- Community Survey Results
- **KEY RECOMMENDATIONS AND IMPLICATIONS FOR PARK DESIGN**
- **EXHIBITS: Domes Survey, Community Survey, www printouts, Foundations Listings, Como Park Conservatory Brochure, Community Survey Photos**

MITCHELL PARK AREA CENSUS TRACTS -- SOUTH



Demographic Trends

Demographic Trends: Metro-Milwaukee area: *Metropolitan Milwaukee Association of Commerce*

- Population is growing. Four-county area has nearly 1.5 million people. This represents a 4% increase from 1990 to 1997.
- Total per capita personal income (1995) is nearly 12% higher than the US average. The average weekly earnings of the area is $610.24 (May, 1998).
- The highest representation of age is in the 25 - 34 year old category (1990 census data) In year 2000 we will see a strong representation of 15-24 year olds.
- Projections of effective buying income indicate a 16.6% increase between the years 1996 - 2001. *1997 Sales & Marketing Management Magazine.*

Near Southside Area Demographic Trends: *"A District Plan for Milwaukee's Near Southside" Applied Planning Workshop at UWM Dept. of Urban Planning, April 1995*

- Approximately one-ninth of City's total population (71,332 people) lives in Near Southside.
- Children from 0 to 19 make up 36% of District's population (compared to 30.4% city-wide).
- Percentage of 25 year olds with high school diplomas or above is 56.6% compared to City rate of 71.5%.
- Hispanic population represents 30.6% of population compared to metro-Milwaukee rate of 4%. 19.8% of Hispanic population do not speak English; 51.4% of Asians do not speak English.
- 28.1% of families live below the poverty level (compared to City-wide rate of 18.1%)
- **Key Issues:** *"Education policies and programs are needed for the Near Southside. With a high school graduation rate just over 50%, and in some portions of the District less than 40%, it is important to reverse this trend in order to promote economic growth."* A District Plan for Milwaukee's Near Southside. Ibid.

Neighborhood Demographics

- The last household data available is from the 1990 census, however MPS school statistics from 1992 - 1998 indicate considerable ethnic change in the near southside community. These statistics just released in July, 1998 indicate the overall youth population has grown by 16%.
- "On the central part of the city's south side -- the area roughly from Lapham St. to Layton Ave., 6th St. to 35th St. -- an influx of Hispanics, and to a less degree blacks and Asians, has countered the outflow of white children."
- "In the central south side, the white share of the population fell from 62% to 39% while the Hispanic share grew from 26% to 43%. Overall youth population was up 16%." *Milwaukee Journal Sentinel 8/23/98*
- A comparison of 1990 Census data on children in tracts 158-159 with 1997 MPS data indicates the following ethnic changes:

	Hispanic	Anglo	African	Asian	Indian
1990 Census/Children 158-159	37.0%	47.7%	4.2%	5.8%	5.3%
1997 MPS Survey	52.2%	21.4%	12.1%	4.8%	9.5%

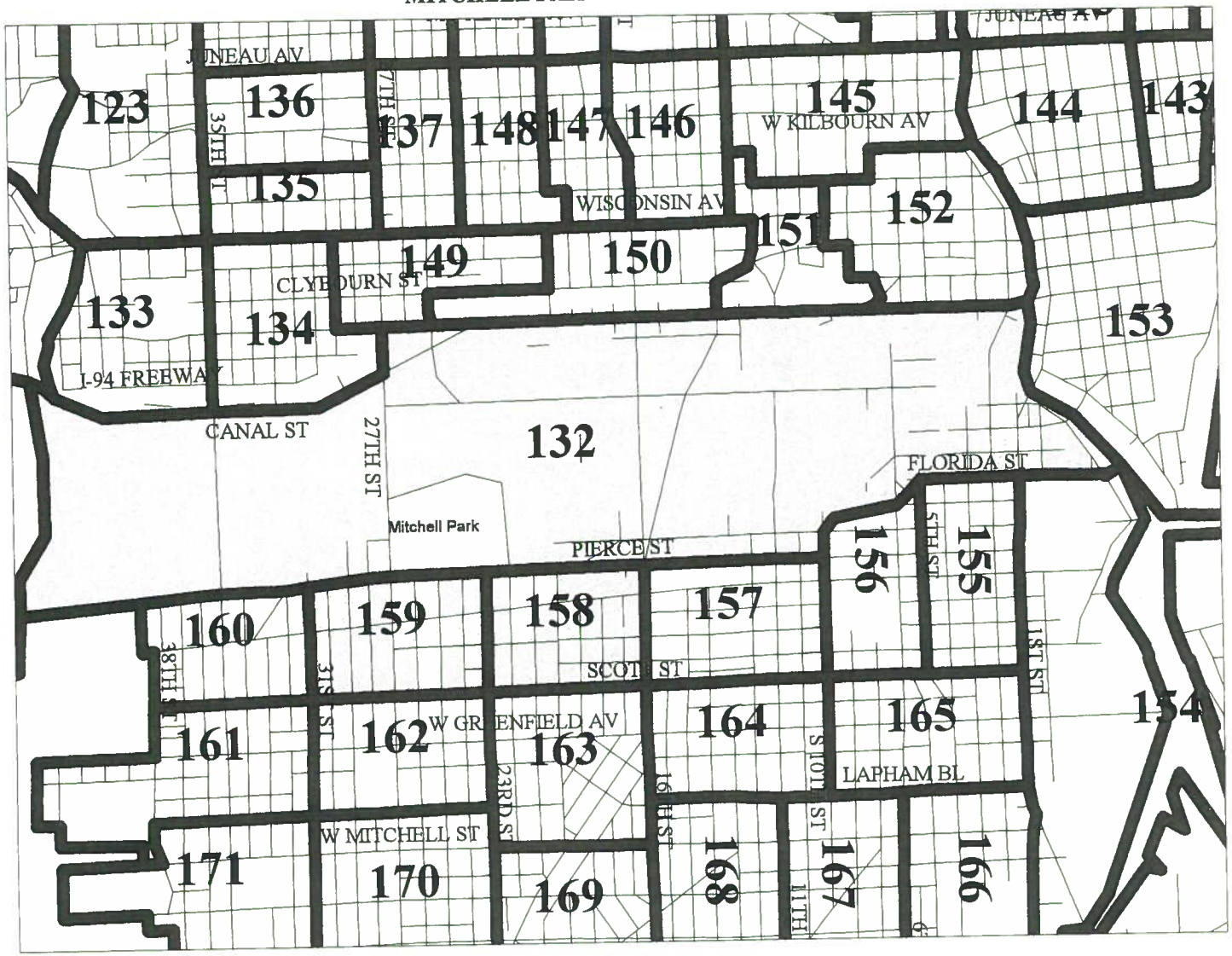
CRIME TRENDS NEAR SOUTHSIDE

Crime Trends Near Southside: In 1987 7.7% of all crimes against persons in the City were committed in the Near Southside District. In 1993, the percentage rose to 9.5% The highest increase was in the Clarke Square/27th Street area (95% increase). *A District Plan for Milwaukee's Near Southside, April 1995.* 1997 statistics for the Clark Square area (census tracts 158-159)show a continued upward trend in crimes against persons -- property crimes, however, are trending downward.

Crime Trends Within The Menomonee River Valley (Census tract 132): Incidence of crime within the Menomonee River Valley is relatively low. A total of 32 violent crimes were reported in 1997 including 1 homicide, 6 rapes, 14 assaults and 11 robberies. Overall, crime trends in the Valley are declining.

Crime in Mitchell Park: Sixth District Crime Prevention Officer Roger Cortez reports there is very little crime or gang activity in the park. There are occasional incidents of drunkenness and prostitution, but the presence of patrol cars in the park has done alot to remedy the problem. Officer Cortez does recommend selective trimming of the shrubbery near the railroad tracks to the North. He also recommends involving a city or county specialist certified in crime prevention through park planning. (Officer Cortez holds this certification.)

MITCHELL PARK AREA CENSUS TRACTS

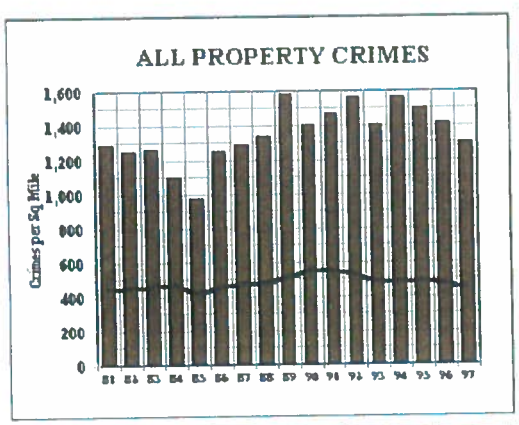


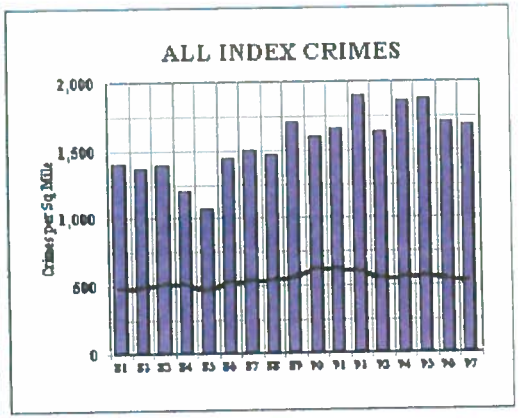
Nonprofit Center of Milwaukee, 1998

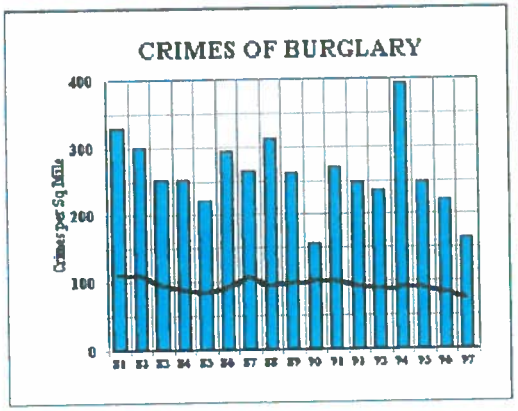
PROPERTY CRIME SUMMARY 1981-1997

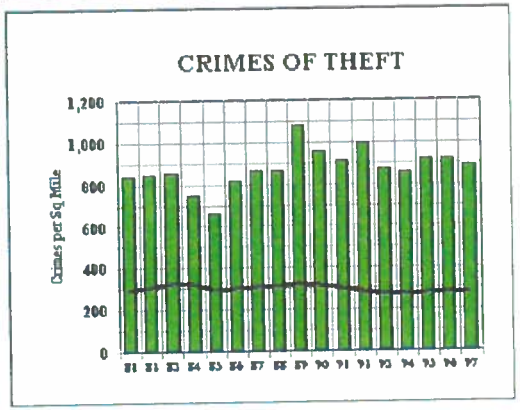
MITCHELL PARK NEIGHBORHOOD

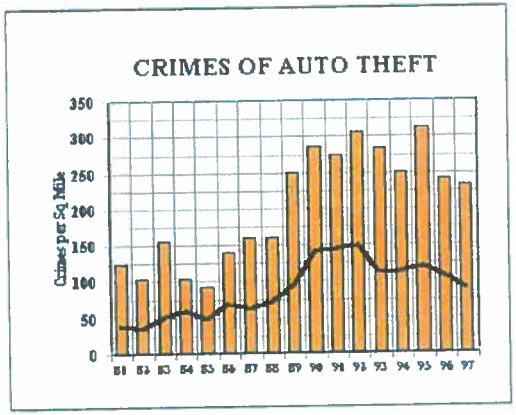
Crimes Per Square Mile

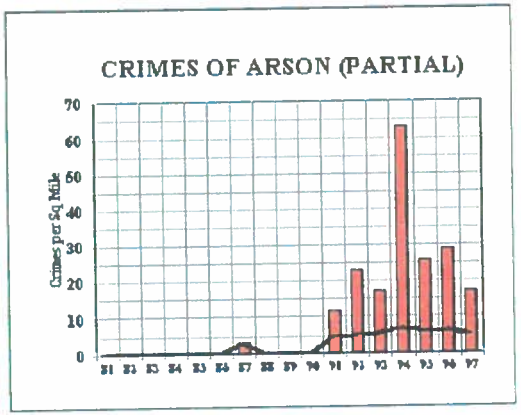








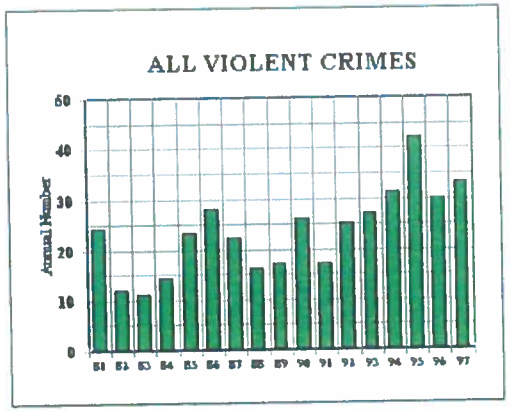


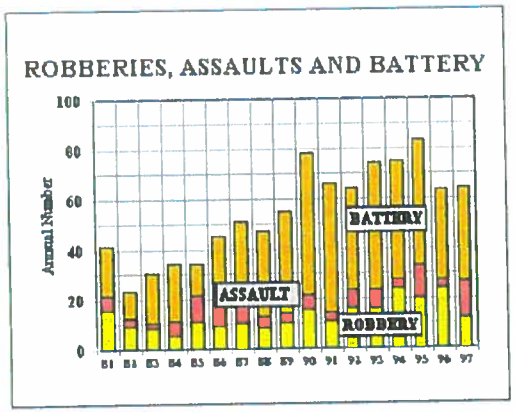


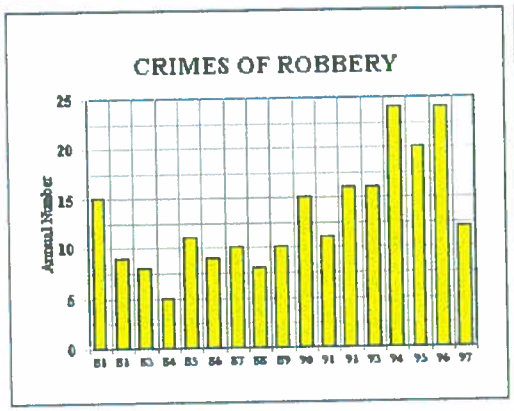
Note: Black line represents City of Milwaukee crime levels.

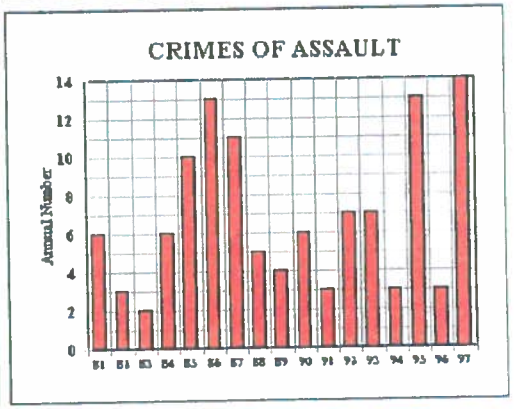
Nonprofit Center of Milwaukee

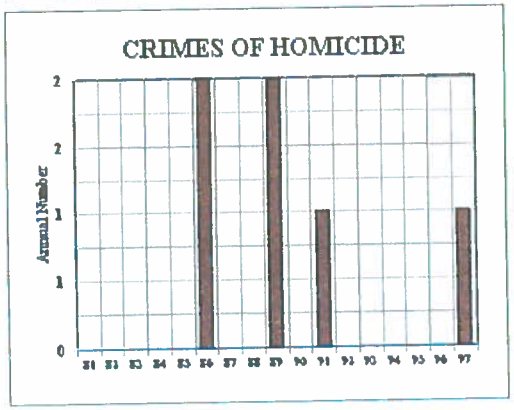
VIOLENT CRIME SUMMARY 1981-1997
MENOMONEE RIVER VALLEY

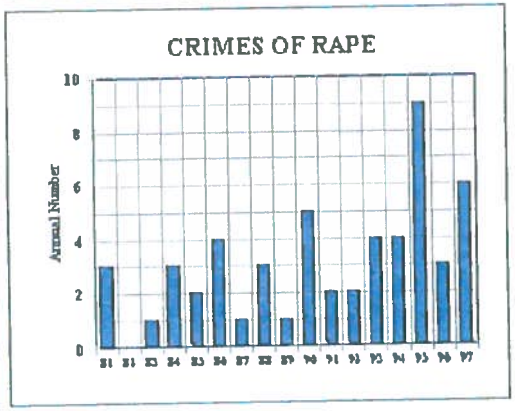












Market Analysis -- General Trends

- *"As public gardens increasingly shift to private funding sources, attendance and economic expectations become the criteria for successful operation. To increase attendance and broaden their appeal, gardens are responding to increasing demand of active entertainment programming."* Public Garden Magazine, July 1996.

- Leisure Trends in General: The 1991 Dieringer Research Associates Report commissioned by the Milwaukee County Dept of Parks, Culture and Recreation revealed that the general Milwaukee area population ranks leisure time needs in the following order of importance: Fun, Relaxation and Entertainment.
- Tourism Trends: Metro-Milwaukee area anticipates a general growth in tourism, particularly as a result of an increase in expected convention activity. The "Domes" is one of the top ten Milwaukee area tourist destinations. *Greater Milwaukee Convention and Visitors Bureau*

Philanthropic Trends

- *"Support for gardens and other environmental institutions is at its highest point in history. According to the June 1995 issue of The Chronicle of Philanthropy, charitable donations to environmental organizations rose to an estimated $3.5 billion dollars in 1994. This represents an increase of 11 percent from the previous year and an increase higher than any other category of giving including education, health, religion, social services and the arts."* Public Garden Magazine, July 1996.
- "The number one reason wealthy people make charitable contributions is to enhance the quality of life in their own communities." 1994 survey of major donors -- Price and Associates, Connecticut
- Giving Trends in Milwaukee: "Overall, the state of philanthropy is very healthy in the Milwaukee area. The bellwethers reported receiving $151,606,051 in gifts for 1996 -- 34.9 percent more than in 1992, compared to an inflation rate of 12.4 percent over the same period." Report Card on Charitable Giving -- Milwaukee Foundation, November 1997.

PUBLIC GARDEN FOOD SERVICE STATISTICS

Survey to AABGA member organizations -- 125 responding facilities

- Less than half manage regular food sales (including contract and concession)
- Of those that do, half include table or cafeteria service, a quarter offer snack bar and the other quarter have vending machines only.
- Sales per visitor:

	Adjusted for Inflation 1990 - 1997
Vending machine -- 5 to 15 cents per person	6 to 19 cents per person
Snack bar -- up to $1 per person	up to $1.25 per person
Table/cafeteria service -- 50 cents to $3.50 per person	62.5 cents to $4.38 per person

- Trend toward contractual or concessional management rather than self-operated.
- Issues to consider:
  - nature of facilities
  - inventory and replacement
  - insurance and licensing
  - standards
  - policies
  - exclusivity
  - cost accounting
  - codependence and supervision

"Regardless of the system, garden administrators across the country express a general discontent with food service arrangements. . . Constant investment required . . Crisis level at which kitchens operate . . Contractual provisions made to attract a good contractor overly generous". Public Garden Magazine, October 1990

SNACK BAR ECONOMIC VIABILITY

(Definition snack bar versus concession --
no cooking/grilling involved in snack bar operation.)

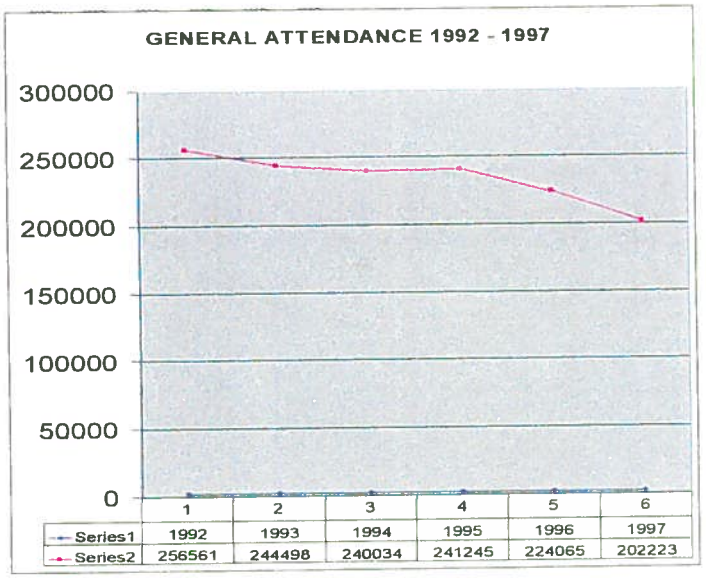
Assumptions:

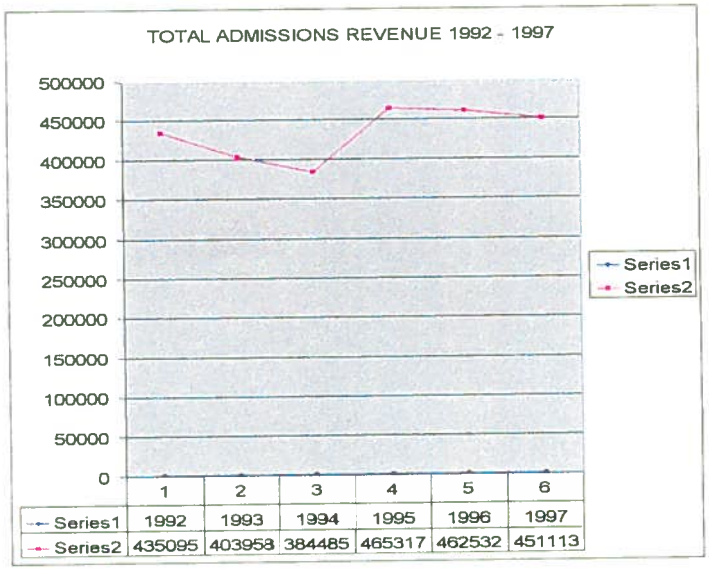
- Menu -- sodas, candy, ice cream, coffee, chocolate, juices, gourmet coffee, cookies, bagels, muffins, hot dogs, bottled water, popcorn, chips, soup. Daily sales assumptions based on 300 people/day.

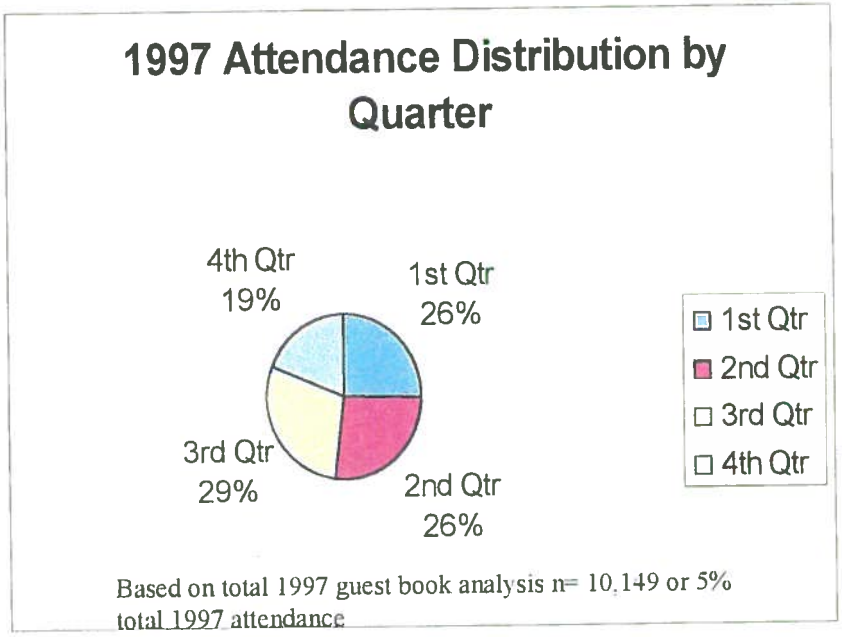
Item	Price	Ext.	Cost	Total Cost
• 25 waters	$1	$25	.35	$8.75
• 75 sodas	$1	$75	.10	7.50
• 50 coffees	$1	$50	.15	7.50
• 15 hot dogs	$1.50	$22.50	.53	7.95
• 15 ice creams	$1	$15	.35	5.25
• 30 popcorns	$1	$30	.23	6.90
• 15 chips	.75	$11.24	.42	6.30
• 10 pretzels	$1.50	$15	.33	3.30
• 50 candies	.75	$37.50	.34	17.00
• TOTAL		$281.25		$70.45 25% gross
• 2 people @ $6.50/hr x 8 hrs.				$104.00 37% gross
• TOTAL COST				$174.45/day
• TOTAL GROSS PROFIT		$106.80/day x 360 days/year =		$38,448

(With appreciation to Gary Lindsey, Executive Director, Uihlein Soccer Park)

Market Analysis -- Horticultural Conservatory







1998 revenue goals are tracking higher than 1997 Total admissions revenue YTD: $326,618

Visitor Segments
"Making new friends while keeping the old"

LOCAL SEGMENTS:

- Greater Milwaukee area residents
- Residents of surrounding neighborhood
- Illinois residents
- Other Wisconsin communities

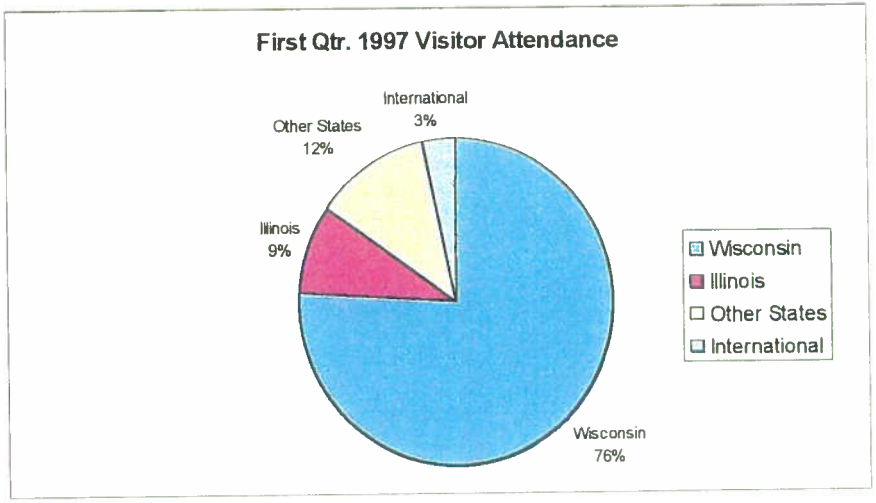
TOURIST SEGMENTS:

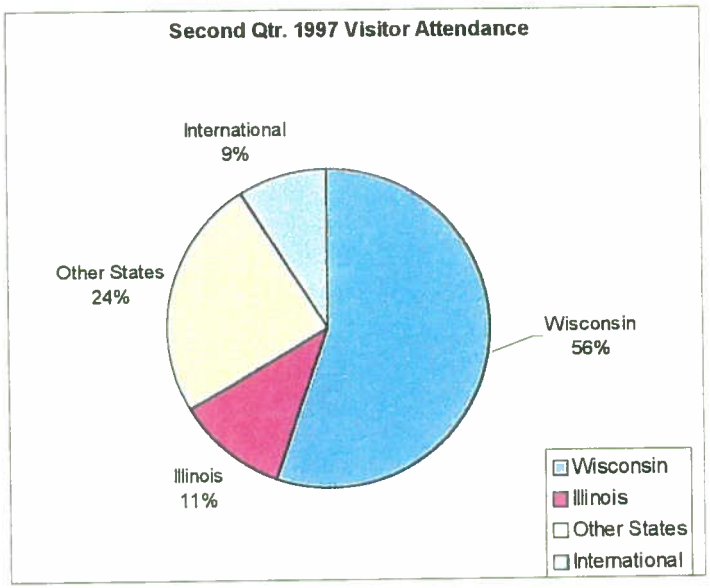
- Out-of-state (other than Illinois)
- International

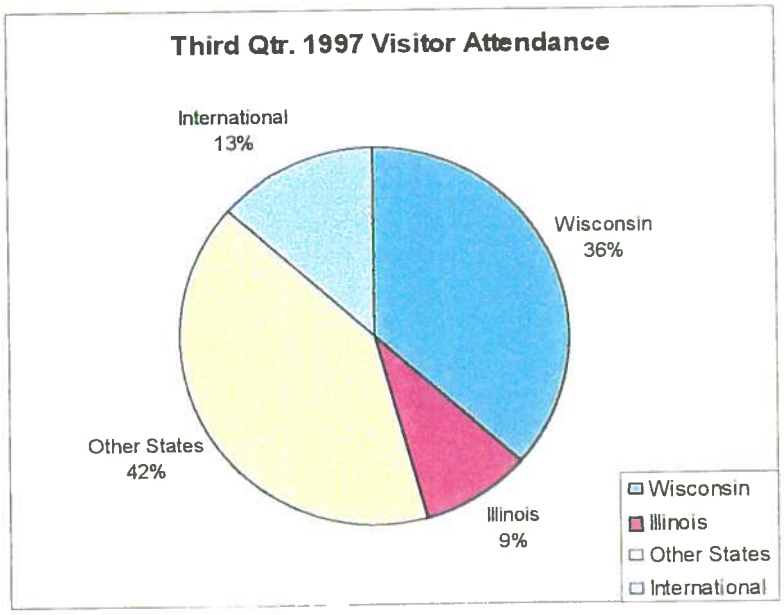
TOURIST SUBSEGMENTS:

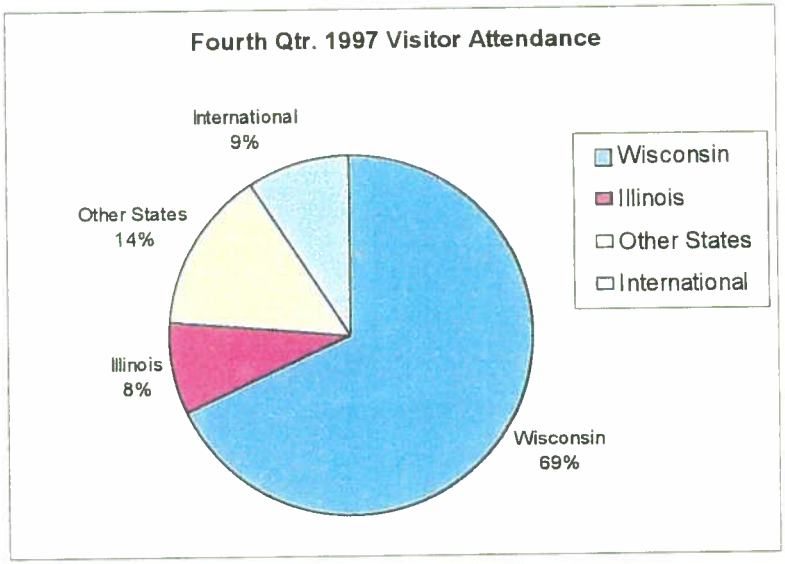
- Convention visitors
- Motor coach segment
- Families
- Tourists visiting local friends/family

(Segmentation based on need for differentiation in marketing strategies)









NOTE: This data is derived from guest book analysis. As a result, the frequent Wisconsin visitor is most likely under-represented. Implications are that the Wisconsin segment is probably greater than these graphs indicate.

QUARTERLY ATTENDANCE TRENDS SUMMARY

- Wisconsin and Illinois represent heaviest attendance segments in 1Q (local 85%, tourist 15%)
- Tourist segment begins to build 2Q (local 67%, tourist 33%)
- Trend grows 3Q (local 45%, tourist 55%)
- Evolves back to local 4Q (local 77%, tourist 23%)

IMPLICATIONS

Advertising and promotion should be targeted accordingly:

- 1Q -- benefits to local (Wisconsin/Illinois) citizens to enjoy the Domes.
- 2Q -- begin to introduce communications to tourism channels.
- 3Q -- heavy emphasis on appeal to tourists as well as message to locals to bring their out-of-town guests to the Domes. (50% of tourists stay with Milwaukee family/friends)
- 4Q -- segue back to local appeal (include some part of marketing mix towards international tourism)