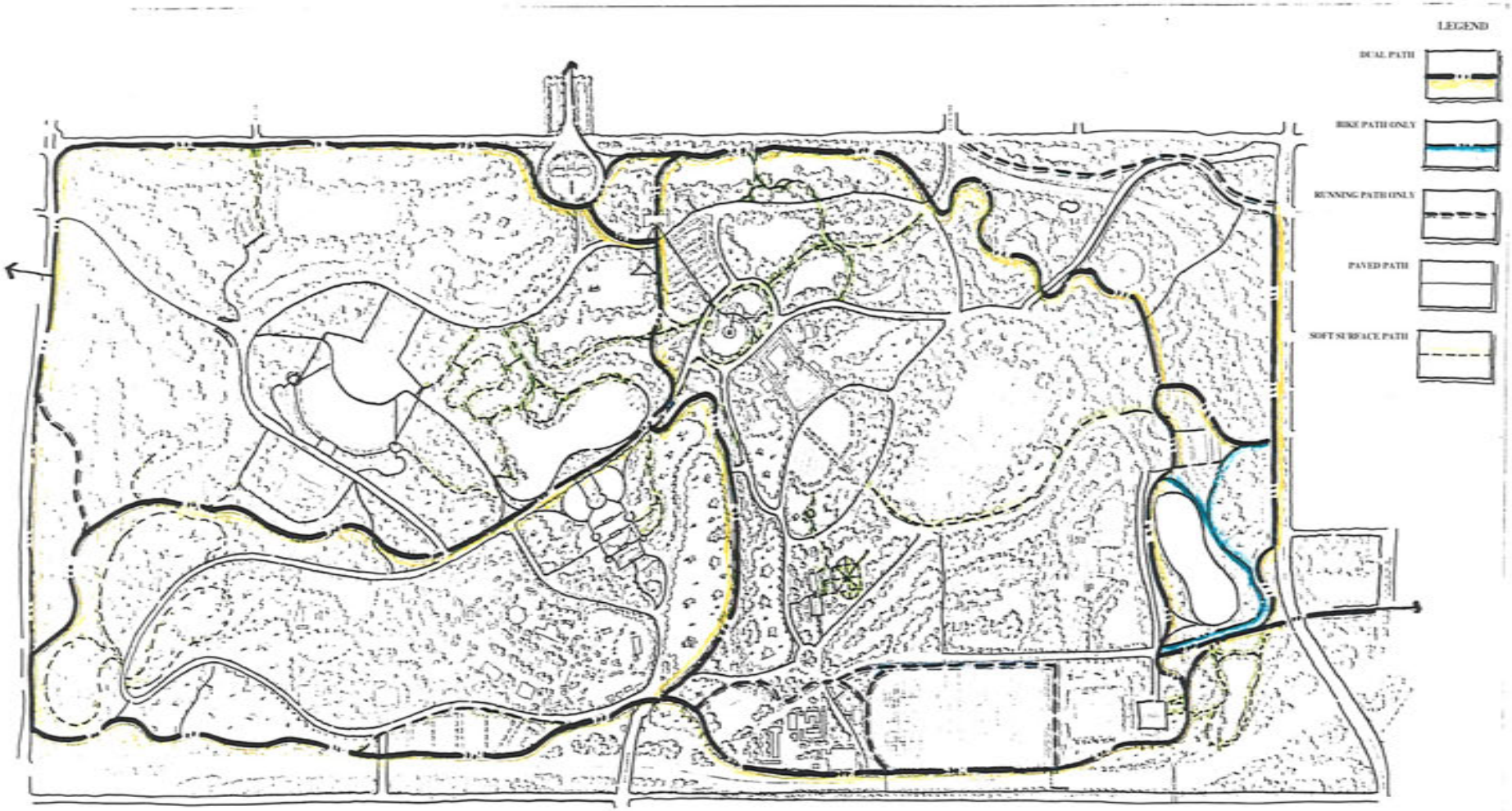


Composite Path System

FOREST PARK MASTER PLAN

ST. LOUIS, MO

CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION URBAN DESIGN

FOREST PARK MASTER PLAN

E. Site Specific Recommendations

AVIATION FIELD
- Reconfigure all fields for improved aesthetics and flexibility.
- Provide eight softball/little league diamonds.
- Provide six baseball diamonds.
- Provide seven soccer/football fields.
- Continue to accommodate special events.
- Consider providing a running track.
- Consider additional lighted fields.
- Increase vegetation along Highway 64/40 to dilute automobile noise and filter airborne pollutants.
- Re-route the bike path to the south of the fields, along Highway 64/40.

CENTRAL FIELDS
- Reconfigure all fields for improved aesthetics and flexibility.
- Provide 11 Softball/Little League diamonds.
- Provide five Soccer/Football fields.
- Relocate three rugby fields from Langenberg Field.
- Upgrade existing building to serve as an active recreation support facility with attended showers, lockers, toilets, and, potentially, a small concession.
- Continue to accommodate special events.
- Maintain as unlighted fields.

ARCHERY RANGE
- Reconfigure Archery Range, removing one or two bays and adding improved safety measures to reduce potential injury to other park users.
- Design for multiple use with potential for tournament soccer field and/or two softball diamonds
- Consider providing smaller, youth-oriented active recreation fields.
- Continue to accommodate special events.
- Consider lighting to increase multiple use flexibility.

LANGENBERG FIELD
- Provide two multi-use athletic fields.
- Provide unstructured/non-permit active recreation (1st come, 1st served).
- Design to accommodate overflow permit use from other active spaces on peak days, while accommodating passive recreation and special events.

LINDELL EDGE: DEBALIVIERE TO UNION
- Provide unstructured/non-permit active recreation (1st come, 1st served).
- Relocate the Par Course exercise stations here from the Lindell Boulevard golf course edge.
- Consider additional semi-active programming such as croquet or Frisbee golf while accommodating general passive recreation.

LINDELL PAVILION ENVIRONS
- Maintain existing lighted racquet sports.
- Renovate the existing children's play area behind Lindell Pavilion.
- Program as an active recreation support services facility.
- Provide a public concession with potential indoor/outdoor casual dining.
- Provide attended public lockers, showers, and toilets.
- Provide maps for general public active recreation/path users.

PARKS DEPARTMENT COMPLEX

- Consider providing support amenities for adjacent athletic fields and path users.

MOUNTED POLICE HANGAR

- Retain current use and renovate the Mounted Police Station.
- Consider long-term relocation of the Mounted Police to another park site and reprogramming of the site for indoor active recreation, such as basketball, volleyball, tennis and rock climbing.

MUNICIPAL GOLF COURSES

Option A

- Relocate five existing holes from the Art Hill/Grand Basin area.
- Remove Grand Drive from the Forsyth Boulevard entrance to DeBaliviere.
- Improve drainage.
- Reduce conflicts with surrounding land uses.
- Provide 27 competition golf holes:
  - One 18 hole course.
  - One nine hole course.
- Continue to utilize Lindell Pavilion as the clubhouse.
- Relocate and/or visually screen the golf maintenance facility.
- Continue to accommodate winter recreation.

Option B

- Relocate five existing holes from the Art Hill/Grand Basin area.
- Remove Grand Drive from the Forsyth Boulevard entrance to DeBaliviere.
- Improve drainage.
- Reduce conflicts with surrounding land uses.
- Provide 18 competition golf holes with returning nines to the clubhouse.
- Provide a practice fairway/driving range (not lighted).
- Provide three instructional/practice holes (not lighted).
- Provide a new centrally located clubhouse.
- Relocate and visually screen the golf maintenance facility into the uplands, accessed by cart paths.
- Continue to accommodate winter recreation.

TRIPLE A CLUB

- Encourage operation as a nine hole golf course with both nine and 18 hole rates.
- Maintain existing lighted and unlighted clay and hard tennis courts.
- Proposed expansion of tennis support facilities.
- Consider increased active recreation programming.
- Provide support amenities, such as food concessions, toilets, showers, and lockers, for surrounding park uses.
- Accommodate winter recreation.

STEINBERG RINK
- Maintain existing ice and roller skating.
- Increase outdoor active recreation around building.
- Operate as an all-season, lighted, active and passive recreation support facility with information/maps, air conditioning, and improved kitchen facilities to serve surrounding recreation and path users and potentially hospital complex employees.

DWIGHT DAVIS TENNIS CENTER
- Provide landscaping to integrate the facility into its surroundings.
- Maintain existing lighted racquet sports facilities.
- Provide significant quantities of bike parking to serve path users.

HUDLIN COURTS
- Barnes Hospital to continue to maintain lighted racquet sports facilities and children's play areas.

CRICKET FIELD
- Operate as a multiple use facility, shared with passive recreation and special event needs.
- Provide the ability to accommodate overflow permit programming during peak periods.
- Maintain as unlighted.

OAKLAND EDGE: HAMPTON TO SKINKER
- Maintain the existing Par Course Exercise Stations.
- Improve children's play areas.

V. ART, ARCHITECTURE, AND INFRASTRUCTURE

A. Overview

B. Summary of Existing Conditions

1. Park Facilities
2. Public Art
3. Architecture and Site Furnishings
4. Infrastructure

C. Design Principles

D. Design Recommendations

1. General Approach
2. Typology of Design Traditions
3. Architectural Styles
4. Building Design
5. Building Function and Use
6. Bridges and Culverts
7. Public Art
8. Roads & Paths
9. Site Furnishings
10. Utilities

E. Site Specific Recommendations

LIST OF DRAWINGS

ANALYSIS
History Composite
1882 Roads and Infrastructure
Building Analysis - Fish Hatchery
Building Analysis - Lindell Pavilion
Building Analysis - Log Cabin
Building Analysis - Police Stables
Building Analysis - Steinberg Memorial Ice Rink
Building Analysis - Worlds Fair Pavilion
Building Analysis - Parks Maintenance Complex
1995 Park Infrastructure and Utilities

DESIGN
Design Principle - Integrate Historically Significant Landmarks, Landscapes and Site Relationships
Design Principle - Emphasize Site Relationships
Design Principle - Multi-Functional Zones with Shared Facilities
Design Principle - Coordinated Infrastructure Replacement and Underground Utility Corridors
Proposed Park Facilities
Proposed ZMD Facilities and Cultural Institutions
Proposed Service and Support Facilities

A. Overview

Forest Park displays a wide and diverse range of public art, architecture, and infrastructure which adds to the unique nature of the park and its ambiance. The Master Plan acknowledges the value of these cultural amenities and seeks to maintain and enhance existing styles through the establishment of design and maintenance standards which are specific to the park. Emphasis will be placed on repairing and maintaining existing infrastructure and ensuring that the design and architectural qualities of new park elements are consistent with neighboring styles and landscaping.

From an architectural perspective, the prime objective is to maintain the distinctive character, quality of construction, and individual architectural integrity of each building structure within Forest Park. While there is no one prevalent architectural style nor a dominant material, there is a sense of scale, richness of detail, and quality of construction. These qualities create a strong overall image within Forest Park.

B. Summary of Existing Conditions

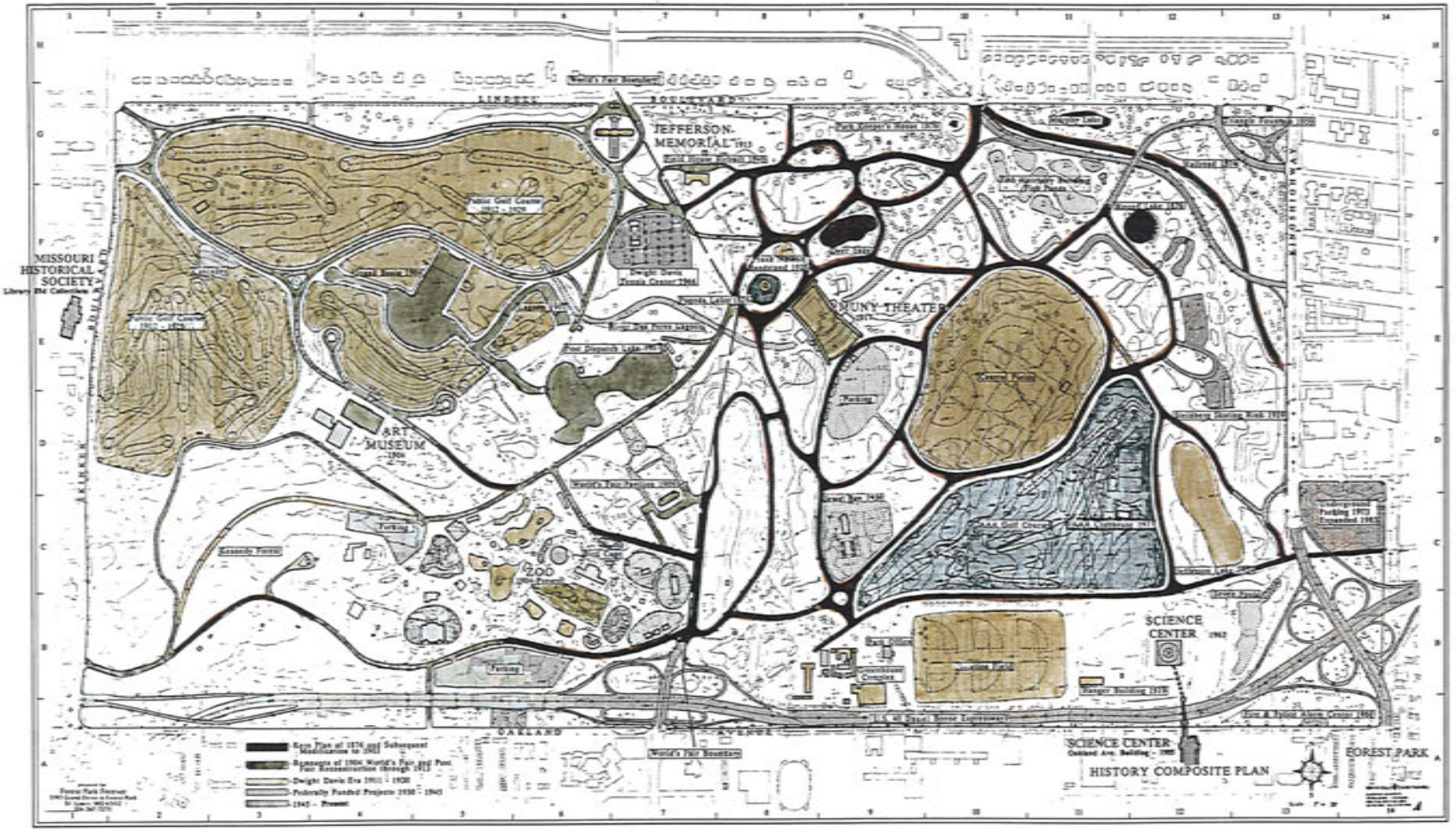
1. Park Facilities

Forest Park contains a diverse tapestry of public art and architecture which has evolved over many years and reflects many styles and influences. There is no predominant architectural "theme" in the park.

Forest Park has always been envisioned as an urban park with cultural amenities. It is important to note that the original 1876 Plan contained provisions for cultural institutions — a zoo and an aquarium. Within twenty years, plans for an Art Museum were also in progress. Thus, cultural institutions and other facilities have been a part of the Forest Park "experience" as long as the park has existed. In general, the institutions are in good shape (the Art Museum's need for structural strengthening to protect it against earthquake damage being the primary exception). However, few of the buildings and facilities in the park are currently ADA accessible, a situation which must be addressed as changes and improvements are made.

One significant deficiency in the park's mix of facilities is that there are few recreational areas in Forest Park dedicated exclusively to youth, with the exception of the Children's Zoo and three small playgrounds. Playgrounds are not provided along the neighborhood edge of the park, except on Oakland Avenue, nor are they provided near athletic fields or cultural or recreational facilities, other than the one at Lindell Pavilion. Some of the park's comfort stations are also poorly located to serve daily park needs. Two are permanently closed to the public. All are closed in winter.

The park's existing service and support facilities also have some historic and architectural merit, but they too are in need of repair or replacement. The Parks Department complex is aesthetically poor. It serves not only Forest Park, but the city's central corridor and its entire fueling needs. As such, the complex includes facilities which might be better located outside the park.



*This map is not intended to illustrate the precise location and boundaries of features but rather to highlight the general characteristics of the system.

HISTORY COMPOSITE

FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE: 1"=400' 0 400 800 1600

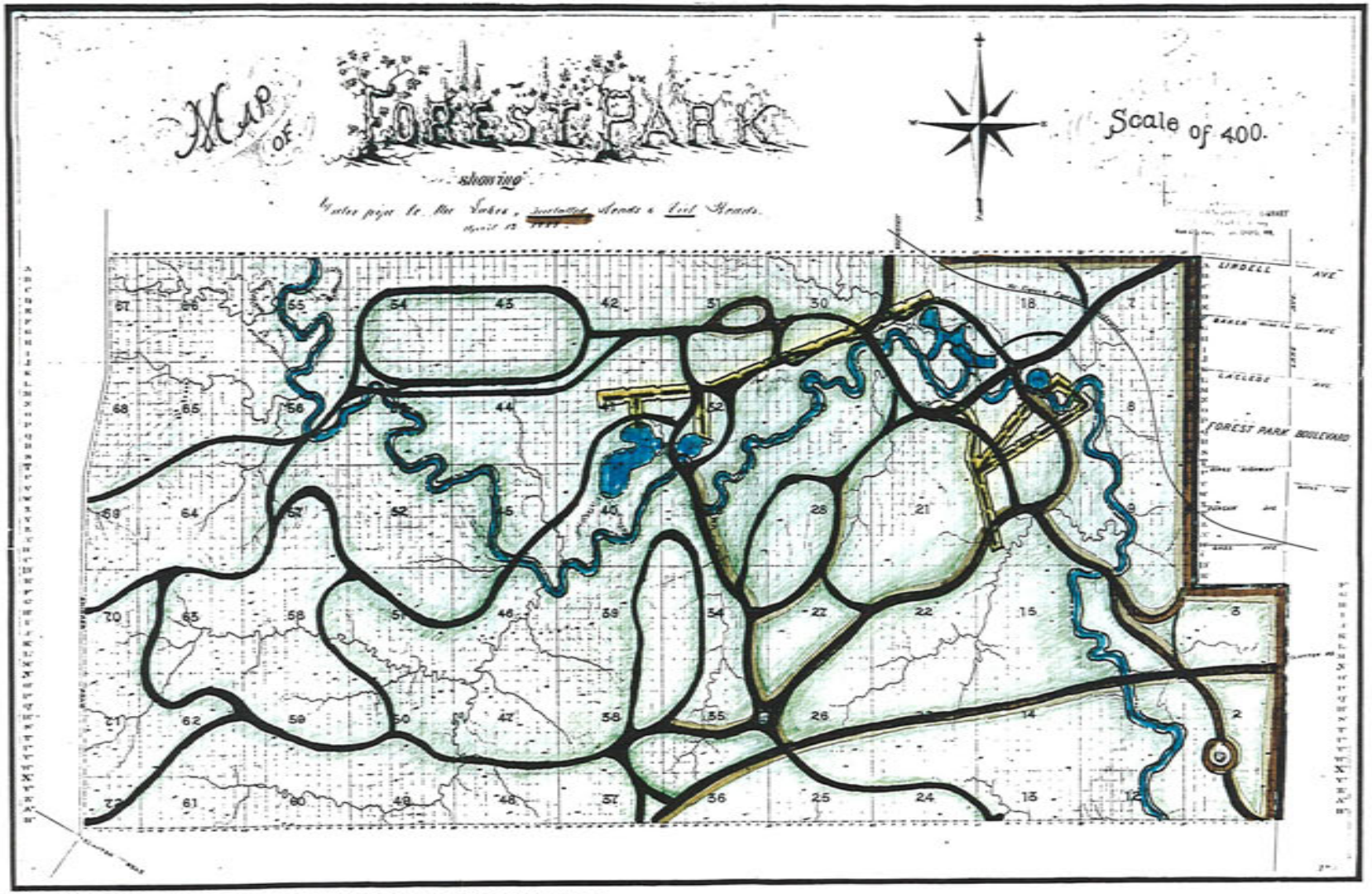
11 MARCH 1995

CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION URBAN DESIGN

FOREST PARK MASTER PLAN



1882 ROADS AND INFRASTRUCTURE MAP

FOREST PARK MASTER PLAN

ST. LOUIS, MO

CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

FOREST PARK MASTER PLAN

2. Public Art

Public art in Forest Park suffers from the absence of a comprehensive placement plan and a lack of adequate maintenance. Many of the park's monuments, statues, and other public art are in need of maintenance or restoration. The landscape settings for much of the public art is in poor physical condition and does not properly accentuate art pieces. Some art pieces are improperly located and should be relocated to more appropriate park settings.

3. Architecture and Site Furnishings

Forest Park contains several buildings of historical value and architectural merit. The condition of these buildings, however, varies with ownership. There are no park-wide guidelines for maintenance of these facilities, nor any system in place to monitor and enforce adequate maintenance.

Site furnishings in Forest Park also suffer from poor maintenance and the lack of a comprehensive placement plan. Much of the decorative architectural ornamentation around buildings, water bodies, and park entrances is in disrepair or missing. Many of the park's benches and seating areas are in a similar situation. There is currently no pedestrian scale lighting in the park. Cobra head street fixtures predominate. There is generally a lack of well-functioning drinking fountains in the park. While there is currently a very positive memorial bench program, no coordinated plan exists to guide the placement of these benches.

4. Infrastructure

The infrastructure in Forest Park, particularly the sewers, roads, and bridges, is in serious disrepair and will require significant investment to bring it up to modern standards for safety, functionality and aesthetics.

The majority of existing utilities are outdated. There is generally a lack of order and coordination regarding utility location.

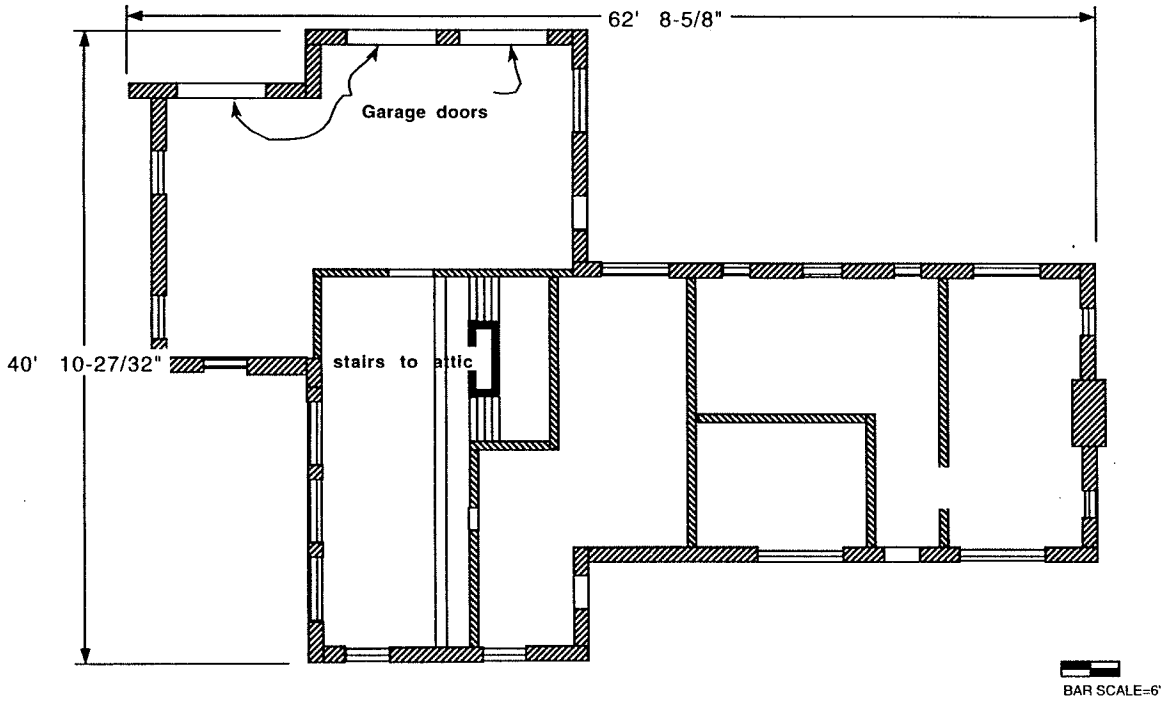
Catchbasins and underground sewer systems, most of which are more than 60 years old, need to be repaired or replaced. Currently, combined sanitary sewer overflow discharges into the park's water bodies, creating an unhealthy situation for wildlife and park visitors alike. Responsibility for maintenance of the sewer system is currently being debated by the Parks Department and the Metropolitan Sewer District.

Existing roadways are basically the original dirt and gravel tracks which have been repeatedly resurfaced over the years. Continuing deterioration, caused by water run-off, flooding, and heavy traffic use, results in frequent pavement buckling, potholes and other hazardous situations.

The park's bridges are similarly deteriorated and need to be repaired or replaced. Appropriate lighting currently exists only on roadways and parking lots and needs to be increased in these and other areas.

FISH HATCHERY PLAN

1,587 sq. ft.



General Notes:

-Needs new HVAC system, current operates on fuel oil.
-Needs electrical system upgrade.
-Minor roof repairs needed.
-Two garage doors on east side of structure possible handicap access.
-Attic could be possibly renovated to house several small offices.
-ADA upgrades needed.

Site Description

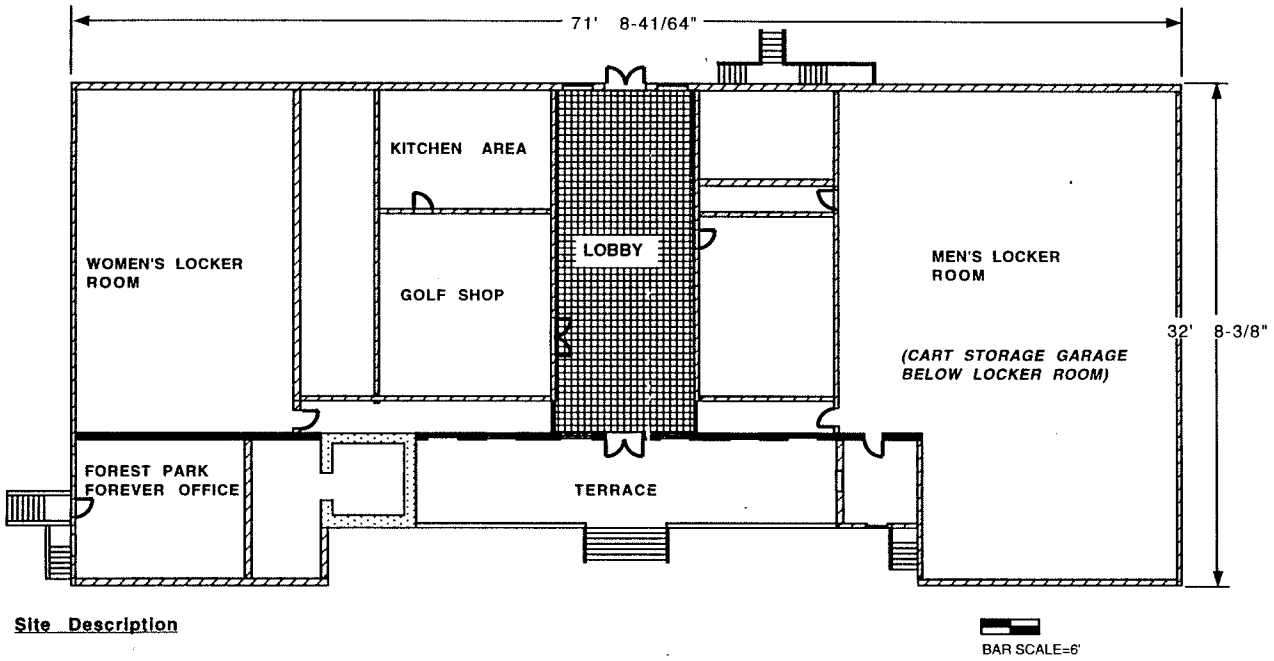
The Fish Hatchery, a 1587 sq. ft. stone structure with a slate roof, is accessed by a driveway off Grand Drive, and has dedicated parking for employees. It is adjacent to a bike path and the Hatchery Lakes. It is currently being used by Recreation Division - Operation Teamwork.

Existing Structural/Mechanical/Electrical Systems

The inadequate systems at the Hatchery include the HVAC system, which currently operates on fuel oil, and insufficient electrical service. There is some roof damage and the facility is not ADA compliant. The building has a 966 sq. ft. attic that can be renovated for office space.

LINDELL PAVILLION

19,740 sq. ft.



General Notes:

- Expensive maintenance cost $40,000/yr.
- Boiler repairs $4,000/yr.
- Electricity system needs upgrade; current system very inefficient.
- Some exterior patching needed.
- Several window replacements needed.
- Interior needs painting.
- Needs ADA upgrade.

Site Description

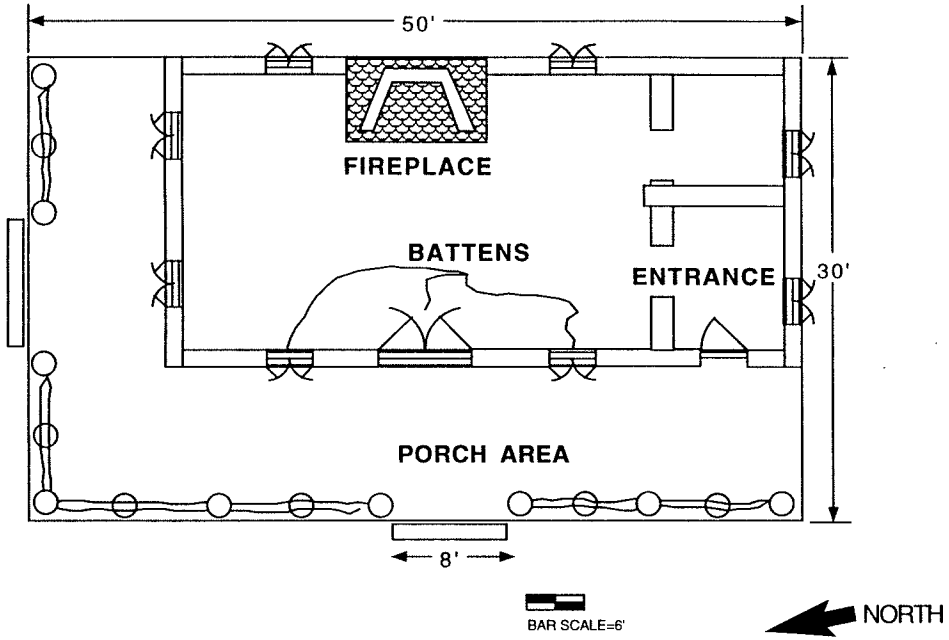
The Lindell Pavilion is used to house the golf Pro shop, and carts. The north side (rear) of the building has a small parking lot that is shared by the nearby sports facilities (racquetball, etc.), and there is ample parking on the Twin Lots. The north side is landscaped and is the beginning of the golf path and there are also picnic facilities, bike paths and a playground in the immediate area making it a high use building. There are restrooms with showers. A vending area is in the central hall of the pavilion and the Pro shop has a small food service area.

Existing Structural/Mechanical/Electrical Systems

The Pro shop was renovated in 1987. The rest of the facility is in major disrepair. Maintenance cost to the pavilion are over $40,000 per year. The electrical system has not met the needs of the facility and has been retrofitted several times (environmentally unfriendly, gas powered golf carts are now being used due to insufficint power). The boiler is outdated and in constant need of repair. The bathrooms are insufficient and unsightly and the plumbing is long outdated. ADA modifications must be made. Windows and exterior stucco and concrete are damaged. The roof leaks, and the clock tower is damged. The parking lot needs repaving.

LOG CABIN

2,142 sq.



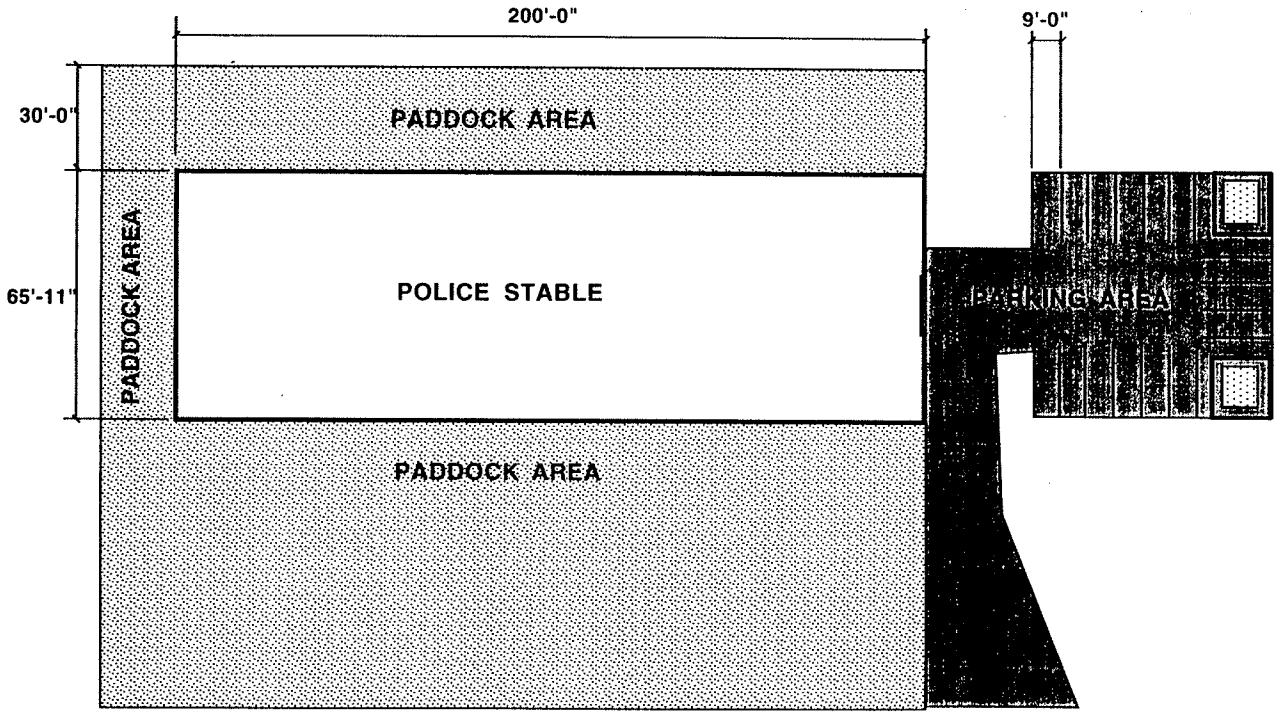
General Notes:
-Proposed relocation of facility.
-Brick fireplace.
-Foundation has addition to original to section, may make it difficult to move.

Site Description

The Log Cabin is located North of the Boat House. It has no vehicle access and is currently being used as the Headquarters for the Forest Park Bait Casting Club. It is not currently utilized as a Park attraction.

Existing Structural/Mechanical/Electrical Systems

The Log Cabin is a soundy constructed facility mounted on a foundation wall. It has no utilities, and does not meet ADA requirements.



POLICE STABLES

13,200 sq.

Notes:

-No fire protection or sprinkler system.
-Poor ventilation in stable area.
-Existing lighting need to be upgraded.
-North and south paddock areas need civil improvements.
-Poor drainage system leads to water settling in middle of parking lot.
-Facility needs siding and some window replacements.

BAR SCALE

Site Description

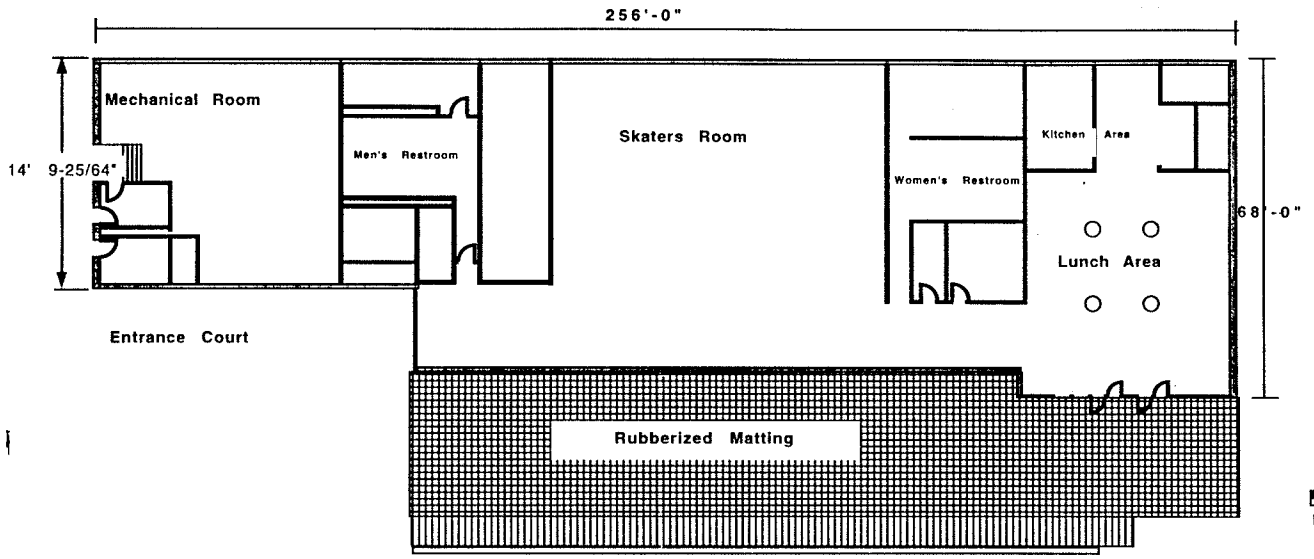
The Police Stables at Forest Park is the home of the St. Louis City Mounted Police. It encompasses a 13,200 sq. ft. area and has an adjacent parking lot. The linear access road is closed to the public that is also used for parking vehicles and horse trailers.

Existing Structual/Mechanical/Electrical Systems

Currently, the stables are fuctional, but inefficient due to the buildings adaptive reuse of an old airplane hanger. There is no fire protection system.n place. Poor ventilation and lighting in the stable area create an intolerable working environment. Drainage systems in the North and South paddock currently flow into the parking lot, creating potential damage to the pavement. The facility itself has damged siding.

STEINBERG MEMORIAL ICE RINK

19,456 sq. ft.



General Notes:

- -Facility had new roof installed April 1995.
- -Building has no air conditioning or ceiling fans.
- -Rubberized matting around rink needs replacement.
- -Restrooms needs ADA upgrades.
- -Concrete around rink needs replacing.
- -Mechanical room uses 40 year old ice producing compressor chiller system designed to utilie R-12 coolant, phased out January 1995.
- -Cooling tower installed 1957, has been utilized beyond its life expectancy.
- -Refrigerant unit contains 4000 lbs. of R-12, environmental hazard.

Site Description

The Steinberg Memorial Ice Rink is a 19,456 sq. ft. facility, built in the late 50's. It consist of the skating rink and main building flanked by concrete which is partially covered with rubber matting. Parking is provided onadjacent lots (employee parking in south lot). There is a central bench/locker ara, a lunchroom with snack counter, bathrooms (w/showers), office, first aid station and mechanical room.

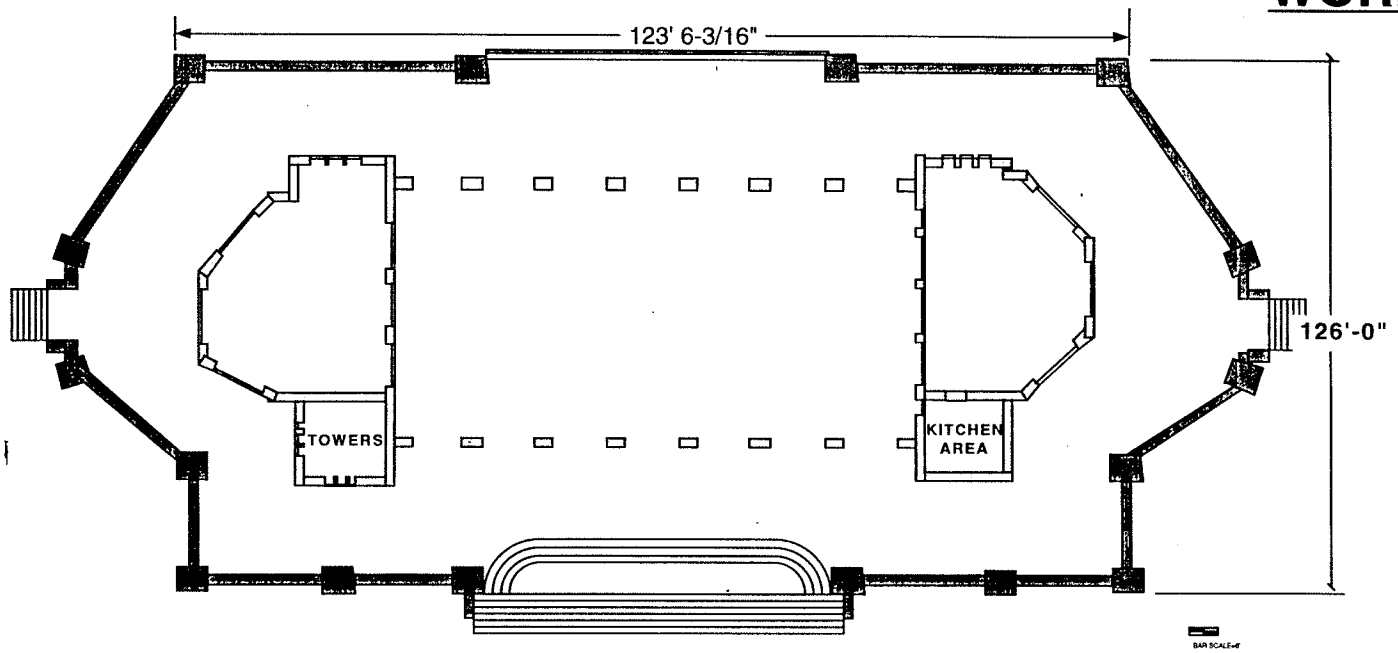
Existing Structural/Mechanical/Electrical Systems

The main building has received some updates (new roof 4/95), but is in need of mechanical and ADA upgrades. The area surrounding the rink is in disrepair. The concrete is uneven and crumbling, many of the rubber mats are torn, and the fencing is damaged in some areas. Water runoff from the top of the hill poses a problem for the roof.

The rink utilizes a 40 year old compressor-chiller system that uses R-12 coolant. R-12 use was phased out in January 1995. The refrigerant unit now contains 4000 pounds of R-12 which is considered an environmental hazard. The cooling tower was installed in 1957 and has been utilized beyond the life expectancy. Currently, the buildings have no air conditioning or ceiling fans which limits summer usage to early morning and late evening skating sessions. The cooling tubes below the rink will need to be replaced. Electrical systems are adequate at this time, but updates may be repaired with additional load of AC and new cooling system.

WORLDS FAIR PAVILION

24,408 sq. ft.



General Notes:

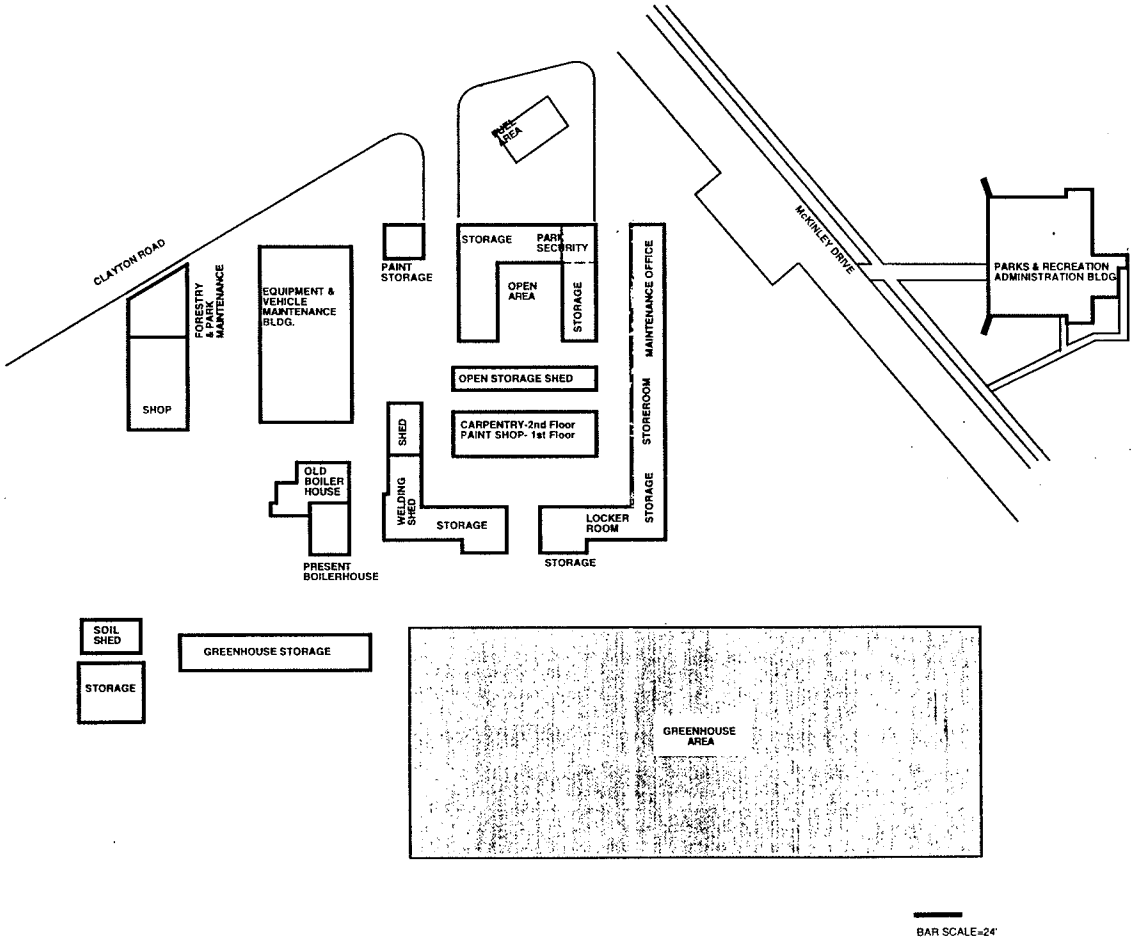
- -Fascia boards and guttering in bad condition.
- -Surface stucco needs patching.
- -Claytile roof needs replacing
- -Restrooms on ground level in bad condition.
- -Kitchen needs all new equipment.
- -Stairs in towers need repair.
- -Extensive concrete repairs needed.
- -Pavilion ceiling in need of repair.
- -Existing kitchen requires new HVAC, plumbing and electrical upgrade.

Site Description

The Worlds Fair Pavilion incorporates a 24,408 sq. ft. area. On its perch atop Government Hill, overlooking the Post-Dispatch Lake, the pavilion provides one of the most spectacular views in Forest Park. The pavilionis used for public events and has a small kitchen area with a large refrigerator (questionable usage) and a sink, but no other equipment. The toilet facilities and towers are not in use. Parking is provided on the rear lot (restricted parking along Government Hill), and there is only one open vehicle entry point to the facility. Also, the road is one way, which lends to difficult access and therefore, not a high use building for the general park user.

Existing Structural/Mechanical/Electrical Systems

Although structurall sound, the pavilion has some damge throughout. The concrete, stucco and ceiling are damaged. Roof tiles are missing, fascia and guttering are in disrepair, there are no downspouts, creating damage to theexterior and foundation.
Both towers have water damage. Walkwas, parking lot and the stairs have damage. The kitchen equipment, HVAC and electrical system are putdated and not sufficient if more than current usage is planned.



Notes:

Parks & Recreation Office (11,000 sq. ft.)- ADA upgrades needed throughout office.
-Various aestethic changes recommended by staff.
-Office currently houses 25 personnel, approx. 440 sq. ft. per person.

Maintenance Office/Storage Facility (7,750 sq. ft.)
- Office supply, parts store, concrete, and metal fencing storage
- Guttering on building loosed and missing parts
- Fascia rotted and missing peices
- Several downspouts missing
- Exterior wood doors and jambs need replacement
- Metal doors and window bars corroded
- Exterior walks badly cracked
- Flat roof areas leaking
- Exterior requires patching

Open Storage Shed Building (2,200 sq. ft.)
- Exterior wood badly cracked & weather damaged

Carpentry & Paint Shop Building (3,520 sq. ft.)
- Exterior wood doors in poor shape, need replacement.
- Minor exterior patching needed

Park Security (6,780 sq. ft.)
- Facility needs new roof.
- Guttering and facia needs new roof (claytile)
- Exterion patching necessary

City Refuel Area
- One of three refuel areas for City Vehicle
- Two Pumps, unleaded and diesel
- 499,032 gallons pumped 6/94 to 6/95
- 272,901 unleaded & 226,131 diesel

Paint Storage Facility Building (750 sq. ft.)
- Building in good shape

New Shop Maintenance Building (9,782 sq. ft.)
- Equipment and vehicle maintenance
- Building in sound condition

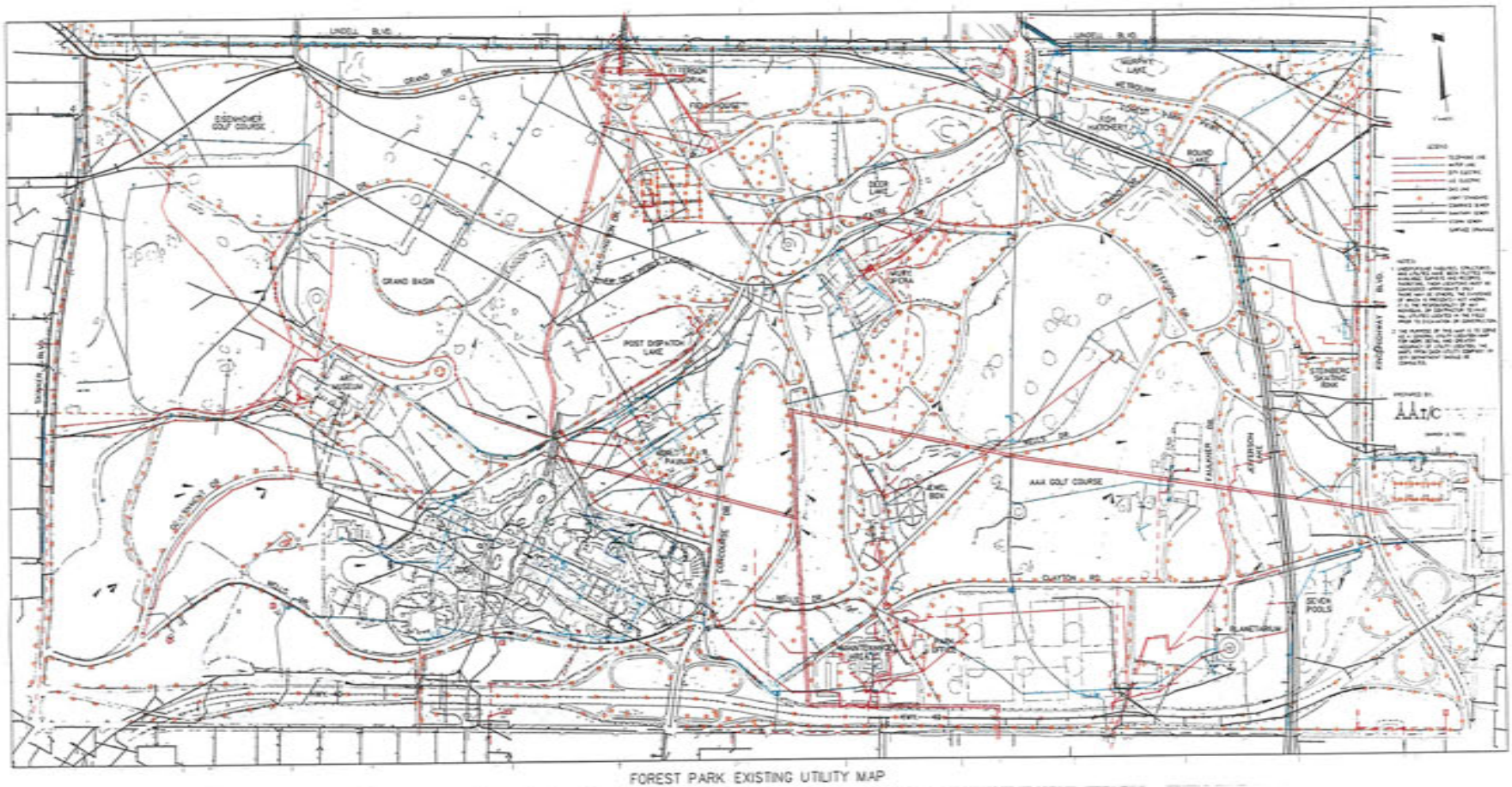
Forestry and Park Maintenance
- Forestry and Park maintenance office
- Facility in good shape

Boiler House Area (2,325 sq. ft.)
- Exterior brick dilapidated
- Wood window frames decayed
- Ashpalt paving needs patching
- Window replacement needed

Greenhouse Storage Building (1,800 sq. ft.)
- Plastic plant container storage
- Brick exterior largely needs tuckpointing

PARK MAINTENANCE COMPLEX

Scale: 1"=40'



1995 PARK INFRASTRUCTURE AND UTILITIES MAP

GENERAL OBSERVATIONS

- There is generally a lack of order and coordination regarding utility location.
- The majority of existing utilities are outdated.
- Parks Dept. currently maintains sewers which are not within MSD jurisdiction.
- Combined sanitary sewer overflow discharges into water bodies.
- Catchbasins and underground sewer systems are in disrepair.
- Stormwater ponding occurs in certain areas of the park.
- Existing roadways are basically the original dirt/gravel and resurfaced roads.
- The condition of bridges vary from poor to excellent.
- Street lighting is basically limited to roadways and parking lots.

FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE: 1"= 400'

11 MARCH 1995

CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION URBAN DESIGN

FOREST PARK MASTER PLAN

C. Design Principles

- Integrate historically significant landmarks, landscape and site relationships.
- Emphasize site relationships.
- Create multi-functional zones with shared facilities.
- Emphasize coordinated infrastructure replacement and create underground utility corridors.

D. Design Recommendations

1. General Approach

The general philosophy is that all art, architecture and infrastructure should be understood to be "Civic Art" placed in a landscape. This implies that the buildings and infrastructure are not purely utilitarian structures. Each structure, regardless of its function, should be of a high design quality and respectful of its role and relationship in the surrounding landscape. With regard to this relationship between the architecture and landscape, there are two design traditions or typologies within Forest Park: a formal and informal tradition. It is of critical importance that this relationship between architecture and landscape be the over-riding design concern for any addition, preservation/maintenance or modification of existing buildings and landscapes; and/or of new buildings or landscapes.

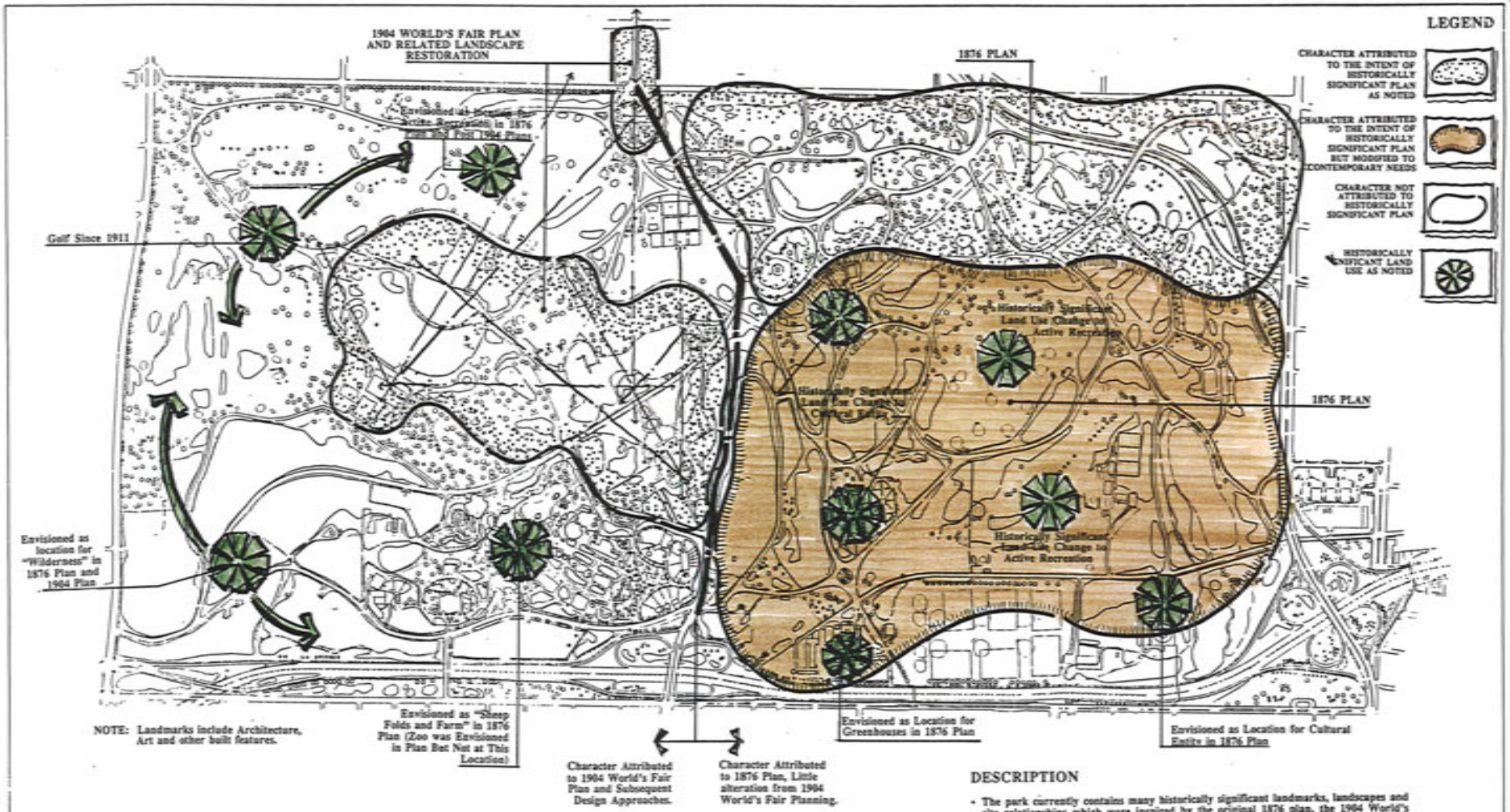
The general objective is to rehabilitate, modify or add to the existing architecture, art, and infrastructure in a manner which preserves its historic and aesthetic significance and relationship to the landscape and site while fulfilling its functional requirements. In the case of historically significant art, architecture, and infrastructure, necessary research and documentation of the original design must be undertaken and the original design intent must be explicitly taken into account in the development of any modification or restoration. Additions to any architecturally significant buildings must preserve, to the extent possible, the original design intent of the structure and be compatible with the building's proportions, ornament, and materials and finishes. In the case of the general maintenance of historically significant architecture, this should involve preserving the historical architecture and possibly restoring any lost architectural features and finishes.

Any modifications to other non-significant buildings should be within the spirit and tradition of the original design, in order to ensure a compatible relationship.

In the case of new art, architecture, and infrastructure, close attention must be paid to the existing site relationships, adjacent architecture, and the proposed design intentions of the Master Plan.

The following policies should be included in the design considerations:

- Respect the existing diverse character of public art and architecture in future designs.



DESIGN PRINCIPLE

Integrate Historically Significant Landmarks, Landscapes and Site Relationships

DESCRIPTION

- The park currently contains many historically significant landmarks, landscapes and site relationships which were inspired by the original 1876 plan, the 1904 World's Fair and related landscape restoration and other historically significant designs. Future design and management should respect these elements while considering appropriate contemporary uses which occupy these locations today.
- Historic landmarks, landscapes and site relationships should be viewed as equally important elements in future design and management.
- It is important to note that virtually every historically significant landmark, landscape and site relationship in the park has been modified to accommodate contemporary needs.

FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE: 1"= 400'

27 FEBRUARY 1995

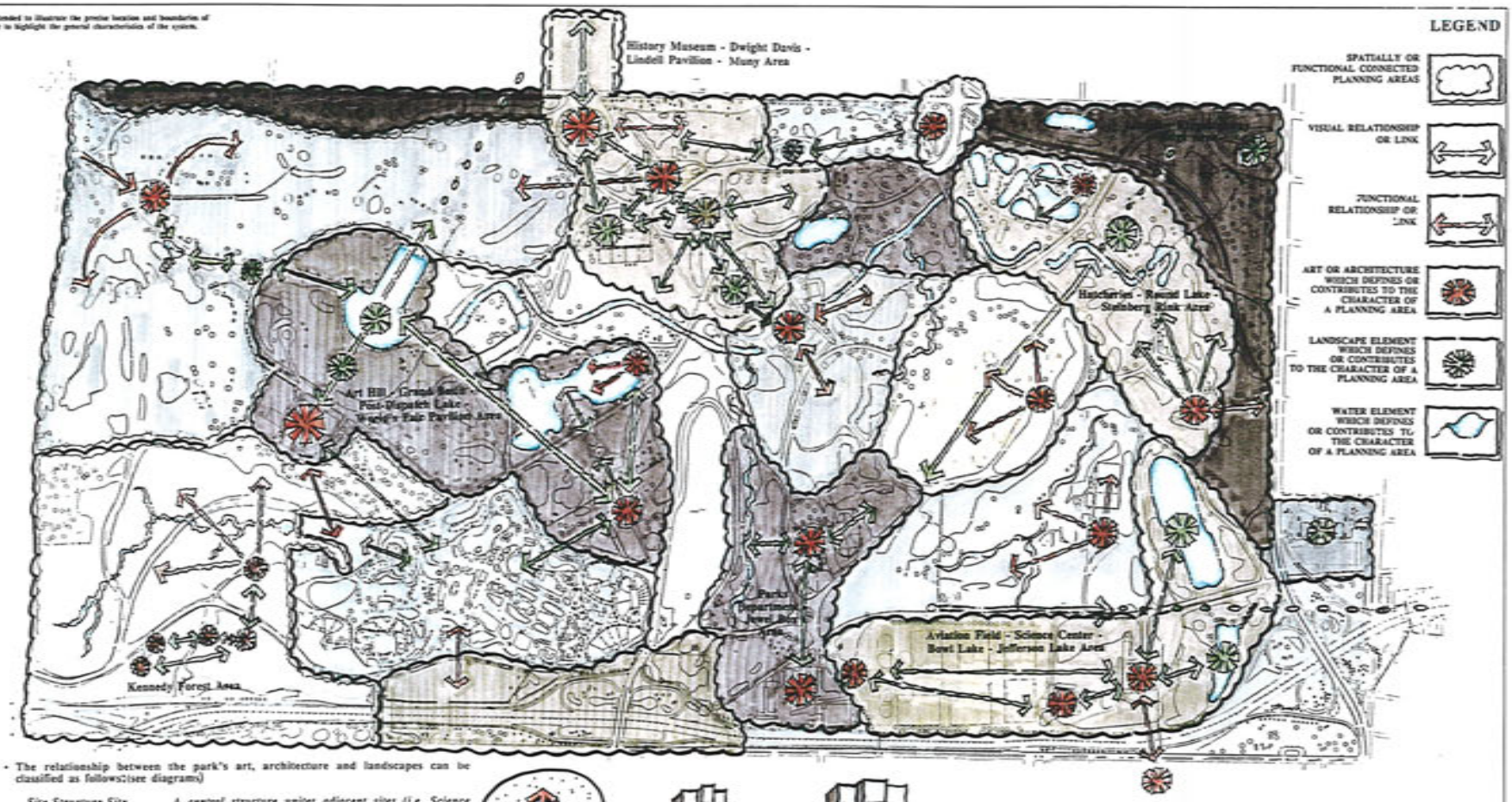
CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION URBAN DESIGN

FOREST PARK MASTER PLAN

*This map is not intended to illustrate the precise location and boundaries of features but rather to highlight the general characteristics of the system.

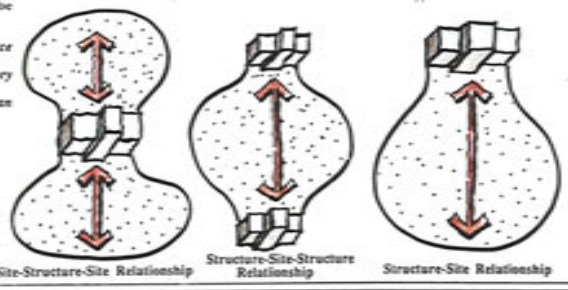


LEGEND

- SPATIALLY OR FUNCTIONAL CONNECTED PLANNING AREAS
- VISUAL RELATIONSHIP OR LINK
- FUNCTIONAL RELATIONSHIP OR LINK
- ART OR ARCHITECTURE WHICH DEFINES OR CONTRIBUTES TO THE CHARACTER OF A PLANNING AREA
- LANDSCAPE ELEMENT WHICH DEFINES OR CONTRIBUTES TO THE CHARACTER OF A PLANNING AREA
- WATER ELEMENT WHICH DEFINES OR CONTRIBUTES TO THE CHARACTER OF A PLANNING AREA

- The relationship between the park's art, architecture and landscapes can be classified as follows:(see diagrams)

Site-Structure-Site	*A central structure unites adjacent sites (i.e. Science Center-Bowl Lake-Archery Range relationship).*
Structure-Site-Structure	*A central site unites adjacent structures (i.e. History Museum-Lindell Pavilion relationship).*
Structure-Site	*A single structure and associated site function as an independent unit.*(Art Hill-Art Museum)



Site-Structure-Site Relationship | Structure-Site-Structure Relationship | Structure-Site Relationship

DESIGN PRINCIPLE
Emphasize Site Relationships

DESCRIPTION

- Sites containing art, architecture and landscapes should be linked together through a series of spatial and functional relationships. Clusters of individual sites often have spatial and/or functional relationships as well.
- Sites with spatial or functional connections should be treated as continuous, composite planning areas.
- Site design within planning areas should enhance their spatial and functional connections.

FOREST PARK MASTER PLAN

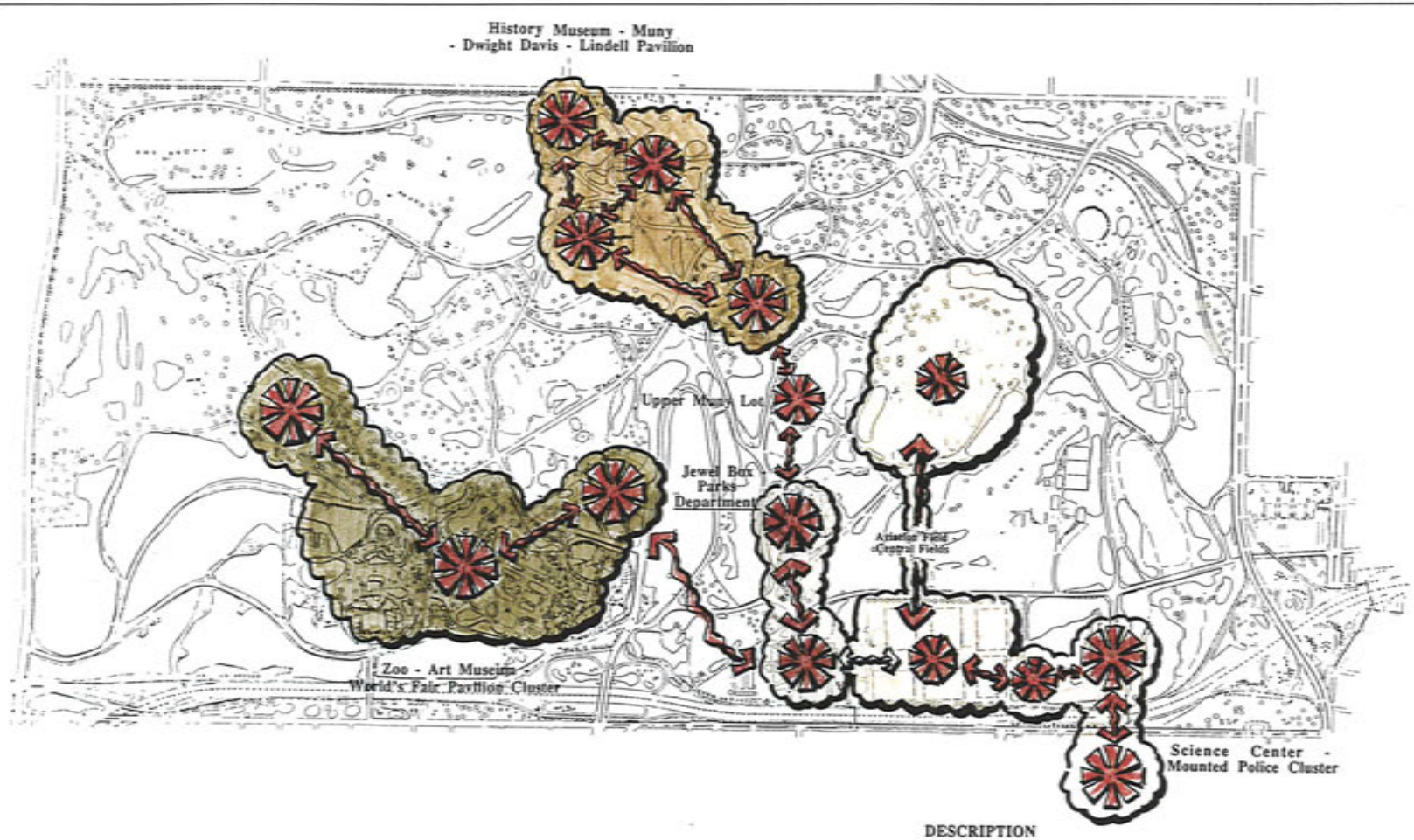
ST. LOUIS, MO

SCALE 1"= 400' 0 400 800 1600 2400

11 MARCH 1995

CITY OF SAINT LOUIS
DEPARTMENT OF PARKS, RECREATION AND FORESTRY
ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

FOREST PARK MASTER PLAN



DESIGN PRINCIPLE

Multi-Functional Zones with Shared Facilities

DESCRIPTION

- Many park entities have functional relationships which require cooperation and coordination to best meet their functional requirements. If these requirements are addressed individually, rather than in groups, the park will suffer from piecemeal development.
- Many park facilities and infrastructure elements are located between park entities with similar needs and could be programmed to serve multiple purposes and users.
- The impact of meeting all the needs of each park entity can be reduced if all entities work together and share common facilities and infrastructure.

FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE 1"= 400' 0 400 800 1600

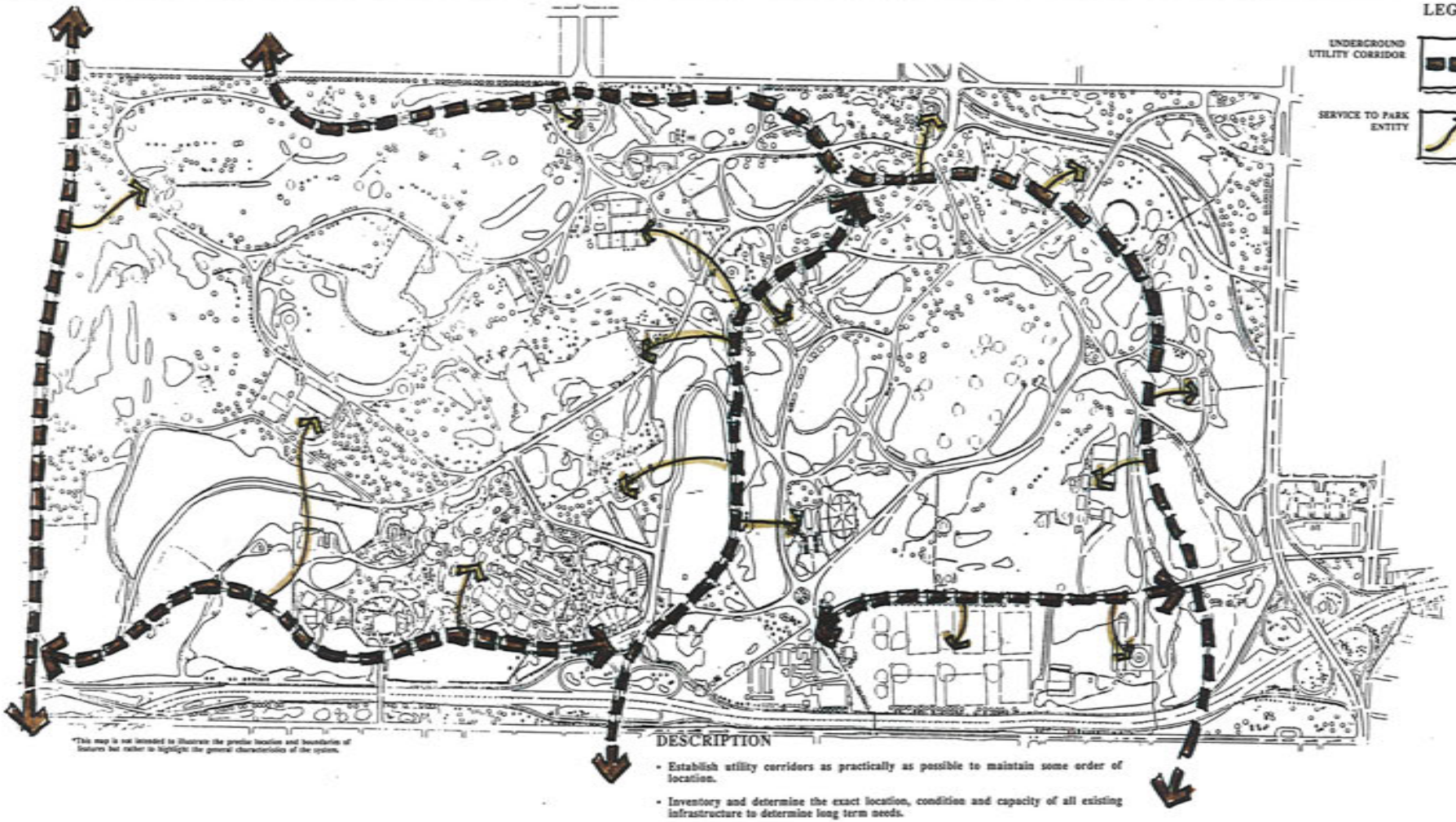
MARCH 1995

CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION URBAN DESIGN

FOREST PARK MASTER PLAN



*This map is not intended to illustrate the precise location and boundaries of features but rather to highlight the general characteristics of the system.

DESCRIPTION

- Establish utility corridors as practically as possible to maintain some order of location.
- Inventory and determine the exact location, condition and capacity of all existing infrastructure to determine long term needs.
- Transfer responsibility of park-maintained sewers to MSD.
- Eliminate combined sanitary sewer flow to existing water bodies.
- Coordinate planned infrastructure repairs and construction with proposed landscape and other park repairs to minimize disruption and redundant construction.
- Reconstruct roadways, parking lots and paths to current city design standards.
- Repair or replace bridges in poor condition.
- Provide appropriate lighting along roads, parking lots, interior walkways and bicycle paths.

DESIGN PRINCIPLE

Coordinated Infrastrucure Replacement and Underground Utility Corridors

FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE: 1"= 400' 0 400 1600 2800

11 MARCH 1995

CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION URBAN DESIGN

FOREST PARK MASTER PLAN

- Create the effect of site specific unity with park-wide variety in all design and construction, wherever possible.
- Inventory and determine the exact location, condition, and capacity of all existing infrastructure to identify long-term needs.
- Coordinate planned infrastructure repairs and construction with proposed landscape and other park repairs to minimize disruption and redundant construction.

B. Typology of Design Traditions

In Forest Park there are two typical or easy identifiable design traditions represented - the classical/formal tradition and the romantic/informal tradition. These design traditions emphasize certain relationships between the architecture and landscape. In some cases these traditions have been mixed to form unique hybrids and site specific design approaches.

- *Classical /Formal Tradition*

  The formal design tradition evolved from the classical architecture and landscape of Europe. It was epitomized in America by the City Beautiful movement at the end of the 19th century. The increasing industrialization and urbanization of the city led to a yearning for order, stability and beauty commensurate with the unrestrained optimism towards the new century. Public buildings became civic palaces—large, dignified compositions, with an orderly classical facade, were considered appropriate vocabulary to symbolize civic virtue and dignity. The building was usually the focal point of an equally formal landscape feature, often the terminus of a landscaped avenue, terrace or vista. The 1904 Worlds Fair in Forest Park is exemplary of the City Beautiful movement. This tradition has often been continued in contemporary civic architecture, with impressive buildings that are prominently sited and of large scale design.

  Formal architectural styles represented in Forest Park include: Beaux Arts, Neoclassicism, Art Moderne; and the Modern styles of Neo-Expressionism and Neo-Formalism. The formal landscape tradition is represented in the Grand Basin area, the park entrance at Union Boulevard and DeBaliviere entrance at the Jefferson Memorial

- *Romantic or Informal Tradition*

  The Informal architectural and landscape discipline resulted from the Romantic movement of the mid 19th century, which first appeared in residential design. In contrast to the formal tradition, where the intent was to impress a spectator by confronting them with buildings of overwhelming scale and ornament, and axial landscapes, the Romantic or informal tradition sought to evoke an emotional response of sentiment or nostalgia by historic or exotic references. The buildings generally have a more human scale, a variety of materials and textures, and their relationship with the spectator is more intimate and personal. In general, these buildings are sited to blend within the surrounding landscape; no designed approaches lead to these buildings; they are happened upon them as a surprise.

  Architectural styles prevalent in the Romantic Tradition in Forest Park include: Second Empire, Spanish Colonial Revival, Arts and Crafts and rustic design. The informal landscape tradition is represented in the eastern portion of the lake and lagoon system.

1. Architectural Styles

Forest Park includes a diversity of architectural styles and building types. The documentation of the existing buildings was included as part of the analysis of park facilities based upon architectural styles. The following is a brief explanation of the most common architectural styles found in Forest Park with examples.

Second Empire

The defining element of the Second Empire style is the use of a Mansard roof, usually covered with decorative slate shingles. Windows are tall and narrow, often grouped in pairs; cornices are prominent and bracketed.

Cabanne House (Park Keeper's House), 1875 by J. H. McNamera
This is the oldest remaining building in Forest Park, and the only surviving architectural element of the original Master Plan.

Beaux Arts:

The popularity of Beaux Arts design was enhanced by the buildings of the Chicago Exposition in 1893 and reinforced by the 1904 World's Fair in St. Louis. The Beaux Arts style was defined by large and grandiose compositions with an exuberance of ornamentation applied to an orderly arrangement of forms. Cornices, parapets, string courses and openings were delineated with a variety of columns, pilasters, entablatures and statuary.

Art Museum, 1904 by Cass Gilbert
Municipal Opera, 1925 by Tom P. Barnett and others
Nathan Frank Bandstand, 1925 by Heffensteller, Hirsch and Watson

Neoclassicism:

Existing at the same time with Beaux Arts style, Neo-Classicism produced buildings of monumental proportions with porticos and columned arcades, but substituted large expanses of smooth surface for the decorative embellishment of the Beaux Arts style

Jefferson Memorial, 1911-13 by Isaac Taylor
Municipal Theater, 1917 by Tom P. Barnett and others

Arts and Crafts:

The Arts and Crafts style emphasizes the use of natural materials in simplified forms. Exposed roof rafters, simple brackets and decorative multi-light windows are hallmarks of the style.

Workshops and Stable (Parks Garage), 1918

Spanish Colonial Revival/Mission Revival:

This style derived from 17th century Spanish missions of the southwest, and was developed out of a disillusionment with earlier 19th century revival styles based upon European precedents. Low-pitched red tile roofs, with shaped parapets and stuccoed wall surfaces with an absence of sculptural ornament mark the style.

World's Fair Pavilion, 1909-10 by Henry Wright
Field House and Restaurant, 1927, reconstructed 1949 (the tower is a remnant of the Lindell Streetcar Pavilion, 1892, which burned in 1925.)

Art Moderne:

The Moderne style is characterized by studied geometrical forms whose surfaces are embellished by flat, stylized decoration and sensuous ornament.

The Jewel Box, 1936 by William Becker

Rustic

This romantic architectural style, favored for park buildings throughout the Depression era, attempts to duplicate vernacular folk buildings of America's frontier period. The prominent characteristics are its extremely intimate scale, and an unsophisticated design through the use of local materials, and simulated hand-crafting.

Baitcasting Clubhouse, 1938-39
Fish Hatchery Building, 1938-39
Comfort Stations, ca. 1938-39

Neo-Expressionism:

This contemporary style presented a sculptural effect of streamlined shapes with contracting concave and convex surfaces. The design of the building was an intentional reflection of its purpose and function.

McDonnell Planetarium, 1963 by Hellmuth, Obata and Kassabaum
Fire and Police Alarm Center, 1958

Neo-Formalism:

Another contemporary architectural style based upon a skeletal box construction enclosed by a regular, symmetrical surface of decorative elegance.

Steinberg Rink, 1957 by Frederick Dunn and Frank Hamig
Parks, Recreation and Forestry Office Building, 1960 by Rathman, Koelle and Carroll.

Industrial

Reflecting no architectural style in particular, the design of these buildings is a result primarily of their function. Little or no ornamentation, simple surface treatments; choice of materials, openings, roof design and scale are utilitarian in concept.
Hangar Building (Mounted Police Stable), 1919

3. Building Design

The intention of these guidelines is to maintain the distinctive character; quality of construction, and individual architectural integrity of each building and structure within Forest Park. While there is no one prevalent architectural style nor dominant material, there is a sense of scale, richness of detail, and quality of construction. These qualities create a strong overall image for Forest Park. Notwithstanding the architectural style or the design tradition, buildings should adhere to the following general design guidelines:

- All architectural improvements on buildings listed on the National Register of Historic Places must adhere strictly to the Secretary of the Interior's Standards for Historic Preservation Projects.
- All architectural improvements and new buildings should be high quality and emphasize craftsmanship, detail, and permanency of material
- All design proposals for new buildings close to historic buildings or additions to existing historic buildings should adhere closely to established historic design themes, overall form, scale, proportions, solid-to-void relationship, and materials.
- Missing historic elements should be reconstructed wherever possible.
- All exterior building modifications should preserve, restore, or respect the original design themes wherever possible or appropriate.
- All exterior modifications to non-historic buildings or new buildings should increase their visual compatibility with surrounding architecture and landscape.
- All buildings should reflect that for the most part they are seen "in the round." Equal care for all design detail, ornamentation, and space articulation should be taken with all exterior elevations.
- All loading docks, maintenance areas, and refuse dumpsters should be located within buildings or screened from public views.
- All mechanical screens, ducts, intakes, and exhausts should not significantly alter exterior elevations or be visually incompatible with the surrounding landscape.
- All mechanical screens, ducts, intakes, and exhausts should be screened from public view.
- All exterior colors should harmonize with surroundings.
- No reflective glass should be used.
- All signage attached to buildings should kept to the minimum and be compatible with the design.
- New or moved buildings shall be positioned on their site so that building masses are complementary to the landscape and any adjacent existing buildings.

- The aesthetic integrity of internal and external architecture and site relationships should be maintained in compliance with A.D.A. guidelines.

- As part of any maintenance and preservation, reconstruction, addition, or demolition plan for any building, a detailed overall assessment and inventory of that building, any ornamentation, and site relationships should be conducted together with research on the original design, previous design proposals, and construction in that area.

- Plans for any new buildings should include a detailed overall assessment and inventory of the existing and proposed site relationships, a demonstration of how the design proposals reflect the master plan requirements, and research on any previous design proposals and construction in that area.

- A park architectural history archive should be established.

- All buildings should be preserved and maintained in good condition.

- These guidelines shall not be construed to prevent the ordinary maintenance or repair of any work of art, architecture, or infrastructure which does not involve a change in design, material, color, or outward appearance of any structure. Small routine maintenance and repairs are necessary to prevent deterioration of building or landscaping elements. Routine maintenance is delineated by these guidelines and does not require approval of the Forest Park Board.

4. Building Function and Use

All buildings must function as ecologically sensitive and energy efficient buildings. It should be the objective of any new building, or modifications or additions to an existing building that they are designed according to the highest and most contemporary standards of ecologically and environmentally responsible building. Buildings can and should contribute to the ecology and natural systems of the park.

In addition, the buildings should adhere to the following general use guidelines:

- The building and premises shall be utilized only for the uses permitted in the lease agreement or outlined in the Master Plan.

- Preserve existing building footprint wherever possible by increasing the efficiency of interior floor plans.

- Wherever possible, locate administrative and storage space off-site in order to increase exhibit space within existing building footprints.

- Explore the creation of shared use facilities.

- Explore programming relationships to the adjacent landscapes. Increase the use of the outdoor rooms in the landscape.

- Encourage the cultural institutions and other park facilities to view Forest Park as an outdoor educational room.

- Encourage institutions and organizations to expand their hours to include traditional off-peak hours and seasons to increase accessibility to educational and recreational opportunities while not burdening the park.

- All park facilities should coordinate their special events and annual calendars to maximize use of the shared facilities and minimize inconveniences.

5. Bridges and Culverts

Specific guidelines concerning bridges and culverts include:

- Repair or replace bridges that are in poor condition.

6. Public Art

Public Art has always been an important component of the experience of Forest Park and should be continued and improved. Initially, there must be a comprehensive assessment and detailed analysis of the condition of existing public art. Priority should be given to the retention and maintenance of existing public art. The Plan has identified a number of locations for major pieces of new public art. These pieces of public art should be within the tradition of the site design and adjacent architecture. Further opportunities for public art should be identified only after careful study of the role of public art in Forest Park, taking into the account that all structures in the park should be seen as "Civic Art."

The following locations have been identified as sites for new public art:
- The Clearing
- Grand Basin area
- Art Hill overlooks
- Triangle south of History Museum
- Area west of Lindell Pavilion
- Children's Plaza

Specific guidelines concerning public art include:

- Develop an Art Program.

- Allow for temporary installations.

- Repair deteriorated statues, monuments and other public art as necessary.

- Upgrade the landscape settings around all public art as necessary.

- Relocate improperly placed art pieces to more appropriate park settings.

7. Roads & Paths

Specific guidelines concerning roads and paths include:

- Reconstruct all roadways to meet contemporary design and construction standards

- Reconstruct new parking lots and paths to current city design standards.

8. Site Furnishings

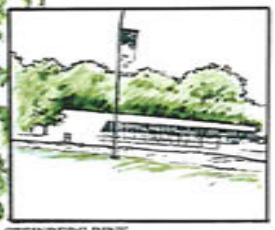
Specific guidelines concerning site furnishings include:

- Design site furnishings to vary by park location with similarities on a smaller, site specific scale, such as similar picnic shelters near Kennedy Forest which differ from those elsewhere in the park.
- Design site furnishings to fit their architectural, landscape, and historic context (i.e. rustic shelters in woodland settings).
- Discourage the use of "fake historic" site furnishings in favor of site furnishings which reflect the design period of a particular site or structure (i.e., contemporary fixtures around new structures).
- Recast historic site furnishings in a manner consistent with the original design (or design intent if never implemented) if adequate documentation exists regarding detailing, materials, and color.
- Utilize contemporary, state-of-the-art construction methods and materials to ensure long term durability and function.
- Consider existing spatial character, form, color, texture, and materials as important design components and select colors for paint, site furnishings, architecture, materials, and play ground equipment that are compatible with surrounding landscapes.
- Consider a variety of landscape lighting methods, including uplighting vegetation, water lighting, foot level lighting of paths, as well as traditional overhead and bollard fixtures.
- Design and locate all items of street furniture in a manner compatible and harmonious with the style and landscape setting.
- Ensure the style of all free-standing light standards on any site is compatible with the period design of the site.

9. Utilities

Specific guidelines concerning utilities include:

- Consider lighting additional building exteriors to enhance appearance.
- Place all new utilities underground and in utility corridors, wherever possible, to maintain some order of location.
- Transfer responsibility of park-maintained sewers to MSD.
- Eliminate combined sanitary sewer flow to existing water bodies.
- Provide appropriate lighting along roads, parking lots, interior walkways, and bike paths.
- In the detail design phase, take into account the need for regional and neighborhood utilities.



FLY CASTING LOG CABIN
- Consider adaptive re-use or relocation to Kennedy Forest or the Bowl Lake area if feasible.

CABANNE HOUSE
- Visitor amenities and public rentals through Saint Louis Ambassadors.

WEST PINE PARK FACILITY
- Upgrade or demolish & rebuild the currently inactive comfort station near the Kingshighway - West Pine entrance.
- This park facility should provide park information/maps, secure attended public toilets, and potentially a small concession.
- Consider providing a small parking area adjacent to the building (±30 cars), if it meets the park wide criteria of no-net-loss-of-open-space.

LINDELL PAVILION
- Recreation support facility and visitor services, such as: park maps, park literature, etc..
- Public concessions
- Potential indoor/outdoor casual dining.
- Lockers, showers, toilets and maps for general public active recreation/path users.
- Provide significant quantities of bicycle parking to serve path users.

MUNICIPAL GOLF COURSES
- If a new club house is constructed it should be a modest club house containing a small pro-shop, food concession, locker rooms/showers, operational facilities and golf cart storage in a sublevel beneath the main clubhouse area.
- Relocated functions from the existing maintenance to a new building hidden on the hillside. Demolish the existing maintenance structure.

HATCHERIES BUILDING
- Utilize as the base for MODOC youth fishing programs with public toilets, equipment storage, staging for the disabled and dedicated youth fishing ponds.
- Accommodate all-season active and passive recreation support needs.
- Maintain Operation Teamwork personnel, if space permits, and coordinate city-wide youth programming functions with those of MODOC.
- Consider coordinating nature-related education in this area with MODOC, using the Hatcheries building as a staging and classroom center.

SPILLWAYS AREA
- Construct a small pavilion that serves the internal trail system, Grand Basin/Art Hill area, Langenberg Field and the passive open space spine.
- Consider providing toilets, information/maps and potentially a small concession.

BOATHOUSE
- Demolish the existing buildings and provide a new boathouse in the current location, which accentuates the area's architectural character and landscape context. Structure should conform to the lake's shape and provide views in all directions. Consider providing a food concession with outdoor eating/viewing areas to serve boaters and area path users. It could also serve winter ice skaters and trail users.

STEINBERG RINK
- Improve the building design, to function as an all-season facility, adding air-conditioning, upgrading kitchen facilities and general improvements for ADA compliance.
- Consider increased active recreation.
- Consider uses that relate to the adjacent BJC hospital complex and its employees. There is potential to offer a children's day camp, which offers active recreation and outdoor education and recreation for area youth, potentially coordinated with area MODOC and Operation Teamwork programs.
- Use the roof of Steinberg Rink for an observation deck and children's play area.

KENNEDY FOREST NATURE AND TRAIL CENTER
- Expedite the Missouri Dept. of Conservation nature center and nature trailhead facility.
- This facility should be a small trail support center for park paths with information/maps, concessions, attended toilet facilities and a potential first aid and security station.

CENTRAL FIELDS BUILDING
- Upgrade building functions to serve as an active recreation support facility with attended locker, shower and toilet facilities and potentially a small concession.

TRIPLE A CLUB
- Provide a 9 hole rate.
- Provide a senior rate.
- Increase marketing of golf, tennis and park support facilities (food concessions, toilets, showers, lockers, etc.) to the general public and park users.
- Provide significant quantities of bicycle parking to serve path users.

WORLD'S FAIR PAVILION
- Increase usage by providing a flexible, all-season and affordable facility with improved food service, public toilets and visitor amenities. Consider seasonal architectural solutions that will allow winter use, while providing open air Spring, Summer and Fall use.
- Increase revenue generating special event uses, especially in the evenings.
- Accentuate the scenic overlooks at the sides of the building and throughout Government Hill.
- Improve ADA accessibility from the surrounding landscapes, in particular to the zoo.

PARKS DEPT. COMPLEX
- Consolidate service entities by limiting activities to those which are essential to Forest Park.
- Reduce the size of the existing dirt hill and convert it to passive recreation.
- Re-route the bike path south of the complex, along Highway 64/40 to alleviate dangerous road crossings.
- Improve overall aesthetics and building maintenance.
- Provide new recreational support facility adjacent to the administrative building to serve Aviation Field.

MOUNTED POLICE HANGAR
- Retain the current use and renovate the Mounted Police Station.
- Consider the relocation, in the long-run, of the Mounted Police to another site in the park and re-program the existing site.

PROPOSED PARK FACILITIES

FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE 1"= 400' 0 400 800 1600

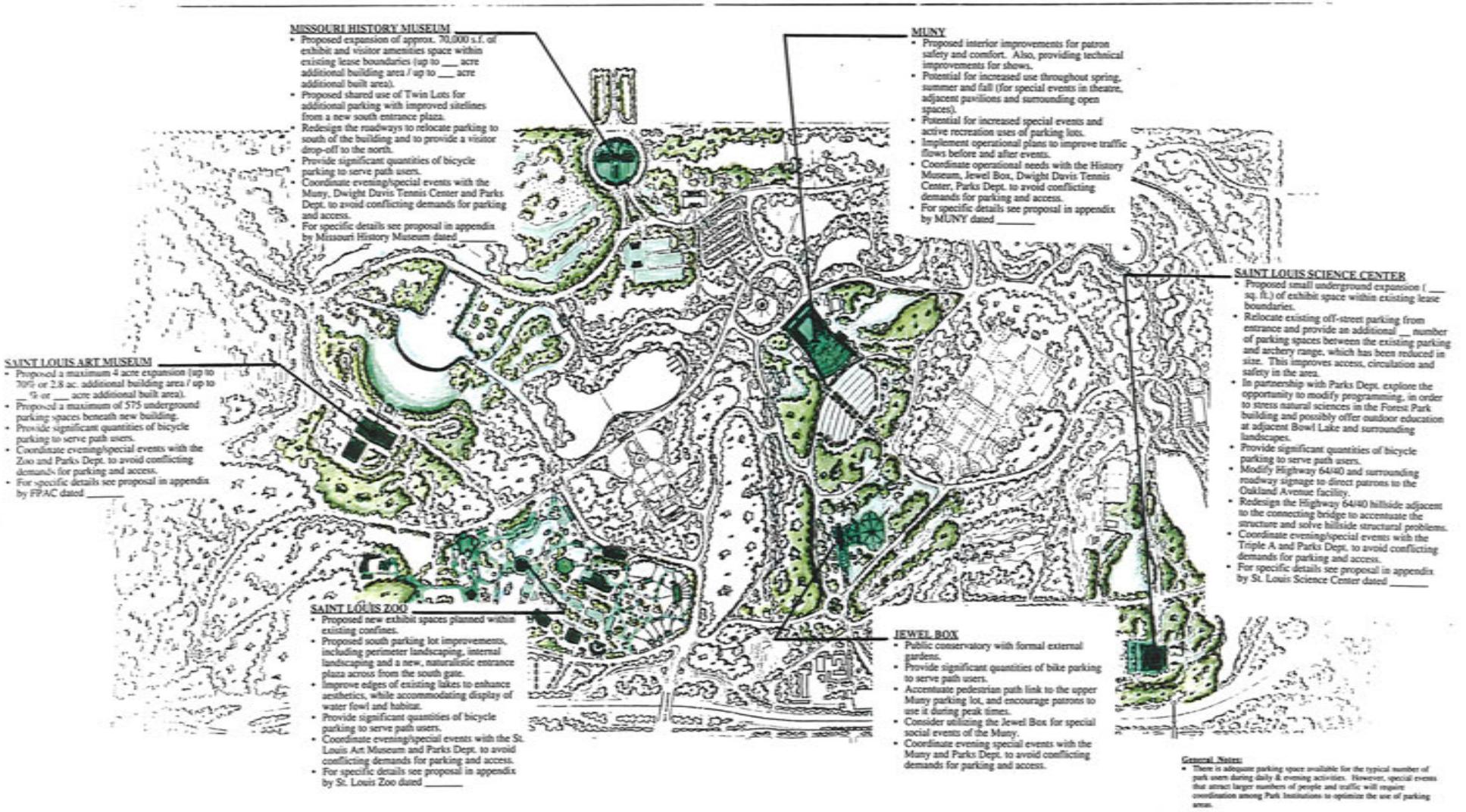
18 NOVEMBER 1995

CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION URBAN DESIGN

FOREST PARK MASTER PLAN



PROPOSED ZMD FACILITIES & CULTURAL INSTITUTIONS

FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE: 1"= 600' 0 600 1200 2400

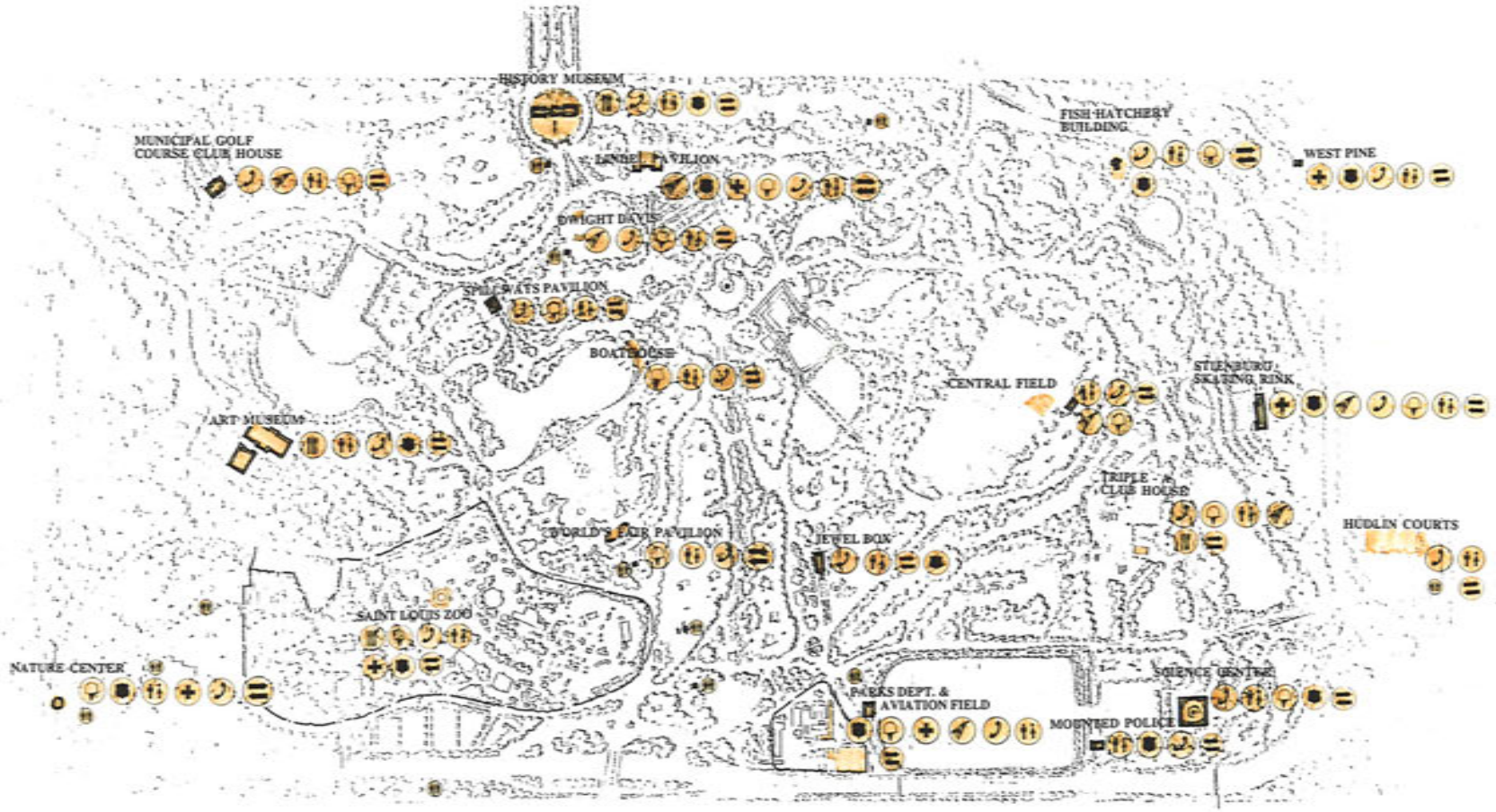
18 NOVEMBER 1995

CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION URBAN DESIGN

FOREST PARK MASTER PLAN



RESTROOMS

CONCESSION

PUBLIC TELEPHONE

SHOWER, LOCKER ROOMS

FIRST - AID STATION

PARK SECURITY

RESTAURANT

PARK INFORMATION

PROPOSED SERVICE AND SUPPORT FACILITIES

FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE: 1"= 600' 0 600 1200 2400

November 18, 1995

CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION URBAN DESIGN

FOREST PARK MASTER PLAN

E. Site Specific Recommendations

SAINT LOUIS ART MUSEUM
- The Art Museum proposes an expansion on up to four additional acres over the next 50 years, including up to 575 underground parking spaces beneath any new building.

SAINT LOUIS ZOO
- The Zoo proposes to modify its existing exhibit space within its existing lease boundaries.
- Implement proposed south parking lot improvements, including perimeter landscaping, internal landscaping, and a new, naturalistic entrance plaza across from the south gate.

MISSOURI HISTORY MUSEUM
- The History Museum proposes an expansion of exhibit and visitor amenities space within existing lease boundaries

SAINT LOUIS SCIENCE CENTER
- The Science Center proposes a small underground expansion of exhibit space within existing lease boundaries.
- Redesign the Highway 64/40 hillside adjacent to the connecting bridge to accentuate the structure and solve hillside structural problems.

MUNY
- The Muny proposes interior improvements for patron safety and comfort and technical enhancements for shows.

JEWEL BOX
- Operate as a public conservatory with formal external gardens.

WORLD'S FAIR PAVILION
- Increase use as a flexible use, all-season, affordable facility with improved food service, public toilets, and visitor amenities.
- Improve ADA access from surrounding landscapes, in particular to the zoo.

LINDELL PAVILION
- Maintain as is or convert to active recreation support facility, with visitor services such as park maps, park literature, public concessions, potential indoor/outdoor casual dining, lockers, showers, and toilets.

STEINBERG RINK
- Upgrade the building to function as an all-season facility, with air conditioning, upgraded kitchen facilities, and general ADA compliance improvements.
- Use the roof of Steinberg Rink for an observation deck and children's play area.

BOATHOUSE
- Replace the existing buildings with a new boathouse, in the current location, which accentuates the area's architectural character and landscape context, conforms to the lake's shape, and provides views in all directions.
- Consider providing a food concession with outdoor eating/viewing areas to serve boaters, area path users, winter ice skaters and trail users.

CABANNE HOUSE
- Continue to provide visitor amenities and public rental through Saint Louis Ambassadors.

FLY CASTING CABIN
- Consider adaptive re-use or relocation to Kennedy Forest or the Bowl Lake area, if feasible.

PARK DEPARTMENT COMPLEX
- Consolidate service entities by limiting activities to those which are essential to Forest Park.
- Reduce the size of the existing dirt hill or convert it to passive recreation.
- Improve overall aesthetics and building maintenance.
- Provide a new recreational support facility adjacent to the administrative building to serve Aviation Field.

MOUNTED POLICE HANGAR
- Retain the current use and renovate the Mounted Police Station.
- Consider long-term relocation of the Mounted Police to another site in the park and re-program the existing site.

CENTRAL FIELDS BUILDING
- Upgrade building functions to serve as an active recreation support facility with attended locker, showers, and toilet facilities and a potential small concession.

HATCHERIES BUILDING
- Utilize as the base for MODOC youth fishing programs with public toilets, equipment storage, staging for the disabled, and dedicated youth fishing ponds.
- Accommodate all-season active and passive recreation support needs.
- Consider using the Hatcheries building as a staging and classroom center for nature-related education in cooperation with MODOC.

SPILLWAYS AREA
- Construct a small pavilion to serve the internal trail system, Grand Basin/Art Hill area, Langenberg Field, and the passive open space spine with toilets, information/maps, and, potentially, a small concession.

MUNICIPAL GOLF COURSES
- Construct a modest new club house (if this redesign option is selected), containing a small pro shop, food concession, locker room/showers, operational facilities, and golf cart storage in a sublevel beneath the main clubhouse area.
- Relocate functions from the existing maintenance structure to a new building hidden in hillside.
- Demolish the existing maintenance structure.

KENNEDY FOREST NATURE AND TRAIL CENTER
- Expedite the Missouri Department of Conservation's nature center and nature trailhead facility.
- Provide support services, such as information/maps, concessions, attended toilet facilities, and, potentially, a first aid and security station for park path users.

WEST PINE PARK FACILITY

- Renovate or replace the comfort station near the Kingshighway-West Pine entrance as a park support center with park information/maps, secure attended public toilets, and, potentially, a small concession.

COMFORT STATIONS

- Upgrade the buildings to function for all-seasons and provide general ADA compliance improvements.

VI. ACCESS, CIRCULATION AND PARKING

A. Overview

B. Summary of Existing Conditions

C. Design Principle

D. Design Recommendations

1. General Approach
2. Roads
3. Interstate Highway 64/40
4. Parking
5. Transit
6. Paths
7. Public Use and Safety
8. Americans with Disabilities Act Guidelines
9. Long-term opportunities

E. Site Specific Recommendations

1. Roads, Parking & Transit
2. Paths

LIST OF DRAWINGS

ANALYSIS
1882 Roads and Infrastructure
Regional Access and Circulation
Regional Access Implications
1993-4 Visitation for Major Park Attractions
Projected 2004 Visitation for Major Park Attractions
1994 Special Events Visitation
1994 Automobile Traffic Volume
Projected 2004 Automobile Traffic Volume
1995 Major Activity Zones
1995 Major Access Zones and Park Circulation
1995 Transit
Analysis Diagram - Existing Parking
Analysis Diagram - Existing Muny Parking

DESIGN
Design Principle - Multi-Functional Zones with Shared Facilities
Design Principle - Multi-Modal, Distributed Access System
Master Plan Road System
Master Plan Traffic Volumes
Implications of Automobile Traffic Volumes
Traffic Operation Comments
Highway 64/40 Improvements
Master Plan Parking
Muny Parking
Transit Options
MetroLink-Long Range Vision
Composite Path System
Dual Path System
Path System

A. Overview

With more than 10 million visitors to Forest Park every year, it is essential that the park maintain an adequate and comprehensive access system to assist visitors in reaching the sites to which they wish to go. While elimination of motor vehicles within the park boundaries would be a lofty goal from a naturalistic viewpoint, given the number and diverse nature of park activities and attractions, it is, in practice, impossible. Instead, design of the park's roads and paths should focus on ensuring that only those roads which are functional and necessary remain, and that any road or path in the park be designed and maintained to blend into the surrounding landscape, causing the least visual and physical disruption as possible. Reduction of commuter traffic through the park will also be encouraged.

The park generally functions as a series of six "Access Zones," which serve the park's major park activity zones or attractions. These are currently served in some capacity by automobile access and parking, paths, and, in most cases, mass transit.

A key objective of this plan is to identify roads which are not needed and to return those areas to green space or pedestrian/bike paths. Similarly, roads and paths which fragment continuous landscapes should be removed or redesigned so as not to interfere with the visitor's ability to experience the natural aspects of the park.

This plan also recognizes the need to provide adequate parking for visitors. The net effect of changes proposed herein is to maintain approximately the same number of parking spaces within the park while substituting some off-street parking for on-street parking. Efforts will also be made to enhance the aesthetic qualities of parking lots.

Forest Park's path system, which currently accommodates runners, walkers, bike riders, and in-line skaters, is inadequate and potentially dangerous. The Plan proposes to develop, where possible, a dual path system to provide separate paths for runners/walkers vs. bikes and skaters. Wherever possible, paths will also be reconfigured to minimize potential intersections with roadways.

Long-term, the plan encourages efforts to link the park to regional transit systems such as MetroLink in order to reduce the number of vehicles which enter the park each year.

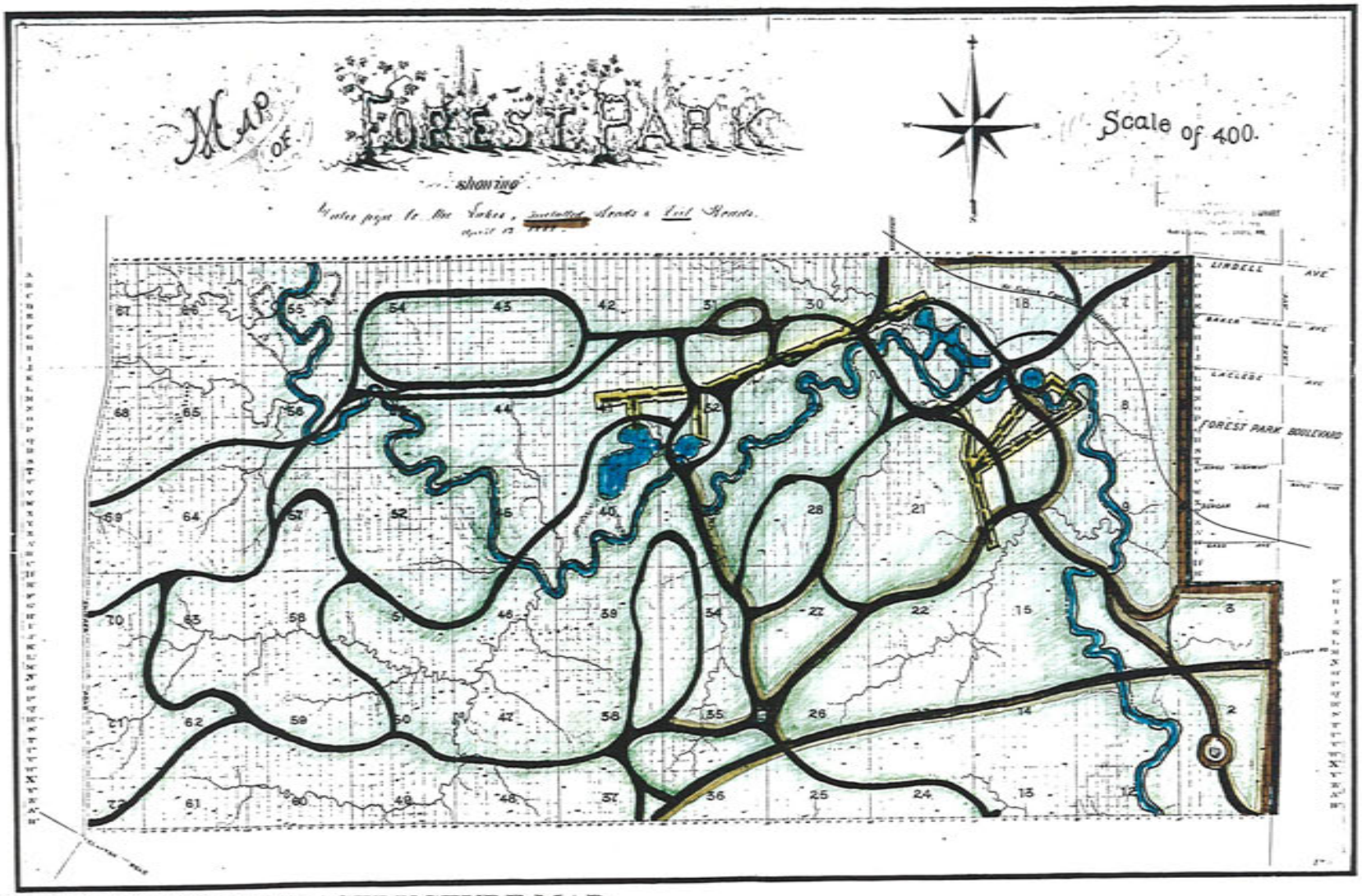
B. Summary of Existing Conditions

Forest Park contains a large number of roads and paths which have been in existence for many years or which have been added more recently without the benefit of an overall system plan. As a result, the existing system is often redundant and confusing and does not necessarily direct the visitor to his or her destination in the most efficient manner. Overall, the park has too many roads, which invite frequent use by commuters as well as park visitors. Commuter traffic patterns typically run north to south, between Hampton and Union, and southwest to northeast, between Skinker-Wells and West Pine. Forest Park is also served by Bi-State bus and light rail service, which links the park to many of the city's neighborhoods, as well as cities throughout the St. Louis region.

The park is served by the ShuttleBug, which provide internal transit between most of the park's major attractions and provides links to the immediately adjacent neighborhoods and land uses northwest of the park.

There is currently adequate park-wide parking in Forest Park, but on a site-specific basis it is not properly located to serve many individual park entities. Better shared use of existing lots, facilitated by an improved road, signage, and park transit system, would alleviate much of the problem. On-street parking, while not preferable, is necessary to handle the volume of park users and traffic until some other long-term parking solution can be found. Most existing parking lots are unsightly, with little or no landscaping.

The path system in the park, while extensive, is plagued by overcrowding from multiple, often conflicting user groups and by frequent intersections with roadways or other park uses where path users may be at a distinct disadvantage. Path crossings at roadways are poorly marked, with poor sight lines due in part to parked cars and inappropriately placed directional signage. In some areas of the park, paths are inappropriately located to their surroundings, failing to link effectively with park facilities and creating barriers and fragmenting the landscape through which they pass. In addition, the path system does not link effectively with the regional transportation networks. The existing soft surface jogging path is poorly maintained and incomplete.



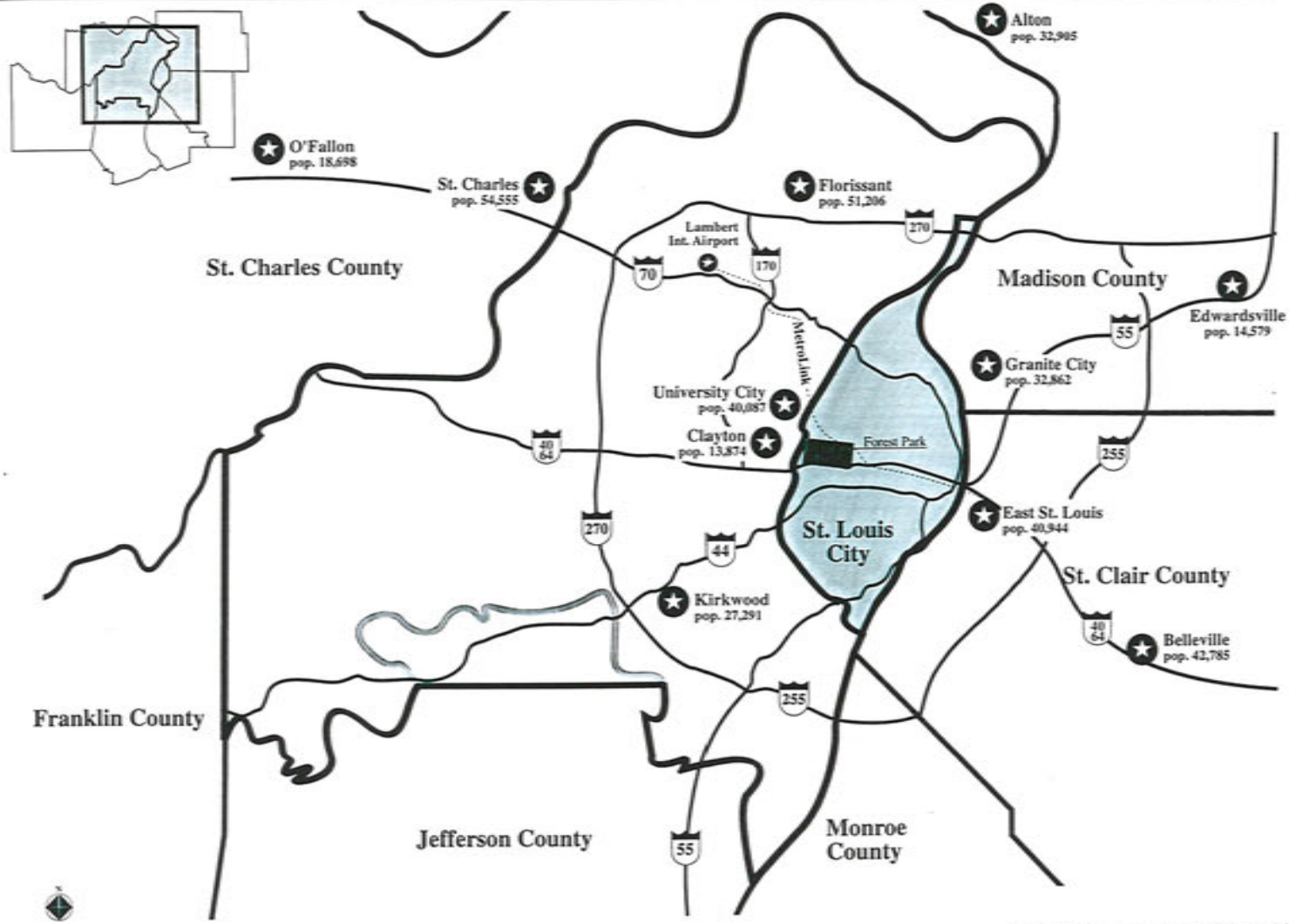
1882 ROADS AND INFRASTRUCTURE MAP

FOREST PARK MASTER PLAN

ST. LOUIS, MO

CITY OF SAINT LOUIS
DEPARTMENT OF PARKS, RECREATION AND FORESTRY
ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

FOREST PARK MASTER PLAN



Figures Courtesy of East-West Gateway Council

- Forest Park is served by the region's interstate highway and transit system. Within its boundaries it accomodates Interstate Highway 40/64 and MetroLink, the region's light rail system. This allows easy access to most of the 2.4 million residents of the metropolitan area but also places a physical burden on the park.

REGIONAL ACCESS AND CIRCULATION MAP

*This map is not intended to illustrate the precise location and boundaries of features but rather to highlight the general characteristics of the system.

FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE 1"= 600'

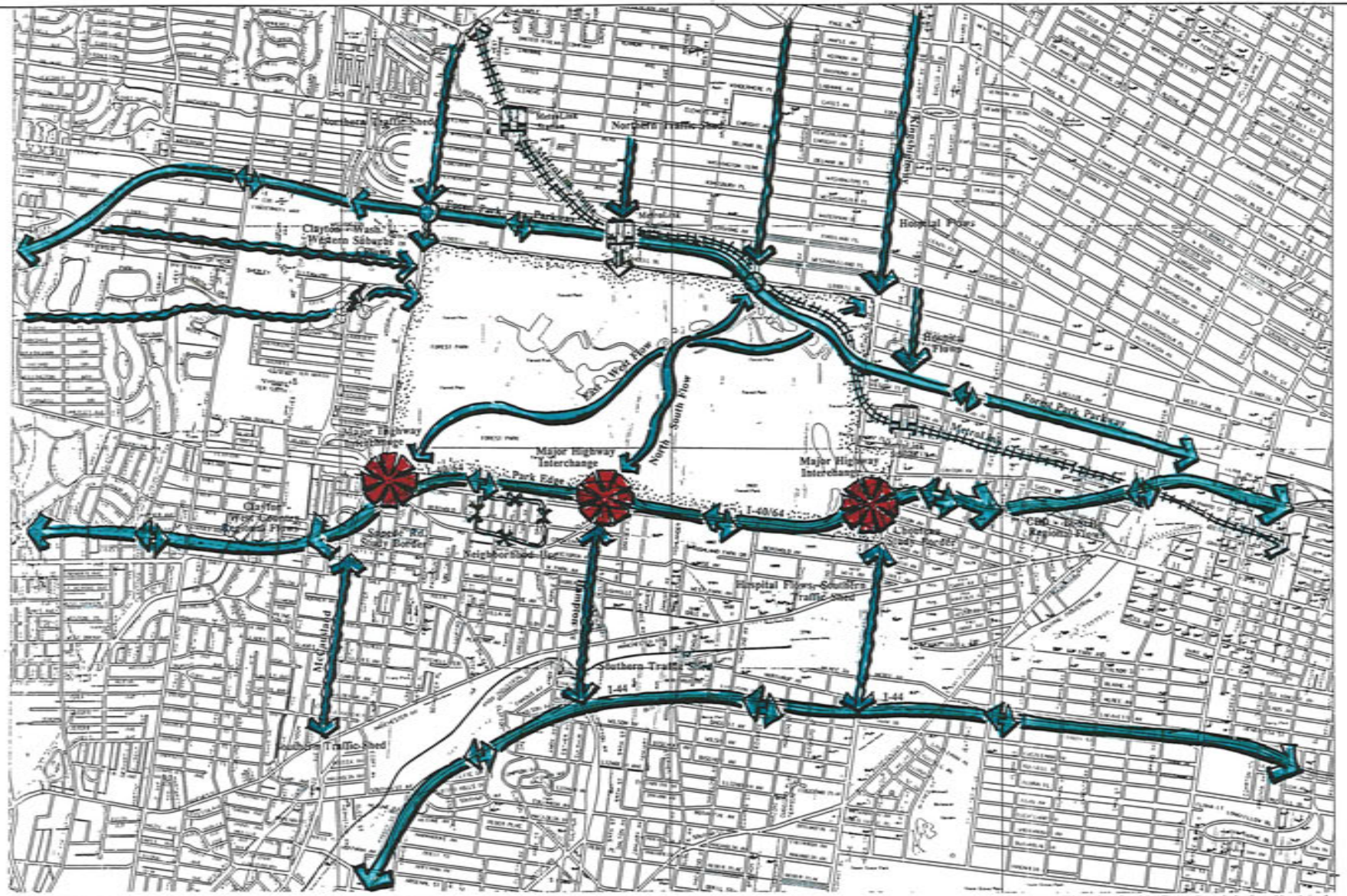
27 FEBRUARY 1995

CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

FOREST PARK MASTER PLAN



REGIONAL ACCESS IMPLICATIONS MAP

*This map is not intended to illustrate the precise location and boundaries of features but rather to highlight the general characteristics of the system.
*Analysis by Design Team 1995

FOREST PARK MASTER PLAN

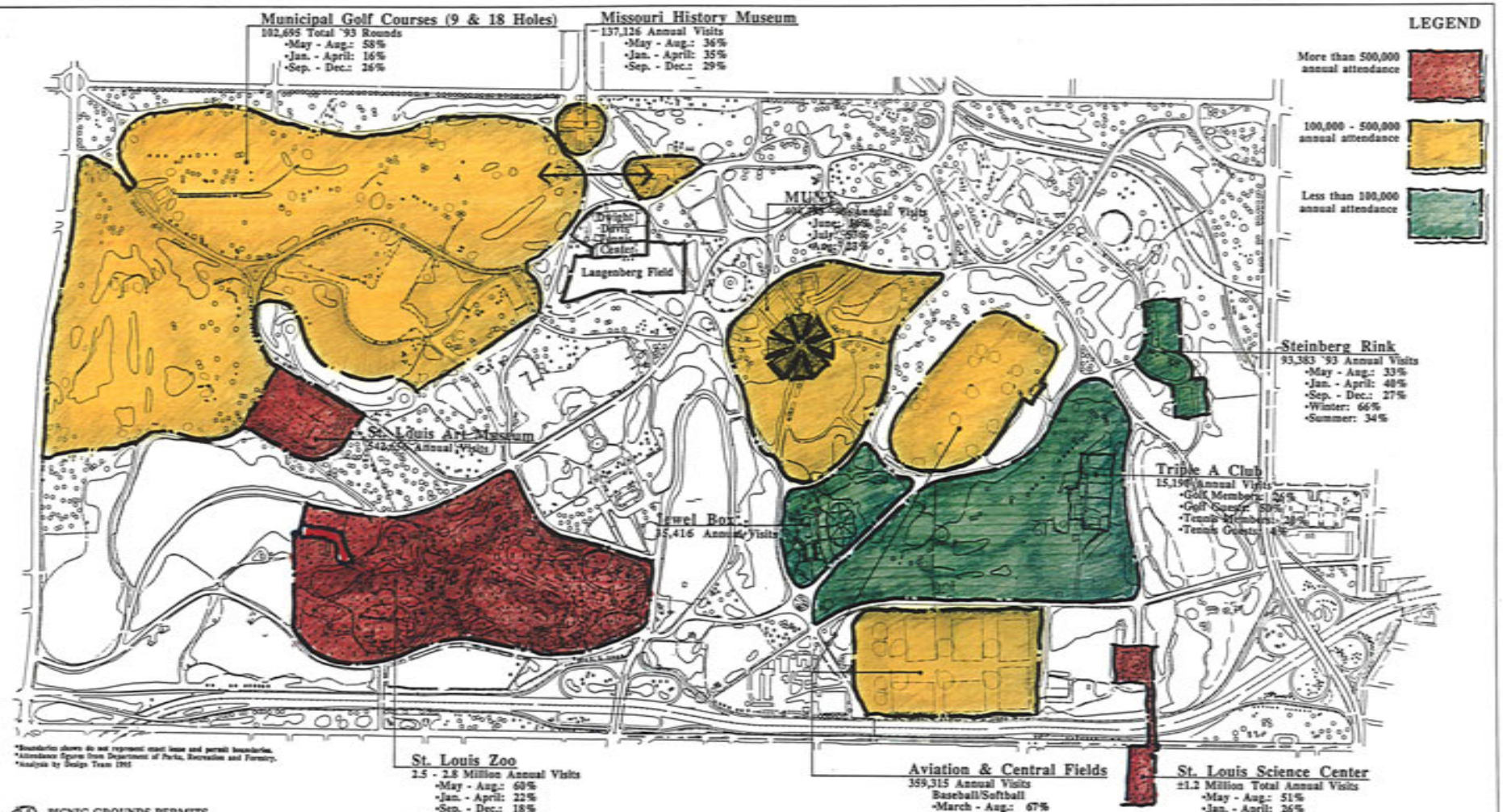
ST. LOUIS, MO

SCALE 1"=1/4 MILE

11 MARCH 1995

CITY OF SAINT LOUIS
DEPARTMENT OF PARKS, RECREATION AND FORESTRY
ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

FOREST PARK MASTER PLAN



1993-4 VISITATION FOR MAJOR PARK ATTRACTIONS

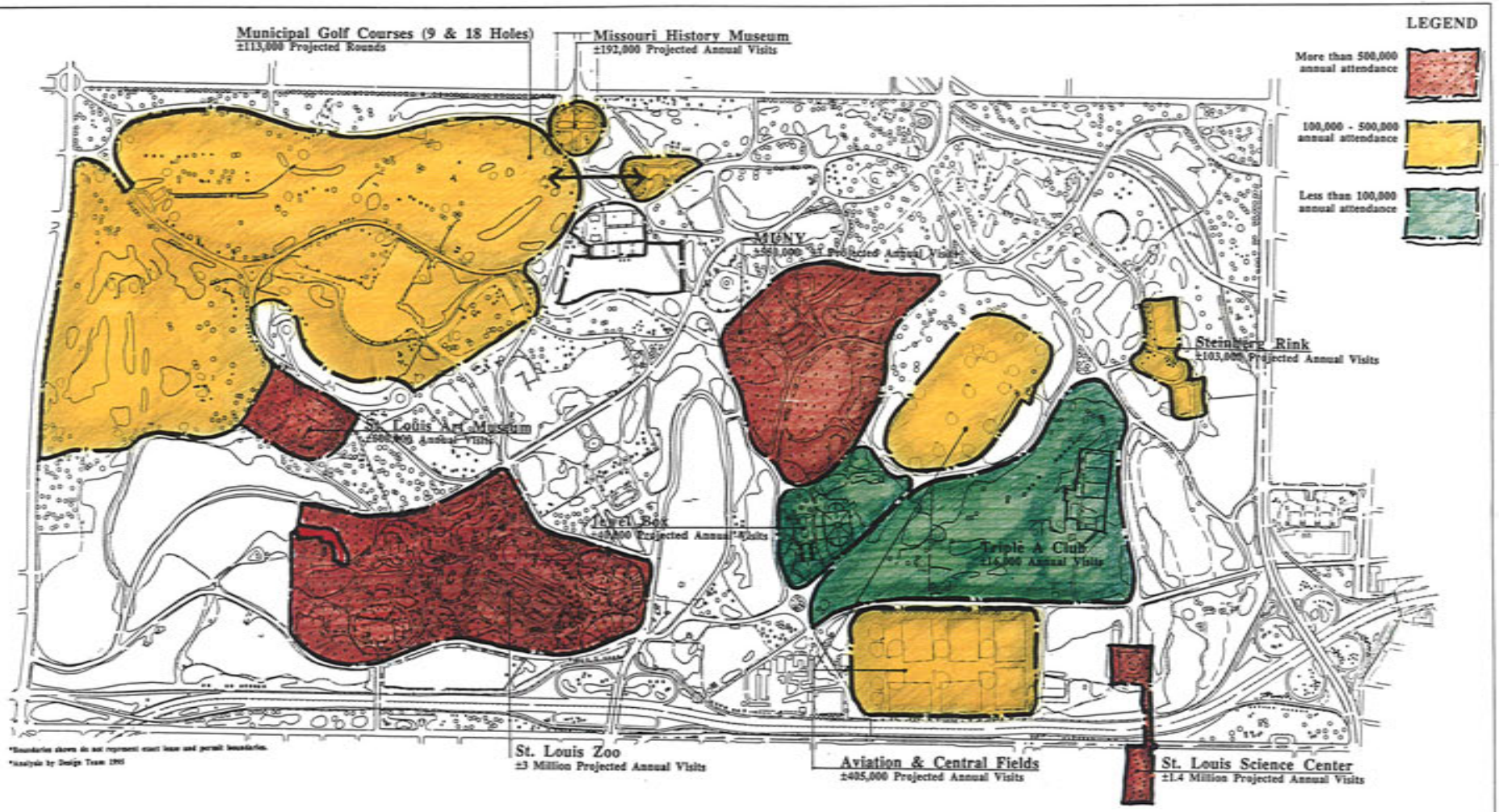
* The MUNY can be classified as either a special event or as a daily event. This has design and management implications either way it is classified.

FOREST PARK MASTER PLAN

ST. LOUIS, MO

27 FEBRUARY 1995

CITY OF SAINT LOUIS
DEPARTMENT OF PARKS, RECREATION AND FORESTRY
ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN



PROJECTED 2004 VISITATION FOR MAJOR PARK ATTRACTIONS

*Projected Attendance Figures based data from "Forest Park Transportation Analysis" by L. E. Haefner Enterprises, Inc. Park entities were interviewed to obtain their growth objectives. The following assumptions were made:

- All attractions are projected to increase by 1% annually unless noted otherwise. This is consistent with other cultural facilities in the region.
- The Zoo does not anticipate or wish to grow beyond their current 25,000 visitation per day volume.
- The Science Center projected increase is 2% annually.
- The Art Museum projected increase is 4% annually.
- The Muny is currently operating on a 8,600 visitations per night level. Projections assume 11,600 visitations per night.

FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE: 1"= 400' 0 400 800 1600

27 FEBRUARY 1995

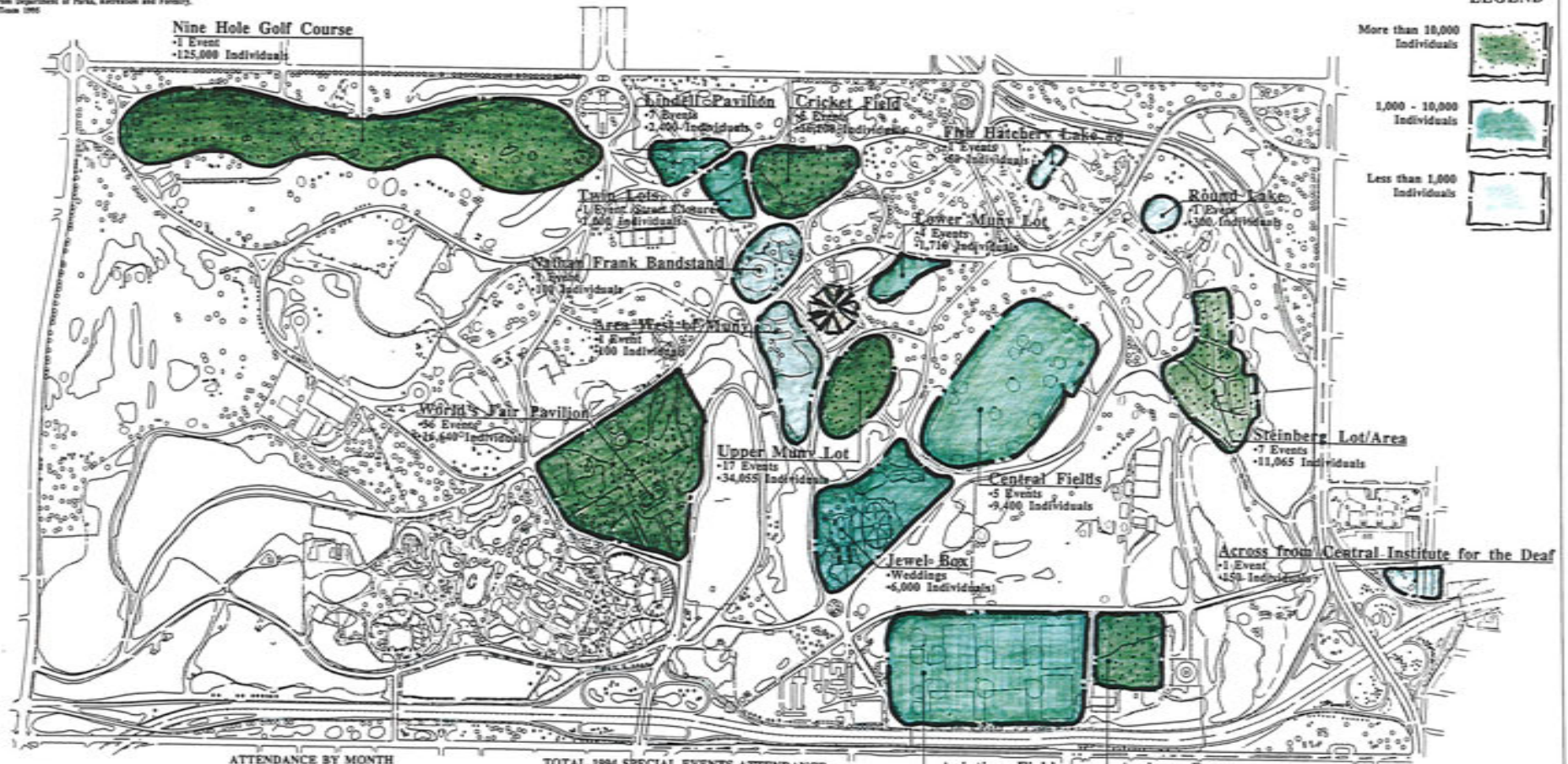
CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION URBAN DESIGN

FOREST PARK MASTER PLAN

*Boundaries shown do not represent exact lease and permit boundaries.
*Attendance figures from Department of Parks, Recreation and Forestry.
*Analysis by Design Team 1995



Roads and Paths
•19 Events
•9,235 Individuals

ATTENDANCE BY MONTH

JANUARY	4 Events	1,350 Individuals
FEBRUARY	5 Events	1,260 Individuals
MARCH	5 Events	2,450 Individuals
APRIL	19 Events	39,375 Individuals
MAY	22 Events	12,440 Individuals
JUNE	18 Events	18,420 Individuals
JULY	15 Events	7,910 Individuals
AUGUST	18 Events	3,790 Individuals
SEPTEMBER	18 Events	131,000 Individuals
OCTOBER	21 Events	20,550 Individuals
NOVEMBER	3 Events	665 Individuals
DECEMBER	5 Events	2,350 Individuals

TOTAL 1994 SPECIAL EVENTS ATTENDANCE:
153 Events - 241,560 Individuals

1994 SPECIAL EVENTS VISITATION MAP

1994 Attendance from Special Events

GENERAL OBSERVATIONS

- All but one event (excluding roads and paths) occur in the eastern half of the park.
- The peak period for special events corresponds with the peak period for athletic field, ZMD institutional and park facility use which produces related traffic flow problems.
- The most frequently used facilities, the Archery Range and World's Fair Pavilion, were used 38 and 36 days respectively. This is little more than one month of the year.
- The MUNY can be classified as either a special event or as a daily event. This has design and management implications either way it is classified.

FOREST PARK MASTER PLAN

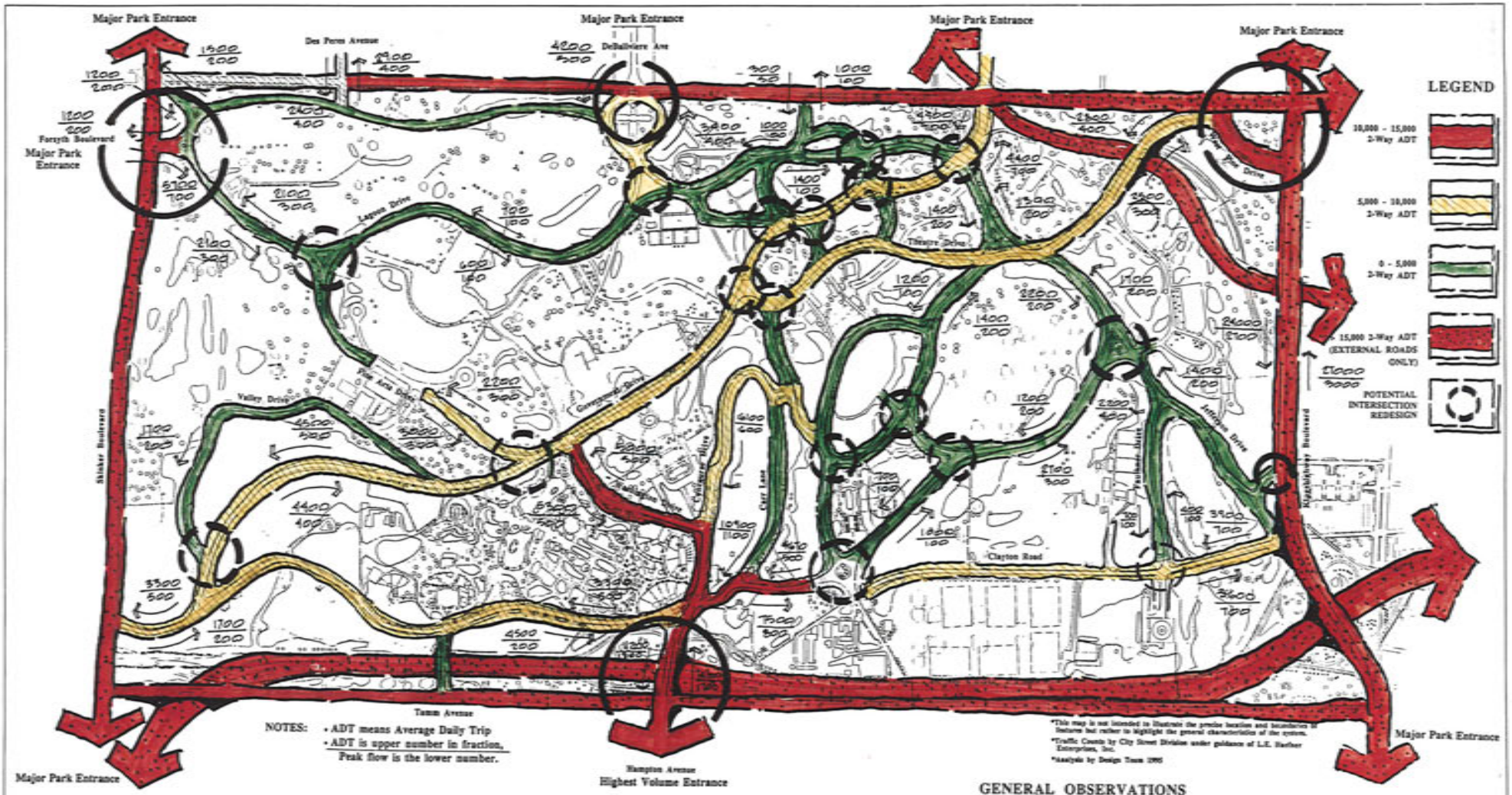
ST. LOUIS, MO

SCALE 1"= 400' 0 400 800 1600

27 FEBRUARY 1995

CITY OF SAINT LOUIS
DEPARTMENT OF PARKS, RECREATION AND FORESTRY
ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

FOREST PARK MASTER PLAN



The existing ADT's for Oakland Ave. near the Tamm Bridge appear to underrepresent existing traffic volumes and therefore should be estimated at approx. 12,000 two way ADT.

GENERAL OBSERVATIONS

- Commuter traffic patterns typically run north to south (between Hampton and Union) and southwest to northeast (between Skinker-Wells and West Pine).
- Highway 40/64, Kingshighway and Skinker are at or near capacity.
- Many park intersections are in need of redesign due to poor sight distances or geometric ambiguity and excess dead space.

1994 AUTOMOBILE TRAFFIC VOLUME MAP

FOREST PARK MASTER PLAN

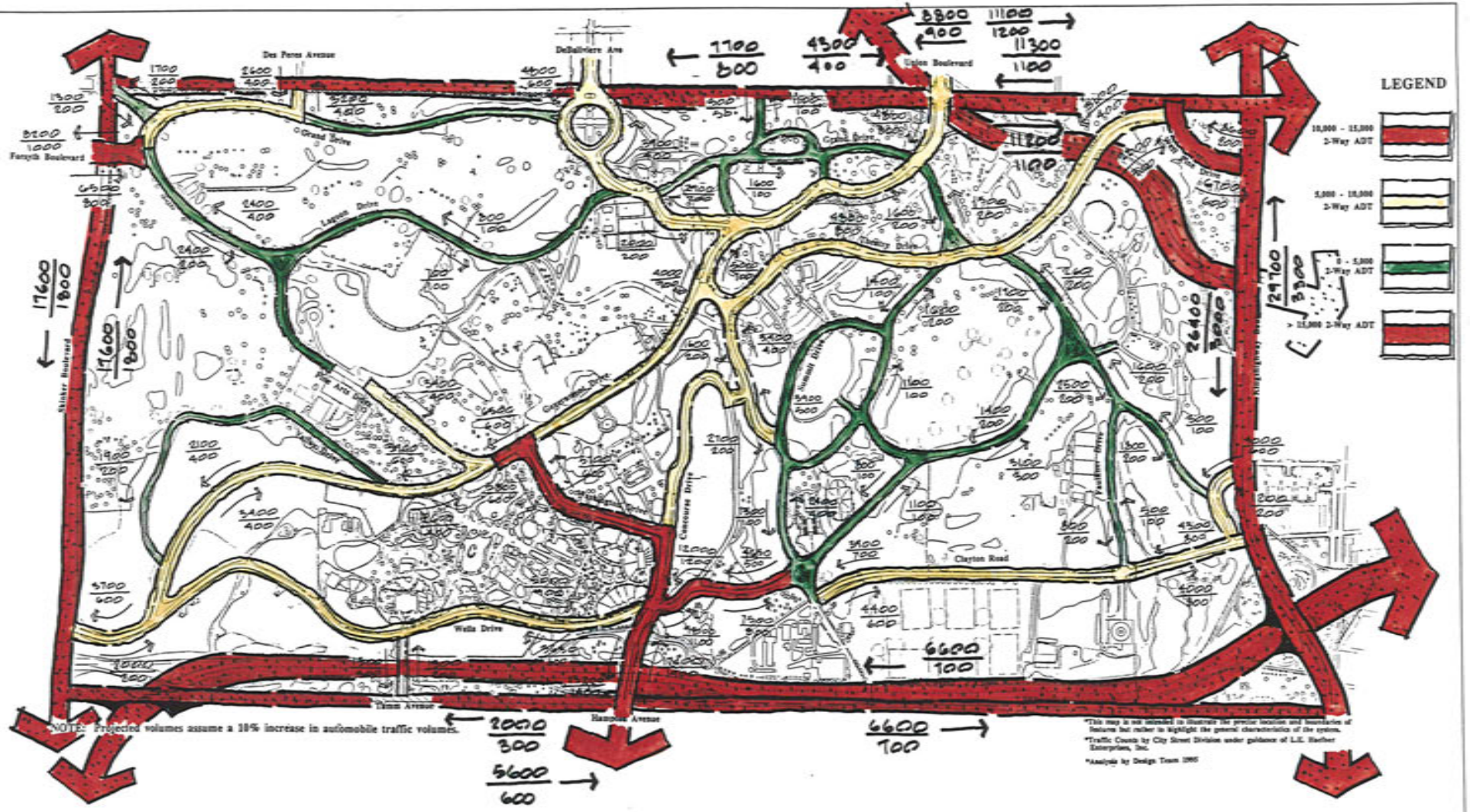
ST. LOUIS, MO

SCALE: 1"= 400' 0 400 1600 2800

11 MARCH 1995

CITY OF SAINT LOUIS
DEPARTMENT OF PARKS, RECREATION AND FORESTRY
ST. LOUIS DEVELOPMENT CORPORATION URBAN DESIGN

FOREST PARK MASTER PLAN



The projected ADT's for Oakland Ave. near the Tamm Bridge are based upon the existing ADT's which appear to underrepresent existing traffic volumes. Projected ADT's should be estimated at approx. 14,000 two way ADT.

PROJECTED 2004 AUTOMOBILE TRAFFIC VOLUME MAP

FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE: 1"= 400'

11 MARCH 1995

CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION URBAN DESIGN

FOREST PARK MASTER PLAN

1995 MAJOR ACTIVITY ZONES MAP

GENERAL OBSERVATIONS

- Forest Park's most visited attractions are located in four "Activity Zones" which all contain a cultural amenity and typically an active recreation facility.
- Three of the four major activity zones are accessed primarily via the Hampton Avenue park entrance.
- There is an interrelationship between activity zones which must be addressed in planning, design and management.

FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE: 1" = 400' 0 400 1600 2800

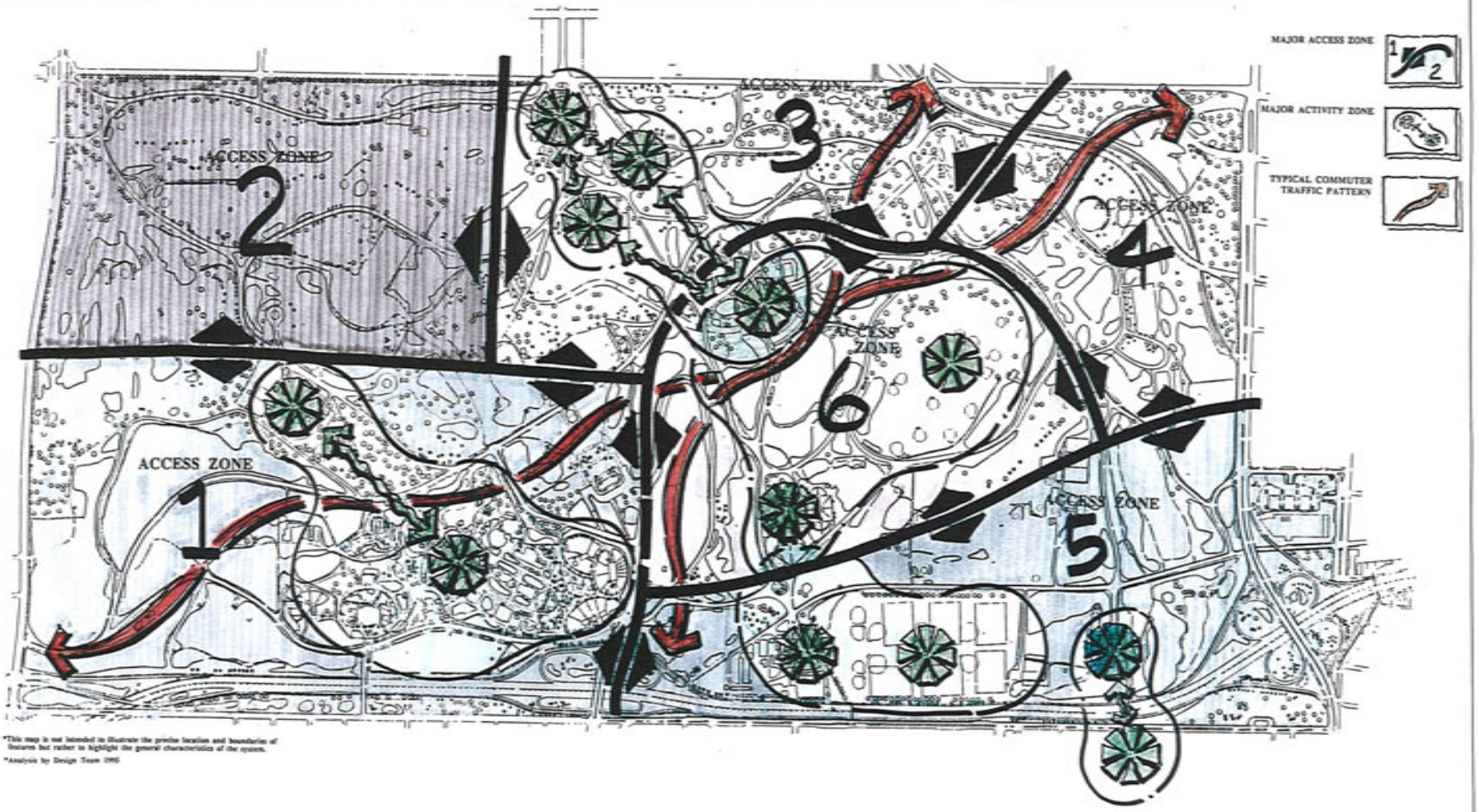
11 MARCH 1995

CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION URBAN DESIGN

FOREST PARK MASTER PLAN



*This map is not intended to illustrate the precise location and boundaries of features but rather to highlight the general characteristics of the system.

*Analysis by Design Team 1995

1995 MAJOR ACCESS ZONES AND PARK CIRCULATION MAP

GENERAL OBSERVATIONS

- Commuter traffic patterns typically run north to south (between Hampton and Union) and southwest to northeast (between Skinker-Wells and West Pine).
- The park generally functions as a series of six "Access Zones" which serve the park's major park activity zones or attractions. These are currently served in some capacity by automobile access and parking, paths and in most cases mass transit.

FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE: 1"= 400'

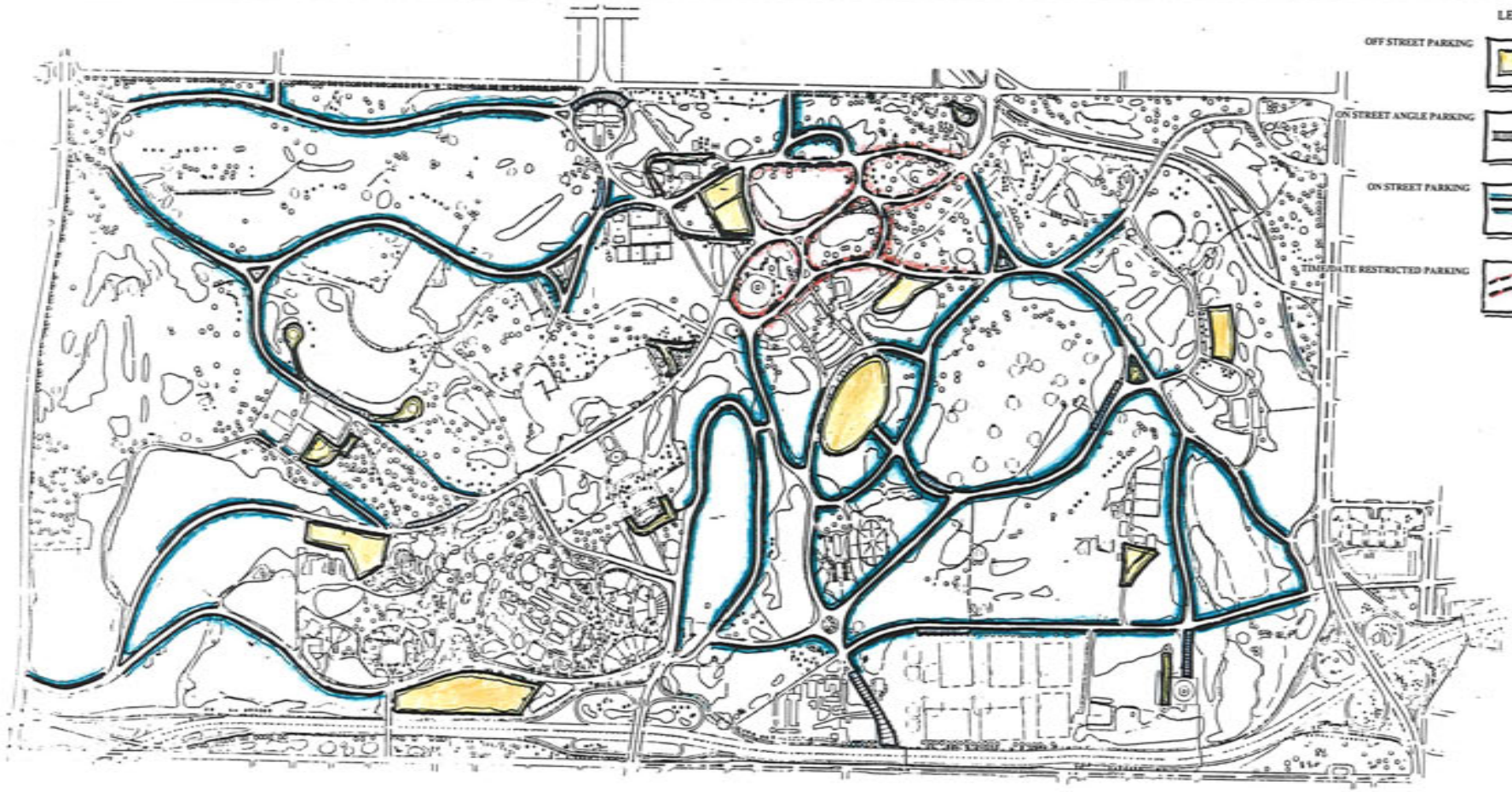
11 MARCH 1995

CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

FOREST PARK MASTER PLAN



	OFF STREET	ON STREET	TOTAL
EXISTING	±3,790	±4,010	±7,800

NOTES: On street parking was calculated by measuring the total street length in the Park, subtracting out restricted parking areas and dividing the net length by 22' (the typical length of one parallel street space).

ANALYSIS DIAGRAM
Existing Parking

FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE: 1"= 600'

CITY OF SAINT LOUIS

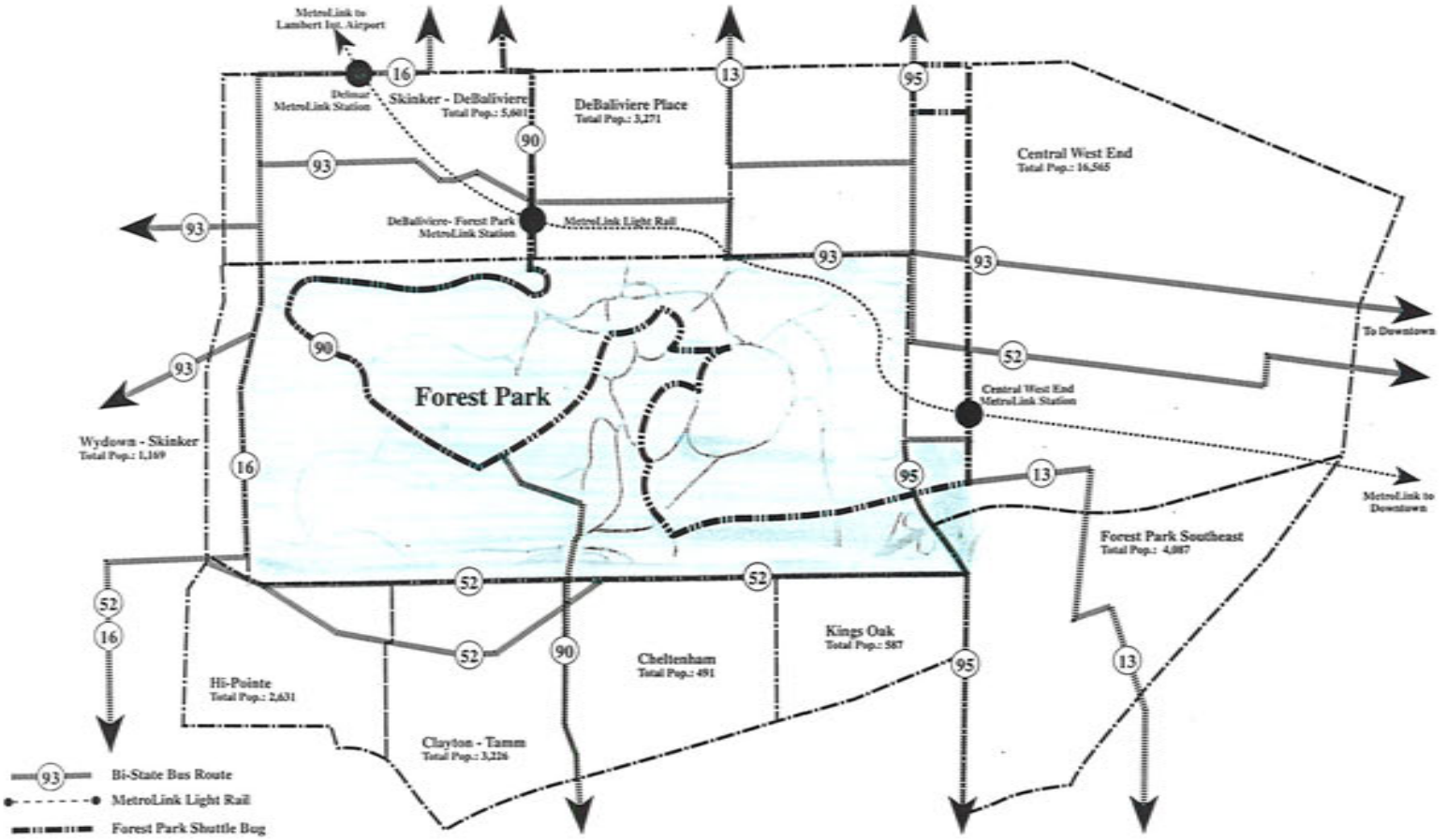
DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION URBAN DESIGN

FOREST PARK MASTER PLAN

*This map is not intended to illustrate the precise location and boundaries of features but rather to highlight the general characteristics of the system.

*Analysis by Design Team 1995



1995 TRANSIT MAP

GENERAL OBSERVATIONS

- Forest Park is served by Bi-State bus and light rail service which links the park to many of the City's neighborhoods as well as cities throughout the St. Louis metropolitan area.
- The park is served by the ShuttleBug which provides internal transit between most of the park's major attractions and provides links to the immediately adjacent neighborhoods and land uses northwest of the park.

FOREST PARK MASTER PLAN

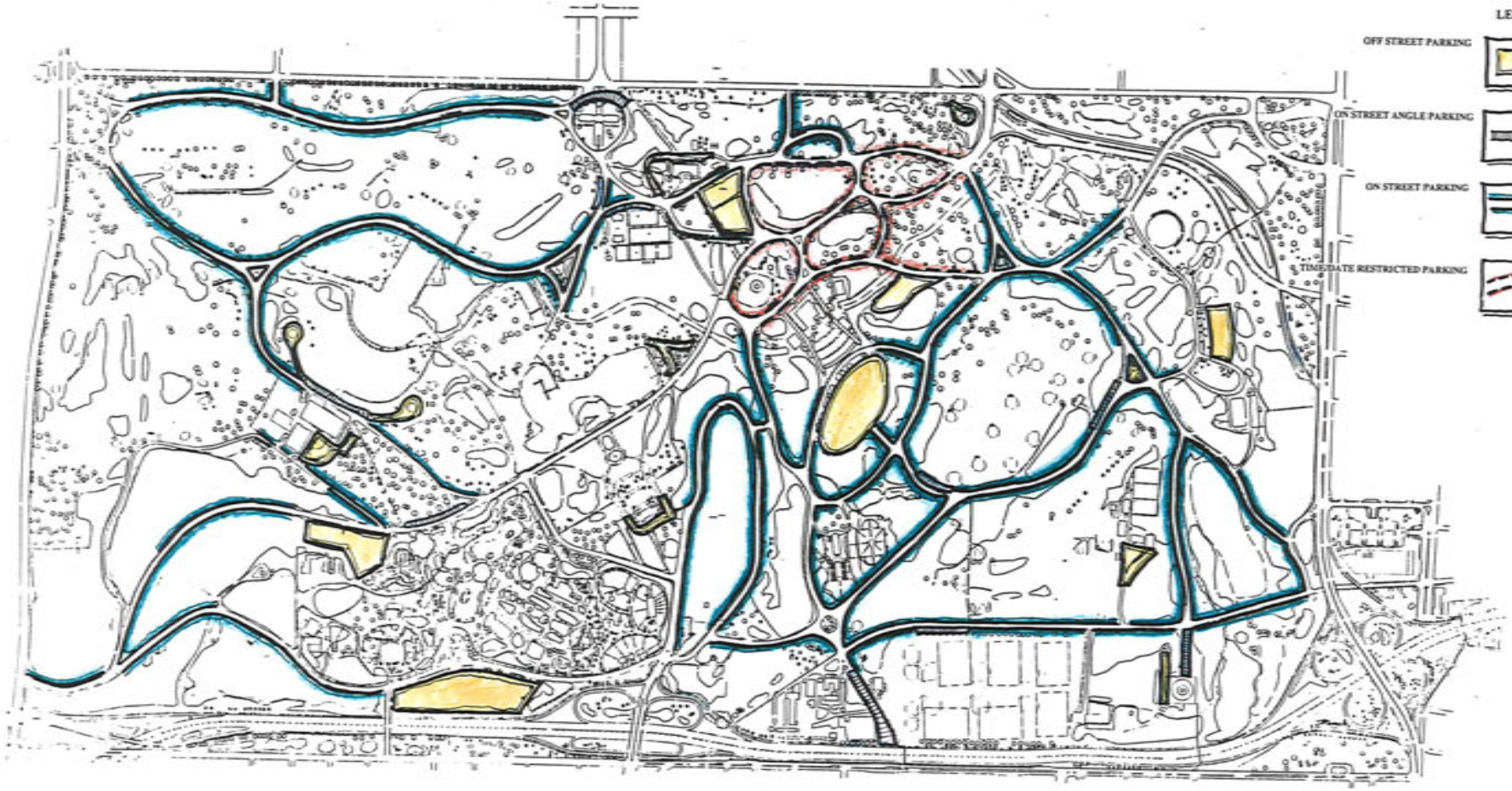
ST. LOUIS, MO

SCALE: 1"=400' 0 400 800 1600

11 MARCH 1995

CITY OF SAINT LOUIS
DEPARTMENT OF PARKS, RECREATION AND FORESTRY
ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

FOREST PARK MASTER PLAN



	OFF STREET	ON STREET	TOTAL
EXISTING	±3,790	±4,010	±7,800

NOTES: On street parking was calculated by measuring the total street length in the Park, subtracting out restricted parking areas and dividing the net length by 22' (the typical length of one parallel street space).

ANALYSIS DIAGRAM
Existing Parking

FOREST PARK MASTER PLAN

ST. LOUIS, MO

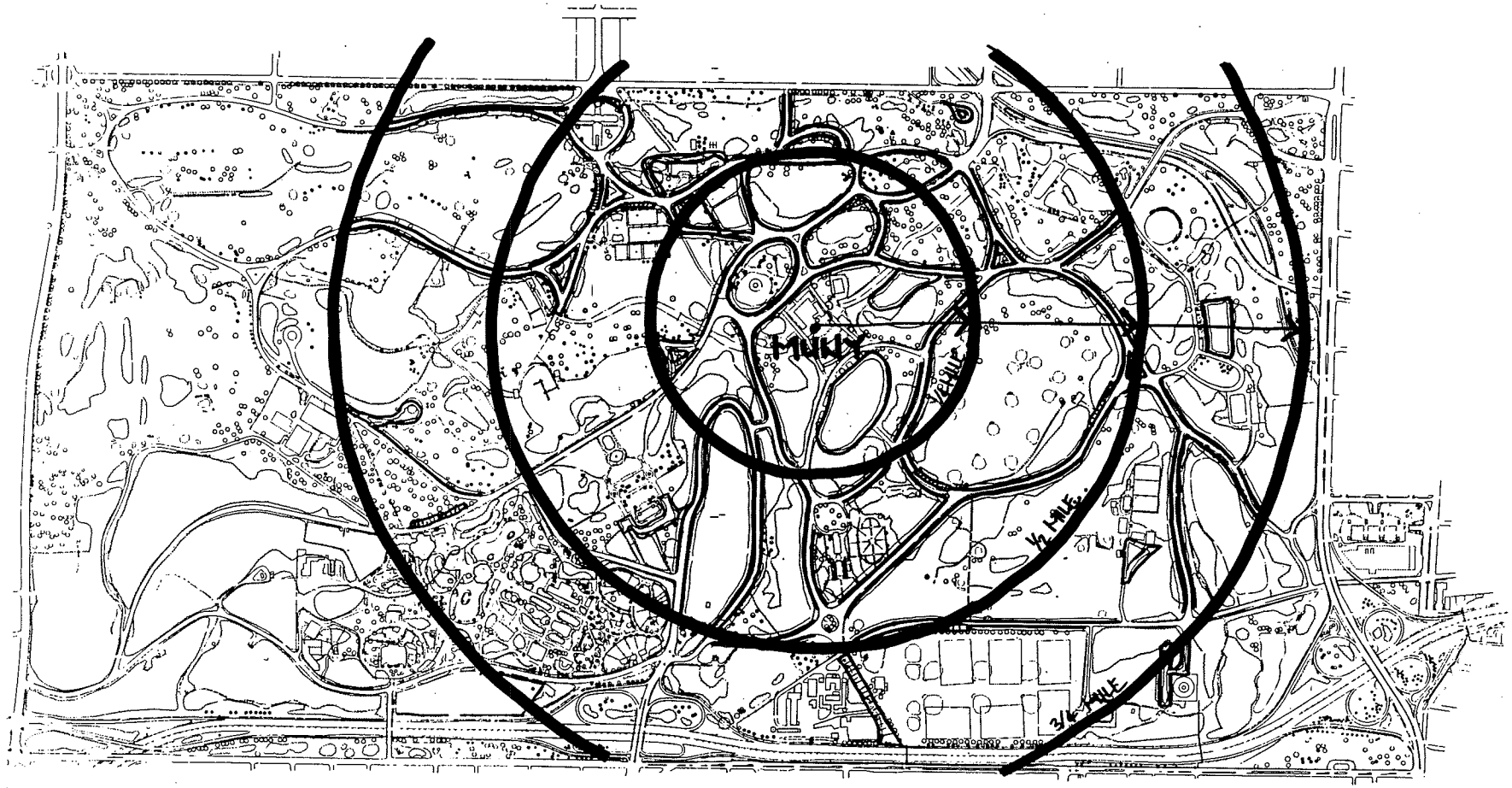
SCALE: 1"=400'

CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

FOREST PARK MASTER PLAN



±1,895 CARS W/IN 1/4 MILE
±3,807 CARS W/IN 1/2 MILE
±5,025 CARS W/IN 3/4 MILE

NOTE: Parking for a normal to highly attended Muny event typically occurs within the 1/4 and 1/2 mile radii shown on this drawing. Only on rare occurances do patrons utilize parking outside of 1/2 mile.

ANALYSIS DIAGRAM
Existing Muny Parking

FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE: 1"= 400' 0 400 1600 2000

18 NOVEMBER 1995

CITY OF SAINT LOUIS
DEPARTMENT OF PARKS, RECREATION AND FORESTRY
ST. LOUIS DEVELOPMENT CORPORATION URBAN DESIGN

FOREST PARK MASTER PLAN

C. Design Principle

- Create multi-functional zones with shared facilities.
- Create a multi-modal, distributed access system.

D. Design Recommendations

1. General Approach

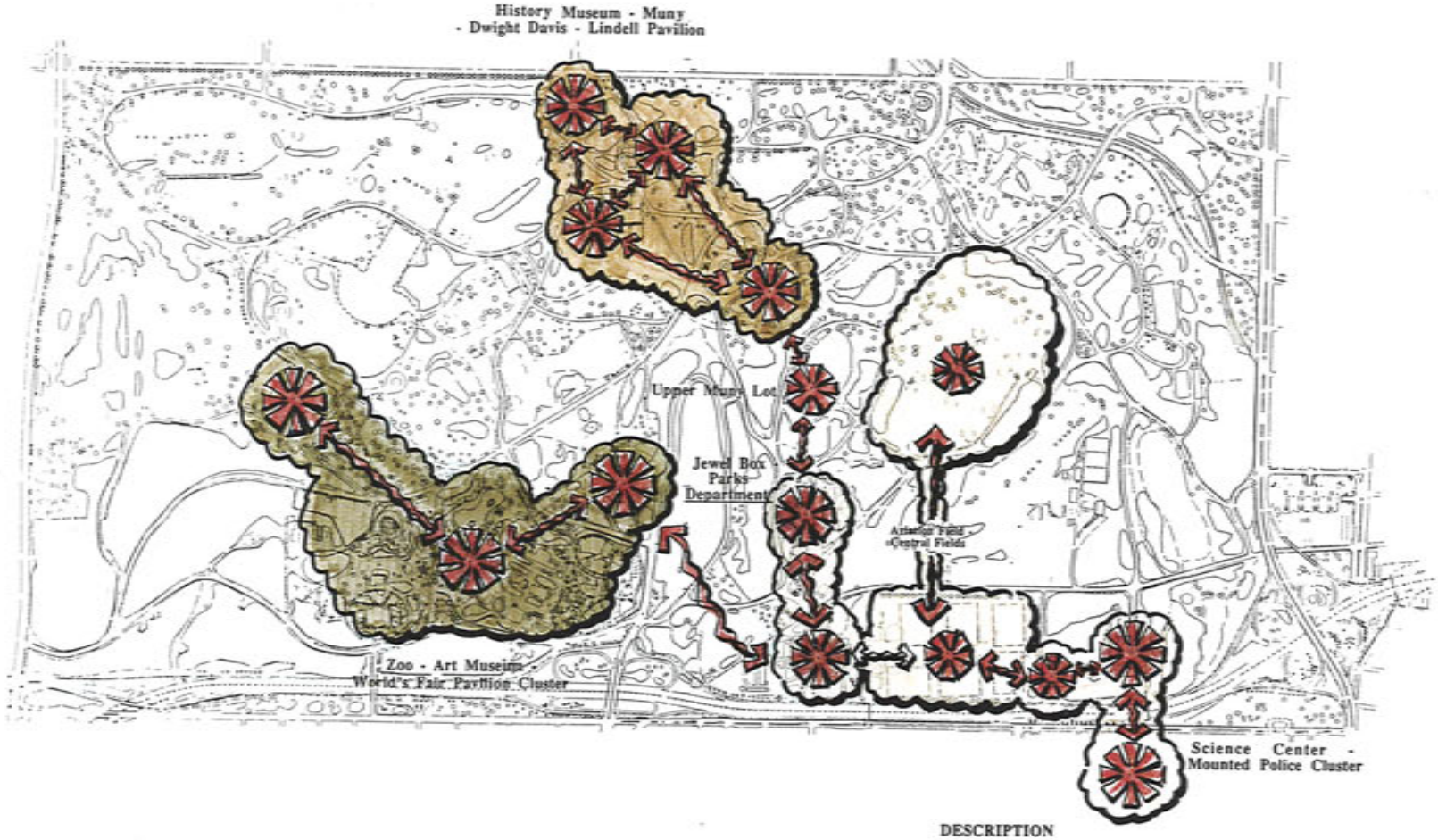
The design of Forest Park's access, circulation and parking system concentrates on two key considerations: functionality and aesthetics. From a functional perspective, roads and paths are designed to provide visitors with a convenient and direct route to their destinations. Clarity (the ease of getting from point A to point B), legibility (the ability to read and quickly understand signage and directions) and capacity (the ability to handle anticipated traffic volumes) are equally important to this Plan.

Aesthetically, this Plan seeks to provide a variety of circulation options that allow the visitor to interact with the park. The addition of site furnishings, ornamental plantings, and other amenities throughout the system will further the integration of the path system with surrounding landscapes and facilities.

Consideration must also be given to how the park's systems link to regional, area and neighborhood roads and entrance ways. Entering the park from any access point should allow the visitor to quickly assimilate themselves into the park experience. At the same time resolution of the park's access and circulation issues should only be made in concert with neighboring areas, so those issues are truly resolved and not merely passed on to the park's neighbors.

General design recommendations include:

- Create a convenient, coordinated, multi-modal approach to meet the needs of park patrons who wish to go to and between park destinations.
- Reduce patron use of the Hampton entrance as the major park entrance by emphasizing other entrances.
- Establish "Access Zones" which share facilities and infrastructure among neighboring park destinations.
- Minimize use of the park as a rush hour commuter route.
- Integrate park traffic systems with other park sites, destinations, and systems.
- Set realistic speed limits within the park, in consultation with enforcement officials and based on study data.
- Participate with the Missouri State Highway and Transportation Department on the forthcoming analysis of Highway 64/40 in the vicinity of Forest Park.



DESIGN PRINCIPLE

Multi-Functional Zones with Shared Facilities

DESCRIPTION

- Many park entities have functional relationships which require cooperation and coordination to best meet their functional requirements. If these requirements are addressed individually, rather than in groups, the park will suffer from piecemeal development.
- Many park facilities and infrastructure elements are located between park entities with similar needs and could be programmed to serve multiple purposes and users.
- The impact of meeting all the needs of each park entity can be reduced if all entities work together and share common facilities and infrastructure.

FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE 1"= 600' 0 600 1800 3000

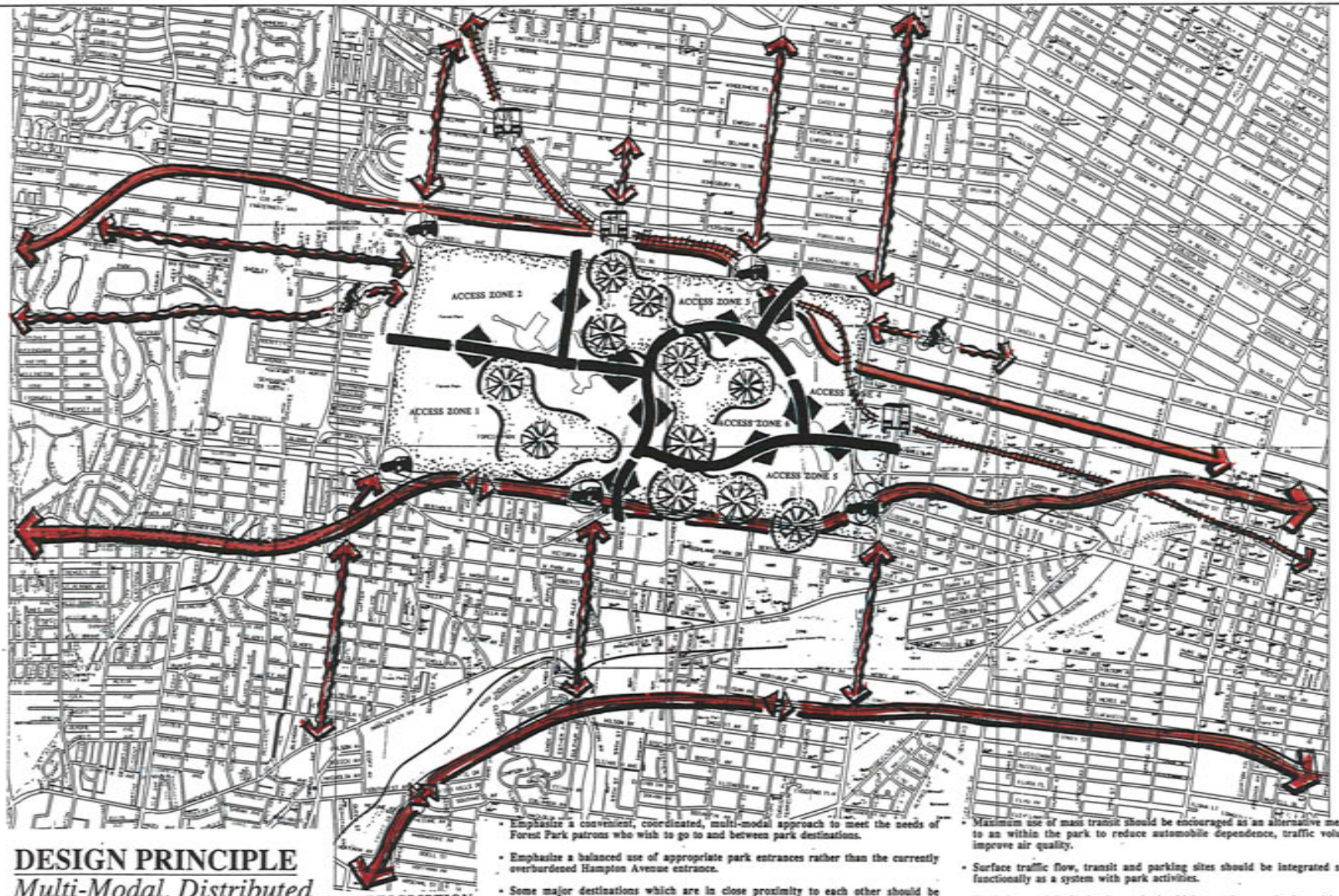
11 MARCH 1995

CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

FOREST PARK MASTER PLAN



*This map is not intended to illustrate the precise location and boundaries of features but rather to highlight the general characteristics of the system.

DESIGN PRINCIPLE

Multi-Modal, Distributed Access System

DESCRIPTION

- Emphasize a convenient, coordinated, multi-modal approach to meet the needs of Forest Park patrons who wish to go to and between park destinations.
- Emphasize a balanced use of appropriate park entrances rather than the currently overburdened Hampton Avenue entrance.
- Some major destinations which are in close proximity to each other should be handled as "Access Zones" which share facilities and infrastructure. Access zones are more easily accommodated than are all destinations independently.
- Use of the park as a rush hour flow commuter system should be minimized to reduce congestion, improve air quality and maximize activity in the park by the park user.
- Maximum use of mass transit should be encouraged as an alternative means of travel to an within the park to reduce automobile dependence, traffic volumes and to improve air quality.
- Surface traffic flow, transit and parking sites should be integrated spatially and functionally as a system with park activities.
- Realistic speed limits in the park should be set, in consultation with enforcement officials and based on study data.
- Dialogue should be established with the Missouri State Highway and Transportation Department regarding the forthcoming alternatives analysis of I-64-40

FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE: 1"= [illegible]

11 MARCH 1995

CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

FOREST PARK MASTER PLAN

2. Roads

Forest Park's roads should be designed as a hierarchical system that reflects the combination of functional and aesthetic needs. Park roadways are defined and accordingly designed in different ways.

General Approach

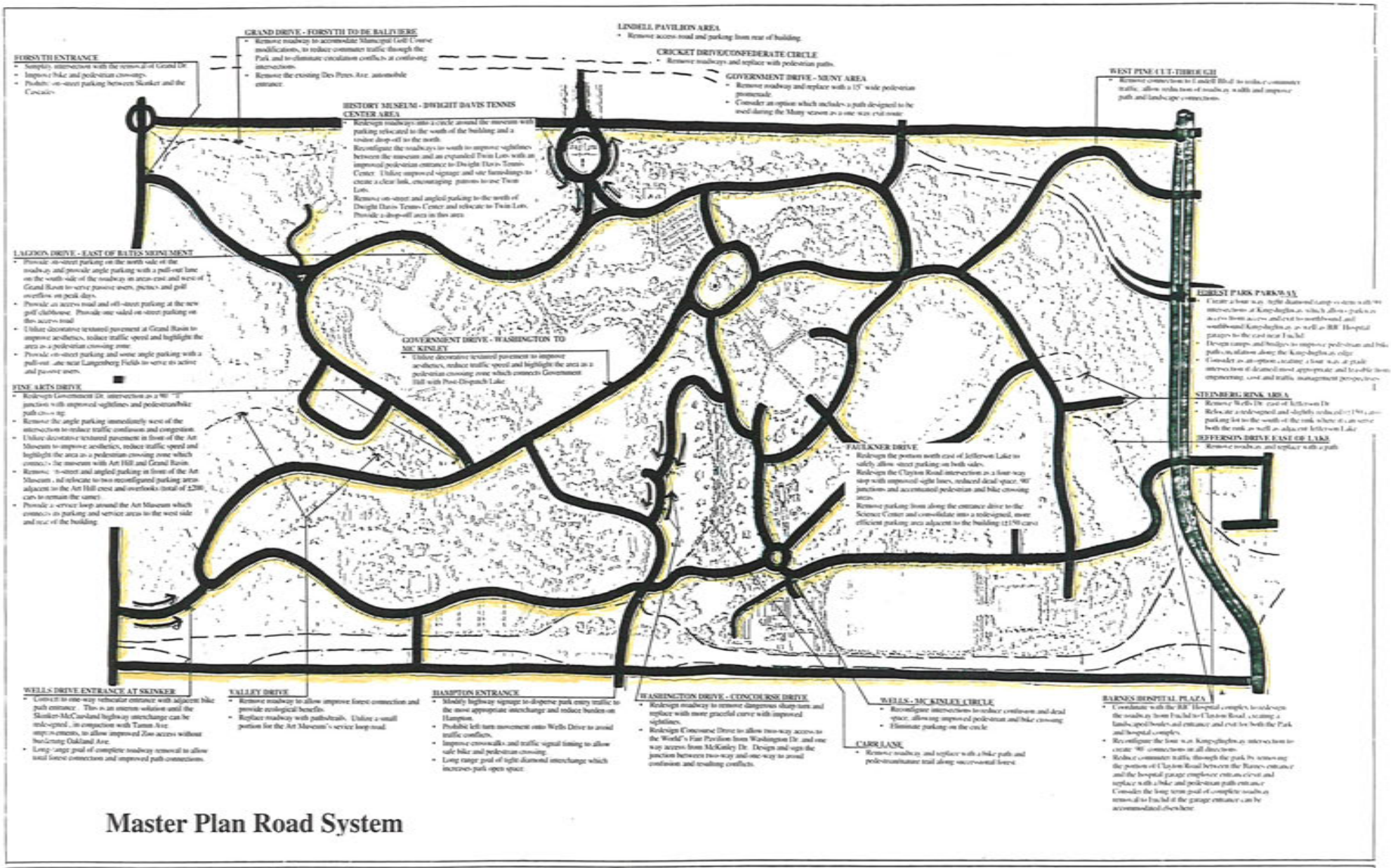
- Remove roads which fragment cohesive landscapes and continuous vegetative communities.
- Maintain existing roads, if needed, by selecting those which divide dissimilar or incompatible uses.
- Accommodate the volume of traffic and number of lanes needed to handle the traffic flows.
- Accommodate necessary curb parking.
- Design roads as scenic routes with views of prominent park features that:
  - Reflect the character of the landscape that they travel through.
  - Frame views of desirable features and away from undesirable ones.
  - Provide a means to access and view park landscapes, public art, and architecture.
- Design roads in sweeping curves and bends, avoiding straight lines and unnatural or tight curves unless part of a formally designed area.
- Provide a mixture of long and short views.

Parkways

Parkways are typically designed from a functional perspective to handle higher speed limits and large traffic volumes. They have multiple lanes in each direction, planted or barrier medians, typically no on-street parking, and lighting and sight distances appropriate for higher designed speed. Aesthetically, parkways often include planted medians when space permits, decorative light fixtures, and canopy tree/ornamental plantings.

Forest Park Parkway is the park's only true parkway, although Highway 64/40 could be considered a parkway too. Recommended changes for the parkway include:

- Improve plantings, park signage, and lighting.
- Continue the planted medians which exist east and west of the park through the park section where possible.
- Accentuate park connections or ramps at Kingshighway and Union with site furnishings and plantings to highlight these areas as park entrances.
- Make aesthetic improvements to Highway 64/40 that are compatible with the State Highway Department's standards for safety, much of which is already contained in the Parks Department's ISTEA grant proposal to improve plantings along the northern highway edge.



Master Plan Road System

FOREST PARK MASTER PLAN

ST. LOUIS, MO

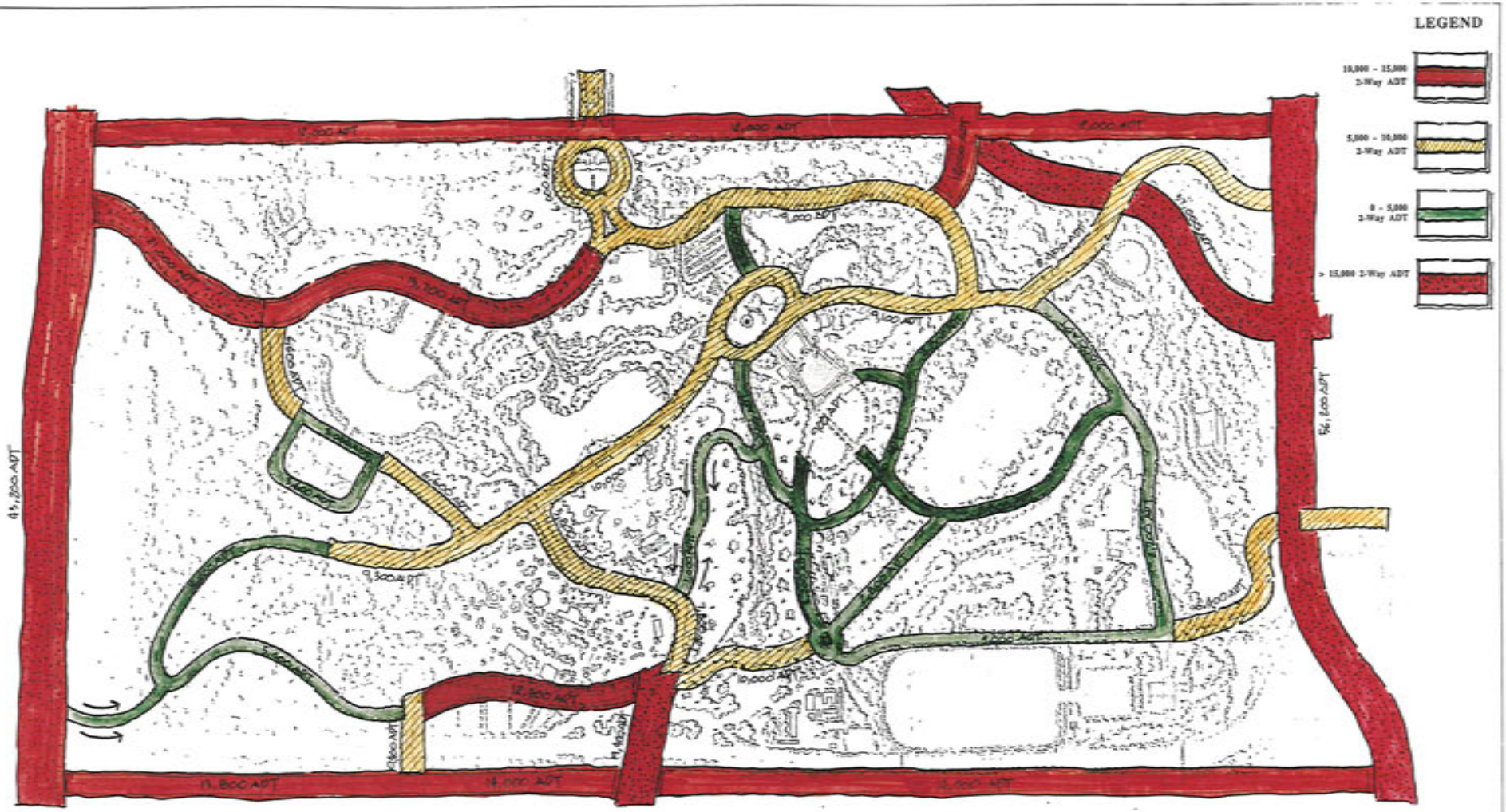
SCALE: 1"=400'

CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION URBAN DESIGN

FOREST PARK MASTER PLAN



Master Plan Traffic Volumes

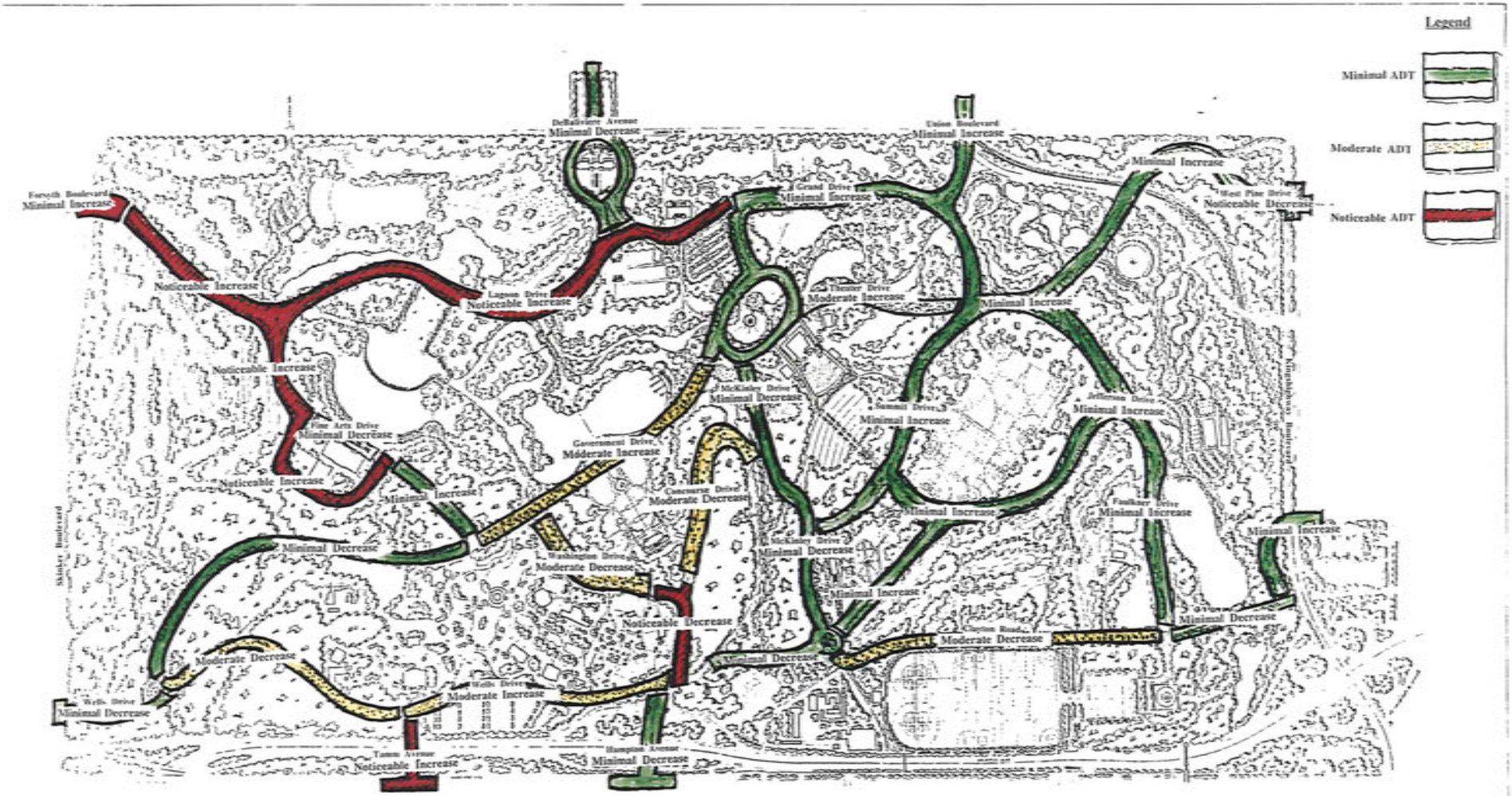
FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE: 1" = 400'

CITY OF SAINT LOUIS
DEPARTMENT OF PARKS, RECREATION AND FORESTRY
ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

FOREST PARK MASTER PLAN



Legend

Minimal	0-3,000	ADT
Moderate	3,000-6,000	ADT
Noticeable	6,000 +	ADT

*Note: ADT = Average Daily Traffic

IMPLICATIONS OF AUTOMOBILE TRAFFIC VOLUMES

FOREST PARK MASTER PLAN

ST. LOUIS, MO

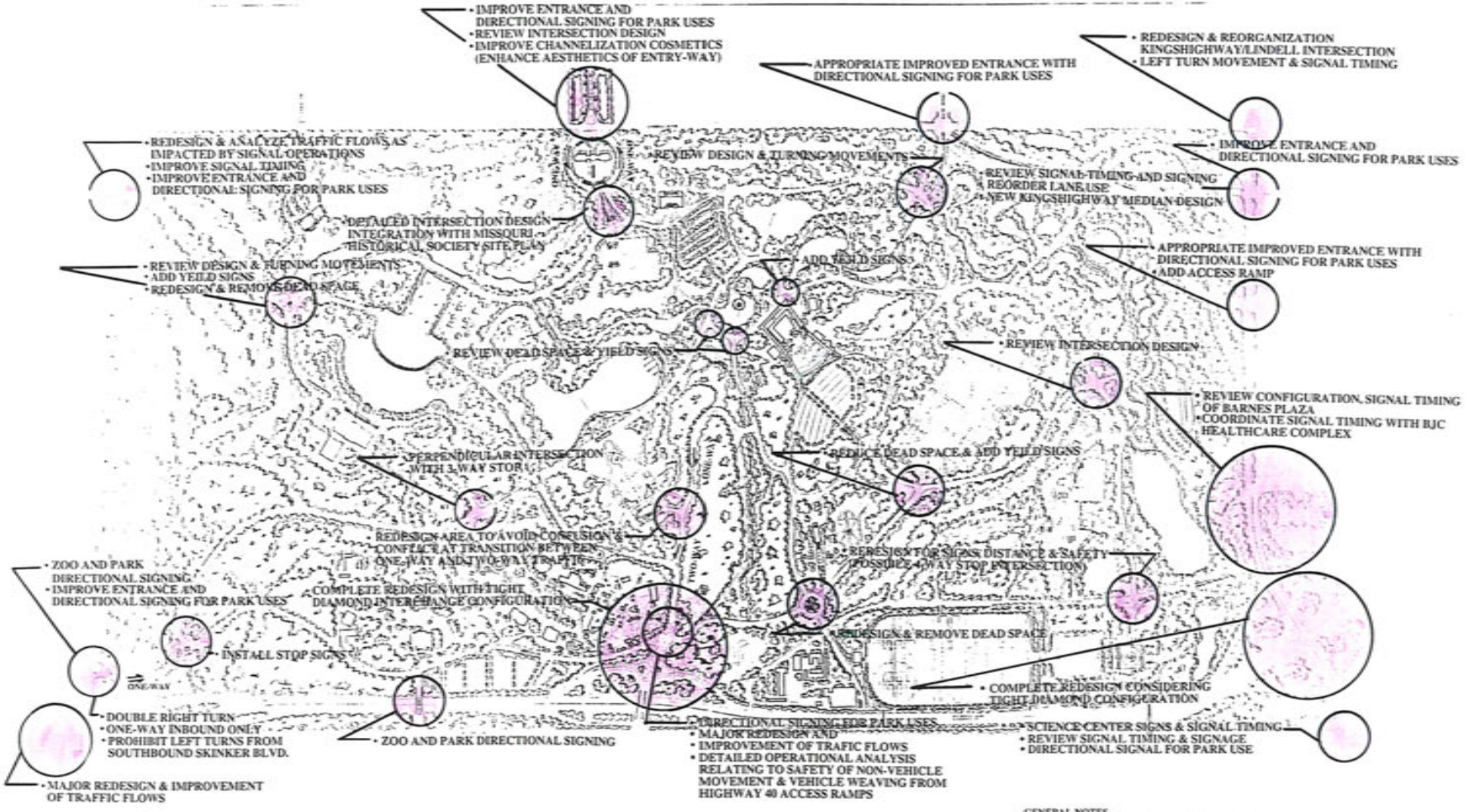
SCALE: 1"= 400'

CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

FOREST PARK MASTER PLAN



GENERAL NOTES
- The next phase is a detailed geometric design and traffic signal operations analysis.
- The detailed analysis will require manual traffic counts.
- Dead Space refers to excess maneuvering room for vehicles.

TRAFFIC OPERATION COMMENTS

FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE: 1"= 600'

18 NOVEMBER 1995

CITY OF SAINT LOUIS
DEPARTMENT OF PARKS, RECREATION AND FORESTRY
ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

FOREST PARK MASTER PLAN

Boulevards

Boulevards are grand scale streets which typically have planted medians, decorative lighting and site furnishings, and canopy tree/ornamental plantings/planters. Forest Park's boulevards should contain these features wherever possible and appropriate.

The following roadways are classified as boulevards and should be designed accordingly:

-Kingshighway Boulevard
-Lindell Boulevard
-Skinker Boulevard
-Oakland Blvd.
-Entries at Forsyth, DeBaliviere, Union, West Pine and Hampton

Specific recommendations for boulevards include:

- Provide park entrance signage and decorative pavement at key portions of roadways, important intersections, and crosswalks.

- Avoid on-street parking along entrance boulevards, but encourage it along appropriate portions of border boulevards to access park edges.

- Coordinate with the City Streets Department to extend park boulevard treatments beyond park boundaries where possible and appropriate.

Avenues

Avenues are the more heavily used, park-wide circulation routes within the park and are typically designed with canopy trees and sidewalks along their edges. They are typically of a grand scale, focusing on dramatic vistas and expansive views. Avenues include:

-Lagoon Drive
-Fine Arts Drive
-Grand Drive
-Wells Drive
-Washington Drive
-Clayton Road
-McKinley Drive
-Government Drive.

Specific recommendations for avenues include:

- Determine appropriateness of on-street parking on a site-by-site basis.

- Apply decorative landscaping, site furnishings, and pavements to key portions of roadways, important intersections, and crosswalks when compatible with site context.

- Consider use as on-street bike routes which link to regional path systems.

Drives

The remainder of the park's roadways are classified as drives. These will receive a variety of site specific streetscape treatments. Drives are typically more intimately scaled, focusing on scenic vistas and forest settings. On-street parking and sidewalks should be determined for all drives on a site-by-site basis.

Access/service roads

Access/service roads should be designed to be visually unobtrusive and should not encourage public vehicular use. Soft surfaces should be considered, with minimal roadway widths. Some of the park's paths, particularly near the Municipal Golf Courses and Kennedy Forest, will be designed to accommodate security patrols and service vehicles.

3. Interstate Highway 64/40

Interchanges

- Collaborate with the Highway Department and future highway planning efforts to create design solutions which reduce the amount of park land occupied and fenced for traffic lanes and right-of-ways.

- Coordinate with the Highway Department to implement signage improvements which direct park patrons to the most appropriate interchange for their park destination.

- Improve the aesthetic character of highway interchanges, implementing plantings, signage, and site furnishings appropriate for major park entrances.

Highway Right-of-Way and Edges

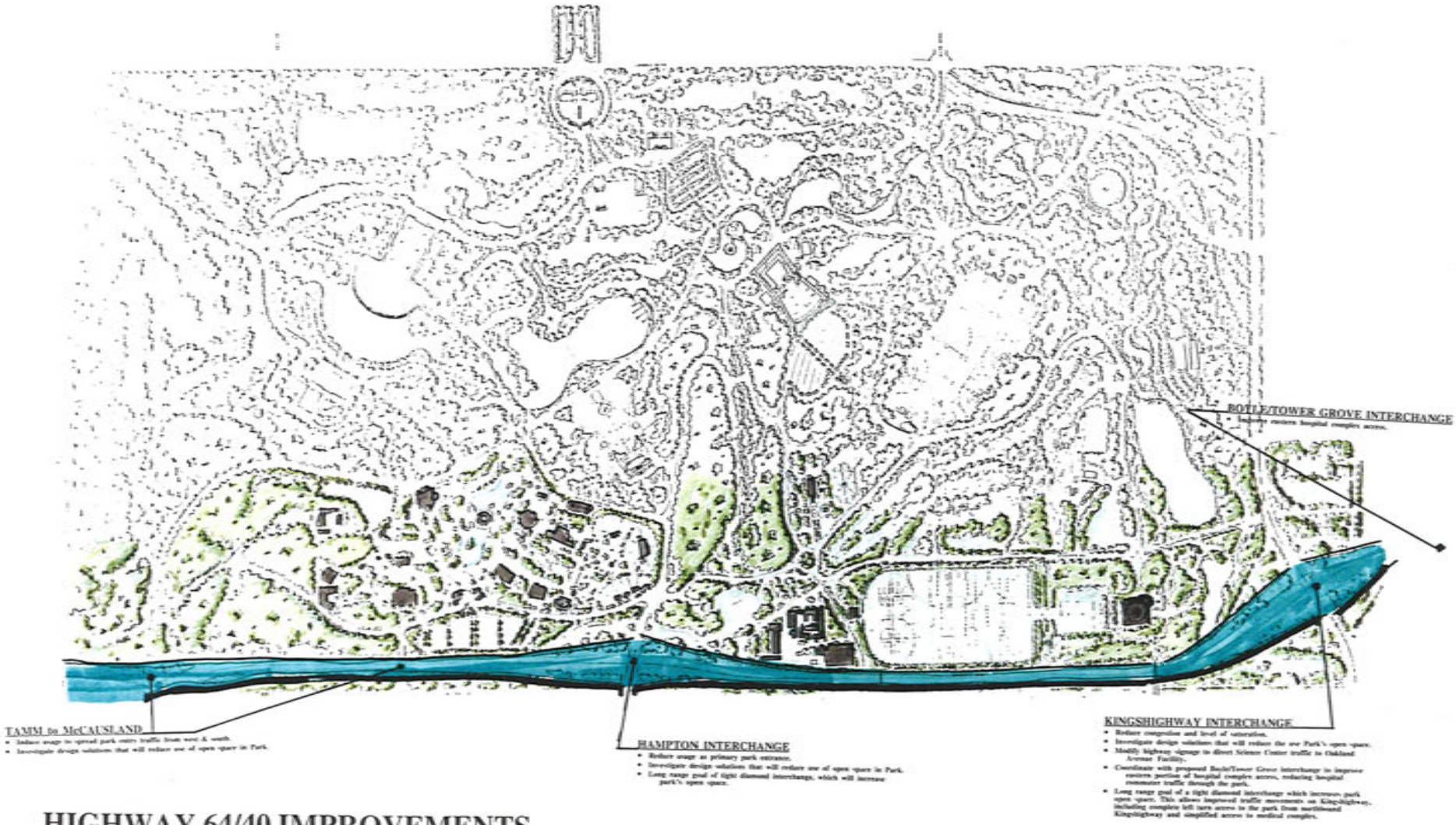
- Implement landscape improvements along the highway right-of-way and fence line which are compatible with surrounding landscapes, to better blend the highway into its park environs.

- Implement landscape improvements which reduce negative visual and audible effects of the highway, yet frame desirable views for highway motorists.

Regional Context

- Collaborate with the Highway Department and future highway planning efforts to extend the park's highway landscape improvements beyond the park, visually linking the park with downtown and areas to the west.

- Collaborate with the Highway Department and future highway planning efforts with regard to existing or planned interchanges which are adjacent to or affecting the park.



HIGHWAY 64/40 IMPROVEMENTS

FOREST PARK MASTER PLAN

ST. LOUIS, MO

CITY OF SAINT LOUIS
DEPARTMENT OF PARKS, RECREATION AND FORESTRY
ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

FOREST PARK MASTER PLAN

4. Parking

- Design parking lots to play a visually subordinate, yet functionally supportive role for the park's landmarks and landscapes.

- Increase patron awareness of parking areas through signage, paths, and landscaping which directs them to the most appropriate lot for their particular destination.

- Place all new facility-related off-street parking behind or to the side of a building structure or underground.

- Consider relocating inappropriately placed parking to areas behind or to the side of a building structure, with the exception of Centrally located lots such as Twin Lots and the Upper Muny lot that can serve multiple facilities.

- Design parking lots in shapes which best fit site qualities while providing maximum parking efficiency.

- Avoid harsh angles and edges which deter from spatial character and which create inhospitable spaces for paths and other landscape users.

- Increase the efficiency of existing and new parking lots, avoiding single loaded parking, if possible.

- Utilize porous pavement wherever feasible in proposed new parking areas and reconstructed existing ones.

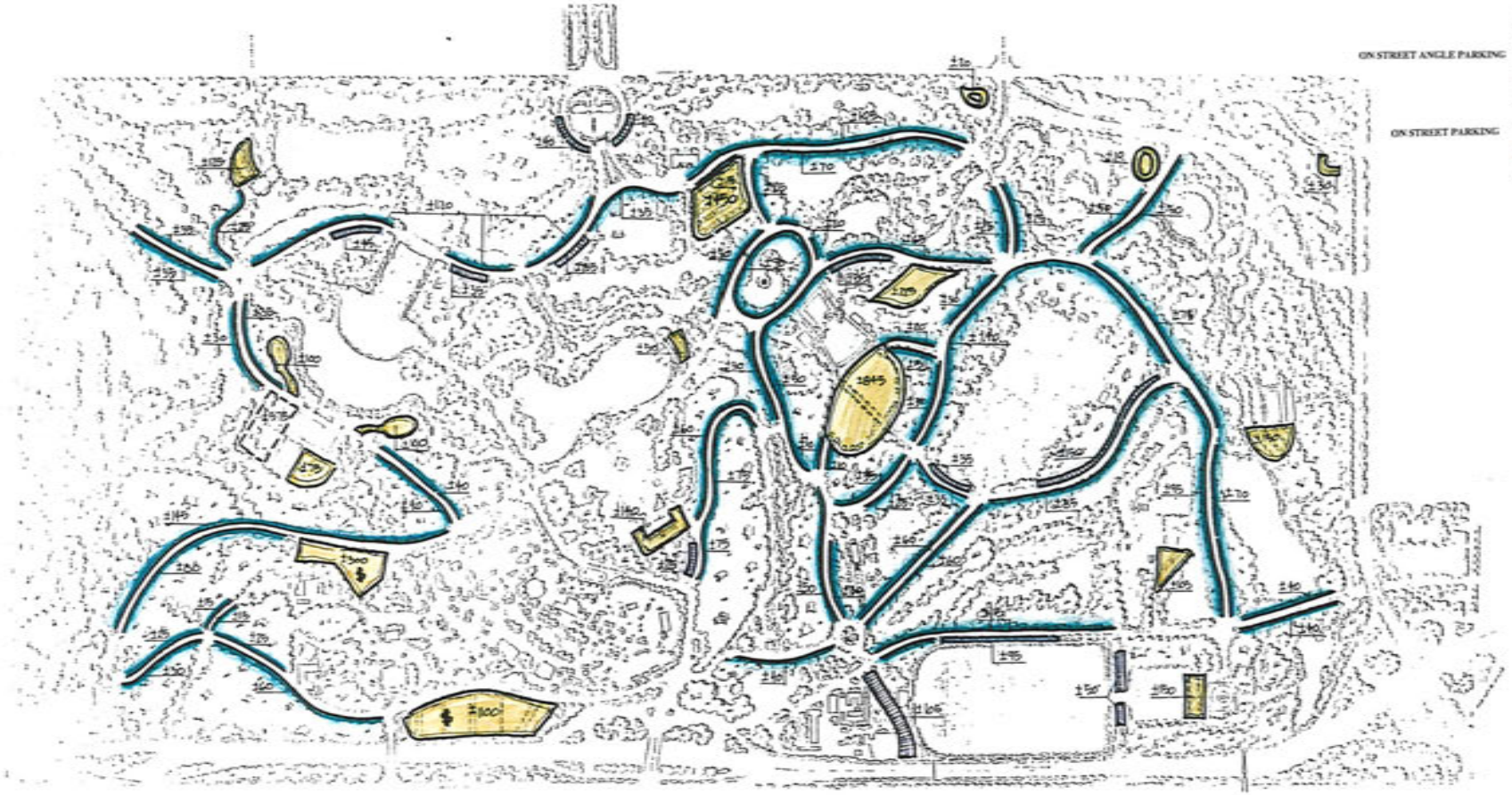
- Adhere to current City standards for parking lot design and landscaping:
  - Design 90° angle off-street spaces for average size cars, with a width of 8.5', a length of 18' and a 22' minimum two way isle width. Consider providing compact car spaces at all major park lots.
  - Design parallel on-street spaces for average size cars, with a width of 12', a length of 22'.
  - Design 90° angle on street spaces with a width of 8.5', a length of 18' and a 12 ' pull-out lane, separate from the nearest traffic lanes.
  - Provide spaces for the disabled with a width of 12', a length of 18' and a 22' minimum isle width (or 8' X18' spaces with a common 5' isle between adjacent spaces). Provide at least one space for all lots of 25 spaces or more or a rate of one space per 75 spaces or fraction thereof in larger lots.
  - Landscape all parking lot edges of lots that abut a street or an adjacent landmark or landscape. The most substantial landscaping and screening should be along any edge that abuts a street. However, site landscaping along sides and in the rear is important to protect the view upon approach, as well as from adjacent sites.
  - Landscape a minimum of 3% of total parking area for lots greater than 10,000 sq. ft. The interior landscaping should consist mostly of trees whose height and upper-level greenery will be visible from the street and will shade automobiles within the parking lots during hot summer days. Locate planting islands along paths which are located in parking lots to separate cars and pedestrians while creating a more pleasant pedestrian experience.

LEGEND

OFF STREET PARKING

ON STREET ANGLE PARKING

ON STREET PARKING



NOTE: Employee parking will be accomodated in the upper Muny lot.

NOTES: On street parking was calculated by measuring desired parking areas on a site specific basis from a 1" = 100' scale base map and dividing the lengths by 22' (the typical length of one parallel street space).

Off street and angled on street parking was calculated by measuring desired parking areas on a site specific basis from a 1" = 100' scale base map and dividing the lengths by 8.5' (the City standard for one angle parking space). Angle parking assumes an 18' length and a 24' isle.

Master Plan Parking

	OFF STREET	ON STREET	TOTAL
MASTER PLAN	±4,500	±3,375	±7,875
EXISTING	±3,790	±4,010	±7,800
CHANGE	+710	-635	+75

FOREST PARK MASTER PLAN

ST. LOUIS, MO

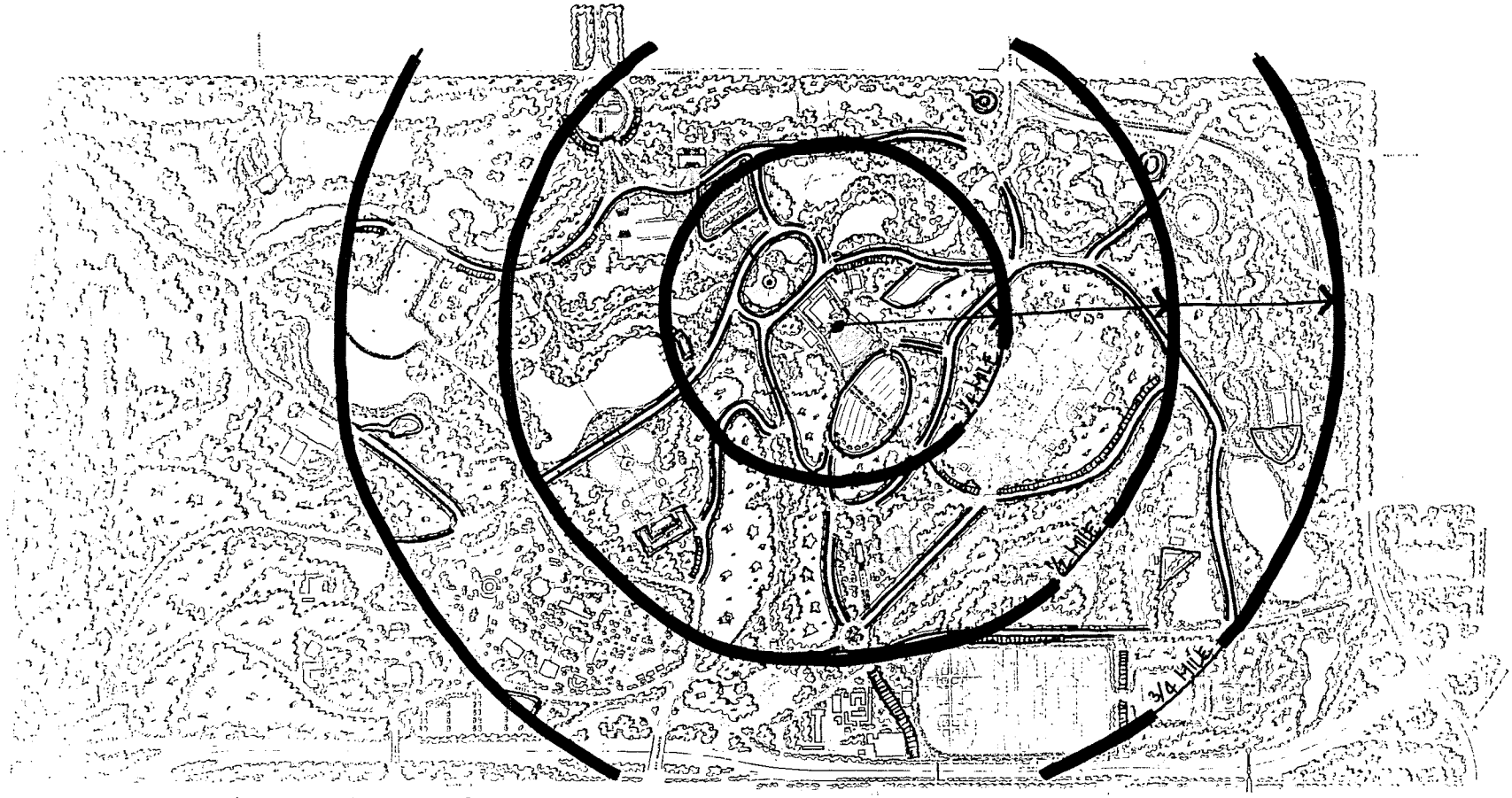
SCALE: 1"= 400'

CITY OF SAINT LOUIS

DEPARTMENT OF PARKS, RECREATION AND FORESTRY

ST. LOUIS DEVELOPMENT CORPORATION URBAN DESIGN

FOREST PARK MASTER PLAN



±1,973 CARS W/IN 1/4 MILE (+78 CARS)
±3,807 CARS W/IN 1/2 MILE (0)
3/4 MILE RADIUS NOT CALCULATED

NOTES: Parking for a normal to highly attended Muny event typically occurs within the 1/4 and 1/2 mile radii shown on this drawing. Only on rare occurances do patrons utilize parking outside of 1/2 mile.

The goal of this design is to maintain existing parking quality and quantity. A net gain of approx. 80 cars was achieved within 1/4 mile of the Muny.

Removal of roads which result in loss of Muny parking will not occur until adequate replacement parking is created as per this plan.

Muny Parking

FOREST PARK MASTER PLAN
ST. LOUIS, MO

SCALE: 1"=400' 0 400 1600 2800

18 NOVEMBER 1995

CITY OF SAINT LOUIS
DEPARTMENT OF PARKS, RECREATION AND FORESTRY
ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

FOREST PARK MASTER PLAN

5. Transit

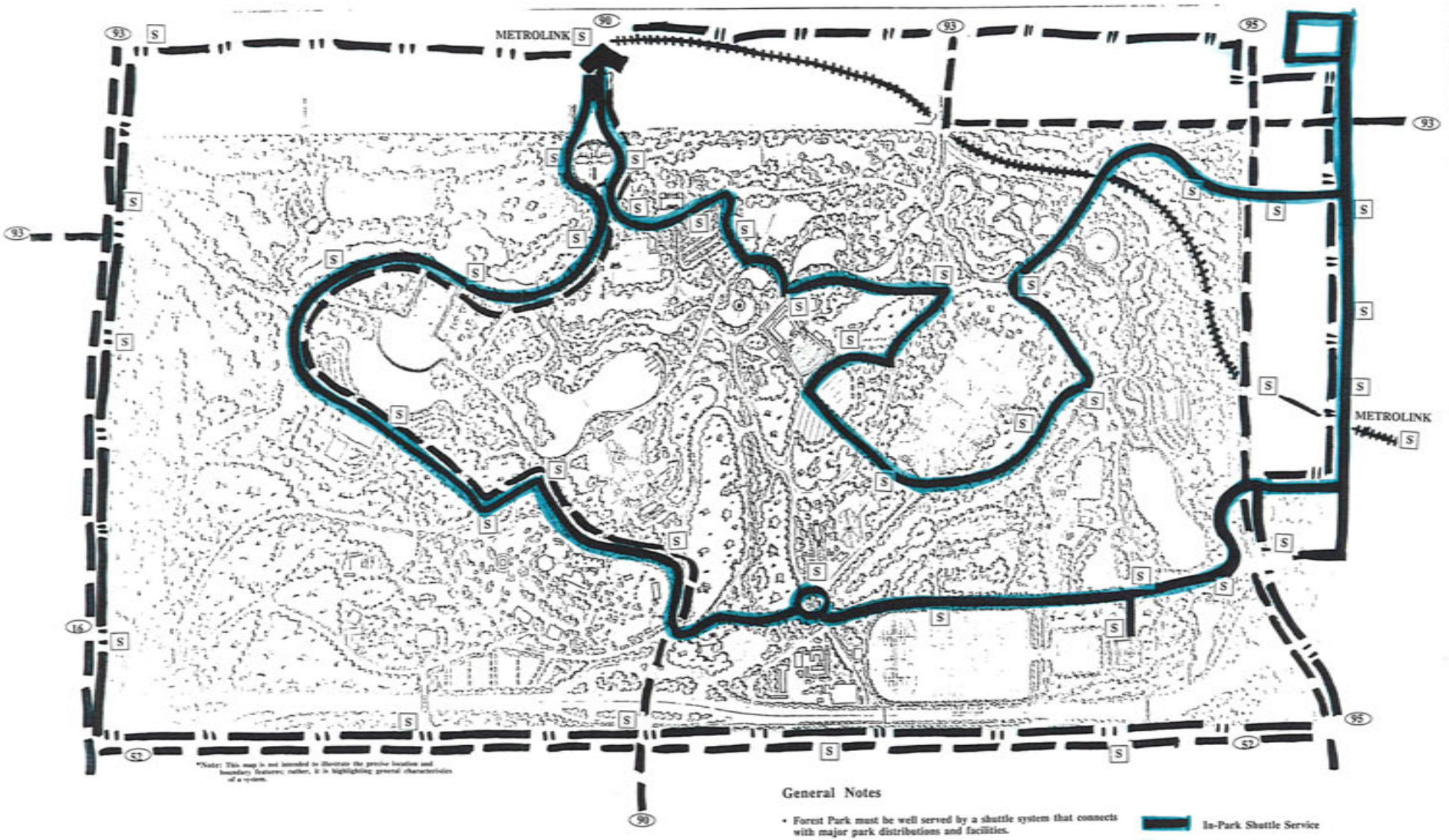
- Create regional, City and neighborhood linkages for all modes of circulation.

- Design the park's internal transit system to serve all major attractions and destinations and coordinate/link with neighborhood service and existing Bi-State transit service.

- Assure that all paths, transit and roadway systems intersect with the park's major parking lots, allowing each to serve as remote parking for all areas of the park.

- Cooperate with future transit planners to develop a park shuttle service, possibly with steel or rubber tires.

- Support a MetroLink extension along the south border of Forest Park to serve the Science Center, athletic fields, and Zoo.



*Note: This map is not intended to illustrate the precise location and boundary features; rather, it is highlighting general characteristics of a system.

TRANSIT OPTIONS

General Notes

- Forest Park must be well served by a shuttle system that connects with major park distributions and facilities.
- MetroLink routes are illustrative only.
- Coordinate station stops with Bi-State routes and institutions.
- Locate station stops for best access to Forest Park attractions.

In-Park Shuttle Service
Forest Park/Neighborhood Shuttle Service
Current Bi-State Bus Routes
S Station Stop

FOREST PARK MASTER PLAN

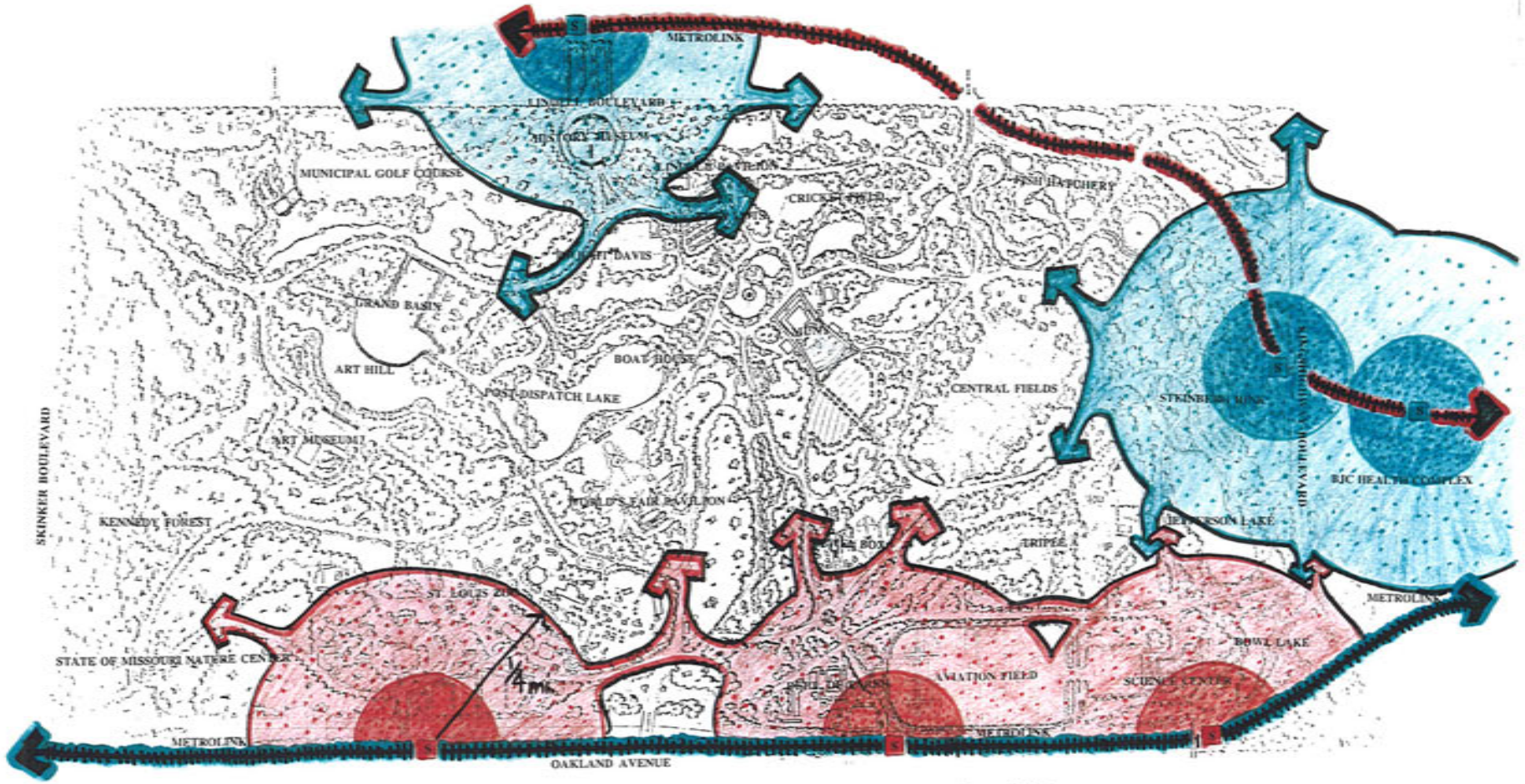
ST. LOUIS, MO

SCALE: 1"=400' 0 400 800 1600

18 NOVEMBER 1995

CITY OF SAINT LOUIS
DEPARTMENT OF PARKS, RECREATION AND FORESTRY
ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

FOREST PARK MASTER PLAN



*Note: This map is not intended to illustrate the precise location and boundary features; rather, it is highlighting general characteristics of a system.

General Notes

- The Master Plan supports a MetroLink extension along the Southside of Forest Park, which would serve the Science Center, Athletic Fields, Zoo and adjacent neighborhoods.
- Possible long-term transit option is a fixed rail circulator; to be determined via future planning efforts.

METROLINK LONG-RANGE VISION

FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE 1"= 400'

18 NOVEMBER 1995

CITY OF SAINT LOUIS
DEPARTMENT OF PARKS, RECREATION AND FORESTRY
ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

FOREST PARK MASTER PLAN