



City of Lake Saint Louis
Missouri

Municipal Separate Storm Sewer System
2008 – 2013
General Permit Application

Department of Public Works

December 2007

RESOLUTION 12-03-07 (1)

A RESOLUTION AUTHORIZING THE FILING OF A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) MISSOURI STATE OPERATING PERMIT APPLICATION WITH THE MISSOURI DEPARTMENT OF NATURAL RESOURCES.

WHEREAS, the City of Lake Saint Louis was classified as a Regulated Small Municipal Separate Storm Sewer System (MS4) by the Missouri Department of Natural Resources and, therefore, must submit an Operating Permit Application; and

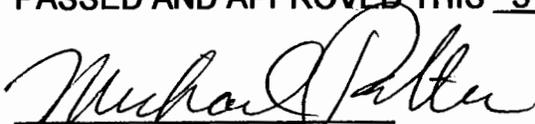
WHEREAS, this Missouri State Operating Permit would authorize discharges of storm water from Regulated Small MS4s, as defined in Title 10, Division 20, Chapter 6.200 of the Missouri Code of State Regulations (CSR).

Now, therefore, be it resolved by the Board of Aldermen for the City of Lake Saint Louis, Missouri as follows:

SECTION 1. That the Mayor and/or City Administrator is hereby authorized to execute and file the attached application on behalf of the City of Lake Saint Louis with the State of Missouri.

SECTION 2. That the Mayor and/or City Administrator is authorized and directed to furnish such information as the Missouri Department of Natural Resources may reasonably request in connection with the application which is herein authorized, to sign all necessary documents on behalf of the applicant, to furnish such assurances to the Missouri Department of Natural Resources as may be required by law or regulation and to receive payment on behalf of the applicant.

PASSED AND APPROVED THIS 3rd DAY OF December, 2007.


Michael Potter, Mayor

ATTEST 
Donna F. Daniel, City Clerk

Table of Contents

I.	Introduction.....	1
II.	Stormwater Mangement Program	1
A.	Public Education and Outreach	1
B.	Public Involvement and Participation	3
C.	Illicit Discharge Detection and Elimination	3
D.	Construction Site Runoff Control.....	5
E.	Post Construction Site Runoff Control.....	6
F.	Pollution Prevention and General Housekeeping In Municipal Operations	8

Appendix A– Storm System GIS Maps

Appendix B– Form K

Appendix C– Form M

I. Introduction

The City of Lake Saint Louis (the City) has the legal authority to implement the following Storm Water Management Program (SWMP) under its governmental authority granted by statutory authority within the Missouri Revised Statutes. These statutes hold that a municipality may enact zoning resolutions which regulate land use in such a manner as to control sediment and storm water runoff from urban development.

During the 2003 – 2008 operating permit, the City funded the additional activities necessary to implement its SWMP through the City's general and capital project funds. In order to fund this program, the City was limited to real estate tax, and sales tax revenues which also supported essential governmental functions of the City. In 2006, the residents of the City passed a \$1 million street and storm water bond issue, and in 2007 the City hired a dedicated storm water engineer to coordinate all National Pollutant Discharge Elimination System (NPDES) requirements, and future Capital Improvement Plans (CIP). This bond issue will fund all streambank stabilization and storm water flooding issues during the 2008 – 2013 operating permit.

The City of Lake Saint Louis is located in the Peruque Creek watershed. The City contains approximately 8.95 square miles. The majority of the community is served by a regional sewage treatment system, but approximately fifteen percent (15%) of the incorporated undeveloped land does not have sewers serving the parcels. Two large recreational lakes have been built within the corporate limit. The largest, Lake Saint Louis, a 550 acre lake is located in the Peruque Creek valley. The smaller 50 acre lake, Lake Saint Louise, is located on a tributary to Peruque Creek. The City's storm water system consists of roadside ditches, culverts, and pipes to the streams that drain the City (See Appendix A).

II. Stormwater Management Program

A. Public Education and Outreach

- 1. Permit requirement:** Lake Saint Louis shall implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff.

- 2. Decision process:** Lake Saint Louis will inform residents about the steps they can take to reduce storm water pollution and about ways to get involved in Lake Saint Louis' SWMP through a combination of public meetings, workshops, community activities, and print media including newspaper articles, newsletters, new resident outreach, and web site postings. The City's newsletter is sent to each household and business twice a year, and the City's web site is very active.

The target audiences for the program are residents, business owners, students, and developers and contractors.

Pollutant sources common to the Peruque Creek watershed include sediment from stream bank erosion and improperly controlled construction sites, habitat alteration due to land use changes, and bacteria and nutrient pollution from home lawn fertilization. Because the majority of these pollution problems are caused by increases in impervious cover and the resulting increases in storm water volume and velocity, Lake Saint Louis will focus much of its Public Education and Outreach program on increasing public awareness of the links between land use practices and storm water pollution. Lake Saint Louis also will continue its program of education on proper operation and maintenance of construction sites to contain sediment pollution. The City will seek out and develop materials to address homeowner practices that may cause pollution, such as landscaping and lawn care; use and disposal of paints, solvents, oils, and the like; and recycling or composting of appropriate materials.

BMPs and Measurable Goals

Annual Activities

1. Release newspaper articles to local publications.
Measurement: Number of Articles
2. Web site postings and links.
Measurement: Website Updated
3. Developer and contractor workshops.
Measurement: Developer and Contractor Workshop Completed
4. Inserts with planning and zoning approval letters on erosion and sediment control for new permittees.
Measurement: Inserts Added
5. Update current resident outreach brochure to include NPDES information.
Measurement: Brochure Updated
6. Operate and advertise a storm water telephone hotline that will allow the City to log concerns related to storm water management.
Measurement: Hotline Operated and Advertised

Because Lake Saint Louis' newsletter is sent to every household twice each year, the City will have contact with every resident. The City will also seek support from organizations that have extensive outreach, such as the Lake Saint Louis Community Association the organization that owns the two large lakes.

B. Public Involvement and Participation

- 1. Permit requirement:** The City shall implement a public involvement/participation program that complies with State and local public notice requirements.
- 2. Decision process:**
Because Lake Saint Louis' newsletter is sent to every household two times per year, the City will have contact with every resident. The City will also seek support from organizations that have extensive outreach, such as the Lake Saint Louis Community Association that controls the two large lakes. Lake Saint Louis will have a procedure to involve the public in the development and submittal of the SWMP. One public hearing will be held per year, in March, to review progress and to discuss the draft annual progress report.

BMPs and Measurable Goals

Annual Activities

- 1. Schedule and conduct at least one clean-up event.**
Measurement: Clean-up Conducted
- 2. Promote participation in the existing adopt-a-street clean-up program.**
Measurement: Participation Promoted
- 3. If requested, train interested citizens to identify and report potential dry weather illicit discharges.**
Measurement: Training Conducted, If Requested
- 4. Encourage resident's use of local recycling facilities such as the county's recycling center, for oil drop off, etc.**
Measurement: Recycling Center Promoted

C. Illicit Discharge Detection and Elimination

- 1. Permit requirement:**
Lake Saint Louis shall develop, implement and enforce a program to detect and eliminate illicit discharges (as defined in 10 CSR 20-6.200) into the City's regulated small municipal separate storm sewer system (MS4). Develop or submit, if not already completed, a storm sewer system map showing the location of all outlets and the names and location of all waters of the State that receive discharges from those outlets. To the extent allowable under State, or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into the City's storm sewer system and implement appropriate enforcement procedures and actions. Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to the City's system. Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste, and address the following categories of non-storm water

discharges or flows (i.e., illicit discharges) only if the City identifies them as significant contributors of pollutants to the City's regulated small MS4:

- landscape irrigation
- rising ground waters
- uncontaminated ground water infiltration
- uncontaminated pumped ground water
- discharges from potable water sources
- foundation drains
- air conditioning condensation
- springs
- water from crawl space pumps
- footing drains
- lawn watering
- flows from riparian habitats and wetlands
- street wash water
- discharges or flows from fire fighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are significant sources of pollutants to waters of the State

The City may also develop a list of other similar occasional incidental non-storm water discharges (e.g. non-commercial or charity car washes, etc.) that will not be addressed as illicit discharges. These non-storm water discharges shall not be reasonably expected (based on information available to the City) to be significant sources of pollutants to the MS4, because of either the nature of the discharges or conditions the City has established for allowing these discharges to the City's MS4 (e.g., a charity car wash with appropriate controls on frequency, proximity to sensitive water bodies, BMPs on the wash water, etc.). The City shall document in their SWMP any local controls or conditions placed on the discharges. The City shall include a provision prohibiting any individual non-storm water discharge that is determined to be contributing significant amounts of pollutants to the City's MS4.

2. Decision Process:

Lake Saint Louis has developed an ordinance for the illicit discharge detection and elimination program. The City does not currently have any streams or lakes on the 303(d) list, and therefore does not have any TMDL's. High priority areas have been identified, and a procedure is in place for tracing, assessing and removing the illicit discharge.

BMPs and Measurable Goals

Annual Activities

1. Update map of storm sewer system using GIS.
Measurement: Maps updated

2. Public employees will be informed by annual training, with specific training for new employees.
Measurement: Training Conducted
3. Propose an ordinance to detect dry-weather discharge and determine if discharge is illicit. The ordinance would allow the City to gain enforcement authority against illicit discharges.
Measurement: Dry-weather Discharge Ordinance Proposed
4. Conduct field investigation of the stream system in the City. Field investigation will include walking the waters of the City, survey of outfalls and noting whether a dry weather illicit discharge was occurring.
Measurement: Field Investigation Conducted
5. Field screen all dry-weather discharges identified. If the discharge appears to be an illicit discharge, identify source using maps and field investigations of the storm drainage system. Contact owner of source to determine type of discharge. If illicit, work with owner to eliminate discharge using the enforcement provisions of the proposed ordinance in Activity #3.
Measurement: Dry-weather Discharges Identified and Eliminated

D. Construction Site Runoff Control

1. Permit Requirement:

The City shall develop, implement, and enforce a program to reduce pollutants in any storm water runoff to their regulated small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre shall be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more.

2. Decision Process:

The Erosion and Sedimentation Control Regulations were adopted by the City in 2001, and are attached to this Storm Water Management Program. The purpose of these regulations is to effectively minimize soil erosion and sedimentation during land development, building, landscaping or any other type of land disturbance regardless of size. They will also provide developers and property owners with soil erosion and sedimentation control standards and regulations. An Erosion and Sedimentation Control Plan is required by all contractors and developers. The Community Development Director and the Public Works Director will review all site plans and submit them to the St. Charles County Soil and Water Conservation District for review as well.

BMPs and Measurable Goals

Annual Activities

1. Continue performing site inspections according to existing ordinance and procedures at all sites.
Measurement: Site Inspections Performed
2. Continue to review all pre-construction site plans to consider potential water quality impacts.
Measurement: Pre-constructions Site Plans Reviewed
3. Train construction site inspection staff on inspection procedures.
Measurement: Training Conducted
4. Create or adopt a structural BMP matrix applicable to construction site activities during year 2 of the permit.
Measurement: Structural BMP Matrix Created or Adopted
5. Create or adopt SWPPP standard form and requirements.
Measurement: SWPPP Standard Form and Requirements Created or Adopted

E. Post Construction Site Runoff Control

1. Permit Requirement:

The City shall develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the City's regulated small MS4. The City's program shall ensure that controls are in place that would prevent or minimize water quality impacts. Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs) appropriate for the City's community. Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State, or local law; and ensure adequate long-term operation and maintenance of BMPs.

2. Decision Process:

The Erosion and Sedimentation Control Regulations establishes the minimum storm water management requirements for the City of Lake Saint Louis. The E&SC regulations establish standards for post-construction site runoff control. These standards apply to any new development or redevelopment. The enforcement of the E&SC post construction is carried out by the Community Development Department.

Lake Saint Louis will use a combination of planning activities, education, and non-structural and structural practices to address storm water runoff from new development and redevelopment projects. This program will be targeted at the western portion of the City. This portion contains the majority of our large tracts of undeveloped land. Lake Saint Louis also will target riparian areas on Perouque Creek and around the two lakes.

Lake Saint Louis is a residential community with limited commercial and institutional developments at this time. City water quality concerns are those related to increases in storm water runoff as impervious cover increases and include sedimentation due to stream bank erosion, increased flooding due to increases in storm water volume, higher temperatures due to increases in storm water temperature in detention facilities, and habitat loss as riparian and wetland areas are impacted by development.

BMPs and Measurable Goals

Annual Activities

1. Inspect existing BMPs (primarily basins and ponds) for functionality.
Schedule inspection completion of one-third existing BMPs each year by ward.
Measurement: Existing BMPs Inspected According to Schedule
2. Monitor complaints, track and log existing problems relative to storm water management.
Measurement: Complaints Monitored
3. Perform follow-up inspections of 10% of sites completed in the previous year.
Measurement: Follow-up Inspections Performed
4. Discuss low impact development zoning requirement for future development in the city with the Mayor and Board of Aldermen.
Measurement: Low Impact Development Zoning Requirement Discussed
5. Develop standards for stormwater treatment BMPs (structural and non-structural) to improve water quality, complete during year 2 of permit.
Measurement: Standards for Development BMPs Developed
6. Facilitate city officials to establish regulations for use of BMPs.
Measurement: Regulations Established

F. Pollution Prevention and General Housekeeping In Municipal Operations

1. Permit Requirements:

The City shall develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. Using training materials that are available from EPA, State, or other organizations, the City shall develop training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.

2. Decision Process:

Lake Saint Louis has three facilities affected by this control measure: Public Works Department Garage, Parks Department Garage, and the City Hall/Police Facility. The City will conduct training for employees of these facilities using available training materials from EPA, OSHA, and MoDOT. Training sessions for the Public Works Department and Park Department will be required annually. Training materials will be incorporated in newsletters, press releases, and web site pages for dissemination to the general public.

BMPs and Measurable Goals

Annual Activities

1. Implement a formal street sweeping program, and increase the frequency of street sweeping as budget allows.
Measurement: Street Sweeping Completed

The Operations and Maintenance Program will contain but not necessarily be restricted to the following municipal operations and categories:

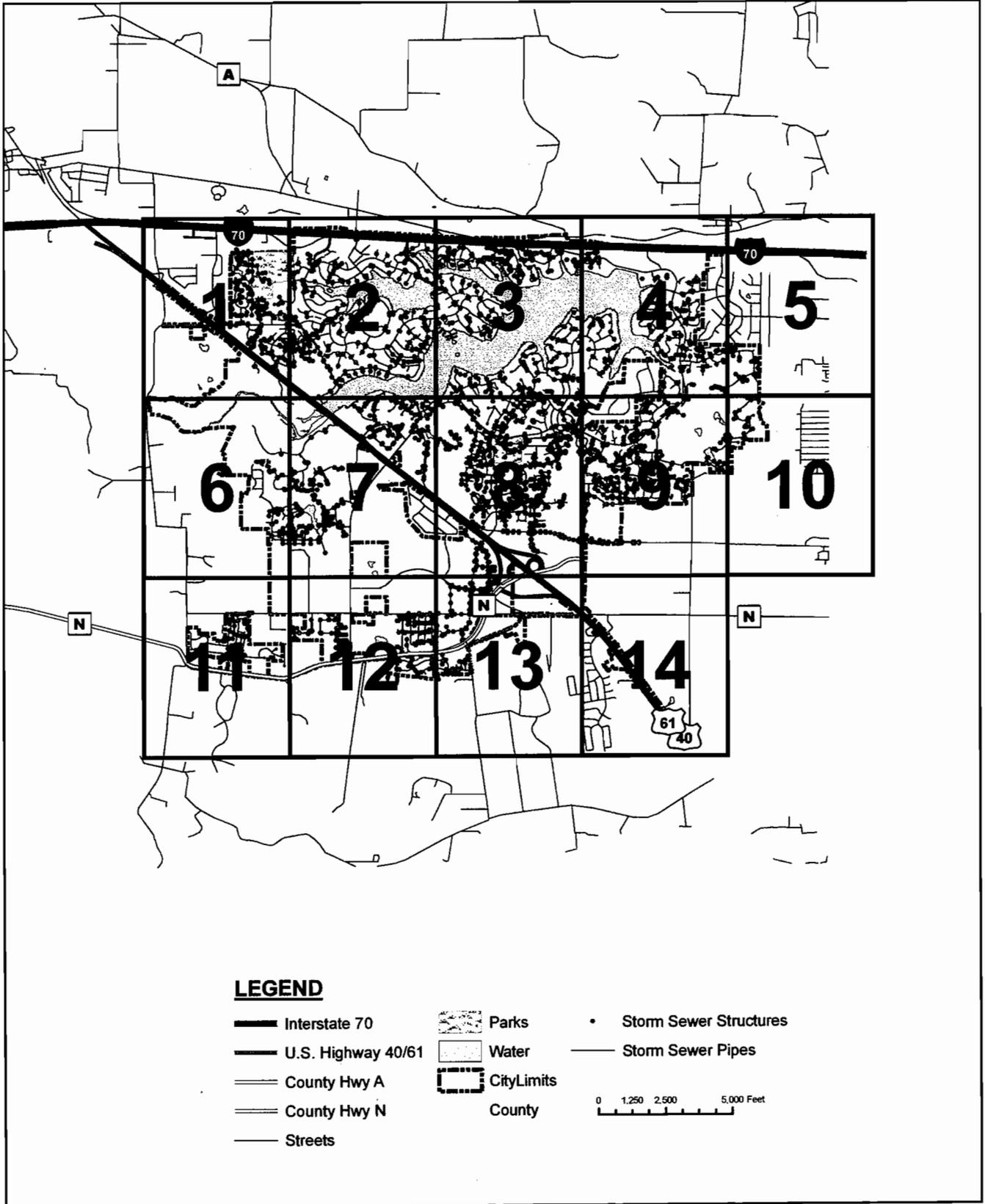
2. Building maintenance: Exterior HVAC equipment, material storage and control, and proper use and application of materials.
Measurement: General Housekeeping Completed
3. Garden and landscaping operations: Proper operation of irrigation systems, material storage and control, and proper use and application of materials.
Measurement: General Housekeeping Completed
4. Parking lots and storm water system maintenance: Periodic inspection of curbing and grating, assessment of storm water drainage, and inspection and cleaning of storm water systems.
Measurement: General Housekeeping Completed
5. Park/open space maintenance: Proper material storage and control, and proper use and application of materials.
Measurement: General Housekeeping Completed

6. Licensed vehicle maintenance: Weekly operator inspections before use, and applicable vehicles cleaned within two days after a winter storm event.
Measurement: General Housekeeping Completed
7. Off-road equipment maintenance: Maintenance performed within a protected facility, weekly operator inspections before use, and remove equipment from service when fluid leaks are significant.
Measurement: General Housekeeping Completed
8. Fuel storage and dispensing facilities: Compliance with federal and state regulations, emergency spill containment, and emergency generator installations.
Measurement: General Housekeeping Completed
9. Outdoor bulk material storage: Covered material storage areas, short term uncovered storage areas.
Measurement: General Housekeeping Completed
10. Land disturbance: Plan/design projects for minimum disturbance, procedures for self-performed construction activities.
Measurement: General Housekeeping Completed
11. Waste disposal: All wastes disposed per federal, state, and local regulations, and recycling alternatives to reduce conventional waste disposal.
Measurement: General Housekeeping Completed

Appendix A

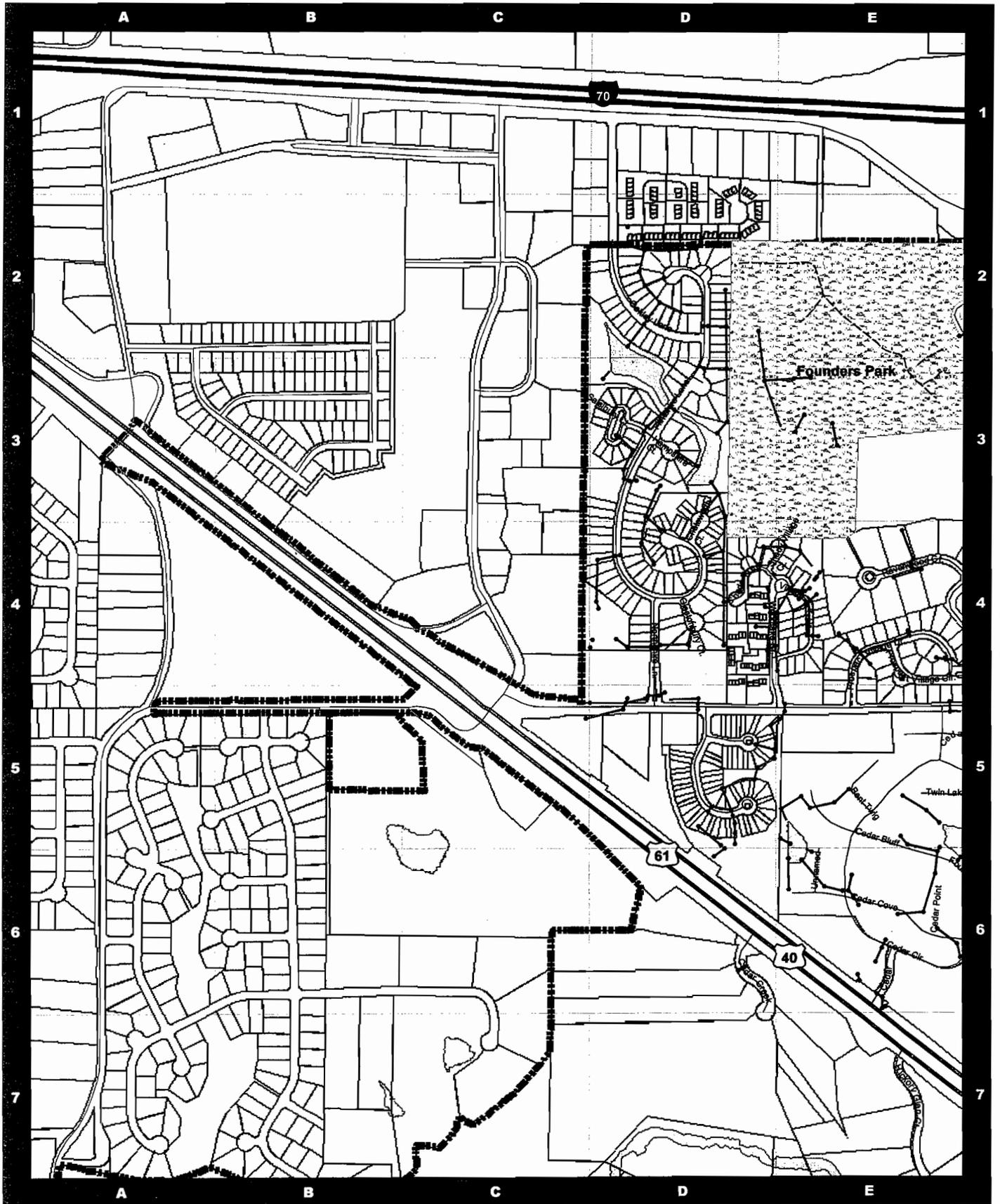
Storm System GIS Maps

City of Lake Saint Louis, MO



City of Lake Saint Louis, MO

0 175 350 700 Feet



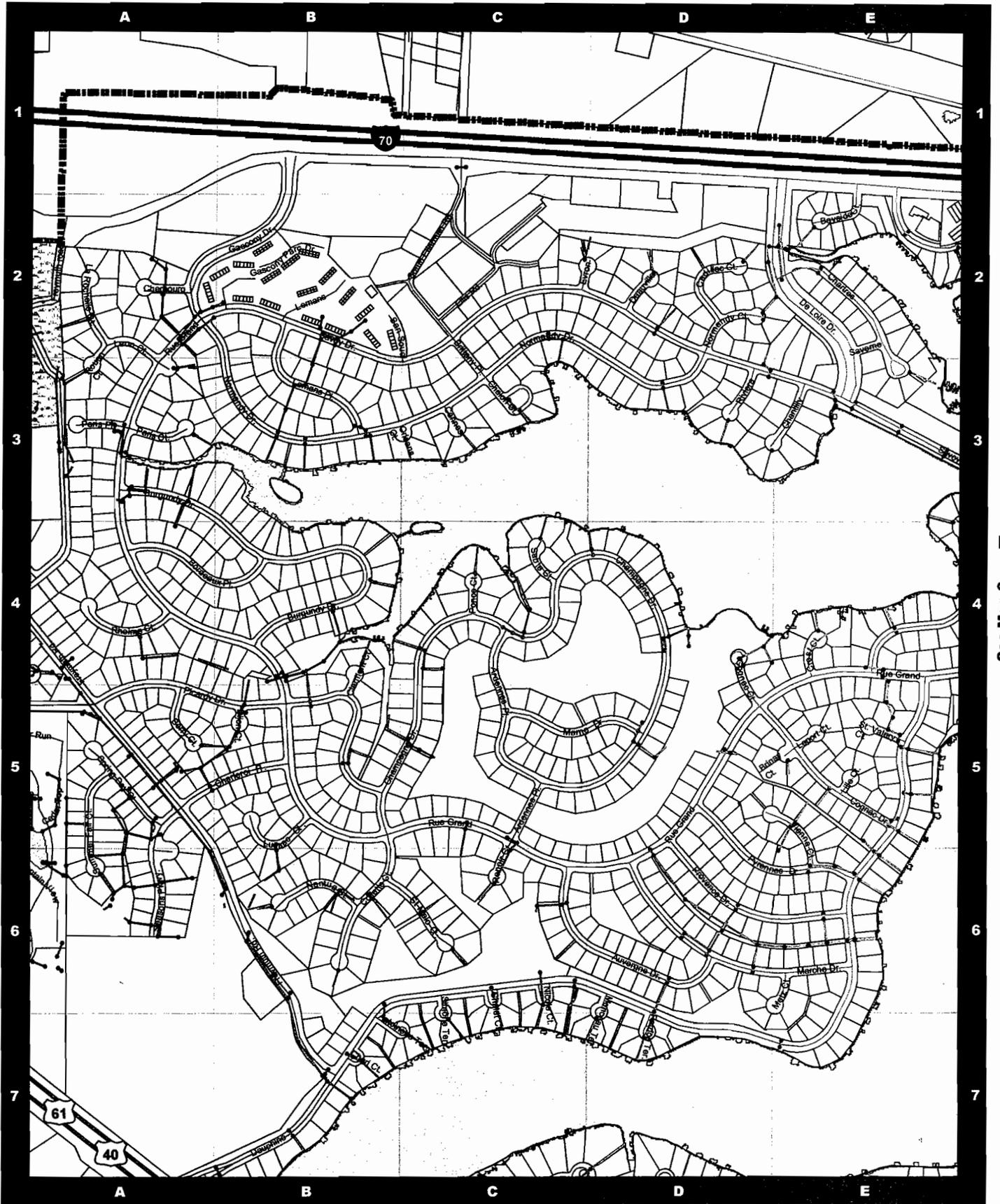
See Map 2 ▼

See Map 6 ▼

MAP 1

City of Lake Saint Louis, MO

0 190 380 760 Feet



See Map 1 ▲

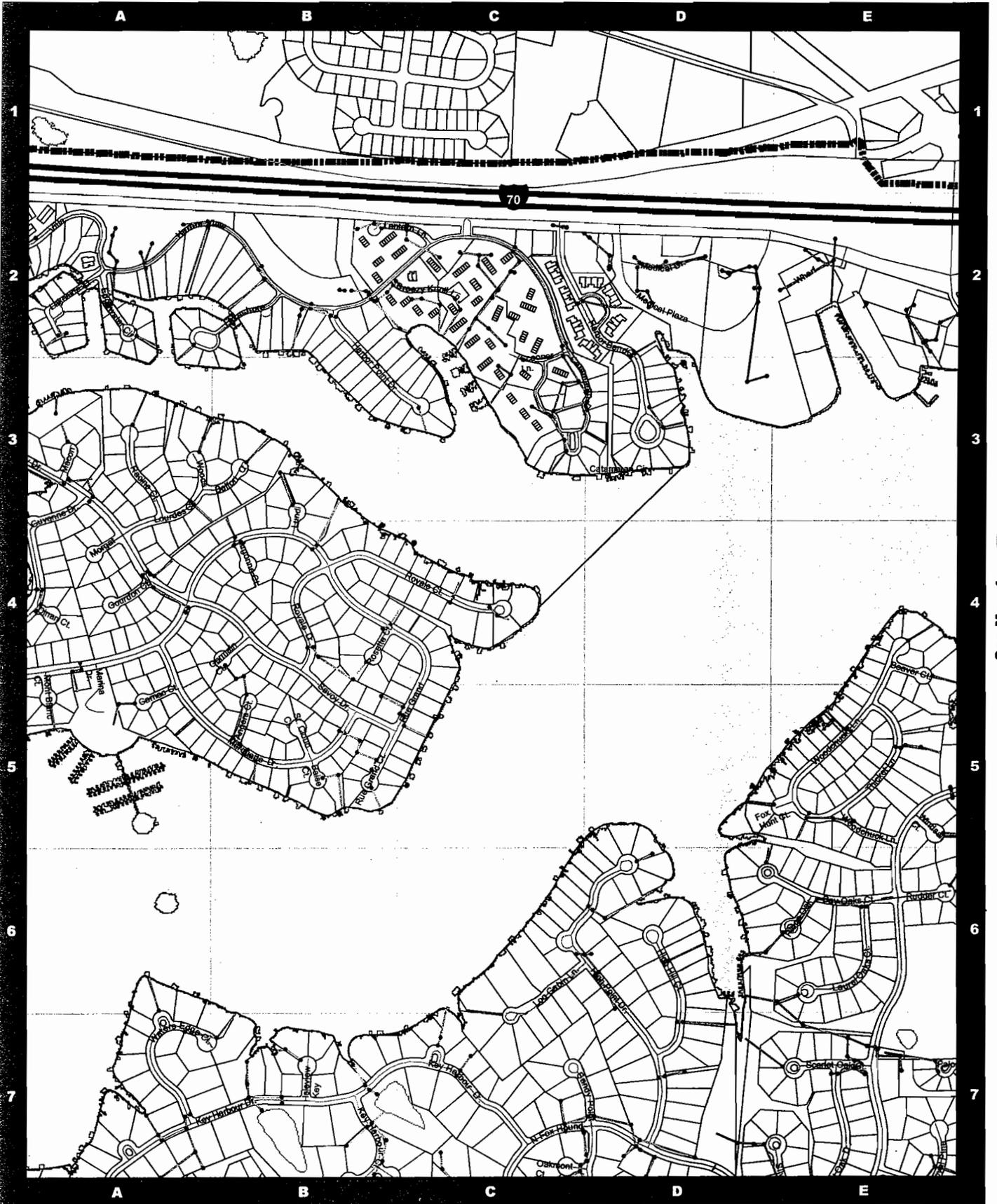
See Map 3 ▼

See Map 7 ▼

MAP 2

City of Lake Saint Louis, MO

0 190 380 760 Feet



See Map 2 ▲

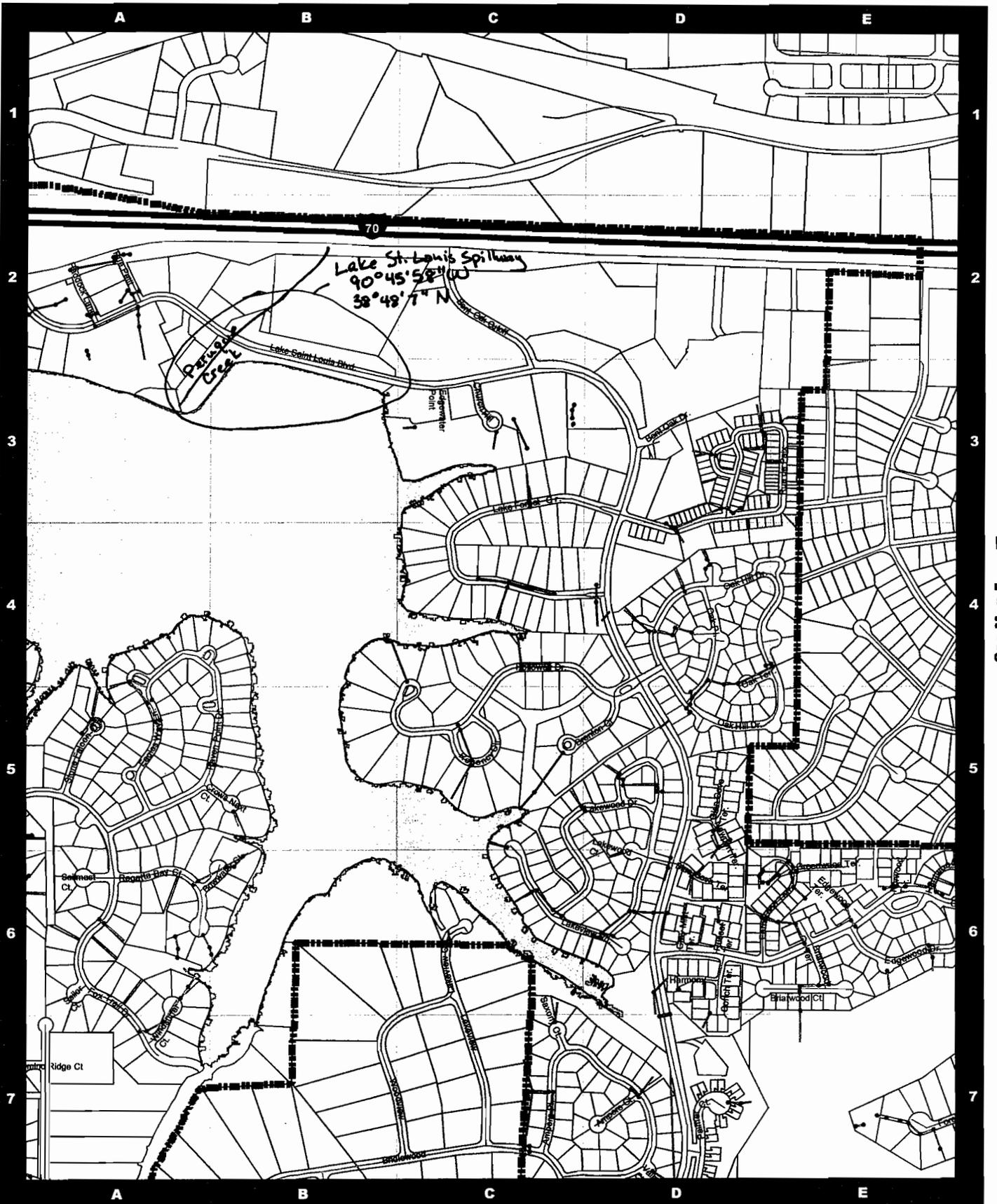
See Map 4 ▼

See Map 8 ▼

MAP 3

City of Lake Saint Louis, MO

0 190 380 760 Feet



See Map 3 ▲

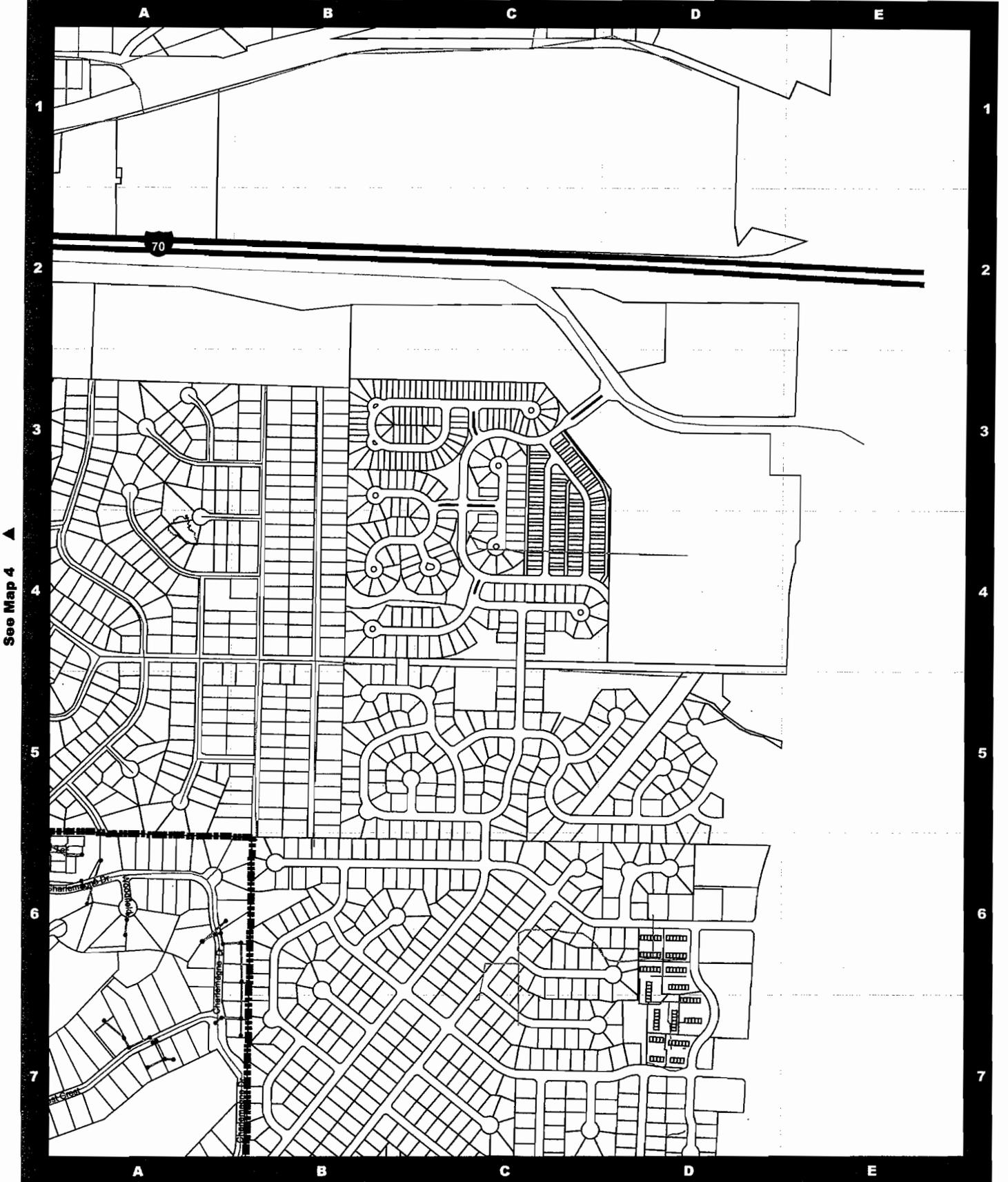
See Map 5 ▼

See Map 9 ▼

MAP 4

City of Lake Saint Louis, MO

0 195 390 780 Feet



See Map 4 ▲

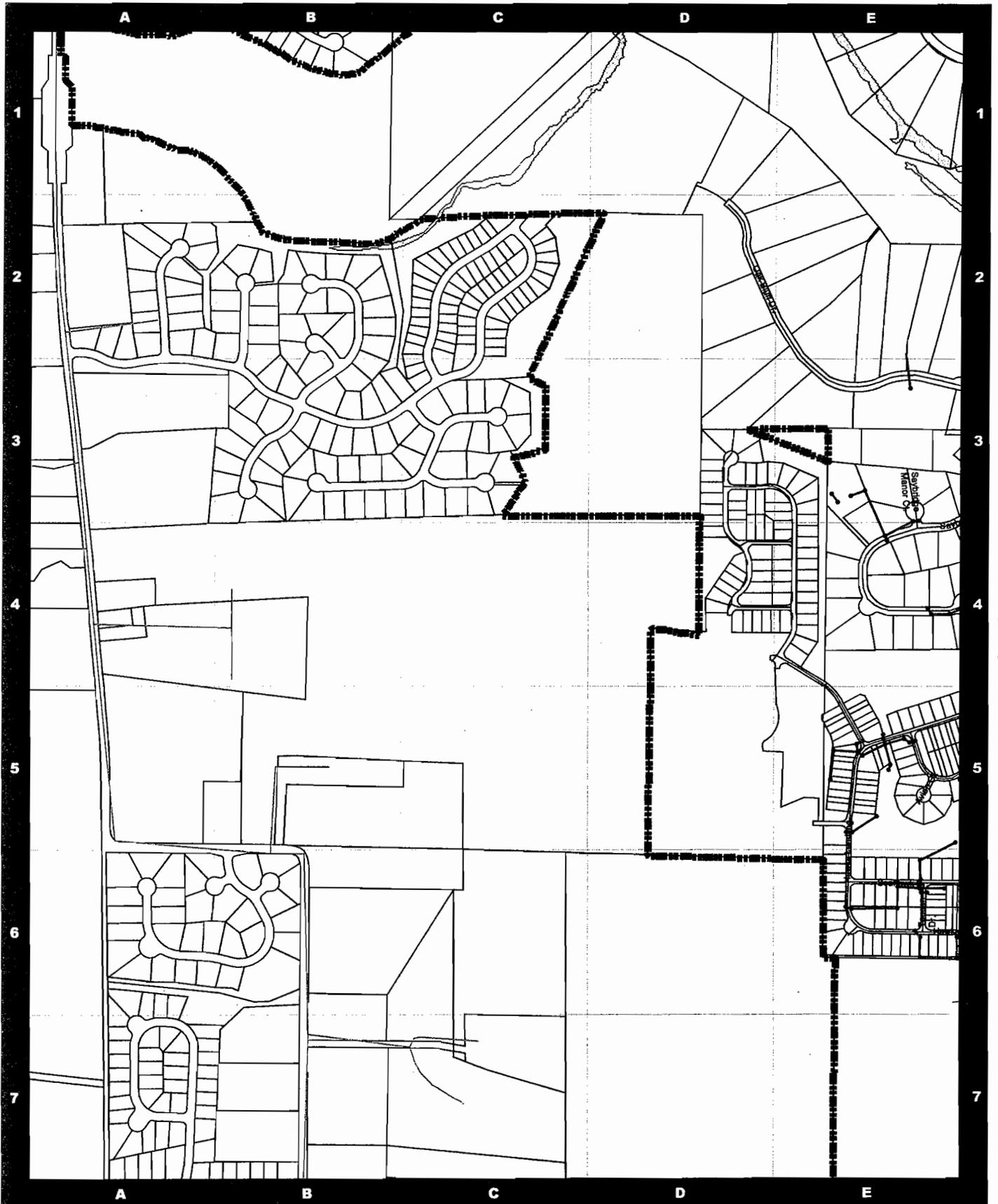
See Map 10 ▼

MAP 5

City of Lake Saint Louis, MO

See Map 1 ▲

0 195 390 780 Feet



See Map 7 ▼

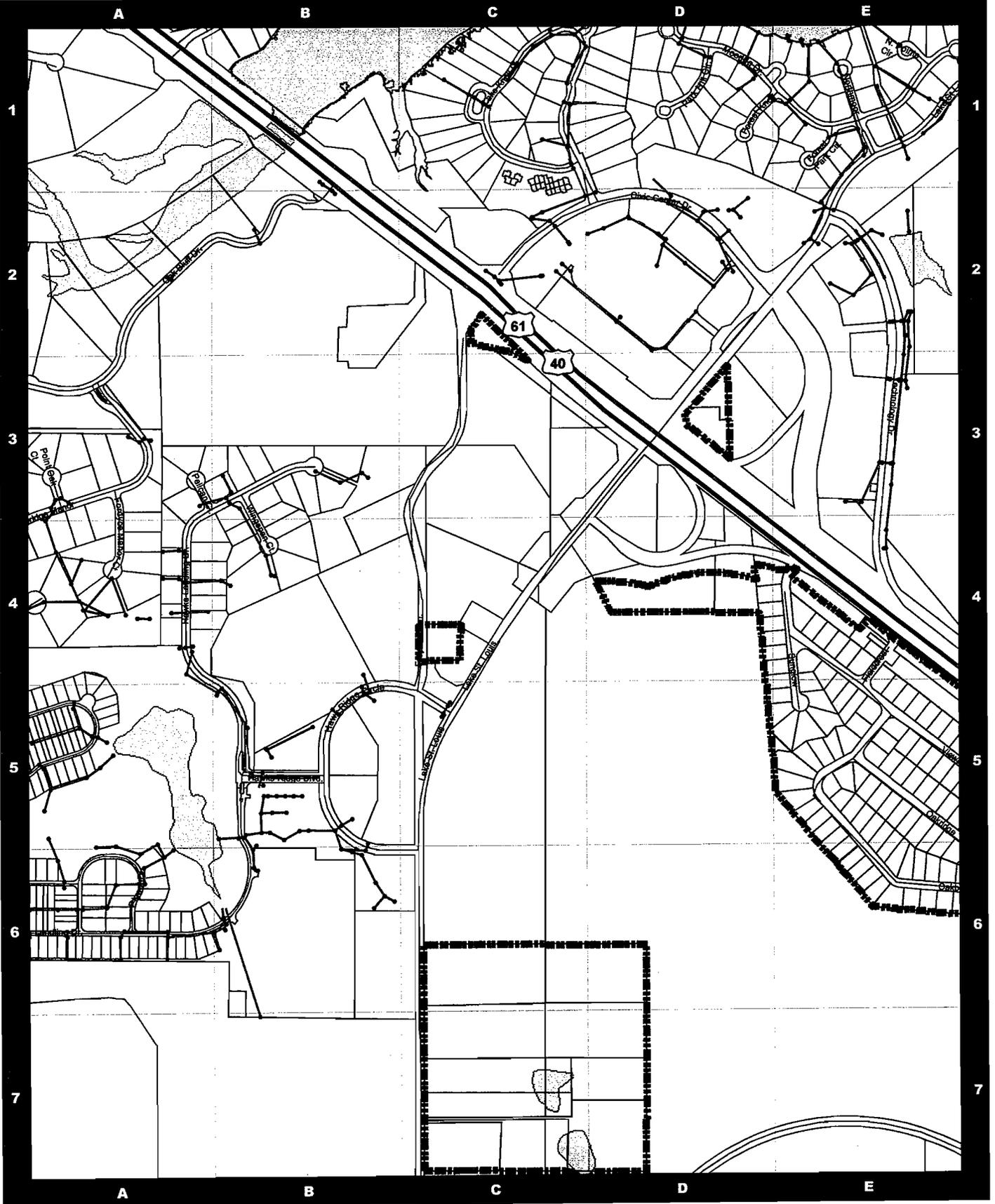
See Map 11 ▼

MAP 6

City of Lake Saint Louis, MO

See Map 2 ▲

0 195 390 780 Feet



See Map 6 ▲

See Map 8 ▼

See Map 12 ▼

MAP 7

City of Lake Saint Louis, MO

See Map 3 ▲

0 195 390 780 Feet



See Map 7 ▲

See Map 9 ▼

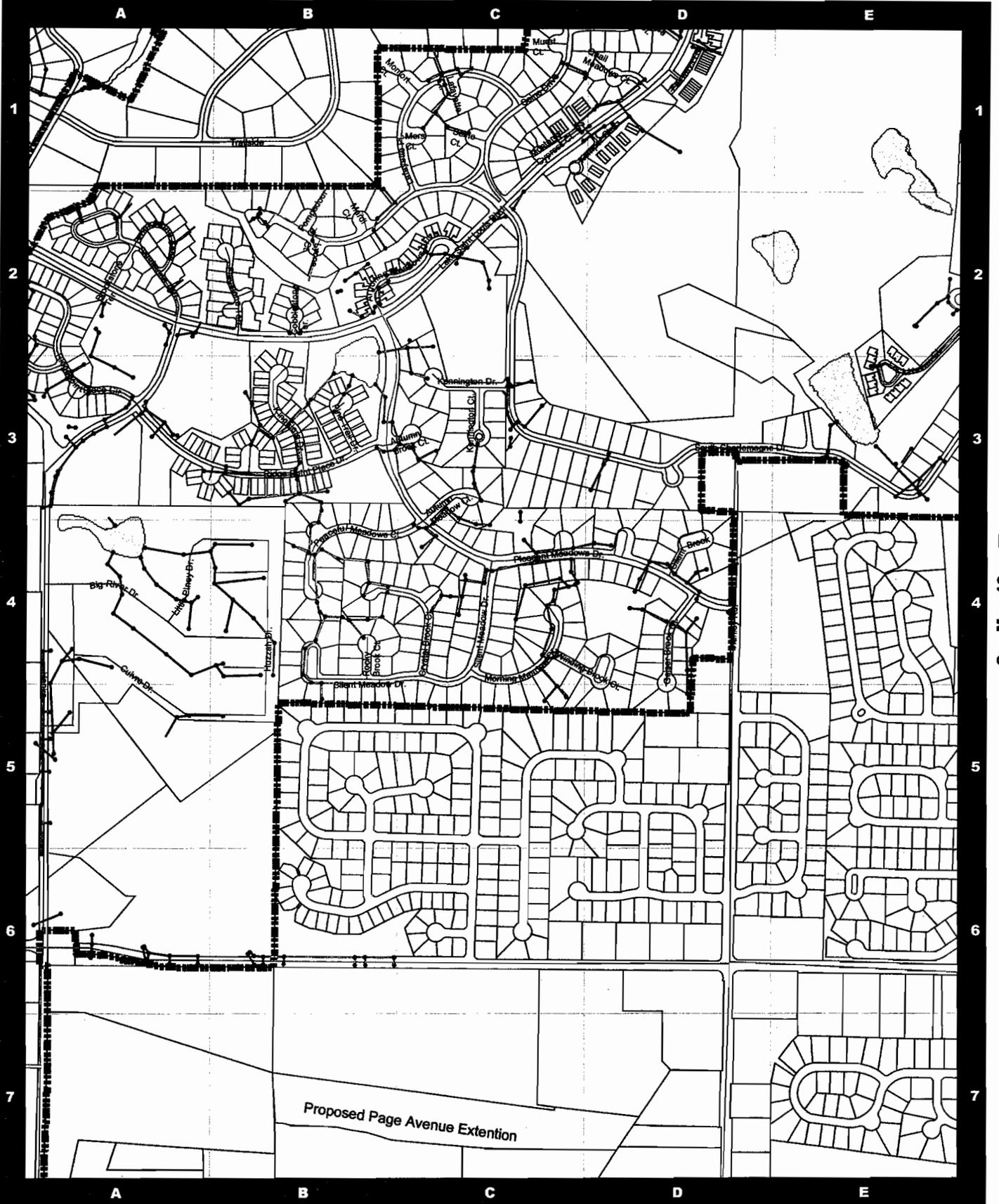
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MAP 8

City of Lake Saint Louis, MO

See Map 4 ▲

0 195 390 780 Feet



See Map 8 ▲

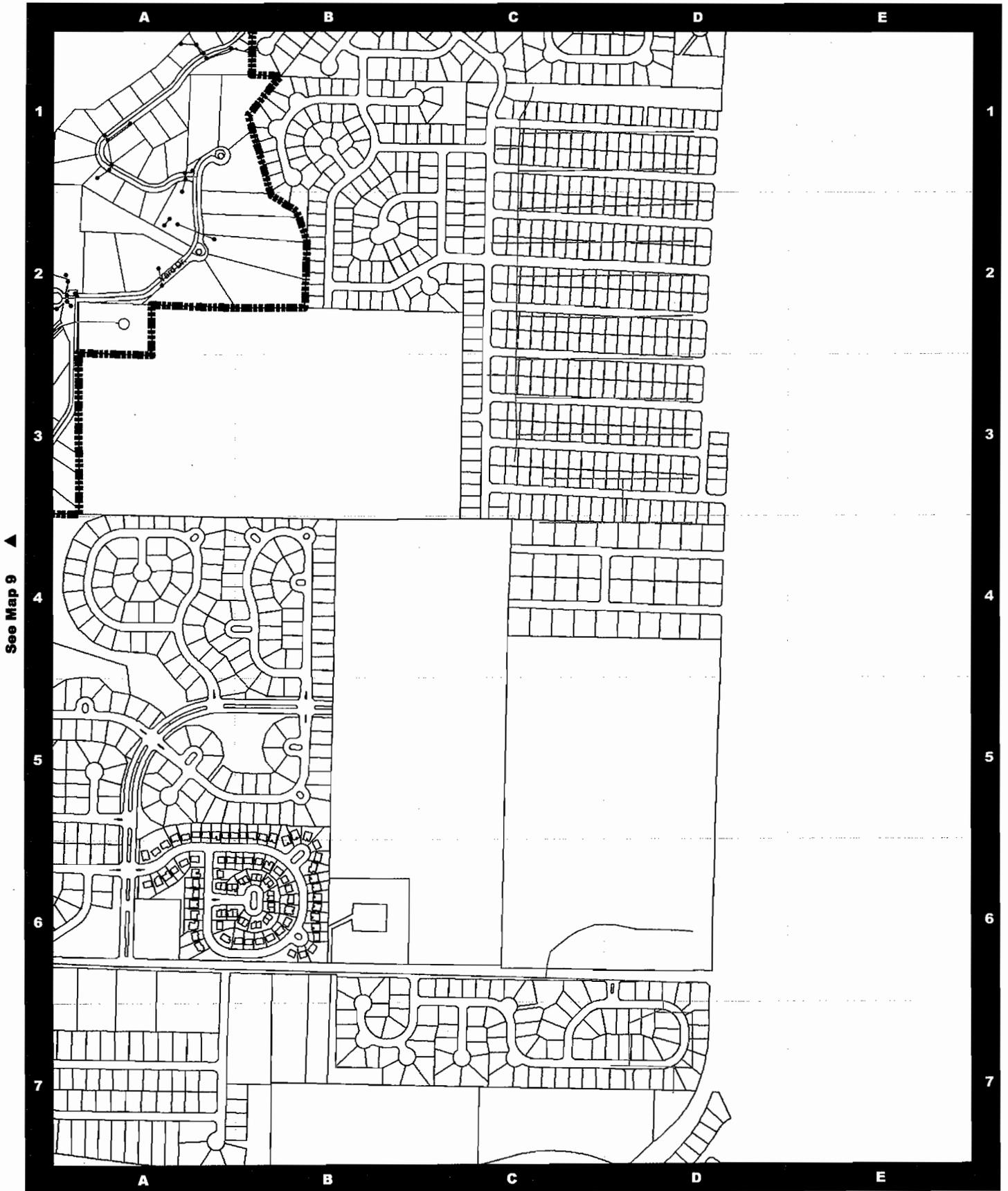
See Map 10 ▼

See Map 14 ▼

City of Lake Saint Louis, MO

See Map 5 ▲

0 195 390 780 Feet

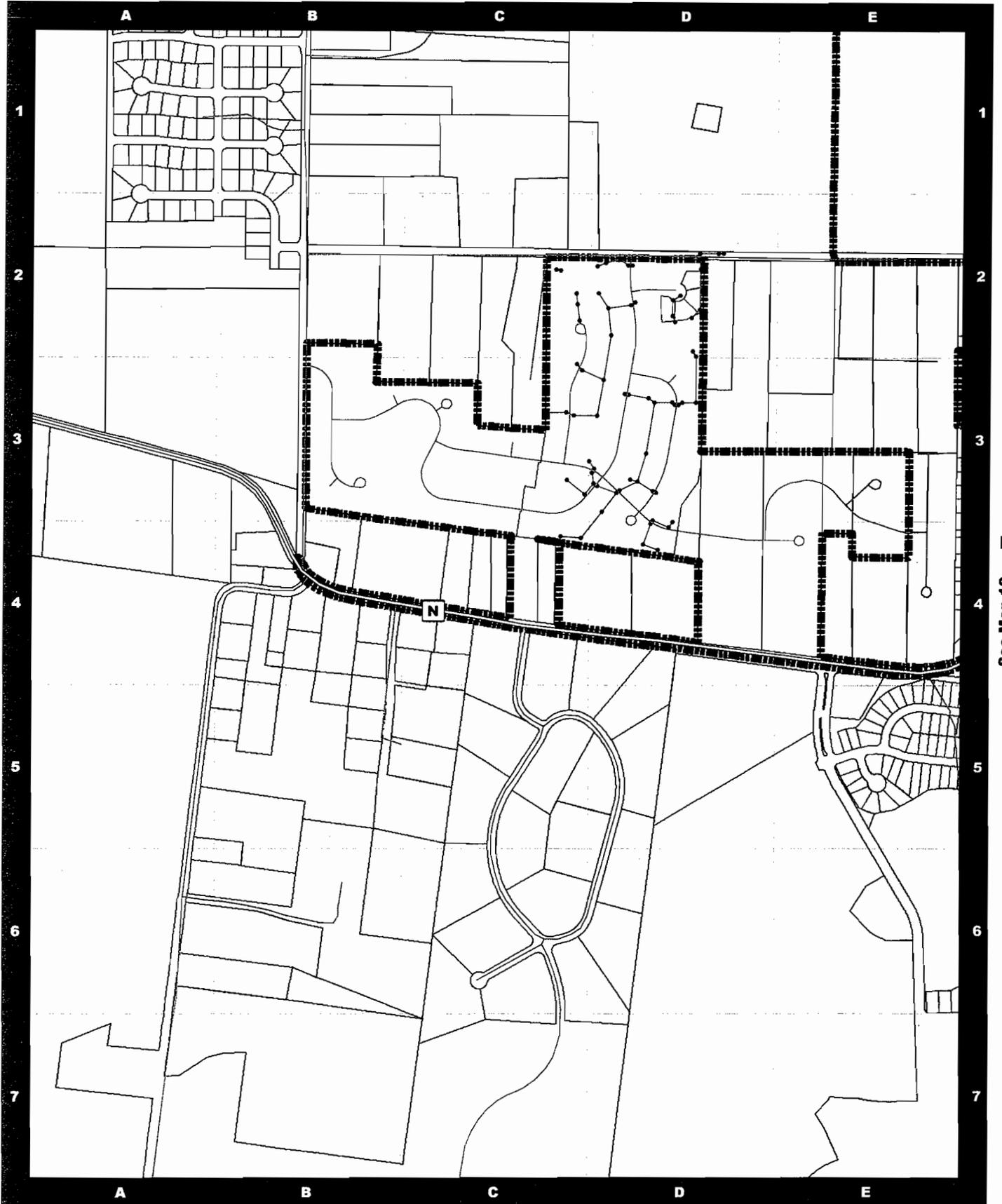


MAP 10

City of Lake Saint Louis, MO

See Map 6 ▲

0 195 390 780 Feet



See Map 12 ▼

MAP 11

City of Lake Saint Louis, MO

See Map 7 ▲

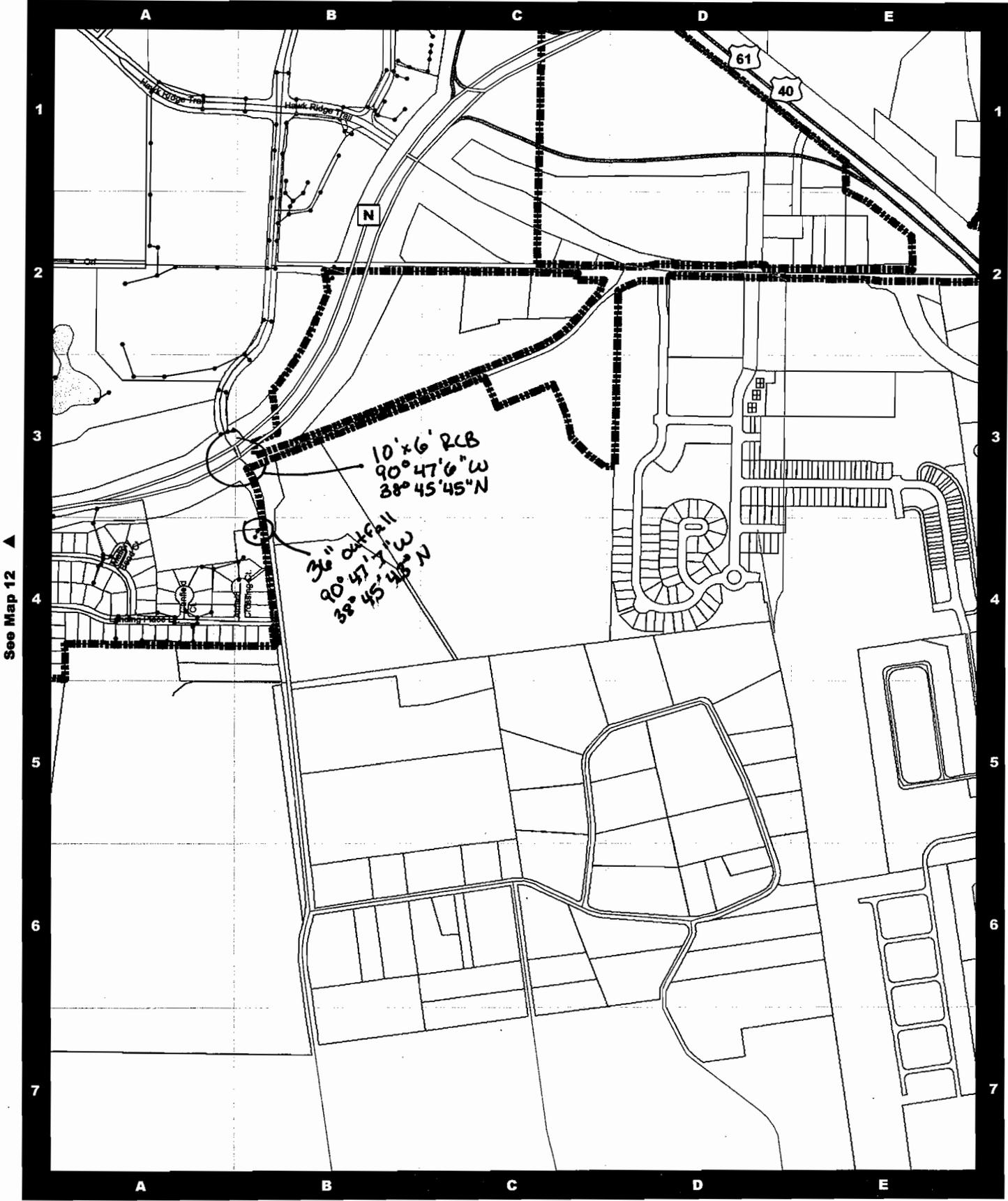
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City of Lake Saint Louis, MO

See Map 8 ▲

0 195 390 780 Feet



See Map 12 ▲

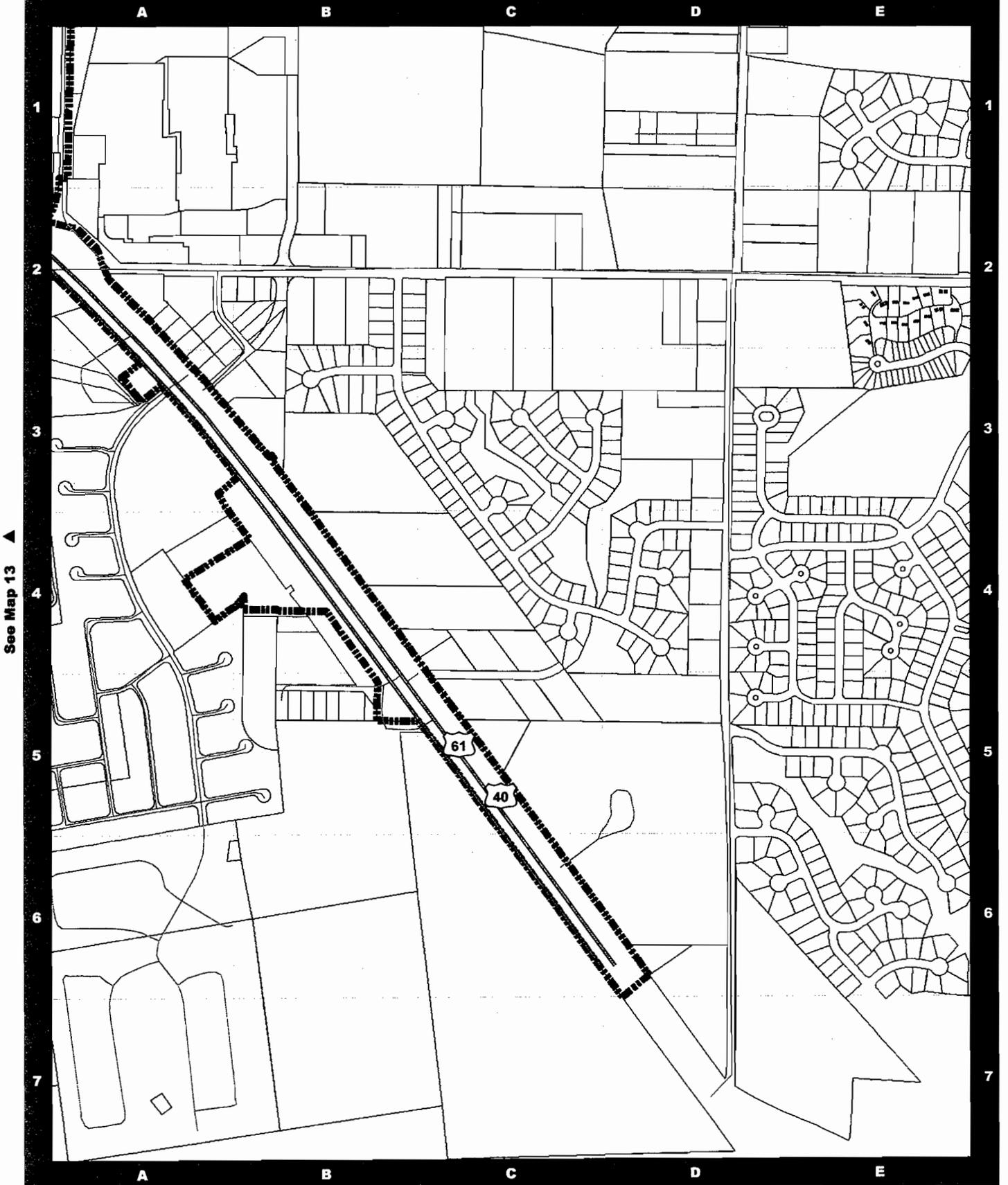
See Map 14 ▼

MAP 13

City of Lake Saint Louis, MO

See Map 9 ▲

0 195 390 780 Feet



See Map 13 ▲

Appendix B

Form K