

Town of Normal
Fire Service Evaluation
June 2017

Normal Fire Department Service Analysis
Relative to City of Bloomington

EXECUTIVE SUMMARY:

The Normal Fire Department completed an in-house analysis pertaining to the merits of constructing a new east side fire station with the intent of responding to calls for service, as the first responding agency, within a defined area in the City of Bloomington. Various assumptions were used to complete this analysis, each of which is articulated within this document. Should these assumptions require modification, thorough review and analysis would be required resulting in amended outcomes and recommendations. This analysis reflects operating costs associated with providing fire suppression and emergency medical services to the City of Bloomington.

In summary, the Normal Fire Department is able to respond to calls for service as first response agency within the City of Bloomington corporate limits under certain defined circumstances as explained in this report. With the assumptions used, it is expected that the Normal Fire Department can continue to effectively serve Town of Normal residents from the new Station #2 while at the same time serve as first responding agency to certain City of Bloomington residents. The Town has identified a preferred location for new Station #2 to effectively respond to calls within the Town of Normal. However, in order to most effectively serve both the Town and the City of Bloomington residents, we have identified a location along Ft. Jesse Road, between Northpointe Drive and Hershey Road as a potential site for the fire station. This proposed site presumes the Town and City enter into an agreement regarding servicing a defined area within the City of Bloomington. Without an agreement, the Town will move forward with the original preferred site for Station #2.

To effectively serve residents of Bloomington, the Town must receive immediate dispatch via MetComm. To support this dispatching procedure, the City of Bloomington must incorporate dispatching technology and protocols to support first response, immediate dispatch directly to the Normal Fire Department.

Further, the Town has presumed a call district comprising approximately 3.05 miles. The Normal Fire Department would serve as first responding agency to this area. Other response within the City of Bloomington would be subject to standard mutual aid protocols. Normal Fire Department personnel and equipment located within the City of Bloomington due to a call for service, including those returning to the NFD station following a call, would not be available to respond to other Bloomington calls for service as a closest available unit unless the call for service originated within the defined district for Station #2.

To complete this analysis, the Town has utilized growth projections based upon recent historical trends. These projections are used to establish a timeline for adding staff and equipment in order to continue effective fire suppression and emergency medical services to Town of Normal residents. Details associated with NFD growth expectations are defined in detail in this report. The Town does not possess detailed trends and data regarding Bloomington Fire Department calls for service but has utilized past practices and generally accepted response analytics.

BACKGROUND:

On June 7, 2013, the Normal City Council held a strategic planning session regarding fire service operations and directed staff to pursue relocation of the Town's three fire stations to effectively and efficiently serve residents with existing fire suppression and emergency medical services personnel. The growth of Normal over the years resulted in the existing fire stations being positioned in less-than-optimal locations. By relocating these three facilities and commencing operations in locations that are better positioned to respond to emergencies within generally acceptable parameters, the NFD will more effectively and efficiently serve residents.

In October 2016, construction of a new headquarters fire station for the NFD began on South Main Street contiguous to the campus of Illinois State University. This new station is expected to commence operations by October 2017 resulting in the relocation of NFD Administration from the College Avenue/Blair Drive station and closure of current Station #2 at Gregory Street/Adelaide Street. Operations from current Station #2 (Gregory/Adelaide station) will relocate to the New HQ Main Street station.

In accordance with the fire service strategic plan, an east side facility is the next station to be developed in the ultimate plan to establish the Town's three stations in positions that best serve residents.

As the NFD prepares to commence the planning and design development phases of a new Station #2, we have evaluated the potential of increasing calls for service to include areas within the City of Bloomington as first responding agency.

ANALYSIS:

Each map identifies calls for service and run district information. It is presumed that apparatus are available and able to respond from the assigned station when the call is dispatched from MetComm. Clearly, if apparatus is not available to respond, the response timeline would be affected since the responding personnel and equipment would originate from an alternative location (other station, mutual aid, returning from hospital, etc). The maps identify generally accepted response times from the first response station.

Map A:

Map A reflects the run districts for NFD new headquarters station, potential new Station #2 and current Station #3. The districts are determined by standard 4 ½ - 6 minute response times. The map includes an area within the City of Bloomington that could be covered by new Station #2.

Map B:

Reflects a projected run district for Bloomington Fire Department Station #3 with a 4 ½ - 6 minute response time. The area at the north end of the district identifies the BFD response time concern regarding a potential 6 minute duration to areas north of GE

Road. This response map presumes that apparatus are available and able to respond when the call is dispatched.

Map C:

Map C reflects the total area in square miles within the City of Bloomington for Station #2 district. This proposed area is bounded by GE Road to the South, Towanda Barnes/East corporate limits to the East and Veterans Parkway to the West. This area comprises 3.04 square miles.

Map D:

Map D reflects a 4 ½ - 6 minute response area for NFD new Station #2. This new east side station, if located along Ft. Jesse Road, could rather comfortably respond to calls along GE Road within the standard 4 ½ - 6 minute duration, presuming immediate dispatching and an available unit.

Map E:

Map E reflects the call density or “hot spot” map for NFD. This map identifies locations where NFD has experienced substantial call volume and thus plays a significant role in determining station location.

Staffing and Call Volume Projections:

New Station #2 on the east side of Normal is projected to comprise approximately 15,000 square feet. It will contain 3 apparatus bays to accommodate one engine, one ambulance and area for expansion when/if new equipment is needed. Initial staffing for this station will consist of 6 individuals per shift: 1 Lieutenant per shift and 5 firefighters per shift of which at least 2 must hold EMT-Paramedic certification and 1 who serves as the Engineer. Four staff will be assigned to the engine and two to the ambulance.

This new station is predicted to serve approximately 1040 calls within the City of Bloomington boundaries in Year 1. The call volume is an estimate based upon the following assumptions regarding potential higher call volume locations (potential “hot spots”). The Town’s projection associated with each location is as follows:

- OSF facility at 1701 E. College Avenue - estimate 450 calls per year
- Assisted Living Facility at Towanda Barnes & GE Road (NE corner) – estimate 350 calls per year
- Chateau Hotel – estimate 36 calls per year
- Veterans Parkway corridor – estimate 30 calls per year
- Four Seasons – estimate 24 calls per year
- GE/Hershey Intersection – estimate 20 calls per year
- Tipton Park and Constitution Trail – estimate 10 calls per year

These potentially higher call volume locations are expected to generate 920 calls per year. The remaining 120 expected calls are attributable to random calls throughout the district (estimating

10 calls per month). These calculations result in approximately 1040 calls per year, or 2 – 3 calls per day within the City of Bloomington.

In order to accommodate this added call volume, the Normal Fire Department evaluated its staffing and equipment levels to ensure effective response to Town of Normal residents along with the proposed area of Bloomington. It is anticipated that under the proposed situation, the NFD will require additional personnel and equipment between years 2020 and 2022. Additional analysis of call volume, ambulance availability, response data and area development will be required after the new station is functional to more effectively determine the likely timeline for necessary expansion of NFD services in the future. The future addition of personnel, apparatus and equipment as a result of increased calls for service will affect NFD operating costs. Periodic review and updating of fire service operating expenses and projections will be coordinated by Town staff as part of the annual budget cycle.

Cost for Services:

The components of a comprehensive fire suppression and emergency medical service operation include personnel expenses, operating costs (fuel, supplies, etc), fleet maintenance, liability and risk management costs, financial services (billing, accounts payable, accounts receivable, etc), custodial and other support services. Normal’s residents support the fire service operation through the Town’s various revenue sources, including sales tax, utility tax, property tax, ambulance fees and other revenues streams.

Two cost analysis strategies were considered to determine an appropriate cost allocation associated with NFD service to the City of Bloomington as follows. Alternative A uses a formula based upon operating costs per call while Alternative B uses a formula based upon operating cost per square mile of service area. Each cost analysis (Alternative A and Alternative B) results in a projected cost to the City of Bloomington of \$1.7 - \$1.8 million per year.

Alternative A – Annual Operating Expense Analysis (Year 1 FY2018-19 projection)

Expenses

Projected Operating Expenses - NFD & Support Operations*	\$12,128,945
Projected Calls in Normal	6500
Cost Per Call	\$1,865.99
Total Projected Calls in Bloomington	1040
Cost Per Call	\$1,865.99
Total Cost for Service to Bloomington	\$1,940,631

Revenue

Projected Bloomington EMS Calls (80% of 1040 Calls)	832
Average Reimbursement Per EMS Call (used 3 yr avg)	\$290.24
Total Revenue	\$241,480
NET COST FOR SERVICE TO BLOOMINGTON	<u>\$1,699,152</u>

Alternative B – Square Mileage Assessment (Year 1 FY2018-19 Projection)

Expenses

Projected Operating Expenses – NFD & Support Operations*	\$12,128,945
Total Square Miles in Normal	18.10
Cost Per Square Mile For NFD Service	\$670,107.46
Proposed New Area in Bloomington in Square Miles	3.04
Total Cost For NFD Service	\$2,037,127

Revenue

Projected Bloomington EMS Calls (80% of 1040 calls)	832
Average Reimbursement Per EMS Call (used 3 yr avg)	\$290.24
Total Revenue	\$241,480
NET COST FOR SERVICE TO BLOOMINGTON	<u>\$1,795,647</u>

** Includes NFD operating expenses, core services support of Fire Department operations, fleet maintenance and replacement, technology and liability insurance expenses*

Alternative A and Alternative B offer two different approaches to formulating a cost associated with providing fire and emergency medical services to residents and establishing a charge for extending those services into the City of Bloomington.

For Years 2 and beyond, the Town anticipates a 5.5% increase in most operating costs and a 2% increase in calls for service. Factors driving these assumptions include projected increases in salary and pension costs, benefit costs (health insurance, etc), emergency medical health care supplies, fleet maintenance, liability insurance premiums, enhanced safety regulations regarding fire suppression equipment and increased replacement costs of NFD fleet.

For budget purposes, the impact of these assumptions would result in the following, presuming a 2% increase in the average income per EMS call to \$296 in Year 2 and \$302 in Year 3:

Year 2 Projected Cost for NFD Service	\$ 1,776,140 – Alternative A \$ 1,876,949 – Alternative B
Year 3 Projected Cost for NFD Service	\$ 1,847,896 – Alternative A \$ 1,977,169 – Alternative B

The Town reserves the right to amend the calculations and assumptions based upon actual calls for service, operating costs, revenue or any other data that would modify the cost analysis.

The above cost analyses exclude any capital expenses associated with the construction of new Station #2. The Town has elected to absorb the capital cost of constructing the new fire station. Therefore, only the operating expenses associated with fire suppression and emergency medical services are considered in this evaluation.

CONCLUSION:

The Town of Normal's plan to construct a new fire station to more effectively serve the Town's east and northeast area presents an opportunity to assist the City of Bloomington to provide such services within a defined area of the City that has been problematic for the City to serve. This new station, NFD Station #2, can quite easily respond to calls for service within this defined City of Bloomington area with response times generally falling within the industry standard 4 ½ - 6 minute duration. The attached maps demonstrate that apparatus responding from Station #2 easily reach the service area within the 4 ½ - 6 minute industry standard.

This proposed service to a defined area within the City of Bloomington allows the City to avoid major expenditures including the capital costs of constructing a new fire station, the acquisition of new apparatus and the investment in additional staff.

A proportionate share of NFD operating costs associated with providing fire suppression and emergency medical services have been allocated to the City of Bloomington based upon a presumed number of service calls. The costs supporting a fire department operation are born by all residents and users of the service and thus the proportionate share of NFD operations serving Bloomington residents are presented as direct costs for the City of Bloomington.

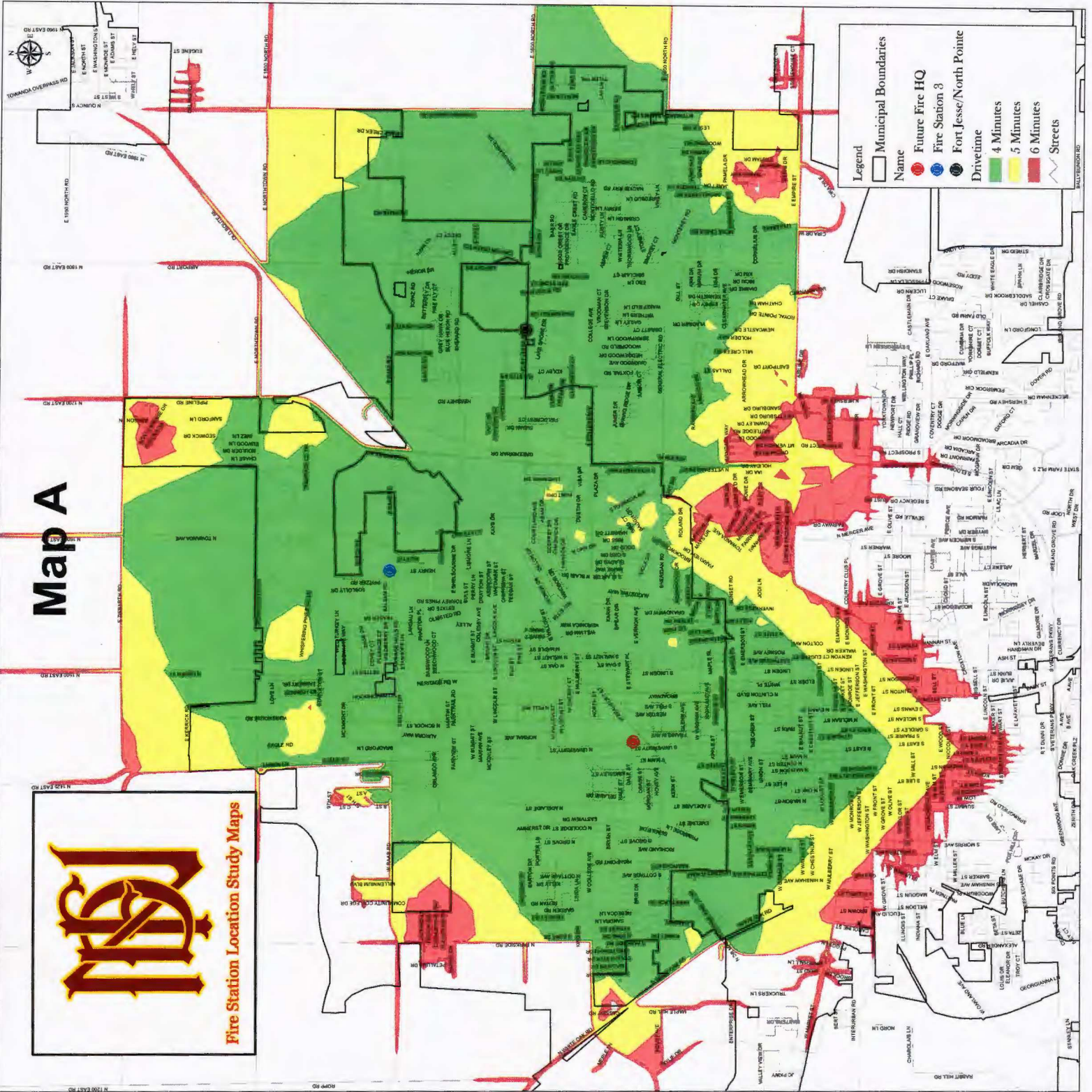
At such time as more defined projections or actual data is available for review, the Town will update the analysis and present detailed information to the City of Bloomington for consideration.

Should the Town and City determine that NFD service within the City of Bloomington is the most effective strategy to serve the area, the Town will present an intergovernmental agreement for approval and execution by both parties. The Town will then conduct regular reviews of department operations and amend the agreement as needed to reflect current data.

Map A



Fire Station Location Study Maps





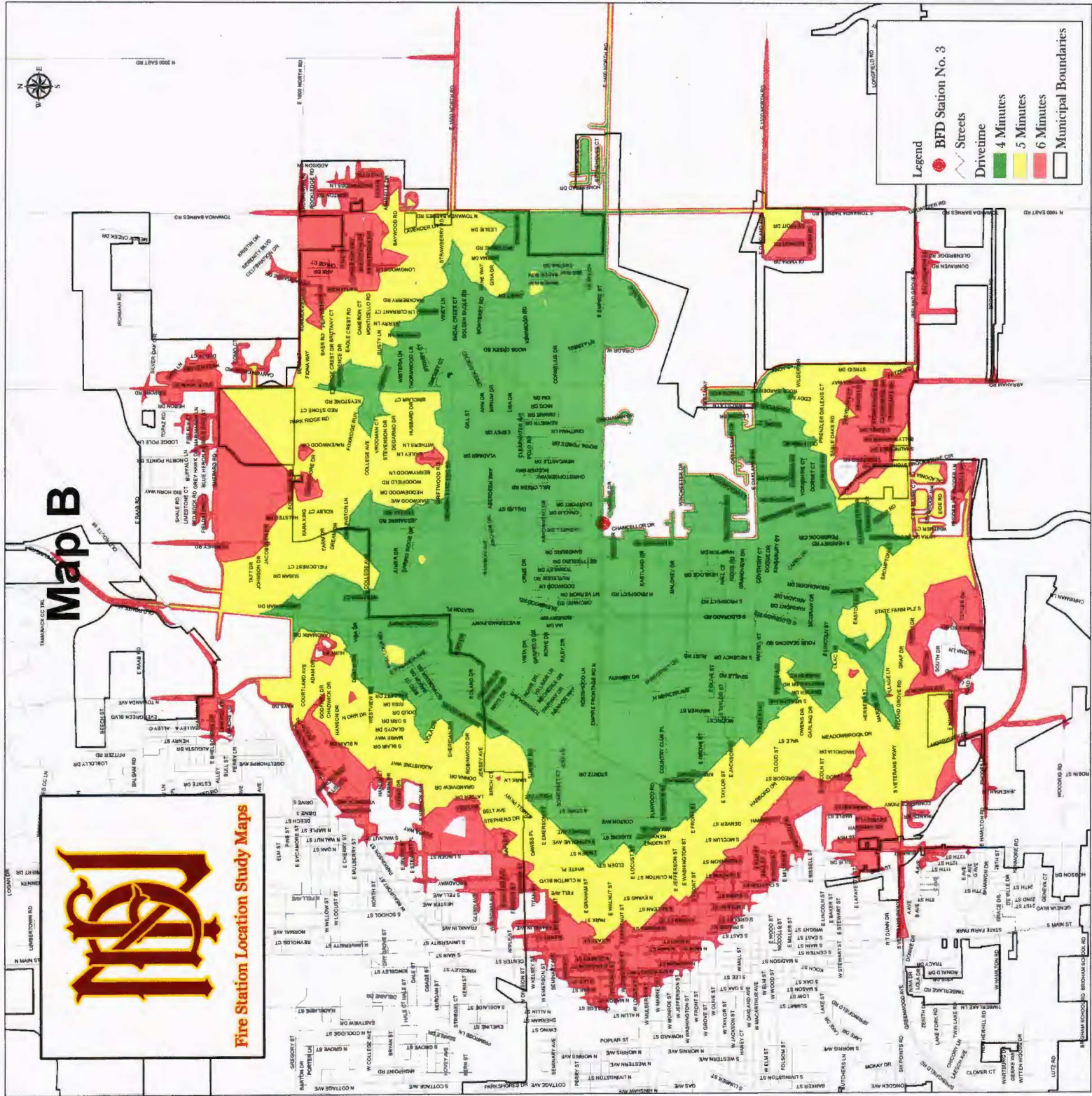
Map B



Fire Station Location Study Maps

Legend

- BFD Station No. 3
- Streets
- Driveways
- 4 Minutes
- 5 Minutes
- 6 Minutes
- Municipal Boundaries





Map C



Legend
Citations

Notes

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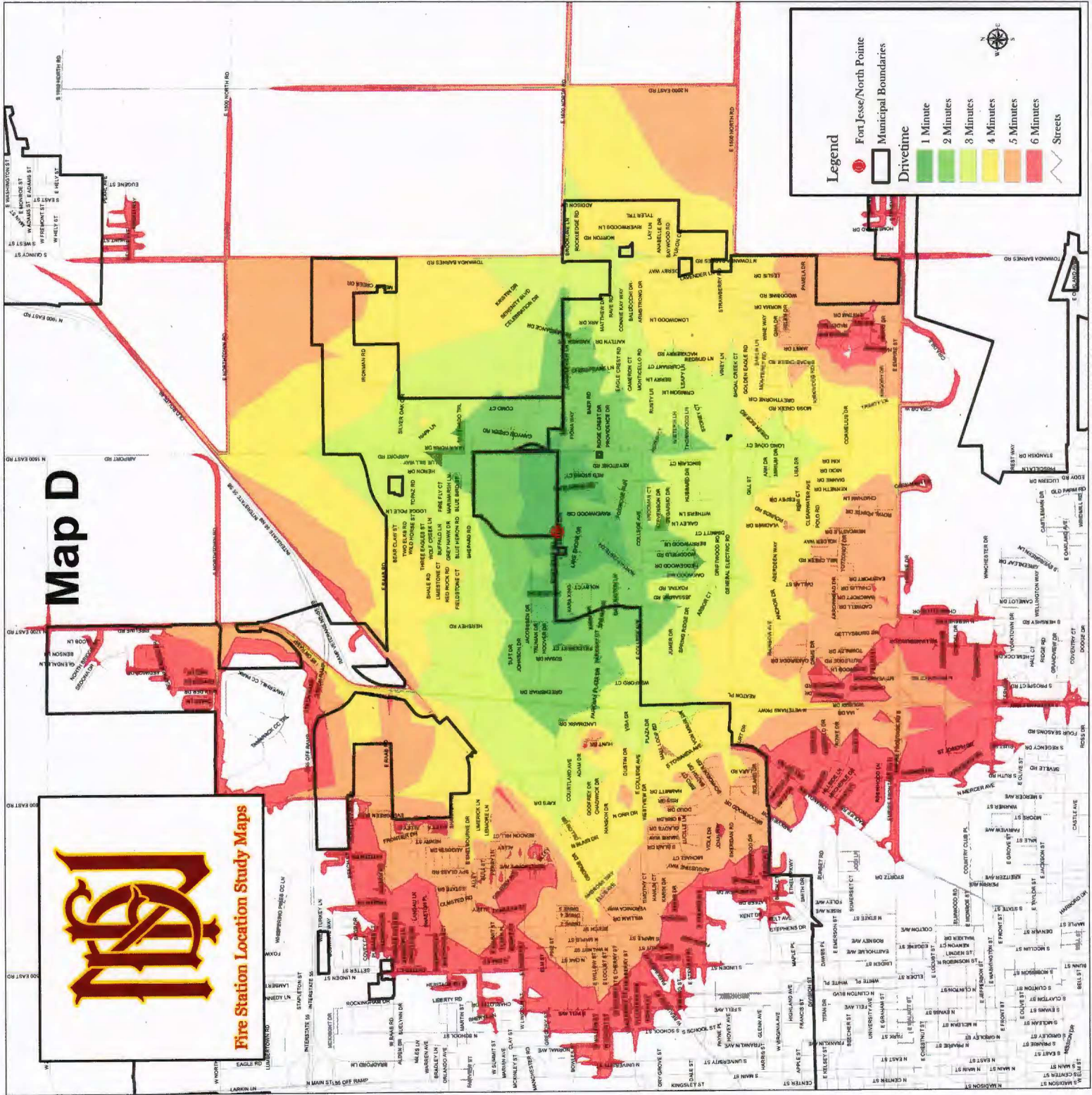
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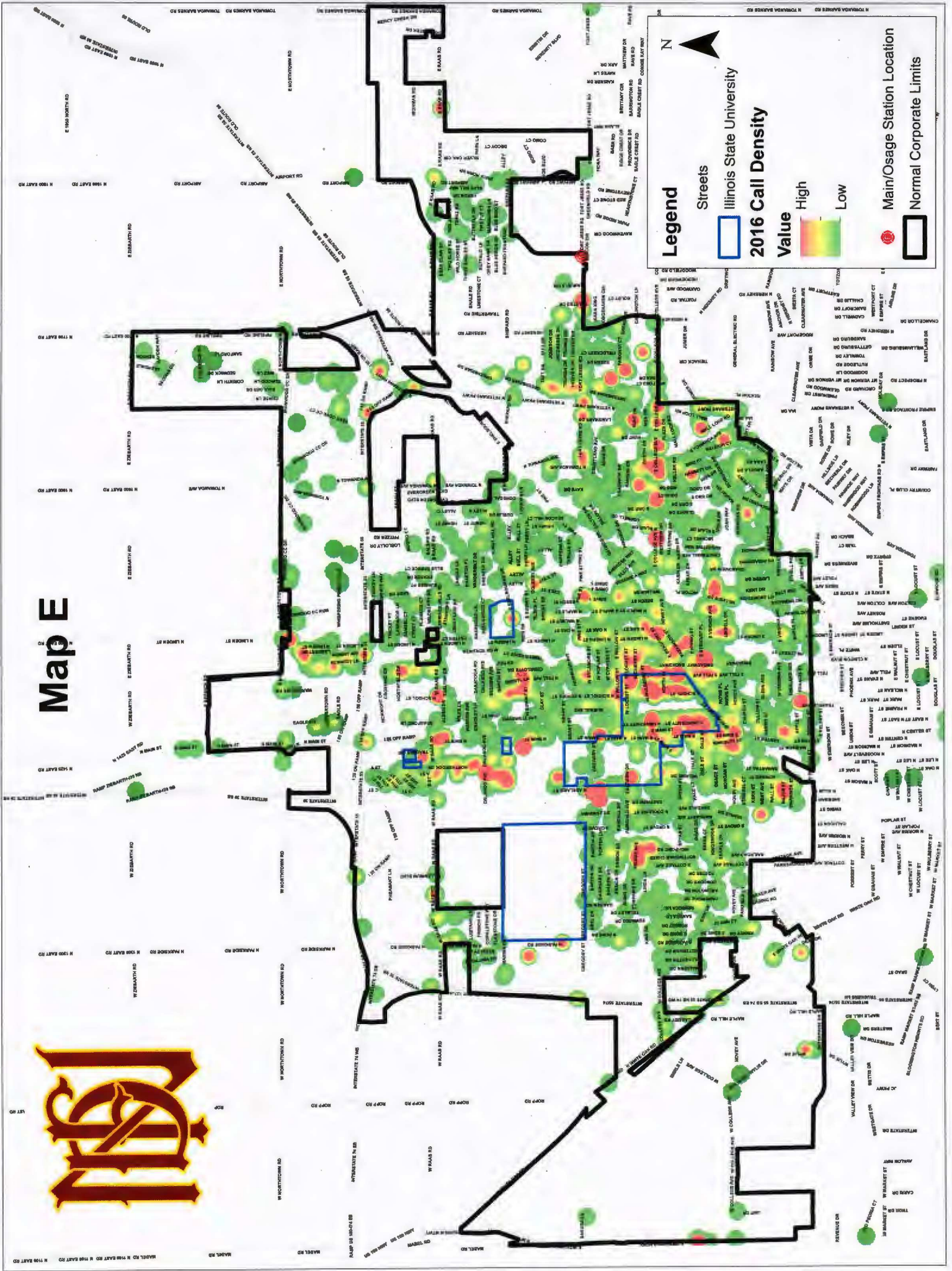
Map D



Fire Station Location Study Maps



Map E



Legend

- Streets
- Illinois State University
- 2016 Call Density Value
- High
- Low
- Main/Osage Station Location
- Normal Corporate Limits