

COMMUNITY AREA STUDY

OLD JAMESTOWN AREA

An evaluation of a part of unincorporated St. Louis County for the St. Louis County Planning Commission, with the participation of the Old Jamestown Area Advisory Committee. Prepared by the St. Louis County Department of Planning. Adopted by the Planning Commission on April 4, 1988.

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GENERAL PLAN PROCESS

St. Louis County has employed a General Plan since the early 1940's. A County Charter revision approved in 1979 requires that the General Plan be reviewed and updated at five year intervals. One of many implementation strategies introduced in the 1985 update of the General Plan was the designation of two areas of unincorporated St. Louis County each year for detailed planning analysis. This study is the third to be initiated in this continuing refinement of planning efforts. In the past, the General Plan was informally supported by comparable "Areas Studies." A total of eight were developed by the Planning Department from 1980 to 1985.

PURPOSE OF COMMUNITY AREA STUDIES

The objective of the Community Area Study process is to improve on the land development decision-making process in areas anticipated to experience development pressures. The study focuses on land use decisions and, to a limited degree, includes comments related to designs. The study provides general projections for various interested parties who need to anticipate land use trends, demographic changes and program infrastructure improvements within the study area. Most importantly, it provides guidelines which can be applied to specific zoning petitions and other planning decisions to help maintain an overall consistency in the transition of the area to its projected fully developed state, even though that process may take many years.

The community area study process is conducted under the auspices of the St. Louis County Planning Commission. The process is initiated with the designation by the Planning Commission of a specific area for study and appointment by the County Executive of an Area Advisory Committee which includes residents of the local community, service providers, the development community, and members of the Planning Commission. Through a series of interactive meetings, the Advisory Committee provides direct input to the study report as it is assembled by the Planning Department. Additional input is gained from public comments received by the Advisory Committee during its meetings and later at a public hearing by the Planning Commission. The report is submitted first to the Planning Commission, then the County Council for consideration.

The fundamental criterion for the selection of an area for study is that it possess a pronounced potential for development activity in the near future. Planning decisions are given advance consideration through the study process and the resultant guidelines provide a link between the General Plan and the specific considerations relevant to individual sites. Development opportunities are identified for future reference. The study is not intended to supersede the technical review of staff or consideration of the merits of proposed developments by the Planning Commission and County Council. The consideration of site-specific design criteria is deferred to the normal review process. The study is intended to support those review processes by establishing guidelines, residential density ranges, and, where appropriate, future development alternatives to which future development proposals may be compared and adapted.

The guidelines describing the recommended development are based on an analysis of basic data and known factors. It is acknowledged that more detailed analysis through engineering reports and other review capacities of the County may refine these recommendations in some cases. Projections have been made from that information in order to develop alternatives and guidelines which will accommodate a range of development possibilities. Although new factors may emerge in the future, it is intended that the continuing development of this study area be guided within the ranges which have been recommended without the necessity of specific revisions to this document.

The scope of the study is necessarily limited to considerations related to developing and developable parts of the study area. A particular type of development or land use is influenced by numerous factors. Obvious examples would be road improvements and sewers. The principal application of the study report will be in consideration of land use decisions. Although road improvements and similar design elements will be considerations of the normal review process, the study report is intended to establish guidelines identifying appropriate land development by general characteristics.

SELECTION OF STUDY AREA AND DESIGNATION OF BOUNDARIES

The Old Jamestown area was selected for study after its consideration along with a number of comparable areas in the County, using a set of basic parameters. These included significant levels of predevelopment zoning and subdivision activity, availability of significant areas for further development, indications of increasing levels of service and infrastructure, and the identification of special issues or problems unique to the area. (See Map 3.)

Within the study area, a total of thirty-eight zoning petitions have been considered during the last five years. Although only two major residential subdivisions were proposed during the same time period, other subdivision activity has occurred in conjunction with zoning changes. Particularly to the west, significant development trends have emerged, resulting in infill of significant vacant parcels beyond the study area boundaries.

The area includes numerous parcels which are comparatively large and are occupied predominantly by agricultural or low density residential land uses. Essentially all parcels north of Lindbergh Boulevard retain the Non-Urban zoning designation as originally established by the Zoning Ordinance. The "NU" Non-Urban District has historically been used to encompass areas of the County where development patterns have not yet been established but it also includes many areas where topographic or geographic features inhibit urban scale development. A continuing sequence of land use transitions is anticipated to influence properties so zoned where a viable development pattern has emerged nearby and physical limitations do not prohibit development.

The improvement of the state highway interchange at Lindbergh Boulevard with Highway 367 (Lewis and Clark Boulevard) as well as other improvements on Highway 367 south of this point are programmed by the State of Missouri. Preliminary steps to the acquisition of right-of-way have been initiated at the time of this study. Anticipated county road improvements include the extension of Lindbergh Boulevard to Bellefontaine Road and improvements on Old Halls Ferry Road. Likewise, improvements to the MSD Coldwater Creek Treatment Facility will increase its capacity in the near future. County Water Company, Southwestern Bell Telephone, Laclede Gas Company and other service providers have extended services into the area. Jamestown Mall is a recognized regional commercial facility with a potential for further development.

Contrary to these factors which suggest a burgeoning development trend in the study area, there are factors unique to the area which will require attention in the future consideration of development proposals. These include the karst formations, (sinkholes), the Laclede underground gas storage facility, and flood plain of Coldwater Creek. These are discussed further in the following text.

The study area is bound by well defined and identifiable barriers on three sides, the Missouri River to the north, Highway 367 to the east, and Coldwater Creek to the south. To the west, the boundary was extended so as to include all significant contiguous parcels for which future development considerations may be required at some time. This boundary abuts Sioux Passage and Champ County Parks using property lines and Vaile Avenue, then following Old Halls Ferry Road to form a boundary for the remainder. Although the objective was to include all parcels with future development potential, some existing and approved developments were also included.

MAP 1

LOCATOR MAP

(INSERT HERE)

IMPLEMENTATION

The recommendations of the Old Jamestown Area Study will find application primarily in the County's implementation of provisions of the Zoning and Subdivision Ordinances and directly associated regulations. As the Planning Department and other Departments exercise counselling, review, or enforcement responsibilities, an additional opportunity for application of the recommendations in this plan is possible. Indirectly, choices made by the development community or service providers which are influenced by the study recommendations are still another form of implementation. In any case, the implementation of the land use recommendations will rely on the initiative of the private sector.

DEVELOPMENT HISTORY

Synopsis of Area History

Current residents of the area referred to as "Jamestown" are inheritors of a history that is truly unique in St. Louis County. To this day, the area has been able to maintain much of its original character from the turn of the century. Unlike many of the early settlements scattered across St. Louis County, the Jamestown area continues to invoke a rural, country flavor in the midst of a rapidly growing metropolitan area. This history has been included in many of the discussions leading up to the development of the Old Jamestown Community Area Study Plan, and to the extent possible, should be preserved.

The first historical reference to the area known as Jamestown is documented in June of 1819. It was at this time that Phenias James, one of the earliest settlers to this area, advertised the sale of lots in what he called "James' Town." According to his plans, a sizeable community would be started on the limestone plateaus that border much of the Missouri River in this area. It has been speculated by historians that Phenias James had visions of this settlement someday rivaling the City of St. Louis.

The dream Mr. James held never materialized. In the ensuing years after his first advertisement, little is heard from the community of "James' Town." Several roads were proposed to adjoin the existing network of roads (Lindbergh Boulevard and Parker Road) in the North County area, but the community itself never did generate similar interest.

It was not until 1847 that the community of Jamestown was first depicted on any of the early maps or surveys commissioned by the Survey General's Office. This first representation showed a community of some three and one-half blocks or approximately eight to sixteen homes. About this same time, numerous roads were being proposed in the general area under enabling legislation passed by the Missouri State Legislature granting corporations the right to build plank roads and charge tolls for their use. One such road, New Halls Ferry Road, is assumed to have been constructed under this authority.

Around 1862, a very detailed land ownership map was drafted for the north area of the County. On this map, the Jamestown settlement is no longer shown. Historians generally feel that the booming town of St. Ferdinand (Florissant) had siphoned most of the new growth away from the surrounding areas. This new map, however, finally substantiated the existence of Jamestown Road. The road followed a path basically similar to that of the existing roadway; starting at Parker Road and heading north to the area around what is now the Jamestown Mall and then continuing toward the Missouri River via Portage Road.

As a result of Florissant's growth and additional development elsewhere in the North County area, Jamestown was spared from some of the pressures of urbanization. Its early ties remained to the Missouri River, with many of its first residents and property owners coming from the burgeoning trade business between St. Louis and western Missouri brought on by the advent of the steamboat. Additional residential development occurred in the following years; but, at best, the Jamestown area remained sparsely populated through much of its early history.

It was not until the years after World War II that the area began to grow in terms of business and increasing residential development. Even then it was not until the early 1970's that the first true post-war subdivision became a part of the Jamestown area - Fox Manor (1970). Subsequently, in 1972, the Jamestown Mall opened as the area's major regional shopping center. Additional residential development followed, but, again, not anywhere near the levels experienced in the central and western portions of St. Louis County.

Since the early 1980's, developmental pressures have been exerted in areas which had not been previously considered. Because of scarce land and higher prices in other parts of the County, these areas are now on the verge of absorbing rising levels of new growth. This is the predominant reason for the Community Area Study process being undertaken in the Jamestown area.

Land Use Trends

The interaction of several geographical and economic factors within the Old Jamestown Study Area has produced a pattern of existing land use which is distinctly different from that of any other portion of St. Louis County. Additionally, the character of the land, its underlying geology and resultant land forms, have had a significant impact upon land use patterns in the area, especially as related to karsted areas. Historically, these factors did influence land use patterns and will continue to do so long into the future.

The general land use trend in the study area has been a slow rate of transition from the historic agricultural and residential uses resulting, to date, in the characteristic large parcel residential development. Most new development has been focused in the vicinity of Lindbergh, and more recently the Old Halls Ferry/Vaile Roads area. Consequently, the availability of utilities and roads has not been increased in the established low density settlement area. Another strong physical influence has been the presence of sinkholes. The existing residential pattern represents a functional adaptation to that limitation. Private water, sewage disposal and roads are typical of most sites. As external factors affect the future development potential in the area, the previous slow rate of transition may be accelerated. Important future factors will include improving utility access, and road improvements in and around the area.

TABLE 1
Area By Land Use Category

<u>Category</u>	<u>Acreage</u>	<u>% of Total</u>	<u>Countywide Average (%)</u>
Single Family Residential	1071.5	23.1	30.4
Multiple Family Residential	25.8	0.6	2.5
Commercial	128.5	2.8	4.3
Industrial	598.6	12.9	3.4
Cultural/Recreational	113.9	2.5	8.0
Community Facilities	104.4	2.2	4.3
Vacant	2412.0	52.0	29.0
Other	82.3	1.8	0.1
Right-of-Way (R.O.W.)	<u>101.4</u>	<u>2.2</u>	<u>18.0</u>
TOTAL	4638.4	100.0	100.0

Source: St. Louis County Department of Planning

Expanding upon this information, several observations can be made regarding the current pattern of land use in the Old Jamestown Study Area:

- Commercial development within the study area is primarily regional in scale given that the Jamestown Mall Shopping Center constitutes almost 50 percent of the 128.5 acres in this category. Beyond the boundary of the study area but accessible to residents are various commercial developments, concentrated on surrounding arterial roads.
- The study area's entire concentration of multiple family residences is entirely contained within a single, condominium development (River Oaks). However, there is a significant number of multiple family residences adjacent to the study area or proposed for future development.
- Cultural/Recreational uses actually situated within the study area are limited and consist of subdivision common ground (flood plain and sinkholes), one privately-held park and recreational facilities that are not freely accessible to the general public (Chambers Park and the Twellman Sports Complex). Two County parks adjoin the study area.
- The small amount of land dedicated to existing road right-of-way is indicative of the level and type of residential development that has occurred in the study area - large lot residences served primarily by a private road system.
- Community facilities are almost non-existent in the study area. One use, the Pallottine Missionary Sisters Facility, represents over 61 percent of the total area in this category. The balance of these community facilities include two churches, one fraternal organization headquarters, and a cemetery.
- Undeveloped, vacant land exceeds 2,400 acres. Many large, vacant parcels are scattered throughout the area, but concentrations do exist in the karsted areas and along Old Halls Ferry Road and Vaile Avenue.

- Approximately 2,200 acres are directly affected (visibly obvious as topographic feature) by Karst topography. This represents 47 percent of the total area within the study boundaries.

Zoning and Subdivision Trends

The most significant zoning occurrence in the study area was the adoption of the 1965 St. Louis County Zoning Ordinance. Prior to this date, numerous parcels throughout St. Louis County did not have a zoning classification. It was not until some change in use was proposed, that the County zoned the property. After this date, however, every parcel that did not have a current zoning designation was brought in under the "NU" Non-Urban District classification or some other appropriate zoning district classification.

Specifically, in the Old Jamestown Study Area, many of the properties north of Lindbergh Boulevard were zoned to the "NU" Non-Urban District designation and to the R-2" 15,000 square foot Residence District south of Lindbergh Boulevard. What remains today is very similar to that of the initial 1965 rezonings. This is not to say that changes have not occurred over the ensuing two decades, but overall, these two categories still constitute 90 percent of all zoning acres in this area (see Table 2). The definition of the "NU" Non-Urban District is included in Appendix 5.

TABLE 2

Area by Zoning Category

<u>Zoning Category</u>	<u>Acres</u>	<u>% of Total</u>
"NU" Non-Urban District	3520.8	77.8
"R-1" One Acre Residence District	59.6	1.3
"R-1A" 22,000 square foot Residence District	12.5	0.3
"R-2" 15,000 square foot Residence District	563.6	12.5
"R-3" 10,000 square foot Residence District	15.6	0.3
"R-5" 6,000 square foot Residence District	79.4	1.8
"C-2" Shopping District	0.4	0.0
"C-8" Planned Commercial District	146.1	3.2
"FPNU" Flood Plain Non-Urban District	50.5	1.1
"FPR-2" Flood Plain 15,000 square foot Residence District	75.6	1.7
TOTAL	4524.1*	

* Total does not include right-of-way figure.

Source: St. Louis County Department of Planning

Since 1965, a number of rezonings have occurred in the study area with the majority of them taking place within the last six years. Beginning in 1982, the Department of Planning has received 38 requests for rezoning in the area. Of those 38 petitions, 24 were approved, 6 were denied, 6 were withdrawn by the petitioner prior to action by the Planning Commission and the County Council, and 2 are pending action during the preparation of this study. The largest rezoning was initiated in 1985 and has continued to date with the development of River Oak Estates. The initial rezoning called for a change from the "NU" Non-Urban District to the "R-2"/"R-5" Residence District designations with a Planned Environment Unit (P.E.U.) and "C-8" Planned Commercial District for neighborhood office/retail uses. Subsequently, two other petitions have been approved for additional residential development at the "R-2" Residence District density. A summary of zoning petitions since 1982 in the Old Jamestown Area is shown in Table 3.

TABLE 3

Zoning Activity Since 1982

Part I: Approved Rezoning Requests Within the Old Jamestown Study Area
(since 1982)

Map Locator	Petition Number	Zoning Change	Name - Planning Subarea	Size (acres)
06G540044	11-82	C.U.P.	Twellman Sports Complex - 11	13.8
06F240011	69-82	C.U.P.	Fountain Head Manor - 13	10.3
06F410047	48-83	"R-2" to "C-8"	Lake James Mall - *	15.6
06G630013	106-84	"NU" to "R-2"/"R-3"	Village of Fours - 11	--
06G630013	107-84	P.E.U.	Village of Fours - 11	18.2
06F430034	12-85	"NU" to "C-8"	Jamestown Center - 11	29.4
06G130113	13-85	"NU" to "R-2"/"R-5"	River Oaks - *	--
06G130113	14-85	P.E.U.	River Oaks - *	56.8
06G130113	15-85	"C-8"	River Oaks - *	3.8
05H630055	143-85	"NU" to "R-1"/"R-1A"	Glen Eagle - 4a	--
05H630055	144-85	P.E.U.	Glen Eagle - 4a	66.1
06G540044	191-85	C.U.P.	Twellman Sports Complex - 11	13.8
06F240011	165-86	C.U.P.	Fountain Head Manor - 13	10.3
06F330033	203-86	"R-2" to "C-8"	Adolphus and Green - 13	2.5
06H620013	70-86	"NU" to "R-2"	River Oaks - *	--
06H620013	71-86	P.E.U.	River Oaks - *	25.1
06G410046	29-87	"NU" to "R-2"	River Oaks - *	--
06G410046	30-87	P.E.U.	River Oaks - *	9.5
04G410022	70-87	"NU" to "R-1"	Park Argonne Estates - *	--
04G410022	71-87	P.E.U.	Park Argonne Estates - *	49.0
04F210054	131-87	C.U.P.	West Lake Quarry - 9	33.4
06G630080	146-87	"NU" to "R-2"/"R-3"	Bay Pointe - 11	--
06G630080	147-87	P.E.U.	Bay Pointe - 11	23.2
06F330055	200-87	"R-2" to "C-8"	Moon Enterprises - 13	2.4

Part II: Withdrawn or Denied Rezoning Requests Within the Old Jamestown Study Area (since 1982)

Map Locator	Petition Number	Zoning Change	Name - Planning Subarea	Size (acres)
06F520124	141-84	"NU" to "C-8"	Afshari, Inc. - 13	6.0
06G110241	166-84	"R-2" to "C-8"	Colyer - 12	2.2

continued

Map Locator	Petition Number	Zoning Change	Name - Planning Subarea	Size (acres)
06F430034 and 06F430056	10-85	"NU" to "R-2" and "R-6"	Walters-Kroenke - 11	--
06F430034 and 06F320056	11-85	P.E.U.	Walters-Kroenke - 11	57.3
06G110203 04G610068	17-86 24-86	"R-2" to "C-8" C.U.P.	Centerre Bank - 12 Florissant Valley Memorial Post - 2	1.8 9.4
06F520124	78-86	"NU" to "C-8"	Afshari, Inc. - 13	4.9
06F110164	168-86	"R-2" to "C-8"	Behlmann - 12	2.6
05F120020	181-86	C.U.P.	Hopkins - 8	6.0
06H640012	27-86	"NU" to "R-3"	Willen - 4b	--
06H640022	28-86	P.E.U.	Willen - 4b	17.0
06G530045	64-87	C.U.P.	Twellman Sports Complex - 11	39.1

Part III: Petitions Filed During Study - (Pending)

Map Locator	Petition Number	Zoning Change	Name - Planning Subarea	Size (acres)
05FH10045 and 05H510034	1-88	"NU" to "R-3"	Kemp - 3	--
05FH10045 and 05H510034	2-88	P.E.U.	Kemp - 3	31.7
06G110263, 06G110203 and 06G110274	3-88	"R-2" and "C-2" to "C-8"	Mobil Oil - 12	1.75

* These sites were not included in any of the planning subareas since they represent developed areas.

-- Indicates that the petition is part of the Planned Environment Unit (P.E.U.) process and will reflect the same acreage figures as its accompanying petition.

Source: St. Louis County Department of Planning

Reviewing the sequence of rezonings will reveal that each of the 24 approved rezonings was for either residential or commercial type uses, except for the Conditional Use Permit (C.U.P.) granted to the West Lake Quarry site in 1987. Geographically, the corridor along Lindbergh Boulevard, particularly at the intersections of Old Halls Ferry Road, Old Jamestown Road, and Highway 367 (Lewis and Clark Boulevard), represents the hub of recent rezoning activity. Additional rezonings have occurred at scattered sites throughout the study area and generally were for the development of large-lot subdivisions (Deer Valley and Parc Argonne Estates are two examples).

Currently, there are six existing subdivisions within the study area with an additional four proposed. Traditional subdivision development is not prevalent in the Old Jamestown area. Most residential development has occurred on single, separate lots of three acres or more in size. Fox Manor and Lake James Manor represent residential development which has occurred via the more traditional post-war subdivision process, at a density of two or more units per acre.

Despite this trend, the most recent rezonings have been at densities that include up to four units per acre (see Table 4).

TABLE 4

Existing and Proposed Subdivision Developments

EXISTING:

Subdivision			Size	Acres	Sewage
<u>Name</u>	<u>Units</u>	<u>Petition</u>	<u>(acres)</u>	<u>Per Unit</u>	<u>Disposal</u>
Deer Valley	17 S.F.	LLSF	54	3.18	Private
Fox Manor	176 S.F.	Adopted with '65 Z.O.	87	0.49	MSD
Jamestown Farms	52 S.F.	LLSF	165	3.17	Private
Lake James Manor	214 S.F.	Adopted with '65 Z.O.	113	0.52	MSD
Old Jamestown Court	10 S.F.	LLSF	35	3.50	Private
River Oak Estates	184 S.F. 205 M.F.	13-85, 14-85, 15-85, 70-86, 71-86, 29-87, 30-87	92	0.50	MSD

PROPOSED:

<u>Subdivision Name</u>	<u>Units</u>	<u>Petition</u>	<u>Size (acres)</u>	<u>Units Per Acre</u>	<u>Sewage Disposal</u>
Bay Pointe	69 S.F.	146-87 and 147-87	23	0.33	MSD
Glen Eagles	96 S.F.	143-85 and 144-85	66	0.69	MSD
Parc Argonne Estates	44 S.F.	70-87 and 71-87	49	1.11	MSD
Village of Fours	68 M.F.	106-84 and 107-84	18	0.26	MSD

LLSF Large lot single family subdivisions do not require a rezoning in a "NU" Non-Urban zoning district.

MSD Metropolitan St. Louis Sewer District

S.F. Single Family

M.F. Multiple Family

Source: St. Louis County Department of Planning

CURRENT LAND USE

An analysis of current land use patterns in the study area identified a prominent residential pattern, several major institutional uses, a limited amount of diversity between uses, and a substantial amount of vacant land not in agricultural production or otherwise developed.

A comparison of the various land uses within the study area is provided in Table 1. The prevailing character of the area is defined by two land uses. They are single family residences and, as mentioned, vacant, undeveloped land. Combined, these two uses constitute almost 3,458 acres of the total 4,638 acres in the Old Jamestown Study Area. This represents approximately 75 percent of current usage. Over half of the area (52 percent) falls into the category identified as "vacant". This category is actually a composite of several types of land use. It includes mainly parcels which are neither cultivated or occupied, but also includes those which are used agriculturally, and exceptionally large parcels (10 acres or more) which are occupied by a single residential user. The next largest total area is the residential category which includes about 23 percent of the study area. This includes about 600 residential lots which are part of one of the five prominent subdivisions platted within the area. The balance of the residences are on lots of one to ten acres, except for the multi-family residences in the River Oaks development. The existing pattern of active land uses within the study area is dominated by the large area of low density residential development typical of the current settlement pattern.

Another important land use is the industrial classification. Of the remaining 1155 acres, industrial uses represents 50 percent. Countywide, industrial land use averages only a little more than three percent of the total area. The figure for the Old Jamestown Study Area is 12.9 percent or almost 600 acres. These identified industrial uses do not reflect the development of light or heavy-industrial type uses, but rather two major industrial uses (Laclede Gas holdings, the Metropolitan St. Louis Sewer District Coldwater Creek Treatment Facility), and one extractive industry (West Lake Quarry). By far, the Laclede Gas Holdings represent the greatest proportion of that total, approximately 550 acres. Otherwise only a few small industrial uses occur within the area. These include the water storage tank owned and operated by the St. Louis County Water

Company, a Union Electric substation off Lindbergh Boulevard, one small manufacturing firm east of Old Halls Ferry Road, and a number of scattered well sites owned by the Laclede Gas Company. This land use category is important as a result of the implication it has for the pattern and magnitude of future land use transitions.

Nearly all the commercial uses within the area are situated on or near Lindbergh Boulevard, although a few commercial uses have been established elsewhere. Most of the commercial use is in the form of major shopping development at Jamestown Mall. The precedent of existing uses and approved zonings tend to concentrate the commercial uses at the three intersections of Old Halls Ferry Road, Old Jamestown Road, and Lewis and Clark Boulevard with Lindbergh Boulevard. The existing commercial land use constitutes 2.8 percent of the area.

The other land uses which comprise the remaining 8.4 percent, are divided between recreational, community facility, right-of-way, and other uses not included in the previous categories.

The ample size of many of the existing parcels and adjoining residential parcels with very low density suggests the possibility of assembling significant developable sites where the physical constraints are not a prohibitive factor. The Jamestown Mall site is anticipated to expand in the future from its current size of 850 thousand square feet of gross floor area (58 percent of which is dedicated to sales area). Tentative plans call for the eventual addition of another large, major retail store similar to that of Dillard's or Sears-Roebuck. A formal timetable has yet to be set for this addition. This further indicates the potential that additional large scale development, which has occurred elsewhere in the County and in nearby areas, may soon be considered within the study area. It is not possible to predict the location, size, or timing of such assemblies due to the fact that the process is a function of the local real estate market and private transactions.

CURRENT ZONING

The proportions of existing zoning districts are shown in Table 2, and illustrated on Map 2. With a total of 77.8 percent of the total area, the "NU" Non-Urban District is the predominant category. A significant percentage of the development which has occurred, to date, has been in accordance with the regulations of the "NU" Zoning District. Nearly all past rezonings have been oriented to Lindbergh and, recently, to the readily developable western part of the study area.

The "C-8" Planned Commercial District comprises 3.2 percent of the area, a total area of 146 acres. This includes the Jamestown Mall site and several rezoning sites not all of which are developed. The balance of the zoning is residential, ranging from one acre to 6,000 square foot minimum lot sizes. The percentage of these is between one and two percent each. (See Table 2.)

MAP 2
LAND USE AND ZONING
(INSERT HERE)

INFRASTRUCTURE AND SERVICES

The provision of utilities within the study area is not extensive, although adequate to serve the existing low density residential use pattern. These utilities are available in varying degrees depending on where extensions have been made (see Map 3). For example, natural gas and public water supplies are available in some parts, electricity and telephone services are available throughout. These and other service distribution systems could be expanded if future development occurs and demand is identified.

Roads and sanitary sewers are influential elements of the infrastructure of the area and have shaped its current state of development. Both have been restricted due to physical constraints and the absence of demand. Although the Coldwater Creek Wastewater Treatment Facility borders the area, the extension of sewer lines into the area north of Lindbergh Boulevard has been undertaken only recently. With the completion of the Del Castle Subtrunk sewer, a watershed of about 0.7 square miles west of Old Jametown Road and on both sides of Lindbergh has been opened to future sewer service connections. The roads serving the area form a series of interconnecting loops which provide a basic circulation system with access to most parcels oriented directly to these roads. They are augmented by private roads to serve the parcels without frontage on a public right-of-way. To date, a more extensive system of roadways has not been necessary.

Significant improvements to handle stormwater have been minimal except for developments in the vicinity of Lindbergh. The normal discharge of surface water is interrupted at numerous points where the natural discharge is to sinkholes and then to subsurface drainage through limestone formations. For the purpose of reviewing proposed stormwater improvements, sinkholes are not considered an appropriate discharge point for increased levels of stormwater discharge by St. Louis County. As a result, the few developments which have occurred or been considered in the karst areas have been required to prohibit increasing the naturally occurring stormwater discharges into sinkholes. With its current low density residential pattern, most of the area's stormwater continues to follow its natural, unimproved course. In May of 1987, the U.S. Army Corps of Engineers issued a feasibility report on alternatives for the mitigation of flooding problems on Cold Water Creek. If effected, these major channel improvements upstream and locally would benefit properties within the study area which are adjacent to the flood plain.

Community service providers such as the Black Jack Fire Protection District and Hazelwood School District have maintained services in the area and have acquired necessary sites for future expansion of service capability when demanded. Police, parks, libraries, and other services are extended to the area by St. Louis County, also on the basis of demand. No changes in the service levels are anticipated unless demand is increased.

MAP 3
INFRASTRUCTURE
(INSERT HERE)

DEMOGRAPHICS

The population now living within the study area was estimated. The population was also analyzed to develop some descriptive characteristics. These study area population and demographic characteristics were compiled from Census block group and block statistics. Some interpolation was required, since the study area does not correspond exactly to block groups. The findings were as follows:

- The 1980 population of the study area was approximately 2,165 persons. Between 1980 and 1987, the population increased to an estimated 2,680, a 24 percent increase, a very rapid increase compared to the estimated 2 percent increase for the County as a whole. This is due to recently approved development.
- The median age in the study area is estimated to be 32.5, as compared with 31.3 for the whole County. In spite of the higher median age, there is a larger percentage of children under 18 (32.9 percent as compared with 27.5 percent for the County) and a smaller percentage of persons over 65 (6.4 percent as compared with 10.5 percent for the County). These figures would suggest that persons who have established families and have not yet reached retirement age are predominant.
- The study area had a higher percentage of professional and white collar workers (69 percent) than the County as a whole (which had 65 percent in those categories). Median household income for 1979 in the study area (\$27,261) was higher than that of the County (\$22,128).
- Persons who had completed some college represented 47 percent of the study area adult population, a considerably higher percentage than the Countywide figure of 39 percent.
- According to the 1980 Census, the racial mix in the study area was very close to that of the County as a whole: it was 87 percent white, 12 percent black and 1 percent other races.
- The study area had only 20 multi-family units in 1984 and now has 94 occupied multi-family units and an additional 179 which have been approved to date. There are no apartment complexes in the study area.
- At the time of the 1980 Census there were no multi-family units in the study area. Currently, there is a condominium project under construction on Old Halls Ferry Road just north of Lindbergh. A total of 206 condominiums were approved for that development and approximately 160 have been completed through September of 1987. An additional 68 multi-family units were approved in 1984 for a site on the north side of Lindbergh, but construction has not begun.
- Within approximately a mile of the study area there are three other condominium complexes with a total of 269 units and two apartment complexes with a total of 598 units.
- About a fourth of the area's present 886 housing units have been added since 1980, and additional units are under construction.

Census figures from 1980 indicate that the area has a predominance of educated professional and white collar workers in family households with school age children. The addition of multi-family condominium units since 1980 may change the mix of age groups and household types somewhat, since young single people and retired people are found in higher percentages in condominiums than in single family homes.

ENVIRONMENTAL FEATURES

Analysis

Since World War II, St. Louis County has experienced a period of phenomenal population and housing growth (144 and 217 percent respectively). As development accelerated to meet this growing demand, urbanization moved away from the City of St. Louis and those surrounding inner-ring communities to areas adjacent to the system of major arterials that crisscrossed much of the remaining rural land in St. Louis County.

Historically, the land that was first developed has been relatively free of the physical constraints that characterize much of today's remaining acreage. Construction and engineering costs of this early development were relatively low. Often these lands had little or no forest cover, had slopes of less than ten percent, were not in the floodplain, and were free of restrictive surface or subsurface conditions that would otherwise render them unsuitable for development.

Today, conditions have dramatically changed. Much of the remaining undeveloped or vacant land can be classified as marginal or restrictive especially for intensive residential and commercial development. Several environmental conditions contribute to this; they are:

- a) extensive forest cover,
- b) moderate to steep slopes (usually greater than ten percent) and irregular terrain,
- c) unfavorable soils or geologic conditions, (such as outcrops or sinkholes) or
- d) location within a floodplain.

In many cases these environmental conditions can be mitigated to allow for development. However, development will be more expensive in terms of the engineering and construction costs, and each development will have to acknowledge the carrying capacity of the land or cause environmental degradation. In such cases, no further development should be encouraged without corrective measures and existing development should be prohibited from compounding the problem.

St. Louis County has instituted a policy requiring the submission of geotechnical reports for certain developments in areas considered potentially unsuitable because of soil or geologic conditions. These reports are meant to review the suitability of a particular development, given the physical properties of the bedrock and overlying unconsolidated materials onsite. With the assistance of the Department of Geology and Land Survey of the Missouri Department of Natural Resources, an established 18-unit classification system based on topography, soils, drainage and engineering properties of soils was adapted to use as an indication of need for a geotechnical analysis. Eight of the eighteen units have been designated as requiring report submission for the entire County. Within the Old Jamestown Study Area, two of the eight units are present. These units, IIb and IIc, occur over all but the western and northern perimeter of the study area, including all the area where sink holes also occur. Consequently a geotechnical report would be required throughout the area influenced by karst formations. In addition to other factors of soil stability given consideration in the reports, the influence of sinkholes on construction design and technique should be highlighted as related to structural, road, stormwater, and other utility improvements. Groundwater effects should likewise be addressed as related to active sinkholes. Findings of a geotechnical report are applied during review of subdivision plats and improvement plans, and where appropriate, reflected in ordinances formulated for special procedure zonings.

Many of these limiting environmental conditions do exist in the study area. Through an inventory process, aimed at revealing the natural features and characteristics that are intrinsic to the study area, broad physiographic regions depicting the existing environmental status can be derived. Three such physiographic regions were identified by this process within the study area. They are:

- approximately four square miles of the study area's seven and a quarter square miles are characterized by a karst-type topography (upland areas, low relief with numerous surface depressions, rapid groundwater percolation, and few surface streams)
- approximately one square mile of the study area is characterized by rolling or steeply rolling hills (upland areas, dissected by numerous small streams; erosion has been severe along steeper slopes, and slopes generally range between ten to over twenty percent)
- the remainder is characterized by a smooth rolling-type topography (upland areas, average slope varies between five and fifteen percent, portions located within the Coldwater Creek floodplain, and extensive forest cover in that floodplain)

Within these regions, environmental conditions can vary based upon the actual site-specific location.

The region of karst topography located in the study area is recognized as being one of the finest examples of deep funnel-shaped sinkholes in the central United States. This type of topography presents serious constraints to urban development. Problems associated with karst topography include: soil creep near sinkhole depressions, localized flooding around those features, and potential groundwater contamination from stormwater runoff and sewage effluent.

An upland area of rolling to steeply rolling hills borders the Missouri River and forms an impressive escarpment from the vicinity of Pelican Island to the Columbia Bottoms area. This type of topography limits urban development when slopes are greater than twenty percent. Problems associated with development on steep slopes include increased erosion and foundation instability.

There are large areas of nearly level land located in the study area. This type of topography does not usually inhibit urban development. This area is concentrated along Lindbergh Boulevard from east of Old Halls Ferry Road to west of Highway 367 (Lewis and Clark Boulevard).

Much of the physiographic uniqueness of this area is attributable to the underlying geology. Climatic conditions, acting over long periods of time on these rock units, have shaped relief, elevation, and slope. Those rock units which are exposed in the Old Jamestown Study Area cover three separate geologic time periods, each of which reflects different environmental conditions at the time of deposition, and a distinct interval of time or age in earth history. A detailed analysis is included in the Appendix.

Karst Formations

With approximately four square miles of the study area being directly influenced by some visible type of karst feature, an understanding of the basic concepts surrounding their formation and the potential environmental risks they present is essential to the implementation of planning recommendations and guidelines for affected sites. Without consideration of this information, recommendations and guidelines that have been developed may not be correctly tailored to all the environmental concerns.

Four conditions are essential to the development of karst topography. Each condition exerts a level of influence on the development of karst features in the area. In the Old Jamestown Study Area, these features have formed in ideal conditions.

The first condition that is integral to karst development is the presence of a soluble rock type at or near the surface; typically this is a limestone. The karsted areas in Old Jamestown are underlain by the St. Louis Formation which is a limestone.

The second condition fundamental to the development of karst features is that the shallow bedrock be a soluble rock type which is also dense, highly jointed, and usually thinly bedded. This results in numerous vertical and horizontal joints through which water is transmitted, slowly enlarging the openings by dissolving the rock. This is a point that is frequently overlooked when karst topography is discussed. Often, it is assumed that the major prerequisite for karst formation is the presence of a permeable or porous limestone. As a matter of fact, mass permeability is unfavorable for the formation of the cavities by dissolution. Permeability as permitted by numerous joints and bedding planes is ideal. If a rock is highly porous and permeable throughout, rainfall will be absorbed en masse and move through the whole body of the rock rather than be concentrated along joints which is essential to karst formation. In the study area, the St. Louis Formation is a dense, thinly bedded, and highly jointed limestone, perfect for karst development.

The third condition which favors the development of sinkholes is the existence of an entrenched valley which lies lower than the upland area which is underlain by the soluble and highly-jointed rock unit. This condition favors the collection and downward movement of the groundwater through the rock. Good water circulation is a prime prerequisite; moving water encourages solution (the dissolving of the rock). The Missouri River watershed encompasses the entire karst region in Old Jamestown. Groundwater flow is directly into the Missouri River from this watershed.* The Missouri River, since the last glacial episode, has continued to cut through soil and rock layers in forming this substantial entrenched valley. The karst plain in the Old Jamestown Study Area lies above the valley floor of the Missouri River, thereby facilitating the movement of groundwater through the subterranean drainage system.

Finally, the fourth condition is the occurrence of adequate rainfall. Without sufficient amounts of precipitation, groundwater movement is slowed and, as a result, solution of the limestone would be reduced to inconsequential levels. The St. Louis Metropolitan Area receives in excess of 33 inches of precipitation annually. This amount of precipitation is more than sufficient to continue to power the karst cycle.

It is apparent that the four conditions essential to karst development exist in the Old Jamestown Study Area and have etched a distinctive landscape. Landforms that are characteristically found in karst regions, including the Old Jamestown Study Area, include:

- 1) Sinkholes - depressions that vary in depth from a mere indentation of a few feet to a maximum of 200 feet or more. In area, sinkholes can range from a few square yards to several acres. The most common form is a funnel shape which broadly opens upward.

* Groundwater flows documented in the St. Louis County Department of Planning's report titled, Analysis of Five Watersheds, p.8c. (Prepared for the U.S. Army Corps of Engineers as part of the Metro Study, 1976.)

- 2) Sinkhole ponds or karst lakes - sinkholes which have become clogged with inwashed clay to such an extent that they will hold water above the regional water table.
- 3) A karst plain - a plain on which sinkholes, subterranean drainage, and other karst features are developed.
- 4) Disappearing streams or losing streams - surface streams that disappear underground into a sinkhole.

These physical features are the outward sign that solution has occurred and is continuing to occur beneath the soil layer. The resultant landform can eventually dictate the location and level of development in a karst area. This becomes a consideration because of the fragile nature of a karst environment. For example, a system of sinkholes can act as a virtual sieve allowing large volumes of surface water and groundwater to move throughout the system. With the ability to move water at this high rate, groundwater degradation becomes a major concern due to the limited amount of filtration the water receives as it passes through the soil and rock layers.

Similarly, sewage effluent can present an even greater problem in a karst area. Without adequate filtration, sewage effluent, especially from septic systems, can enter the groundwater system virtually untreated. It is important that in karst areas, septic systems be properly installed, maintained, and regularly monitored to insure compliance to accepted standards of operation. A mechanically aided aeration septic system generally is needed because of steep slopes and the presence of sinkholes which reduce the possible size of the fields.

The basic hydrology of a karst area, as has been shown, is the movement of groundwater through the rock units along joints and bedding planes. Karst areas generally seem to remain relatively stable over time. This can be attributed to the protracted rate at which solution occurs. Concerns have been expressed that new development in this area will cause increases in stormwater runoff, groundwater depletion, and the discharge of sewage effluent, thereby speeding up the rate of solution substantially, and that this increased rate will then lead to incidences of sinkhole collapse and groundwater degradation.

Although, there are numerous examples of these occurrences happening across the country, this may not always be the case. Each karst region, whether it be Florida, Indiana, Kentucky, New Mexico, or Missouri, is unique and will react differently to changes in the karst cycle. Because of the variability among regions, it is imperative that the recommendations and guidelines be area-specific and actually address conditions that exist in that area. Influences that have shaped events in Florida, like sandy soils, a high water table, and a sub-tropical climate, are not all characteristic of the Old Jamestown Study Area. If parallels are too tightly defined between different geographic regions, those intrinsic characteristics that govern how soil and rock units will react to natural or man-made changes are not really being taken into account. Ideally, to insure this does not occur, each new building site should have a detailed on-site soil and geologic investigation performed to identify these characteristics.

Future implementation of recommendations and guidelines should reflect existing conditions in the area along with sound engineering and design principles. The Missouri Department of Natural Resources has developed an "Empirical Rating System" to be used in the determination of limitations for the siting of individual liquid-waste disposal systems. It is described in [Engineering Geology Report #7, Geologic Aspects of Individual Home Liquid-Waste Disposal in Missouri](#). Limitations in the study area correlate to at least a moderate range and indicate that significant

groundwater pollution hazards exist. Application of the empirical ratings system should be repeatedly applied in the future to avoid sites or circumstances where a "severe range" of limitations is present. In that case it is indicated that "regional groundwater contamination is likely" and that the "hazards are so severe that elaborate and costly engineering procedures may not be totally successful."

There are a number of general characteristics that all the karsted areas in Old Jamestown exhibit; these provide an overall framework for the development of more specific recommendations and guidelines. These characteristics are:

- 1) The area has a high aesthetic value given its unique landscape.
- 2) The ridges between sinkholes generally offer the best potential building sites.
- 3) The sides of sinkholes characteristically have slopes that are too severe (9 to 30 percent) to permit development.
- 4) The bottoms of sinkholes are unsuitable for development since they act as natural drainage points for the area.
- 5) Karst areas are generally unsuited for man-made water impoundments.

Laclede Gas Company's Storage Facility

The largest, single landowner in the Old Jamestown Study Area is the Laclede Gas Company. Currently, this utility owns in excess of 550 acres. This represents just under twelve percent of the total area within the study boundaries. Because of this ownership, the Laclede Gas Company has and will continue to exert a strong influence in the area.

These underground storage facilities and the surrounding 550 acres are situated just south of Old Jamestown Road along Sinks Road. The entire Laclede Gas Holdings lie in the karsted region of the study area. Physiographically, this means the area is characterized by numerous surface depressions (sinkholes) ranging from a fraction of an acre to about two acres in size, a limited number of well-defined surface streams, localized shallow water impoundments in some of the surface depressions, rapid groundwater percolation, and low relief. Additionally, due to the nature of this facility's operation, the terrestrial community has remained relatively unchanged over the past three decades. Portions exhibit an extensive forest cover (oak and hickory), or where clearing has occurred, lie idle or in pasture. This area provides an excellent habitat for a variety of wildlife (white-tail deer, gray squirrel, cottontail rabbit, opossum, raccoon, etc.) and birds, representing an unmatched open space in an urbanizing area.

At this time, the Laclede Gas Company operates a storage and transmission facility for propane and natural gas. Also on site are a number of oil producing wells. These wells annually produce over 8000 barrels of crude. The crude oil production is a by-product of the storage process. This facility currently carries a 29 billion cubic foot inventory of natural gas and a 33 million cubic foot inventory of propane. Interestingly, the propane is used as an additive to the natural gas during periods of extreme cold to enhance its heating content. Essential to the operation is a variety of wells, piping, storage facilities, and transmission equipment. Presently, on site, there are 28 observation wells, 50 injection/withdrawal wells, a man-made propane storage cavern, and 6 recapitulating compressors for injection purposes.

Representatives from the Laclede Gas Company have stated that their current policy calls for the facility with its surrounding 550 acres to be operated essentially in its current capacity over both the short-term and foreseeable future, and felt it would be impossible to predict any change at this time.

Drainage Areas

The surface drainage of water within the study area is divided between three watersheds. Roughly one-third drains southward to the Cold Water Creek watershed and the balance drains toward the Missouri River in the Mill Creek Watershed or the Missouri River Sub. 3 Watershed. It is within the Mill Creek and Missouri Sub. 3 Watersheds that karsting occurs. This results in an additional watershed, in a functional sense. Surface water within this karst watershed does not flow directly to tributaries leading to the lowest point in the watershed. Instead, it may flow to the ground water or other unidentified discharge points.* The ridge lines which separate these drainage areas are shown on Map 4. It should be noted that the confluence of Cold Water Creek with the Missouri River is near, but not within the study area.

As previously noted, the presence of sinkholes influences the stormwater drainage of the area. However, it is impossible without further geologic data, to determine the relation of the surface water in the watershed to groundwater within or adjacent to it. As shown on Map 4, the sinkholes tend to be concentrated in the Missouri River watershed. This results in an irregular pattern of surface water drainage which is a function of localized variations in slope and sinkhole location. Normally, a well-defined network of tributaries forms as a result of erosive forces and collects surface water within a watershed, finally discharging it at the lowest point. In the karsted area, the sinkholes intercept this runoff and interrupt the formation of the usual stream tributaries. This complicates the prospect of improving stormwater drainage where such discharges must be prohibited from going into sinkholes. Still more difficult to accommodate are discharges from wastewater sources which are more critical than stormwater discharges as a source of ground water pollution. In order for sewage treatment in this general area to be centralized at the Coldwater Creek Treatment Facility, it would be necessary to provide force mains and lift stations to convey it over the ridge line separating the watersheds. If not collected and centrally treated, such discharges must necessarily remain within the watershed and consequently in the vicinity of karst formations. The "Empirical Rating System" developed by DNR (pg. 24) substantiated by other findings and engineering studies, should be applied during the review of affects of both new and existing development in the karst area. The cost of either a central or adequate household system is escalated by the karst topography.

* Watershed boundaries taken from the Zurheide-Hermann and East-West Gateway Coordinating Council report, St. Louis County Water Pollution Control Study Phase II - Areas Tributary to the Missouri River, p. 19.

MAP 4
ENVIRONMENTAL FEATURES
(INSERT HERE)

Natural Areas and Wildlife

The present low density settlement pattern results in the retention of relatively undisturbed natural habitat for numerous species. Although a comprehensive census of indigenous plant and animal life has not been attempted for the purpose of this planning document, it is apparent that many species have adapted to the presence of residences and agricultural uses. The further encroachment of an increasingly urban land use setting will displace animal species which can not continue to adapt. The conservation of natural habitat wherever possible can aid in retention of many of these animal species, promote the stabilization of soils against excessive erosion, and provide substantial aesthetic value. Long term or permanent preservation of this type can be anticipated in relation to the Laclede holdings, the heavily karsted areas, and the flood plain of the Missouri River. To a lesser extent, the same effect may be incorporated in the establishment of preserved common grounds as part of special procedure developments and should be a consideration in any such development proposals.

PROJECTED IMPROVEMENTS

Over the years, the Old Jamestown Area has shared in a number of major capital improvement programs undertaken by area service providers. Many of these programs were instituted to accommodate existing service demands or to meet anticipated needs well into the future. Recently, additional projects have been undertaken to upgrade and improve existing facilities and, again, to meet even greater anticipated demands for future services. Major projects that have been undertaken or scheduled for long-term completion include the following:

The Metropolitan St. Louis Sewer District is in the process of completing a \$5 million capital improvements program at the Coldwater Creek Treatment Facility. The proposed expansion and upgrading is designed to increase plant capacity and improve effluent quality. Future plans call for the completion of the Del Castle Spur to serve areas north of Lindbergh Boulevard, the construction of an outfall sewer line to directly discharge effluent into the Missouri River from the Coldwater Creek Plant, and the eventual construction of an additional trunk sewer line from the Coldwater Creek Plant to the Bissell Point Facility to dispose of sewage sludge. No new connections for sewer discharge would be made in the outfall lines.

The St. Louis County Water Company currently has a large ground storage tank located in the study area on Old Halls Ferry Road. Additionally, several large transmission mains criss-cross this area. Main locations are along the rights-of-way of the following roads: Lindbergh Boulevard to the east of Old Jamestown Road, north along Sinks Road to the Jamestown Farms Subdivision from Lindbergh Boulevard, along Old Halls Ferry Road from Lindbergh Boulevard to the storage tank, and north along Old Jamestown Road from Lindbergh Boulevard for a short distance. Future plans call for the development of additional transmission mains north from the storage tank along the projected Old Halls Ferry Extension and east across Sinks Road and Old Jamestown Road eventually ending in the Columbia Bottoms area.

Both Union Electric and Laclede Gas Company have extended services into the developed portions of the study area with main circuits or lines associated with major streets. Both expect to continue providing new services to developing areas in a similar fashion.

Southwestern Bell Telephone has begun to extend fiber optic cable service into the study area. This first cable runs west along Lindbergh Boulevard to the intersection of Old Jamestown Road.

The Black Jack Fire Protection District has already acquired a site in the study area for future expansion. The site is located on the north side of Lindbergh Boulevard across from the Lake James Manor Subdivision.

The Hazelwood School District has acquired a future school site in the study area. It will be west of Vaile Road and north of Old Halls Ferry Road.

The County Executive's Office has expanded its satellite government center concept into the North County area. The site is at the existing Department of Human Resources North Area Center in Dellwood. With the addition of this satellite center in North County, residents will be able to conduct more of their routine government business at this site versus the Government Center in Clayton.

The St. Louis County Library is considering building an additional branch in this northeast quadrant of the Library District. The District currently owns property at Lewis and Clark Boulevard and Parker Road, but is also examining available property in the study area. Construction would be at least several years from now.

The Missouri Highway and Transportation Department is proposing a major reconstruction of the Lindbergh Boulevard and Lewis and Clark Boulevard interchange. The proposed improvement plan calls for the construction of an additional north-south roadway, slip ramps, and the partial extension of Lindbergh Boulevard to the east. Additionally, the State Highway Department has suggested that a new intersection from Sinks Road to Lindbergh Boulevard be constructed to relieve the congested traffic situation at Robbins Mill Road and Lindbergh Boulevard intersection. The Lindbergh/Lewis and Clark Boulevard interchange project will be initiated within two years, while the Sinks Road project has no specific timeline or jurisdictional responsibility assigned to it at this time.

The St. Louis County Department of Highways and Traffic has recently published its Highway System Plan detailing long-range road improvements. The Highway System Plan does not set definitive dates for completion, but represents more a comprehensive inventory of all future projects regardless of funding capability. Included in this Plan are a number of proposed improvements within the study area boundaries:

TABLE 5

PROPOSED ROAD IMPROVEMENTS

<u>NATURE OF IMPROVEMENT</u>	<u>NAME AND DESIGNATION</u>	<u>LOCATION</u>	<u>PURPOSE OF IMPROVEMENT</u>
Replace existing Bridge*	Old Jamestown Road Bridge 134	South of Lindbergh Blvd., (U.S. Route 67)/ on Old Jamestown Road	Enhance traffic safety
Realign intersection with Robbins Mill Road	Sinks Road	Northeast of Lindbergh Blvd., (U.S. Rte. 67)/ Intersection of Sinks Rd. and Robbins Mill Road	Enhance traffic safety
Realign Curve	Vaile Avenue	North of Old Halls Ferry Rd./On Vaile Avenue	Enhance traffic safety
Realign Curve	Old Jamestown Road	South of Fort Bellefontaine Rd./ Old Jamestown Road	Enhance traffic safety
Proposed four lane arterial	Old Halls Ferry Rd. (north of Parker Rd.)	North of Parker Rd. to Vaile Avenue	Improve to arterial standards
Construct new collector	Undesignated collector	Old Halls Ferry Rd. to Sinks Rd.	Enhance future residential traffic movement

* Completed during study process

Additionally, portions of the western study area are covered under the Bluff-Old Halls Ferry Road Traffic Generation Assessment Trust Fund for road improvements. Funds are derived from assessments levied on new developments in this identified area. These funds are in addition to the developer assuming the total cost of financing subdivision collector streets constructed as part of a specific project.

A particular problem for the area in relation to growing demands for road improvements is the difficulty in engineering around the sinkholes to provide safe and adequate roadways. Both Sinks Road and Old Jamestown Road are examples of the restrictive effects which will need to be overcome to accommodate development as it occurs in the future.

Many of the proposed major capital improvement plans and more recent upgrades will or have benefited an area substantially larger than that of the Old Jamestown Study Area. In fact, much of the area around the study area is growing at a very rapid rate and requires that these new improvements be made to the service delivery network. It is also evident that the development of new infrastructure and service delivery capability is directly linked to additional new growth. Each time the service delivery network is extended, areas once thought to be too isolated become more accessible. Due to the enormous costs associated with providing infrastructure and public services, few service providers or local governments will expand capabilities or facilities without a demonstrated need in an area.

Because of the nominal growth rate in the Old Jamestown Study Area, many of the more urban services normally provided by local utilities or County Government are accomplished on a private basis. Specifically, water, sewer, and roads have lagged behind these services as compared to the surrounding area. If many of these proposed expansion plans are carried out by the local service providers, new growth will eventually accelerate in this area.

Other services, normally considered as amenities, are not as easily accessible to residents of the study area as they are to other County residents. These services, like cultural institutions, educational facilities, and recreational areas are demand driven and directly related to a threshold population large enough to justify the need and cost. If this threshold population does not exist, these services are provided on a larger, more regional basis to insure that economies of scale are obtained.

If significant future development is proposed and the higher ranges of projected residential densities are approached, the future demands exerted on the existing local street system will predictably exceed the capacity of the system. In anticipation of this need, it may be appropriate to consider a collector street system which, in its preliminary form, is based on the projections of this planning document. Later refinements could be expected as part of the review process. The general land use pattern now anticipated, physical constraints, and specific objective of conserving efficient traffic movement on Lindbergh Boulevard suggest that such a collector would be suitable to the north of Lindbergh. This could take the form of an eastward extension of the as yet undesignated collector between Old Halls Ferry Road and Sinks Road which is part of the Highway Systems Plan. Ideally, this should serve to relieve Lindbergh Boulevard of locally generated traffic without encouraging use of the collector as a substitute for through traffic movements.

ISSUES WITHIN STUDY AREA

An initial action of the Community Area Advisory Committee was the identification of basic issues or concerns affecting the study area which are amenable to consideration in the study report. The discussion disclosed five general categories of concern, each of which included related but distinct issues. Other issues which emerged later in the process are reflected in specific guidelines or recommendations. The original issues are summarized as follows:

1. LAND USE

Compatibility: The underlying issue is to identify the specific areas where conflict between various land uses can be anticipated and establish guidelines which will help address these conflicts. This issue is the essence of zoning and other regulations, and is the principal purview of the Planning Commission. A general concern for the compatibility of all types of land use was indicated, but the effect of new development on existing residential uses was viewed to be most critical in importance.

Blend of Development Types and Densities: In order to promote a cohesive and healthy community as the area undergoes development, it will be necessary to incorporate land uses which support each other. In particular, the residential environment relies upon services, retail stores, churches, schools, work places, and recreational space to be successful. Furthermore, varied types of housing are required to accommodate differing lifestyles, preferences, and financial capabilities. In many cases these alternatives in residential type may be blended with each other and supporting non-residential uses typical of a normal residential setting interwoven in the overall pattern. The essential issue is to anticipate the location of compatible or complementary land uses.

Laclede Holdings: As the area urbanizes, the approximately 550 acres controlled by the Laclede Gas Company in conjunction with its underground storage facility might be considered for a higher degree of development than is now the case. The issue in this case is the coordination of any residential or other development abutting or possibly within the current area of active production or surface use by Laclede. The objective of the study and area plan would be to minimize conflicts between this industrial type of use and the potential residential or other dissimilar uses so that neither is hindered and the environment is protected. A similar situation exists regarding holdings of the West Lake Quarry operation.

2. RESIDENTIAL DEVELOPMENT

Density Ranges: Particular to residential development and beyond the blend of land uses, is the effect densities exert on residential environments. The basic issue is the selection of an appropriate density range and location where differing densities can be accommodated by suitable supporting infrastructure and services. The sequence of individual developments is an important factor since the progression of future development may not necessarily result in a uniform extension of utilities. Preferences for low densities and detached residences may need to be reconciled to alternative residential development types as required to accommodate increasing density ranges which are needed to assure the installation of public sewer and water systems. These are necessary to protect the environment if additional development is to be acceptable in the future. The plan should provide the development community with some expectation of the cost of improvements, and the present and future occupants should likewise be provided with some anticipation of potential patterns of land use.

Location: The relative location of residential development in relation to traffic, its relation to demand for open space, general compatibility, and transitions in density are considered to be important factors in the consideration of future proposals.

Alternative Designs: Current technology and consumer preferences make alternatives to conventional design and construction practices a stronger possibility for the future development of the study area. Some of the physical limitations such as sinkholes, slip zones and slopes may make alternatives more practical than conventional site designs in some cases. These possibilities would increase in importance as the residential density increases. Conversely, the opportunity to encourage or guide such development to the most suitable locations may be enhanced by the use of alternative designs which promote the most efficient and sound site development. In comparison to conventional platting of individual lots, the appropriateness and compatibility of these residential design alternatives were seen to require more careful scrutiny, especially when considered as an alternative to low density residential uses in areas with environmental constraints. This concept is not reserved to residential development and should extend to commercial and other non-residential development as well.

Large Lot: In light of the environmental considerations which may either favor or contraindicate such design, the consumer desire for large lot developments makes this an issue of identifying places and conditions wherein such development is or is not appropriate and environmentally compatible.

3. COMMERCIAL DEVELOPMENT

Lindbergh Boulevard: Commercial development is the principal nonresidential land use category with potential to influence the area, and its impact on other parts of Lindbergh and similar corridors has raised it as a specific issue here. The concern relates not only to traffic conflict but also to the aesthetic quality and preservation of an emerging residential trend in the Lindbergh corridor within the study area. It was suggested by the Advisory Committee, early in the process of identifying issues, that commercial and associated development be limited to major intersections instead of permitting a continuous commercial development of Lindbergh Boulevard.

Jamestown Mall: As a recognized regional scale commercial facility, the mall is a major and continuing attractive influence to the area. It is assumed that the commercial area will continue to expand. The development of the entire study area, and especially the closely adjacent properties, will continue to be influenced. Ultimately, the preservation of the integrity of this regional asset is a function of its successful integration into the Lindbergh corridor. Conversely, the success of the future community relies on the compatibility of adjoining land use development.

4. UTILITIES

Availability of Sanitary Sewers: The current availability of sanitary sewer service within the study area is limited. The extension of the service is complicated by the division of the area into two natural drainage basins and the karst topography, both of which require more complex installations of structures and equipment. Except for major structures, such as interceptor lines and force mains, sanitary sewer services are typically extended incrementally by the developers of abutting developments as they are sequentially developed. The responsibility of coordinating the segment by segment installation of the final network of

service lines is normally accomplished by a combined effort of the Metropolitan St. Louis Sewer District and St. Louis County through its subdivision and other ordinances. Generally, the issue is related to the predictable and equitable division of costs and the technical acceptability of individual or interim treatment facilities for sewage disposal.

Demands Created by New Development: Typically, public services such as library systems, school systems or fire districts increase service levels as the demand is increased by new residents. Due to economic constraints of maintaining cost effectiveness, and the reliance on revenue sources which follow rather than precede new development, these service providers are forced to react rather than anticipate demand. On the other hand, services such as communications, circulation, stormwater, and basic utilities are introduced with each new development but nevertheless must be designed to accommodate the eventual fully developed end state. The issue is one of economical sequencing and timing for developers. As new infrastructure facilitates subsequent development, the influence on existing development is also a major concern, especially for residents.

5. ENVIRONMENTAL CONSIDERATIONS

Minimum Standards for Individual Sewage Disposal: Private individual sewage disposal systems are presently governed at the stages of design and construction by regulations of St. Louis County, the Metropolitan St. Louis Sewer District, and the Department of Natural Resources. Subsequent monitoring of operation is left to the owner. These regulations reflect minimum standards not only of lot size but also of alternative designs. Different, more stringent regulations are applied to any alternatives which collect sewage from several sources. In residential development of low density, where public sanitary sewers are not provided, the carrying capacity of the land must necessarily be acknowledged. The issue is to identify the point at which environmental degradation, such as ground water pollution, may occur and avoid exceeding that threshold. Beyond that, it must also be acknowledged that in order to make a public sewer system economically feasible as an alternative, an increased density may be necessary. The critical importance of this issue is directly correlated to the public welfare and safety, both at the end state of development and during the interim period of land use transition, in that a failure to prevent degradation can result in a hazard to the public health.

Conservation of Wildlife, Geologic and Other Natural Features: The unique karst topography is of national geologic interest. The preservation or conservation of open space for future use is also important to future decision making. Development of any type, including what has taken place to date, affects the indigenous plant and animal life. In the face of increases in human contact, adaptation, migration or other changes will invariably occur. Effects on physical features may be far-reaching and irreversible. An issue for the plan in this case would be the identification of realistic means to mitigate some of the adverse effects. This might build upon major public use areas in, and adjacent to, the study area.

In the past, a greenway along Coldwater Creek has been discussed. The current issue is essentially whether such a proposal remains appropriate and economically feasible. The limited application of such a concept elsewhere in the study area might be considered as development occurs, especially in relation to nonmotorized circulation. (See Appendix One)

GENERAL GUIDELINES

General: The premature platting and development of isolated sites which cannot be adequately served by essential urban scale services and support facilities should be discouraged, or at least required to reliably demonstrate that no adverse effects will result in the interim while waiting for such services to be extended to the site.

Natural and unique aesthetic qualities of the area should be preserved in public or common ground open spaces where possible. Otherwise, such features should be integrated with the actively used environment of developed areas as much as possible so that aesthetic qualities are not destroyed. For example, wooded areas of wildlife habitat, groups of sinkholes, and significant vistas might all fit into this category.

Natural features should be utilized in preference to artificial physical barriers when buffers, screens or transition areas are required within developing sites.

Site designs should support nonvehicular circulation and access, particularly where local convenience and service commercial uses are combined with community facilities to form a neighborhood activity node which is linked to the surrounding residential environment. As an example, sidewalks and pathways should not be deleted from any development where an incomplete overall system would be the result.

Individual lots platted for residential development should always include an adequate building site after any unbuildable parts of the lot are subtracted, and should be enlarged as necessary to include contiguous undevelopable areas where permanent common maintenance is not a viable alternative.

Residential: Medium Density (1.9 to 7.3 units per acre)

Any such residential development should have essentially direct access to Lewis and Clark Boulevard, Lindbergh Boulevard, or to one of the major collector streets which intersect with Lindbergh Boulevard.

Residential development in this density range could also be in conjunction with another comparably intensive land use in some compatible combination.

The effects of traffic generation should be emphasized in the review process and any problems identified in the process mitigated prior to the final approval of the proposed development.

Building heights greater than three or four stories should be confined to sites where an acceptable transition to lower residential densities is assured. Where a consistent pattern of lower density residential development does not yet exist, placement of these taller structures should still be oriented to the major corridors where intensive development is most likely. The intent should be to provide for aesthetic consistency and functional efficiency.

Residential: Medium-Low Density (1.0 to 4.3 units per acre)

This should be the density range of most of the residential development anticipated in the area and should be predominantly conventional single family detached in type but, where feasible, should also include other arrangements of dwellings which preserve the characteristics of the surrounding density.

Public sanitary sewer or an acceptable interim facility which complies with all applicable regulations will be available in accordance with requirements of the Metropolitan St. Louis Sewer District and the Missouri Department of Natural Resources. Any interim facilities should not be interpreted as a precedent for further premature development which is out of sequence with the logical extension of sewers.

Public water should be available to all such development at the time it is completed or provided for as soon thereafter as practical. The sequence of water main extensions should be in accordance with regulations and policies of the Black Jack Fire District and St. Louis County Water Company.

Residential development should not intrude on areas anticipated to be developed either at significantly higher residential densities or as nonresidential uses to the extent that adequate buffering or transition is made impossible.

Alternative development types and site configurations should be employed as necessary to accommodate restrictive physical features, preserve desirable environmental qualities, and minimize public costs. For this purpose, Planned Environment Units (P.E.U.'s) or other appropriate special procedures should be encouraged in order to stimulate and later regulate such alternative treatments.

Residential: Low Density (One or fewer units per acre)

This density range should be primarily single family detached in character.

It should be adequately documented following review by the appropriate authorities, that any proposed development relying on individual wells and/or sewage disposal systems will not present any health risk. Otherwise, public water should be required and specific provisions made for the earliest possible connection of units to a public sewer.

The heavily karsted parts of the study area (where sinkholes are evident) might include a number of large lots but should not concentrate individual sewage and water systems where ground water contamination is likely to occur as a result.

Site developments should be such that boundary adjustments, lot-splits, and minor subdivisions with appropriate zoning changes are not precluded at a future time when they might be found appropriate for the redivision of properties.

These large lots might also be blended with other densities of residential development in order to assimilate restrictive physical features, notably sinkholes, which inhibit a uniform arrangement of conventional subdivided lots.

TABLE 6

Residential Density Ranges

Range	Density in Units per Acre	Comparable Zoning Districts
Low	one or fewer	"NU" and "R-1"
Medium-Low	1.0 to 4.3	"R-1A" through "R-3"
Medium	1.9 to 7.3	"R-2" through "R-5"
Medium-High	5.8 to 21.8	"R-5" through "R-6"
High	14.5 to 87.1	"R-6" through "R-8"

Residential: Alternative residential designs

Special Procedure zoning and subdivisions should be encouraged as a means of increasing adaptability of the residential environment to site constraints, and as an opportunity to build autonomous neighborhoods which also relate to the surrounding community.

Clustering of units should be considered as a mechanism to preserve passive open space, reduce construction and maintenance costs, lower road and utility costs, provide safer and simpler traffic circulation, and promote active recreation facilities and other community amenities.

Garden apartments, townhouses, and comparable attached housing types can make efficient use of irregular topography while maintaining a reasonable density, and should be considered as an alternative before approving less efficient designs, especially in the medium density range.

As residential concentration increases, parking, circulation, and the availability of supporting uses also increase in importance. Review of increasing residential densities should be accompanied by increasing detail in the analysis of these related factors.

Higher densities should be in close proximity to collector roads and activity centers with an orderly transition to progressively lower residential densities or compatible nonresidential types of land use.

In both conventional and special procedure developments within the karst area, an additional setback from the edge of sinkholes may be advisable. Based on specific geotechnical indications, alternative designs should be considered or required.

Commercial:

In order to avoid duplicating the existing commercial concentration, the major commercial activity center at Jamestown Mall should be the focal point of any new development designed to serve a regional population. The expansion should be a consistent continuation of the existing Jamestown Mall development, emphasizing the area to the east. Locally, the duplication of community or neighborhood oriented commercial development and services should be avoided.

The following table (Table 9) is included only to provide a general comparison of types of commercial development; appropriate parcel sizes may vary somewhat. Specific recommendations should be based on features and associated recommendations of each subarea.

TABLE 7

Comparison of Commercial Scale

	<u>NEIGHBORHOOD</u>	<u>COMMUNITY</u>	<u>REGIONAL</u>
Service Area	Up to 2 miles	Up to 5 miles	10 miles or more
Driving Time	5-10 minutes	Up to 30 minutes	30 minutes or more
Typical Location	Intersection of collector and/or major roads within P.E.U.'s	Intersection of expressways and/or major roads	Intersection of expressways and/or freeways
Typical Gross Area	Up to 10 acres	10-30 acres	30 acres or more
Commercial Role	Convenience goods, personal services	Competitive shopping, major purchases, professional offices, entertainment	Highly competitive shopping, broadest range and largest selection including specialty items

A limited number of small groupings of complementary commercial development within the Lindbergh corridor could be oriented to access through collector road intersections at Robbins Mill Road, realigned Sinks Road, and New Jamestown Road. Commercial facilities should be arranged in efficient unified, architecturally consistent groupings which present visual harmony and facilitate access.

Highway commercial and comparable land uses may prove appropriate for the west side of Lewis and Clark Boulevard in the immediate vicinity of the proposed interchange with Lindbergh Boulevard and should be considered as an alternative.

Neighborhood commercial and service areas should not be promoted in the interior of the study area. Such development should be integrated with the existing nonresidential development closer to Lindbergh. The neighborhood commercial node should not exceed approximately ten acres of contiguous development. The commercial uses could be located adjacent to other trip generators or active nonresidential land uses to establish a cohesive neighborhood activity center. The activity center should be readily accessible to pedestrian and local nonvehicular traffic.

New commercial development should generally be a continuation of the established scale of adjoining development or an appropriate intermediate graduation in intensity of land use should result. Commercial development should not impede or delay traffic on Lindbergh Boulevard or other major roads in the area.

Economic Development and Employment:

The future development of the area should not exclude employment opportunities and should contribute to the economic stability of the County and the region.

The more intensive corridors on eastern Lindbergh and Lewis and Clark Boulevards should generally be the location of major office, manufacturing, or commercial enterprises with significant employment or extensive land use characteristics. Development should be oriented to the major intersection and mall area, leaving the residential community to the west.

Manufacturing, if any is proposed, should be located on Lewis and Clark Boulevard, between the extractive industry to the north and the commercial activity to the south along Lindbergh Boulevard.

A "park" or planned setting for office, commercial, and other activities with a compatible mix of users should be given preference. Traffic should be oriented directly to Lindbergh Boulevard or Lewis and Clark Boulevard without adverse effects on residential areas. Operations and uses which are unlikely to result in future environmental conflicts with adjacent developments should be encouraged.

In addition to attenuating noise and other external effects, buffering of non-residential uses should improve traffic safety and efficiency, maintain privacy and security, and keep aesthetic quality high.

General Location of Public Facilities:

Future locations of sites for public facilities must be anticipated. If it appears necessary, appropriate sites should be preserved in anticipation of future demand as the area develops.

Where possible, public facilities and other supportive land uses should be associated with each other to form contiguous elements of a neighborhood center.

Provisions for the surrounding community's civic, social, and leisure activities should be integrated with other nonresidential development. Supportive uses such as day care, churches, institutions, and civic organizations should be encouraged to coordinate site locations so as to reduce conflict with neighborhood residential areas or to become part of centralized areas of nonresidential activity.

Parks and Recreation:

The study area is served by three parks, Champ, Sioux Passage and Ft. Bellefontaine. It is recommended that both parks adjoining the study area be expanded by encouraging additional acquisitions of contiguous land.

The general area will require additional neighborhood scale parks (5 to 10 acres) which should provide a spectrum of active use areas to include field and court oriented sports, outdoor gathering places, playgrounds, restrooms, and other necessary facilities. Generally, new neighborhood parks should be central to a 15 minute walking radius of residential concentrations of 4,000 to 6,000 residents. Conservation of unique features and landmark vistas should also be given primary consideration in the designation of sites. The general location of at least two such parks should be in the vicinity of Old Halls Ferry and Vaile Roads, and between Lewis and Clark Boulevard and Old Jamestown Road.

Nonresidents such as the daytime employee population should also be considered in projecting user demand.

Interconnecting links between existing and future park facilities to provide nonvehicular corridors should be considered and could include jogging, bicycle, and natural trails. New residential subdivisions should provide for open space and active recreational uses which preserve environmental features.

Streets and Circulation:

The collector road system internal to the area should build upon the existing road system as depicted in the St. Louis County Highway System Plan. This will necessarily require augmentation by the addition of local streets, upgrading of existing roadways, and establishing new collector road linkages, all of which are a function of future development proposals. A common factor will be that the bulk of traffic will be conveyed to Lindbergh Boulevard intersections.

The number of intersections with Lindbergh Boulevard should be minimized in number and the free flow of traffic preserved as much as possible in the design, spacing, and signalization of intersections.

Nonresidential traffic should not be introduced into residential neighborhoods.

Individual developments should provide adequate circulation capacity to absorb peak traffic loads without excessive delays or hazards. For any development with potential traffic problems, an analysis of patterns and mitigating strategies should precede approval.

The design of the local street system in individual developments and as a whole throughout the area should consistently provide for multiple access, adequate turn-around radius and ease of circulation as necessary to accommodate requirements of all emergency and service vehicles, including school buses. Adequate parking should be made available to prevent it from interfering with regular and emergency circulation and access.

Multiple curb cuts serving adjacent but independent commercial development should be restricted or prohibited on collector streets, and especially on Lindbergh Boulevard. The objective is to protect efficient traffic carrying capacity. Alternatively, access should be from an organized system of coordinated internal circulation which orients traffic to controlled points of intersection.

In general, the arterial function of Lindbergh Boulevard and Highway 367 should be protected. Related considerations to improve the surrounding system of arterial County and State roads should continue to be encouraged to the extent possible.

Stormwater:

Stormwater systems constructed in conjunction with streets and other improvements should eliminate discharges to sinkholes. Such discharges should, instead, be conveyed to Coldwater Creek or the Missouri River, depending on the specific drainage basin involved so as to protect the ground water. This may require testing and analysis to confirm.

Storm sewer structures should be installed according to approved improvement plans based upon the anticipated end-state development of the area at the highest range of potential intensity with particular attention to the effects on contiguous existing developments.

Pending implementation of recommendations by the Corps of Engineers for the Coldwater Creek drainage basin, storm drainage should be coordinated with efforts to mitigate flooding which now occurs in the area.

Sanitary Sewers:

Individual sewage disposal systems should be discouraged if there is an acceptable alternative and prior to approval of such a system, it should be clearly demonstrated that a public system is not feasible, that no damage to the environment is expected, and that future connection to a public system is possible. These determinations should be derived from the application of the Department of Natural Resources "Empirical Rating System" as cited earlier, other findings of engineering analysis if available, and the standard criteria uniformly applied to all related permits.

MAP 5
STUDY AREA AND SUB AREA BOUNDARIES
(INSERT HERE)

RECOMMENDATIONS

For the purpose of analysis, the study area has been broken down into 15 subareas as shown on Map 5. Each subarea is based upon common characteristics and properties which are likely to have interrelated effects if development is proposed. A few autonomous areas where development has taken place or is fully committed are not included in any of the subareas, although they may be referenced in relation to adjacent sites.

The general zoning pattern north of Lindbergh Boulevard is the "NU" Non-Urban District except where specific parcels have been rezoned. The "R-2" Residence District, with a 15,000 square foot lot size, and Flood Plain District were designated for the area south of Lindbergh upon adoption of the County's Zoning Ordinance. A prerequisite to most development would be a rezoning or special procedure application. It is primarily through one of those procedures and the subdivision ordinances that most of the following recommendations will be applied.

Five special procedures are provided in the Zoning Ordinance. They are enumerated in Appendix Four. Their basic purpose is to allow appropriate adaptations of standard regulations based upon a thorough analysis of a specific proposal. They require adoption of regulatory legislation specific to the development. These procedures are frequently recommended in the following discussions as a mechanism to address the multiplicity of unique characteristics of the area, although their application would take various forms in different parts of the study area.

The development of specific infrastructure systems (roads, sewers, etc.), although related to potential development, is a function of engineering standards. It is beyond the purview of this policy document to detail plans or needs for such facilities. However, their importance is noted for general references, such as influence on the environment or appropriate interrelation of future street systems. In summation, both storm and sanitary sewers must respond to sensitive geologic features. The street system should provide an adequate means of moving local traffic in an east/west direction so that the arterial flow of traffic on Lindbergh is not impeded. Other elements of infrastructure should emerge from the normal evolution of development proposals through the review and construction process.

Another general consideration is the location of sites for necessary supporting uses such as fire stations and elementary schools. It is noted that the Black Jack Fire Protection District has already acquired a site for the future location of a station on Lindbergh (see subarea 11). Likewise, the Hazelwood School District has acquired a new elementary school site to meet the demand created by recent development near the study area. It will be in Subarea 3. Numerous other uses such as day care, churches, and neighborhood park facilities are included in the category of uses which support or complement residential development.

FEATURES AND RECOMMENDATIONS FOR 15 SUBAREAS:

AREA 1

FEATURES:

- The area does not adjoin any other subareas and is bisected by the flood plain of Mill Creek. The balance is open, with slopes of under 10 percent.

- The west half is adjacent to Sioux Passage Park and is not contiguous to developed or developing areas. The east half is contiguous to Parc Argonne Estates ("R-1", 44 single family).
- The east half has frontage and access to Old Jamestown Road.

RECOMMENDATIONS:

1. The east half should be developed as residential, continuous with the adjacent developing area to the east, Parc Argonne Estates. The low density range of one acre or more per unit should be continued.
2. If developed, the west half should also be residential, developed as a continuation of the east half, with larger lots or buffering adjacent to the park. The low density range of one acre or more per unit should be continued.
3. Street designs should provide alternative means of ingress/egress, especially to the west half. Traffic should not be introduced into the park. The stub street and improvements to Old Jamestown Road within Parc Argonne Estates should be continued into this area.
4. Buffering should be provided between the public (park) and private (single family residence) uses where they abut.
5. Consistent with recommendations of County park plans, consideration should be given to acquisition of the west half, including flood plain on both sides of Mill Creek to expand the park area. Maintenance and access easements to the east side of flood plain should be maintained if acquired for park expansion.
6. Although Special Procedures could be employed to address issues related to the flood plain and internal circulation, lots created for homesites should be consistent in size with the adjoining platted lots, which are one acre or more per unit.

AREA 2

FEATURES:

- The area includes a consistent pattern of large lots of five acres or more with single family residential use. There is almost complete occupancy but low coverage, with high value housing. A portion of the West Lake Quarry operation is also included at the eastern extremity.
- Approximately 50 percent of the subarea is directly influenced by the presence of sinkholes as major surface features.
- Almost all parcels are affected by karst topography, basically adjacent to Old Jamestown Road.
- Steep slopes mark topography next to river.
- Portions of some properties lie within the floodway/flood plain of the Missouri River.

- Largest lots are concentrated at the ends of this generally linear area and some present karst- and slope-free parcels of 20 acres or more. The east end includes part of the West Lake Quarry operation which is controlled by a Conditional Use Permit.
- Access to most of the large lots is by private easement.

RECOMMENDATIONS:

1. If future development is considered, it should be exclusively residential and in the low density range. Where contiguous subdivisions of property have occurred, the prevailing lot size should be reflected in future redivisions of surrounding parcels by means of appropriate transitions in lot size and other design alternatives. Except where environmental considerations for individual water and sewage disposal systems would be detrimental, lots of three acres or more should be encouraged.
2. The Special Procedure provisions of the Zoning Ordinance should be considered or encouraged where they provide an effective means of mitigating future development problems. When applied, these provisions should focus on the extension of adequate utilities, providing efficient traffic circulation, and preserving the integrity of the community environment.
3. Intersections and other traffic influences should not cause any conflict with existing traffic on Old Jamestown Road.
4. If future development proposals will affect stormwater runoff or discharge to a sinkhole, policies which prohibit alterations of natural flows should be implemented in special procedure zoning legislation or subdivision improvement plans. Otherwise, improvements on individual lots should be subjected to the normal review process which will yield compliance with uniformly enforced codes and regulations but with specific regard for the unique implications of karst affected areas. This should include sewage disposal systems. Individual sewage disposal and water supplies should not be encouraged if the alternative of a public system is viable. The alternative of individual sewage treatment systems of an advanced design, capable of reliably sustaining a high quality of effluent discharge could also be considered where a public system remains unavailable and conventional private systems are not environmentally appropriate. Building sites should provide a setback from the lip of any sinkhole.
5. The subarea includes an area of currently active quarry operation at its east end which is governed by a Conditional Use Permit. It is anticipated that the approved conditional use will be continued and, therefore, that the provisions of the Conditional Use Permit should be maintained. In addition to provisions of the current permit, strong consideration should be given to implementing mitigation techniques which will prevent conflict with adjoining residential development to the south and west. This could be undertaken voluntarily by the operator but should definitely be part of any revisions to the provisions of the permit. Mitigation techniques should increase visual screening, acoustic attenuation and containment of dust. Although effective alternatives should also be considered, an appropriately contoured berm with permanent vegetative cover may be considered appropriate. Any such provisions must be compatible with the eventual reclamation of the area to a use compatible with surrounding development. Furthermore, no deleterious effects on stormwater, utilities, or circulation should be created.

AREA 3

FEATURES:

- The area is composed of large parcels, currently a mix of agriculture and single family residences.
- Large lots of three acres, or larger, predominate to the north.
- Champ Park abuts to the west.
- Existing and developing residential development in the medium-low density range is established to the south and southwest.
- Access to Vaile Road is continuous along the east side and improvements to Old Halls Ferry Road to the west are pending. The area is within the Bluff-Old Halls Ferry Road Traffic Generation Assessment Trust Fund area.
- Basic utilities are in proximity of area.

RECOMMENDATIONS:

1. This area should be developed in a residential pattern. A low density range should be emphasized, with the lowest densities oriented to the north and west and medium-low densities where compatible with development to the southwest.
2. Along the northeast boundary of Area 3, larger lots and/or other transitional mechanisms should reflect the large lots developed to the north.
3. The Special Procedure provisions of the Zoning Ordinance should be considered or encouraged where they provide an effective means of mitigating future development problems. When applied, these provisions should focus on the extension of adequate utilities, providing efficient traffic circulation, and preserving the integrity of the community environment.
4. Buffering should protect public (park) and private uses (single family residence) from conflict.
5. The design of local streets should be a continuation of the surrounding system and should encourage the direction of traffic to designated collector roads. Future use and access to Champ Park should be included in considerations. Alternative site designs should be compatible with the general character of surrounding residential development.
6. Street designs should provide for continuous internal pedestrian and vehicular circulation with alternative ingress and egress but without introducing traffic to park areas except at intended points.
7. All necessary maintenance and access easements to the park should be preserved.
8. Consideration should be given to institutional or public uses on an appropriately coordinated site, with improvements and buffering to prevent disruption of the residential community now or in future developments. Such development should be consistent with adjoining subarea or developed sites.

9. Acquisition of additional land for Champ Park should be considered prior to commitment of the abutting area to any other development.

AREA 4

FEATURES:

- The area includes Glen Eagles, "R-1"/"R-1A", a 96-lot single family development adjacent to Vaile Avenue.
- It abuts the west side of Laclede properties, and along this boundary karst topography is prominent.
- Where the River Oaks development abuts to the south it consists of "R-2" single family detached residential development.
- It also includes a cemetery and convent near the center of the area.
- A major Laclede Gas line traverses the area and a major water storage tank of County Water Company is located within the area.
- Approximately 30 percent of the subarea is directly influenced by the presence of sinkholes as major surface features. The remaining area is comparatively free of major topographic constraints. The southwest two-thirds is relatively open and free of physical obstacles.

RECOMMENDATIONS:

1. For the purpose of description, the subarea is divided into two parts, the upper portion, 4a, being north of the property of the Palletine Order. The lower portion, 4b, includes that property and others south of it. Generally, any development of karsted area abutting the Laclede property should be limited to the low density residential range.
2. If future development proposals will affect stormwater runoff or discharge to a sinkhole, policies which prohibit alterations of natural flows should be implemented in special procedure zoning legislation or subdivision improvement plans. Otherwise, improvements on individual lots should be subjected to review which will yield compliance with normally enforced codes and regulations but with specific regard for the unique implications of sinkholes which could be affected. Individual sewage disposal and water supplies should not be encouraged if the alternative of a public system is viable. The alternative of individual sewage treatment systems of an advanced design, capable of reliably sustaining a high quality of effluent discharge could also be considered where a public system remains unavailable and conventional private systems are not environmentally appropriate. Building sites should provide a setback from the lip of any sinkhole.
3. In 4a, preference should be given to residential development in the low range. The transition of densities should place larger lots to the north.
4. In 4b, the density range should include medium-low at the south end, near similar existing development.

5. The Special Procedure provisions of the Zoning Ordinance should be considered or encouraged where they provide an effective means of mitigating future development problems. When applied, these provisions should focus on the extension of adequate utilities, providing efficient traffic circulation, and preserving the integrity of the community environment.
6. Street designs should provide for a continuous internal pedestrian and vehicular circulation which enhances local traffic flow and is continuous with adjoining areas. Traffic could be generally oriented to Lindbergh Boulevard or Old Halls Ferry Road to the south and to provide a general east/west movement through the study area if determined to be feasible. Access for emergency vehicles should be assured.
7. Consideration should be given to institutional or public uses on an appropriately coordinated site, with improvements and buffering to prevent disruption of the residential community now or in future developments. Such uses should be oriented to sites providing optimal access and where non-local traffic will be oriented away from local streets.

AREA 5

FEATURES:

- The entire area is dominated by karst formations.
- Over a dozen Laclede operated wells and associated pipelines, tanks and processing equipment are situated in the west half of the area.
- Two or three outparcels of Laclede holdings are encompassed by the area.
- The main Laclede holdings are to the south.

RECOMMENDATIONS:

1. If development is proposed within this area, it should be limited to residential in the low density range. Where contiguous subdivisions of property have occurred, the prevailing lot size should be reflected in future redivisions of surrounding parcels by means of appropriate transitions in lot size and other design alternatives. Except where environmental considerations for individual water and sewage disposal systems would be detrimental, lots of three acres or more should be encouraged.
2. If future development proposals will affect stormwater runoff or discharge to a sinkhole, policies which prohibit alterations of natural flows should be implemented in special procedure zoning legislation or subdivision improvement plans. Otherwise, improvements on individual lots should be subjected to review which will yield compliance with normally enforced codes and regulations but with specific regard for the unique implications of sinkholes which could be affected. Individual sewage disposal and water supplies should not be encouraged if the alternative of a public system is viable. The alternative of individual sewage treatment systems of an advanced design, capable of reliably sustaining a high quality of effluent discharge could also be considered where a public system remains unavailable and conventional private systems are not environmentally appropriate. Building sites should provide a setback from the lip of any sinkhole.

3. The Special Procedures provisions of the Zoning Ordinance should be considered or encouraged where they provide an effective means of mitigating future development problems. When applied, these provisions should focus on the extension of adequate utilities, providing efficient traffic circulation, and preserving the integrity of the community environment.
4. Any redivision of properties should be specifically designed to preserve unencumbered access to Laclede facilities. Any future development should be coordinated with considerations for Subareas 2 and 15.

AREA 6

FEATURES:

- Approximately 50 percent of the subarea is directly influenced by the presence of sinkholes as major surface features. The remaining area is comparatively free of major topographic constraints.
- The subarea is generally comprised of large parcels with access from Sinks Road.
- The south tip abuts River Oaks; while the north end abuts Laclede holdings, extending along Sinks Road to include the private holding near center of the Laclede holdings.
- A large lot subdivision, Deer Valley, has been developed on the opposite side of Sinks Road, to the southeast.
- Sinks Road is limited in potential for significant upgrading due to adjoining sinkholes.

RECOMMENDATIONS:

1. Any future development should be residential in continuation of any that occurs in adjacent areas. It should be in the low density range. Where contiguous subdivisions of property have occurred, the prevailing lot size should be reflected in future redivisions of surrounding parcels by means of appropriate transitions in lot size and other design alternatives. Except where environmental considerations for individual water and sewage disposal systems would be detrimental, lots of three acres or more should be encouraged.
2. If future development proposals will affect stormwater runoff or discharge to a sinkhole, policies which prohibit alterations of natural flows should be implemented in special procedure zoning legislation or subdivision improvement plans. Otherwise, improvements on individual lots should be subjected to review which will yield compliance with normally enforced codes and regulations but with specific regard for the unique implications of sinkholes which could be affected. Individual sewage disposal and water supplies should not be encouraged if the alternative of a public system is viable. The alternative of individual sewage treatment systems of an advanced design, capable of reliably sustaining a high quality of effluent discharge could also be considered where a public system remains unavailable and conventional private systems are not environmentally appropriate. Building sites should provide a setback from the lip of any sinkhole. Public water should be promoted given the access to a water main on Sinks Road.

3. The physical constraints of sinkholes are less pronounced near the southern tip and adjacent to a short section of Sinks Road near the north boundary of the subarea. An internal transition of densities which extends to the medium-low density range could be a consideration in these areas if it results in an appropriate continuation of adjoining developments with consistent parcel sizes and access.
4. The Special Procedure provisions of the Zoning Ordinance should be considered or encouraged where they provide an effective means of mitigating future development problems. When applied, these provisions should focus on the extension of adequate utilities, providing efficient traffic circulation, and preserving the integrity of the community environment.
5. Where possible, realignment and improvement of Sinks Road should be facilitated by right-of-way acquisition and appropriate improvements as part of any proposed development.
6. The volume of traffic introduced to Sinks Road should be minimized so that its capacity is conserved. Where possible, access to the west should be encouraged.
7. Any redivisions of property adjacent to Laclede holdings should preserve unencumbered access.
8. Traffic could be generally oriented to Lindbergh Boulevard and should also provide a general east/west movement through the study area where determined to be feasible and advantageous. Access for emergency vehicles should be assured.
9. Where such uses are compatible with adjoining residential development, outdoor recreational uses (such as golf courses), community facilities (such as church, day care or library facilities) or other consistent non-commercial uses should be given consideration in conjunction with other guidelines for the area.

AREA 7

FEATURES:

- Approximately 80 percent of the subarea is directly influenced by the presence of sinkholes as major surface features. The remaining area is comparatively free of major topographic constraints and forms a strip in the center. Several large sinkhole lakes occur within this area.
- Ingress/egress is generally from either Sinks Road or Old Jamestown Road.
- Laclede holdings adjoin to the north, and Subarea 11, with significant residential development potential as part of Lindbergh Corridor, adjoins to the south.
- The area is constituted of large parcels with a sparse residential settlement pattern.

RECOMMENDATIONS:

1. Areas affected by karsts and slopes should be considered only for low density residential development.

2. Where contiguous subdivisions of property have occurred, the prevailing lot size should be reflected in future redivisions of surrounding parcels by means of appropriate transitions in lot size and other design alternatives. Except where environmental considerations for individual water and sewage disposal systems would be detrimental, lots of three acres or more should be encouraged.
3. The Special Procedure provisions of the Zoning Ordinance should be considered or encouraged where they provide an effective means of mitigating future development problems. When applied, these provisions should focus on the extension of adequate utilities, providing efficient traffic circulation, and preserving the integrity of the community environment. Special procedures should be encouraged where they address transitions in density to potential development in Area 11.
4. Where possible, access should be augmented by coordinating with streets to the south which link with Lindbergh Boulevard and/or to an east/west movement of locally generated traffic. The volume of traffic introduced to Sinks Road should be minimized so that capacity is conserved. Where possible, access to the east and west should be encouraged in order to promote a local traffic collector system which does not rely on Lindbergh Boulevard. Access for emergency vehicles should be assured. Access to Laclede facilities could be preserved.
5. If residential densities in Area 11 are higher, the transition of densities could also be extended to the developable area in the south central part of Area 7 to the extent permitted by available sanitary sewer.
6. If future development proposals will affect stormwater runoff or discharge to a sinkhole, policies which prohibit alterations of natural flows should be implemented in special procedure zoning legislation or subdivision improvement plans. Otherwise, improvements on individual lots should be subjected to review which will yield compliance with normally enforced codes and regulations but with specific regard for the unique implications of sinkholes which could be affected. Individual sewage disposal and water supplies should not be encouraged if the alternative of a public system is viable. The alternative of individual sewage treatment systems of an advanced design, capable of reliably sustaining a high quality of effluent discharge could also be considered where a public system remains unavailable and conventional private systems are not environmentally appropriate. Building sites should provide a setback from the lip of any sinkhole.

AREA 8

FEATURES:

- Approximately 30 percent of the subarea is directly influenced by the presence of sinkholes as major surface features. The remaining area is comparatively free of major topographic constraints with slopes of under 10 percent.
- The area is composed of properties which have frontage on either Old or New Jamestown Roads, extending to Lindbergh Boulevard on the south.
- Many of the residentially occupied parcels are very narrow and deep with residential units at road frontage. Nearly all parcels are occupied by single family residences.

- A public water main extends along Old Jamestown Road and a major utility gas line passes through north end and along New Jamestown Road.
- The typical lot size is five acres or less but some significant parcels are mixed throughout the area.
- Jamestown Mall is on the opposite side of Lindbergh but a strong commercial precedent has as yet not emerged on the north side within the area. Numerous small parcels have been formed along Lindbergh and are occupied by residences and a few commercial developments on comparably sized lots.
- The West Lake Quarry operation abuts the northeast corner of this subarea, constituting approximately half of Subarea 9 and a small part of Subarea 2.
- The south portion of the area will be influenced by the more intensive development on Lindbergh Boulevard and the Jamestown Mall.

RECOMMENDATIONS:

1. The varying residential densities anticipated to the north and west portions of the subarea should be reflected in equivalent or compatible residential development along Old Jamestown Road, at such time as development is proposed. The southeast portion could also include the medium-low to medium ranges of density. Development adjacent to Lindbergh Boulevard should be of a combination which features the compatible arrangement of medium residential development with supporting non-residential development. Unified site designs should be encouraged in order to preclude multiple curb cuts on Lindbergh, aesthetic distraction, and inadequate land use transitions. Although such development will reflect the commercial development of Jamestown Mall to the south, land uses which are complementary should be preferred to those which are redundant of the major commercial precedent. Office, attached residential, institutional or comparable uses could be appropriate.
2. Except for non-residential development adjacent to Lindbergh, any proposed development should be generally residential in character with densities forming a transition to lower densities through the area from south to north.
3. The Special Procedure provisions of the Zoning Ordinance should be considered or encouraged where they provide an effective means of mitigating future development problems. When applied, these provisions should focus on the extension of adequate utilities, providing efficient traffic circulation, and preserving the integrity of the community environment. Special procedures should be encouraged where they address transitions in density to potential development in Area 11.
4. Any consolidation and/or redivision of properties should not perpetuate the multiple frontage, long and narrow lot pattern now prevalent. Designs consistent with requirements of the Subdivision Ordinance should be substituted. The north/south line which now forms the rear lot line of nearly all the lots need not be maintained.

5. Service-oriented commercial, office commercial, or neighborhood commercial development which is compatible with or complements the residential community might also be appropriate as a transition or to take advantage of access. Such development should be oriented to the southern portion of the subarea where it contributes to the development of a predominantly residential character for the Lindbergh corridor.
6. Streets should be designed to provide for a continuous circulation of local residential traffic, but should discourage non-local traffic from the adjoining areas on Lindbergh or Lewis and Clark Boulevards where residential development may occur. Residential traffic within this subarea, however, could also be oriented to an east/west movement which is continuous with comparable residential street development in Areas 7 and 11. However, it should not extend that movement east of New Jamestown Road.
7. Any proposed development which abuts New Jamestown Road should be designed so as to provide an intermediate residential density, buffer, or other transitional method which will minimize conflict between residential development to the west and the potentially more intensive development anticipated adjacent to Lewis and Clark Boulevard. Such development should be within the medium-low residential density range and result in a minimum number of intersections with New Jamestown Road. Traffic should be internally oriented to Old Jamestown Road or an intersection which is coordinated with the future development of the mall to the south.
8. Any residential development in the northeast quarter of Area 8 should be buffered from the effects of the quarry operation within the north half of Area 9. Methods which provide a visual barrier, increase the separation of land uses, create a natural appearance, and effectively reduce the potential of future conflict should be incorporated with the residential design to the maximum possible extent.
9. If future development proposals will affect stormwater runoff or discharge to a sinkhole, policies which prohibit alterations of natural flows should be implemented in special procedure zoning legislation or subdivision improvement plans. Otherwise, improvements on individual lots should be subjected to review which will yield compliance with normally enforced codes and regulations but with specific regard for the unique implications of sinkholes which could be affected. Individual sewage disposal and water supplies should not be encouraged if the alternative of a private system is viable. The alternative of individual sewage treatment systems of an advanced design, capable of reliably sustaining a high quality of effluent discharge could also be considered where a public system remains unavailable and conventional private systems are not environmentally appropriate. Building sites should provide a setback from the lip of any sinkhole.

AREA 9

FEATURES:

- This area was identified in the 1979 General Plan as an area of potential industrial development in reflection of industrial zoning on opposite side of Lewis and Clark Boulevard.

- West Lake Quarry is prominent in that it currently or potentially dominates the north half of the subarea. The ongoing operation of the quarry has resulted in conflicts with surrounding residential development. These concerns include traffic conflicts, visual detracting, migration of dust, and off-site noise. Abutting Area 2 includes the portion of the quarry operation which is included within a Conditional Use Permit (P.C. 131-87 West Lake Quarry) granted July 4, 1987. Area 9 includes the balance of the operation.
- The east edge is adjacent to a rail right-of-way.
- The area offers extensive visibility from Lewis and Clark Boulevard.
- Most of the area is relatively free of topographic constraints except for drainage and slope at east edge.
- The future status of the railroad may be open to question in regard to continued operation of this section of track and bridge over the Missouri River.

RECOMMENDATIONS:

1. An indefinite continuation of the quarry operation should be assumed and reflected in designs for any future development in the northeast quarter of Subarea 8, east end of Subarea 2 or the south half of Subarea 9. Although the use of approximately the north half of subarea by quarry operation is a possibility, alternative uses, other than extraction may also be proposed for developable areas in the center of this subarea. In future considerations related to the quarry operation, particular consideration should be given to long-term improvements which enhance the environmental stipulations of the Zoning Ordinance, Performance Standards and/or other regulations. Voluntary compliance with higher standards should be encouraged, especially in relation to adjoining development. Such development should be consistent with potential development on the east side of Lewis and Clark Boulevard and could include highway commercial, office, or light industrial or residential development of a medium density range.
2. Non-residential traffic from the subarea should principally be oriented to access Lewis and Clark or Lindbergh, particularly any remaining truck traffic.
3. As a result of the access, visibility, and influences of highway and non-residential development to the east, alternatives to residential development of this area may also be considered in the future. Such uses could include highway commercial, light industry, or office commercial uses. These should be oriented to the southern part of the subarea. Particular consideration should be given to appropriate buffering, screening, and related site design criteria which will provide for both aesthetic and functional compatibility with any adjoining residential development. If a residential alternative is eventually proposed, it should result in a transition in density and continuity in design with residential development in Area 8.
4. The Special Procedure provisions of the Zoning Ordinance should be considered or encouraged where they provide an effective means of mitigating future development problems. When applied, these provisions should focus on the extension of adequate utilities, providing efficient traffic circulation, and preserving the integrity of the community environment.

5. Whenever an opportunity is presented during future review processes for the establishment of stronger design remedies, they should be instituted. These could include alternatives such as berms, screens, transitional land uses within the site, or redevelopment in adjacent areas to land uses compatible to all adjoining areas. More effective environmental controls for operations should also be implemented where off-site effects can be mitigated.

AREA 10

FEATURES:

- This roughly three sided area is bound on the west and south by right-of-way and to the east by low density residential subdivision.
- There are commercial ("C-8") sites established with frontage on Lindbergh.
- Robbins Mill Road separates the area and forms a "pocket" between Robbins Mill Road and Lindbergh Boulevard. To the north are single family residences.
- A number of relatively small parcels are all occupied by single family residences with access to Robbins Mill Road.
- Larger lots of several acres compose the north half, which is also in the karst area.
- Approximately 50 percent of the subarea is directly influenced by the presence of sinkholes as major surface features. The remaining area is comparatively free of major topographic constraints.

RECOMMENDATIONS:

1. Where it already exists north of Robbins Mill Road, the residential character of the area should be preserved. If any transition occurs, it should be within the low density range, reflecting adjoining development to the east and forming an appropriate transition to the west where some medium-low density occurs.
2. If transition from the existing residential pattern is considered, based upon the "C-8" commercial development already existing, it should be limited to the south of Robbins Mill and should emphasize a planned site development which provides for circulation improvements and an appropriate transition to the adjoining residential area to the north.
3. The Special Procedure provisions of the Zoning Ordinance should be considered or encouraged where they provide an effective means of mitigating future development problems. When applied, these provisions should focus on the extension of adequate utilities, providing efficient traffic circulation, and preserving the integrity of the community environment.
4. The residential development immediately north of Robbins Mill should not exceed the low density range.

5. If future development proposals will affect stormwater runoff or discharge to a sinkhole, policies which prohibit alterations of natural flows should be implemented in special procedure zoning legislation or subdivision improvement plans. Otherwise, improvements on individual lots should be subject to the normal review process which will yield compliance with uniformly enforced codes and regulations but with specific regard for the unique implications of karst affected areas. This should include sewage disposal systems. Individual sewage disposal and water supplies should not be encouraged if the alternative of a public system is viable. The alternative of individual sewage treatment systems of an advanced design, capable of reliably sustaining a high quality of effluent discharge could also be considered where a public system remains unavailable and conventional private systems are not environmentally appropriate. Building sites should provide a setback from the lip of any sinkhole.

AREA 11

FEATURES:

- This Subarea includes the bulk of potentially developable Lindbergh frontage.
- Approximately 30 percent of the subarea is directly influenced by the presence of sinkholes as major surface features. The remaining area is comparatively free of major topographic constraints.
- Two approved developments are currently underway; Village of Fours, 68 multiple family, "R-2" and "R-3"; Bay Pointe, 69 single family, "R-2" and "R-3".
- Except where sinkholes occur at the northwest and northeast corners, the topography is relatively uniform, with a slope to the south. The ridgeline of Coldwater Creek passes through the subarea in such a way that most of this area drains naturally into that basin.
- Substantial residential precedents have been established in the form of Deer Valley Subdivision which is large-lot in character (three acres per unit); The Village of Fours, which arranges 68 units in quadruplexes around an internal loop street; and Bay Pointe, in which 69 single family lots of a 9,000 square foot minimum are arranged along an elongated street which provides a stub to connect to potential future development.
- The Black Jack Fire Protection District owns a site on the north side of Lindbergh Boulevard immediately west of the proposed Jamestown Center.
- The parcels are narrow and deep, approximately 1800 feet or more. Except for a few residential lots on Lindbergh Boulevard, the parcels are 10 acres or larger.
- The Del Castle Sub-Trunk sewer line provides sewer access to the subarea.

RECOMMENDATIONS:

1. The residential precedent which has been established by previous and pending development extends through a residential density range of low through medium-low. Additionally, situating the medium-low density adjacent to Lindbergh or next to the limited commercial development which adjoins Lindbergh Boulevard would be desirable. The general pattern should be continued by maintaining a significant residential character in future development.

2. Development adjacent to Lindbergh Boulevard should be of a combination which features the compatible arrangement of medium-low residential development. Unified site designs which preclude multiple curb cuts on Lindbergh Boulevard, aesthetic distraction, and inadequate land use transitions should be given preference.
3. Streets should be designed to orient traffic to a minimal number of intersection points with Lindbergh Boulevard and should be coordinated with cross access to promote a continuous free flow of local traffic which is not required to use Lindbergh unnecessarily. The creation of multiple curb cuts and turning traffic on Lindbergh Boulevard should be prohibited.
4. The internal transition of residential densities should be consistent with the related residential densities and development in Areas 6, 7, 8, and 10. Special procedure developments may be utilized to coordinate that transition to provide continuous open space, buffers, or continuity of the pattern of development, especially to preserve the residential character of the Lindbergh Corridor.
5. The Del Castle Sub-Trunk sewer watershed extends northward to include part of Subarea 7. This area, which also extends into the karst topography of the Missouri River watershed, should be correlated to the transition of residential density and design of other supporting infrastructure. Such a procedure could link developments in Subareas 7 and 11 to promote an economical overall design.
6. If future development proposals will affect stormwater runoff or discharge to a sinkhole, policies which prohibit alterations of natural flows should be implemented in special procedure zoning legislation or subdivision improvement plans. Otherwise, improvements on individual lots should be subject to the normal review process which will yield compliance with uniformly enforced codes and regulations but with specific regard for the unique implications of karst affected areas. This review should include sewage disposal systems. Individual sewage disposal and water supplies should not be encouraged if the alternative of a private system is viable. The alternative of individual sewage treatment systems of an advanced design, capable of reliably sustaining a high quality of effluent discharge could also be considered where a public system remains unavailable and conventional private systems are not environmentally appropriate. Building sites should provide a setback from the lip of any sinkhole.

AREA 12

FEATURES:

- This area includes bulk of developable properties on the south side of Lindbergh Boulevard.
- The flood plain of Coldwater Creek and MSD plant dominate southern boundary and form an effective boundary between this unincorporated area and Black Jack. Two tributaries project into the center of the subarea resulting in significant slopes and added flood plain. Many of the slopes exceed 10 percent.
- Parcels are generally of an elongated shape with several under three acres and a few over 20 acres, most with single family residences at the frontage.
- The underlying zoning is "R-2", 15,000 square foot minimum residential.

- Planned improvements to the Coldwater Creek Treatment Facility should mitigate factors which heretofore may have inhibited development.
- An existing neighborhood to the east and to the west establishes an "R-2"/"R-3" density precedent.
- Commercial zoning of "C-8" occurs on the other three corners of the intersection of Lindbergh and Old Halls Ferry.
- River Oaks includes an "R-5" density north of the "C-8", although "R-2" density predominates.
- Delcastle Drive stubs at the eastern boundary.

RECOMMENDATIONS:

1. The existing zoning designation ("R-2") should be retained except as indicated in the following recommendations where other densities or uses may be appropriate for consideration.
2. The absence of potential access to the south limits this area to the use of ingress/egress oriented to Lindbergh Boulevard. The intersection of Robbins Mill on the north side of Lindbergh Boulevard (in Area 10) near the center of this area suggests a coordination of intersections for the purpose of limiting the number of intersections and signals on Lindbergh Boulevard. However, any such proposal should be preceded by development of a complete intersection design which is consistent with development of both Areas 10 and 12.
3. The topographic constraints, presence of the MSD treatment facility, and medium-low residential density of adjacent areas to the east and west suggest a continuation of the same general pattern of residential development. It should be anticipated that residential development in the medium-low density range will predominate but that some institutional, public, or other complementing uses could be included. Some sites adjacent to commercial development may be determined to be appropriate for a medium residential density as a transition from this nonresidential development.
4. The southeast corner of the intersection of Lindbergh Boulevard and Old Halls Ferry Road could eventually include a commercial use which reflects the established precedent on the other three corners. However, alternatives should also be considered, to include office, residential or other uses oriented to the visibility and access of the location. The topographic constraints of a slope to the southeast limit the size of the developable area. A proposed development within this corner location should reflect a consolidation of properties to develop the area as an integral site rather than a parcel by parcel approach. Duplication of locally oriented services should be avoided and a full range of neighborhood services encouraged.
5. Any development should specifically accommodate stormwater in a manner which is consistent with flood plain regulations and as integrated with anticipated improvements within the Coldwater Creek drainage basin.
6. The residential street, Delcastle Drive, should be extended, preferably to a continuous local street system which serves any future residential development to the west and provides an alternative means of ingress/egress to Lindbergh Boulevard or Old Halls Ferry Road.

7. The lot sizes and general subdivision character of Lake James Manor could be reflected in the continued use of similar special procedure developments which accommodate physical constraints of the area. Such alternative designs could also aid the formation of effective buffers adjacent to Lindbergh Boulevard and the MSD treatment facility.
8. With appropriate transitions, the clustering of residential units could be combined with conventional platting to preserve the scenic character of the area and support a more efficient infrastructure.
9. The Special Procedure provisions of the Zoning Ordinance should be considered or encouraged where they provide an effective means of mitigating future development problems. When applied, these provisions should focus on the extension of adequate utilities, providing efficient traffic circulation, and preserving the integrity of the community environment.

AREA 13

FEATURES:

- This subarea includes the area of potential expansion of Jamestown Mall. Approved or pending commercial developments in the "C-8" Planned Commercial District; and a 120-bed nursing/convalescent home.
- Fox Manor establishes a precedent south of the area for residential development using a special procedure at an "R-2" density.
- The area between Robbins Mill Road and Lindbergh Boulevard is presently divided into a number of irregular parcels occupied by single family residences. A strong slope to the center dominates the east end.
- The highway improvements and interchange at Lewis and Clark Boulevard should not exert any major influence on west side of Lewis and Clark Boulevard in terms of new alignment.
- The underlying zoning south of Lindbergh Boulevard is "R-2"; north of Lindbergh Boulevard it is "NU".
- Only two significant parcels remain uncommitted south of Lindbergh Boulevard; one is east of Jamestown Mall and the other is between Lindbergh Boulevard and Coldwater Creek adjacent to Lewis and Clark Boulevard.

RECOMMENDATIONS:

1. The yet to be developed portion of "C-8" zoning which is adjacent to the mall site should be considered in conjunction with area abutting to the east. The development should then provide a transition and buffer between the commercial development and existing residential development to the east.
2. Stubbed streets should be connected to provide for effective local traffic circulation; however, traffic from commercial development should be excluded from residential streets.

3. The undeveloped parcel at the southwest corner of the intersection of Lindbergh with Lewis and Clark Boulevards could be considered for a more intensive non-residential use. It should be compatible with the adjacent arterial road, and could take advantage of the natural buffer of the flood plain and transition from "C-8" uses to the north. It would also benefit from the high visibility and access offered by the site.
4. The area between Robbins Mill Road and Lindbergh Boulevard should be a continuation of the pattern of development for the Lindbergh Boulevard corridor and should also form a transition to the potential highway orientation of development on Lewis and Clark Boulevard. Traffic should be oriented to Robbins Mill Road versus Lindbergh Boulevard, and curb cuts on Lindbergh should be restricted to a minimum. Highway commercial, office commercial, and possibly medium to medium-high residential densities could be included.
5. The Special Procedure provisions of the Zoning Ordinance should be considered or encouraged where they provide an effective means of mitigating future development problems. When applied, these provisions should focus on the extension of adequate utilities, providing efficient traffic circulation, and preserving the integrity of the community environment.

AREA 14

FEATURES:

- This small area is composed of "C-8" zoning associated with the mall to the north and a residual area of "R-2" zoning. The flood plain of Coldwater Creek diminishes the readily buildable area substantially.
- Access to the "R-2" area is available only from the north, through the "C-8" area.

RECOMMENDATIONS:

1. Development of the area will, of necessity, require coordination with the mall for the sake of access. The limited size and visibility suggest a relatively small scale of development; however, a special procedure would increase the number of workable alternatives for residential density and type, if residential development is considered.
2. Another alternative would be to continue the non-residential use pattern of the mall, for example with an office type of development.
3. Still another alternative could be a public use area, namely a neighborhood scale park facility.
4. In any of the above it would be mandatory to include adequate buffering for the existing residential development and also to prevent any influence on stormwater elevations.

AREA 15

FEATURES:

- Approximately 50 percent of the subarea is directly influenced by the presence of sinkholes as major surface features. The remaining area is comparatively free of major topographic constraints.
- This area consists of the bulk of Laclede's holdings which are contiguous properties.
- Although no change in the existing pattern of use is anticipated in the near future, development of surrounding and adjacent areas could make some considerations desirable at some future time.
- The nature of the operation is such that access and security of equipment are critical.
- Karst formations and concentrations of equipment tend to preclude alternative uses except for a strip near the western limits of the property.
- A large underground storage cavern has been excavated under the northwest part of this subarea.

RECOMMENDATIONS:

1. It should be anticipated that the existing use will continue essentially unchanged. However, in the event of change, compatible alternatives should be considered.
2. Any alternative use should be required to meet all requirements of Laclede Gas Company regarding convenience and safety. This should be documented prior to final consideration of any proposal. All limitations and restrictions should be clearly defined and satisfactorily addressed prior to any approval.
3. If any residential development is considered, it should be at a low residential density in the karst areas and should utilize public water only, discouraging individual sewage disposal. If compatible with adjacent areas, a medium-low density could be appropriate.
4. Special procedure zoning should be instituted in order to establish the unique regulatory capacities which would be required to monitor the relation of compatible but dissimilar land uses.
5. These same recommendations should be applied to outparcels or future acquisitions by Laclede Gas Company.

6. If future development proposals will affect stormwater runoff or discharge to a sinkhole, policies which prohibit alterations of natural flows should be implemented in special procedure zoning legislation or subdivision improvement plans. Otherwise, improvements on individual lots should be subject to the normal review process which will yield compliance with uniformly enforced codes and regulations but with specific regard for the unique implications of karst affected areas. This should include sewage disposal systems. Individual sewage disposal and water supplies should not be encouraged if the alternative of a private system is viable. The alternative of individual sewage treatment systems of an advanced design, capable of reliably sustaining a high quality of effluent discharge could also be considered where a public system remains unavailable and conventional private systems are not environmentally appropriate. Building sites should provide a setback from the lip of any sinkhole.

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CHRONOLOGY OF THE GREENBELT DEVELOPMENT CONCEPT

April, 1962: Guide For Growth - The Land Use Plan, an element of the County's Comprehensive Plan states that "greenbelts (permanent open space areas) should be used as a means of delimiting urban communities." The Guide for Growth was not adopted as a formal policy statement by the County Council.

July, 1965: The Challenge of Growth - A Study of Major County and Regional Park Needs cites the Coldwater Creek area from Old Halls Ferry Road east to Highway 367 as being an excellent addition to the County Park System. The Lewis and Clark/Missouri River Parkway is also identified as a potential new regional park facility.

The Lewis and Clark/Missouri River Parkway was first proposed and considered by the Eighty-eighth Congress of the United States through Public Law 88-630 in 1964 with the hopes of developing a system of national river parkways.

October, 1968: National Trail Systems Act (Public Law 90-543) lists the Lewis and Clark Trail as one of the routes for further study for possible designation as National Scenic Trail.

August, 1974: The General Plan - St. Louis County reiterates the stated policy concerning greenbelts and their subsequent need and use. The 1974 General Plan was never formally adopted by the County Council.

June, 1977: Bureau of Outdoor Recreation completes the required study on the Lewis and Clark Trail and recommends its inclusion as a National Historic Trail.

June, 1978: The United States Congress passes the National Parks and Recreation Act (95-625) which amends the National Trails System Act and designates the Lewis and Clark Trail as a National Historic Trail. However, no significant amount of funds was appropriated, nor was a major acquisition program contemplated.

In St. Louis County, the proposed trail is entirely contained within the banks of the Missouri River and calls for no additional acquisition or dedication of public or private land around it.

August, 1979: The St. Louis County Linear Parks Plan was developed for the St. Louis County Parks and Recreation Department by John Lark and Associates through a pilot study program approved by voters in a 1977 bond issue. Implementation of Phase One land acquisitions has been completed along Coldwater Creek (from the Missouri River upstream to its intersection with Highway 367).

May, 1981: General Plan - St. Louis County calls for the preservation of wildlife habitats, scenic vistas, environmentally sensitive areas, unique features, and other land unsuitable for development, as open space. Additionally, the plan has called for the preservation, linkage, and enhancement of linear open space areas as residential, commercial, and industrial development occurs. This was the first plan adopted as a policy guide by the County Council, in accordance with the 1979 Charter amendment requiring such a plan.

December, 1983: Recreation Spaces - Community Places 1982 - 2000 states "that all available open space areas along the Missouri River, Coldwater Creek, and Mill Creek should be preserved when feasible."

January, 1986: St. Louis County's 1985 General Plan Update titled, "The Challenges of Transition," calls for the continued support of the long-standing policy of preserving, to whatever extent possible, wildlife habitats, scenic vistas, environmentally sensitive areas, unique features, and other land unsuitable for development, as open space.

GEOLOGIC DESCRIPTION OF STUDY AREA

Rocks of the Mississippian age are the oldest in the study area and are generally solution limestones in extensive beds. The younger Pennsylvanian rocks were laid down in warm seas some 300 million years ago and consist of cyclic (alternating) strata of shales, sandstones, and limestones with some seams of coal. Both of these two bedrock formations have been covered by extensive deposits of loess (windblown silt) carried from the floodplain of the Missouri River and deposited on the upland areas during post-glacial time. Recent (Quaternary) unconsolidated deposits of sands, silts, and gravels were deposited by the Missouri River since it began flowing through its present valley thousands of years ago.

The Mississippian age bedrock exists in extensive layers or beds of pure, dense, massively bedded gray to light gray limestones commonly referred to as the St. Louis Formation. The total thickness of the St. Louis Formation in the study area is more than 100 feet.

This extensive solution limestone Formation has been significantly altered by weathering. Surface water travelling downward along vertical joints and horizontal bedding planes has dissolved the rock, resulting in the formation of numerous, small caverns. The bedrock over these caverns has collapsed under the weight of the soil overburden forming the familiar sinkholes typical of the karst topography located in this area.

The limestone from the St. Louis Formation is quarried in the study area for cement manufacture and aggregate.

The Pennsylvanian bedrock within the study area consists of cyclic, or alternating, sequences of shales, sandstones, siltstones, and limestones with an occasional thin seam of clay and coal. These alternating sequences of rocks are collectively called the Cabaniss subgroup. The individual layers or beds are relatively thin, varying from a few inches to several feet thick. The cumulative thickness of the Cabaniss subgroup in the study area is less than 100 feet.

The smooth rolling topography characteristic in part of the study area is reflective of the shale bedrock that caps the Cabaniss subgroup there. The shales that make up the Cabaniss subgroup exhibit nearly perfect horizontal bedding, little weathering, and an extensive cover of thick surficial deposits of loess.

Recent (Quaternary) surface geologic deposits in the valley floor of the Missouri River are composed of deep alluvial materials of sands, silts, and gravels. The upper layers of these surface materials were deposited during flooding in relatively recent times. Water flows underground through the alluvium as well as in the river channel on the surface. The depth of the alluvium is well over one hundred feet in the study area. Additionally, as the river channel has continued to grow smaller, terrace deposits of stratified sand, silt, and clay are also found lying adjacent to the existing floodplain, but at slightly higher elevations.

The study area is free of any major faults, folds, or other geologic features that could render any future development unsuitable. There may be site-specific incidences of these features in the study area that have yet to be mapped, but they would become apparent if development was proposed and undertaken.

GEOGRAPHIC DISTRIBUTION OF NEW JAMESTOWN AREA COMMUNITY STUDY

ADVISORY COMMITTEE

1. Jim Smith, Planning Commissioner - St. Louis County
Chairman of Advisory Committee
2. Kenneth J. Otto, Planning Commissioner - St. Louis County
Vice-Chairman of Advisory Committee
3. Louis Becker, Chairman - Wedgewood Trustee Association
4. Christine R. Boyce - Resident of Area, Former Trustee, Lake James Manor
5. Dick Dalton - Old Jamestown Neighborhood Assoc.
6. Paul F. Detrick, Board Chairman
Christian Health Services Development Corporation
7. Robert Dick, Fire Chief
Black Jack Fire Protection District
8. Kevin Franklin
Franklin Contracting Co.
9. Lowell Girardier, Home Builder
10. Marvin Hahn, Assistant Superintendent
Hazelwood School District
11. Donna Smith
Baronwood Kennels
12. Anthony J. Soukenik
Attorney - Padberg, McSweeney, Slater and Merz

RESIDENCE/BUSINESS LOCATIONS
OF COMMITTEE MEMBERS IN RELATION
TO THE OLD JAMESTOWN STUDY AREA

SPECIAL ZONING PROCEDURES

The following are extracted from The Zoning Ordinance of St. Louis County, Missouri (Ordinance No. 10,889 - Adopted 12/22/82)

1003.180 Special Procedures.

In order to provide for uses that require particular consideration in each case because of the nature of the use and its effect on its surroundings or the community, and in order to provide the maximum flexibility in the site planning of uses and reasonable modification in uses in appropriate circumstances, all consistent with the public health, safety, and general welfare of St. Louis County and good planning practice, the following procedures are established. (O.No. 10889 - Adopted 12/22/82).

1003.181 Conditional Use Permit Procedure (CUP).

1. Scope of Provisions.

This section contains the regulations of the Conditional Use Permit Procedure. These regulations are supplemented and qualified by additional general regulations appearing elsewhere in this Chapter which are incorporated as part of this section by reference.

2. Statement of Intent.

It is hereby declared that certain land uses and developments present unique problems with respect to their proper location and relationship to other land uses. Therefore, analysis and judgment of the consequences of each development and use is necessary to preserve and to promote the public health, safety, and general welfare. Such land uses and developments are identified in each particular zoning district under Conditional Land Use and Development Permits Issued by the Commission.

1003.183 Density Development Procedure.

1. Scope of Provisions.

This section contains the regulations of the Density Development Procedure. The regulations are supplemented and qualified by additional general regulations appearing elsewhere in this Chapter which are incorporated as part of this section by reference.

2. Statement of Intent.

The intent of this section in establishing the Density Development Procedure is as follows:

- (1) To provide permissive, voluntary, and alternate zoning procedures within the "NU", "R-1", "R-1A", "R-2", "R-3", "R-4", and "R-5" Residence Districts by permitting variations in lot size and design while maintaining the maximum dwelling unit density limitations of the particular residence district.
- (2) Through variation in the zoning requirements to promote economic and energy efficient subdivision design, encourage a variety of housing types, encourage ingenuity and originality in site design, preserve open space, and provide recreation areas within residential developments.

1003.187 Planned Environment Unit Procedure (PEU).

1. Scope of Provisions.

This section contains the regulations of the Planned Environment Unit Procedure. These regulations are supplemented and qualified by additional general regulations appearing elsewhere in this Chapter which are incorporated as part of this section by reference.

2. Statement of Intent.

The intent of this section is to provide a voluntary and alternate zoning procedure in the "R-1", "R-1A", "R-2", "R-3", "R-4", "R-5", "R-6A", "R-6AA", "R-6", "R-7", and "R-8" Residence Districts in order to permit flexibility in building types, encourage economic and energy efficient subdivision design, and encourage the provision of supporting community facilities in the development of diverse, sound, urban developments under conditions of approved site and development plans.

1003.189 Commercial-Industrial Designed Development Procedure (CIDD).

1. Scope of Provisions.

This section contains the regulations of the Commercial-Industrial Designed Development Procedure. These regulations are supplemented and qualified by additional general regulations appearing elsewhere in this Chapter which are incorporated as part of this section by reference.

2. Statement of Intent.

The purpose of this section is to provide a permissive, voluntary, and alternate zoning procedure in the "C" Commercial and the "M" Industrial Districts in order to permit minor flexibility in commercial and industrial uses beyond those permitted in the particular districts, under approved site plans and conditions.

1003.191 Landmark and Preservation Area (LPA).

1. Purpose and Intent.

The purpose of this section is to promote the general welfare, heritage, education, and economic benefit of St. Louis County, through the preservation, protection, and regulation of buildings, sites, structures, monuments, and neighborhoods of historic, architectural, cultural or archeological significance. It is further the intent of this procedure to encourage the adaptation of these buildings, sites, structures, etc. for current use.

2. In any zoning district, except "PS" Park and Scenic District, a single parcel or geographic area may be designated as a Landmark and Preservation Area thereby encouraging the preservation, enhancement, rehabilitation, and perpetuation of the landmark building, structure or area. The Planning Commission may recommend and the County Council, by ordinance, may approve designation for a specific parcel or area provided the area is characterized by one or more of the following criteria:

- (1) Has significant character, interest or value as part of the development, heritage or cultural characteristics of the County of St. Louis, State of Missouri, or the United States.
- (2) Is the site of a significant historic event.
- (3) Is the work of a designer whose individual work has significantly influenced the development of the St. Louis region, State of Missouri or United States.
- (4) Contains elements of design, detail, materials, or craftsmanship which represent a particular architectural style or significant innovation.
- (5) Owing to its unique location or singular physical characteristic, represents an established and familiar visual feature of a neighborhood, or within St. Louis County.

1003.193 Appeal and Protest Procedure for Special Procedures.

1. Scope of Provisions.

This section contains the regulations governing the filing and review of an appeal or protest from a Planning Commission decision or recommendation regarding a special procedure authorized under Sections 1003.181 Conditional Use Permits, 1003.187 Planned Environment Unit Procedure, 1003.189 Commercial-Industrial Designed Development Procedure, and 1003.191 Landmark and Preservation Area Procedure.

2. Statement of Intent.

The purpose of this section is to provide a formal method by which a petitioner may request further consideration by the County Council of a Planning Commission denial or recommendation of denial of certain special procedures as specified herein; and to provide a formal method by which the owners of property located within a specified proximity to a petitioned tract of land may present to the County Council a petition and statement of their opposition to a Planning Commission decision or recommendation of approval of certain special procedures as specified herein.

1003.107 "NU" Non-Urban District Regulations.

1. Scope of Provisions.

This section contains the district regulations of the "NU" Non-Urban District. These regulations are supplemented and qualified by additional general regulations appearing elsewhere in this Chapter which are incorporated as part of this section by reference. The "NU" Non-Urban District of St. Louis County encompasses areas within which rough natural topography, geological conditions, or location in relation to urbanized areas creates practical difficulties in providing and maintaining public roads, and public or private utility services and facilities. The "NU" Non-Urban District also encompasses areas where specific potential development patterns have not been identified or where significant non-urban uses have been established.

WEST LAKE QUARRY

The West Lake Quarry operation located at Fort Bellefontaine and New Jamestown Roads is part of a larger (434 acre) owned or leased area formerly known as Fort Bellefontaine Quarry that straddles Highway 367 on the east and west. Prior to April 1965, this area was zoned "K" Heavy Industrial and quarry operations were permitted uses. After 1965, the area was zoned "NU" Non-Urban. An affidavit presented to the Zoning Enforcement Officer of St. Louis County indicated that quarrying operations have taken place within these boundaries since and prior to June 1946. Per a memorandum dated November 24, 1986 the Zoning Enforcement Officer determined the 434± acre area was a legal non-conforming use and quarry operations could continue on those portions of the identified and documented tract. This area includes the approximate 99 acres located on the east side of New Jamestown Road south of existing Westlake Quarry. However, the documented tract did not include the stockpile area (subject of P.C. 131-87 West Lake Quarry).

On December 12, 1986 the Zoning Enforcement Officer reported to the West Lake Quarry operator that the material storage area (subject of 131-87) was outside the established non-conforming use area and was in violation of St. Louis County Ordinances. It was requested that West Lake discontinue using the property by February 1, 1987. In February, West Lake agreed to file for a Conditional Use Permit on the subject 21.9 acres and the Zoning Enforcement Officer permitted the use of the property for material storage during daylight hours with no expansion of the ground area of current operations. The C.U.P. application was filed and accepted and a public hearing scheduled for May 18, 1987. The Planning Commission granted approval of the C.U.P. request at the June 1, 1987 Executive Meeting. The permit became effective on July 4, 1987. Site Development Plans are currently being processed.