

# LEXINGTON

## Snow & Ice Control Plan



**Department of Environmental Quality & Public Works**

Lexington-Fayette Urban County Government  
200 E. Main Street  
Lexington, Kentucky 40507

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### INTRODUCTION

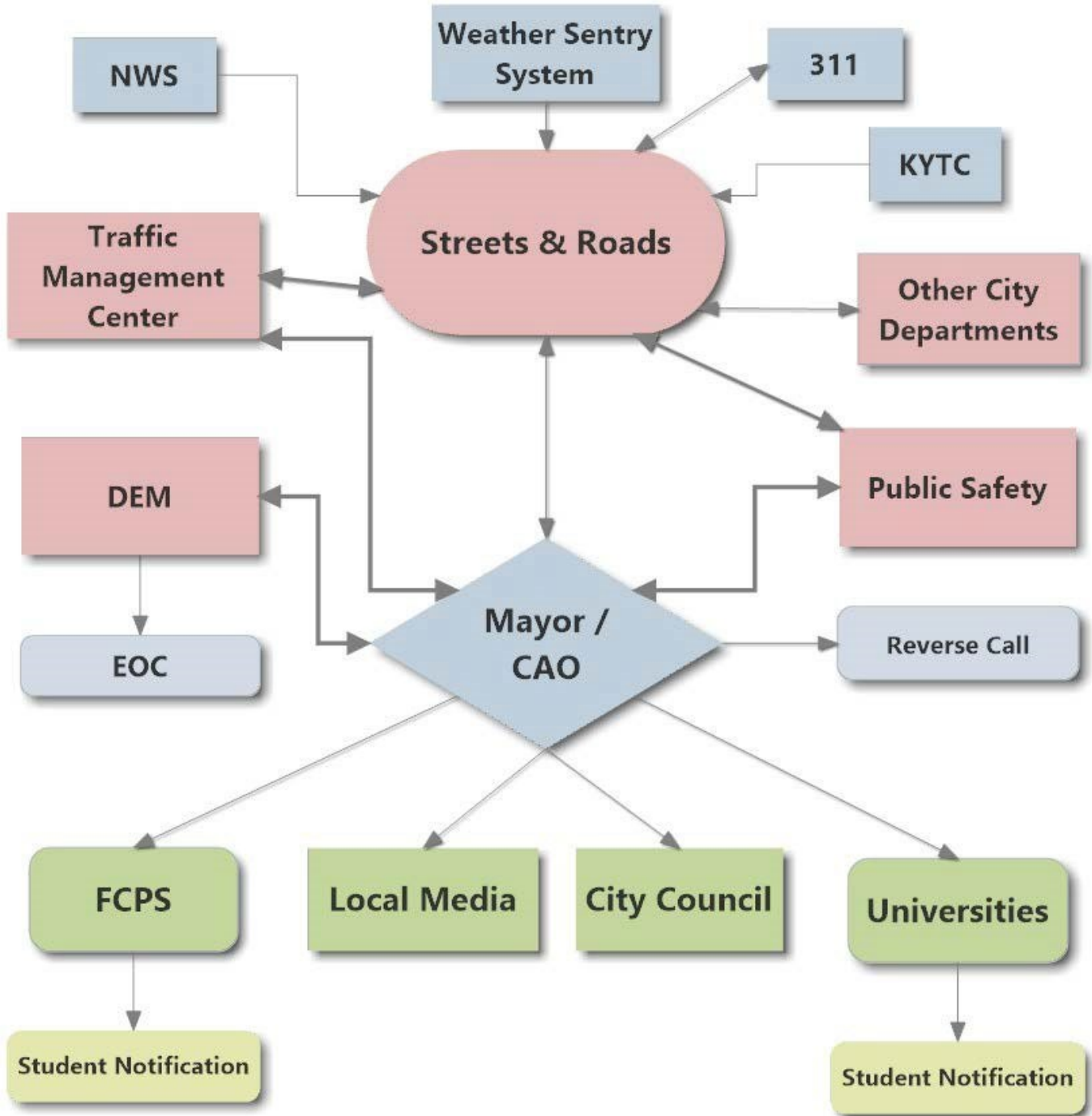
Snow and ice removal in Fayette County is a combined effort between the Department of Environmental Quality & Public Works and the Kentucky Transportation Cabinet (KYTC). The Divisions of Streets & Roads, Water Quality and Parks & Recreation are responsible for snow and ice removal for approximately 1,400 lane miles of city and county roads. The state is responsible for plowing more than 800 lane miles of State and County roads. (Lane miles are the number of lanes along a road multiplied by the distance.)

It is often difficult for the public to distinguish between city and state roadways within Fayette County. Any roadway with a United States or State Route numeric designation is a state maintained roadway (e.g., Nicholasville Road [U.S. 27] is a State-maintained road, while Man O War Boulevard is maintained by the city). The map in **Appendix 1** distinguishes between City and State maintained roadways. **During major snow events, the public can get the latest available information concerning snow removal operations by calling LexCall (311) or online at the following: [maps.lexingtonky.gov/snowresponse](https://maps.lexingtonky.gov/snowresponse).**

Annually, representatives from the Department of Environmental Quality & Public Works, General Services and Public Safety; the Divisions of Government Communications and Computer Services along with Fayette County Public Schools, University of Kentucky, LexTran, and KYTC meet to review and update the Snow and Ice Control Plan for the upcoming winter season.

The Division of Streets & Roads coordinates the long-range planning and equipment preparation for snow removal. There are a variety of conditions that can occur during the snow and ice season within Fayette County that makes each event unique, including the following: the rate and accumulation of snowfall, moisture content, presence of sleet and freezing rain, temperature variations - during and after the storm, wind velocity, time of day or night, storm duration and intervals between storms. These various factors are considered when establishing procedures and protocols for snow and ice removal and when evaluating their effectiveness in minimizing a storm's impact on the community.

# LFUCG Snow Plan Communications Workflow



## **EXTERNAL COMMUNICATIONS**

Prior to the beginning of the snow season, a copy of the Snow and Ice Control Plan is [posted on the City website](#) for the media and the general public to learn about notification and operating procedures. During a snow event, the Government Communications team will post updates on the City website homepage: <https://www.lexingtonky.gov/>

Should conditions dictate that the Mayor declares a snow emergency; the media will be notified by LFUCG's Division of Government Communications.

The LFUCG Traffic Management Center (TMC) also keeps the media notified of street conditions and traffic movement. The TMC sends information out continuously via the Internet and social media. The TMC gathers traffic information from a variety of sources: the computerized traffic signal control system, video surveillance cameras, LFUCG Police dispatch, State Police dispatch, State Department of Highways, AAA, Kentucky Utilities, local schools, LexTran, Bluegrass Airport, and LFUCG's Divisions of Streets & Roads, Government Communications, Engineering, and Water Quality. The Traffic Management Center also gets information from the National Oceanic & Atmospheric Administration (NOAA), which is a weather band on a scanner that signals when weather conditions threaten to become severe.

The public can check local road conditions on the TMC Website as well as view real-time camera images of city streets. The public can also obtain information on accidents, lane blockages, and snow and ice trouble spots and road closures on the @LexWrecks Twitter feed and the Real-time traffic ticker: <https://www.lexingtonky.gov/traffic-ticker>

Link to Live Traffic Cameras: <https://trafficvid.lexingtonky.gov/publicmap/>

## **WEATHER MONITORING**

During the snow and ice season, the Division of Streets & Roads continuously monitors the weather using national and regional weather tracking systems, which provides detailed weather forecasts as well as the ability to speak with a regional meteorologist for specific information. The weather-radar system tracks wind directions, the velocity of an impending storm, and the type of precipitation (snow, rain, sleet, etc.). In addition, Streets & Roads also relies on temperature gauges staged throughout the State along roadways to track roadside temperature conditions.

## **THREE STAGES OF SNOW EMERGENCIES**

When conditions become so severe that traffic flow and parking must be restricted for snow plowing and other snow-removal efforts, the Mayor will declare a snow emergency. A snow emergency consists of 3 stages:

- Stage 1:** No parking will be permitted on designated snow emergency routes.
- Stage 2:** No parking permitted on designated snow emergency routes plus parking restrictions on residential roads. Parking permitted on alternate sides of the street - even house numbered side on even numbered days and odd numbered side on odd numbered days.
- Stage 3:** No travel permitted on designated snow emergency routes unless vehicle is equipped with snow tires, tire chains, or four-wheel drive, or is an emergency vehicle or vehicle approved by the Mayor.

**Stage 1** through **Stage 3** snow emergencies are declared by the Mayor. During declared snow emergencies, all unnecessary travel should be avoided during each stage of the emergency. All refuse collection services will be delayed or cancelled until such time that road and weather conditions improve.

## **SNOW EMERGENCY ROUTES**

The amount of snow, the type of snow and/or ice, and the duration of the storm affect the time it takes to complete work on each ranked street. Therefore, a specific completion time cannot be given.

The Urban County Government has designated, with appropriate signs, approximately 76 miles of roadway as Snow Emergency Routes. These are roadways that have a high traffic volume and/or shoulders that are inadequate to accommodate disabled vehicles. Disabled or parked vehicles along these roadways can cause problems when snow plowing is in progress. A map of the designated snow emergency routes is found in **Appendix 2**.

During a snow emergency, the Division of Police can remove, or have removed, a vehicle from an emergency route to facilitate traffic movement and snow-removal efforts. This may occur:

- When the vehicle is parked in an area declared a Stage 1, 2, or 3 Snow Emergency.
- When the vehicle is stalled or disabled on the normally traveled portion of any public roadway and the owner is not attempting to remove the vehicle.

Vehicles are moved to an area designated by the Urban County Government. Car owners can retrieve their cars by calling the Police reports desk at **258-3563**. The Division of Traffic Engineering checks snow emergency route signs annually, and missing, damaged or illegible signs are replaced.

### **TREATING THE ROADS**

Pre-treating the roads with salt brine, salt, or a mixture of salt and Beet Heet® is the first step in preparing for a snow event. LFUCG begins the winter weather season with approximately 8,800 tons of rock salt (sodium chloride) on hand.

Rock salt is the most widely used de-icing agent in the United States because of its cost and effectiveness. When the temperature is above 25 degrees Fahrenheit, salt can melt several inches of snow and prevent or reduce the bonding of compacted snow to the pavement surface. Salt is less effective at temperatures below 25 degrees and/or when traffic volumes are too light to activate the chemicals. For lower temperatures, applying Beet Heet® in addition to sodium chloride (salt) increases the overall deicing effectiveness of the salt. Beet Heet® is a proprietary product recently added to the deicing program. According to the manufacturer, Beet Heet® is an organic based liquid deicer that is 99% biodegradable and is authorized to carry the U.S. EPA Design for the Environment™ label.

Depending on the expected conditions, the Division of Streets & Roads will be proactive and apply salt brine to streets to try to keep ice and snow from bonding to the pavement. Streets & Roads has handheld pavement thermometers and truck-mounted infrared thermometers to test the temperature of the pavement. The temperature of the pavement helps determine which method of snow-and-ice control to use.

### **STREETS PLOWED BY RANK**

There are approximately 1,174 lane miles of **ranked** streets in the city. This rank plan is divided into zones of responsibility for work crews. Each area is assigned to a supervisor who is given trucks, plows, and salt spreaders. Crews start with Rank 1 streets, which includes Emergency Routes, and then proceed through all the ranked streets. Once these streets have been plowed one time, the crews return, by rank, to the streets that need to be re-plowed. While crews are plowing streets in the urbanized area of Fayette County, other city crews are also plowing county roads. Removal efforts continue until safety hazards caused by a snow or ice emergency have been eliminated.

The ranking plan for snow removal was developed by identifying a basic system of roads essential to the continuation of traffic movement. While developing this plan, the realistic capabilities of the Lexington-Fayette Urban County Government, such as equipment and personnel, were kept in mind. Routes have been ranked based on traffic volume, access to public transportation,

emergency services, Fayette County Public Schools, and the efficiency and effectiveness of snow removal operations. The ranked streets are defined as follows:

### **Rank 1 & 1E**

These streets are the primary arteries in and out of the city, such as Main Street, Nicholasville Road, Richmond Road, etc. These streets are given first priority since they provide the interconnecting link from all corners of the City. Also included are streets that provide access for emergency services such as fire stations, hospitals and the Police Department. School Zones in the city are also considered Rank 1 during normal opening hours. Rank 1 streets will be maintained for all snow events. In an event with an impact on operations similar to the COVID-19 pandemic, staff will focus on access to a subset of Rank 1 routes categorized as “Rank 1E,” to prioritize access to emergency sites and services. **Appendix 5** highlights these sites.



### **Rank 2**

These streets are the major connecting streets, such as Red Mile Road and Loudon Avenue. Also included are streets that provide access to major office areas and business areas such as grocery stores and service stations.

### **Rank 3**

These roadways are major collector streets and are generally streets that connect major arterial streets to residential streets.

### **Rank 4**

These streets are local streets within residential areas, which allow residents access to the main roads. This plan allows all residences to be in close proximity of a plowed street in the shortest amount of time. The City will address the remaining residential streets as time permits and weather conditions warrant.



## **SERVICE LEVELS AND SNOW ACCUMULATION**

Snow events will be categorized into one of three basic service levels. The response to the event is different for each of the different service levels. A description of each service level is provided below:

- **Level 1: 1" to 4"** - Our Streets & Roads Snow Removal team will operate under the defined Rank 1-4 plan.
- **Level 2: 5" to 8"** - Additional streets will be added, including residential streets that connect to collector streets.
- **Level 3: 8" and above** - Streets & Roads will attempt to plow as many streets as possible.

## **BRIDGES, HILLS & INTERSECTIONS**

Snow and ice on bridges, hills, and intersections are given special attention because of the increased danger to the public. Many of these are located on priority routes, so they are handled at the same time as general salting and plowing. At the beginning of the snowfall, small salt trucks are sent to treat bridges that are located in the downtown area or adjacent to it. Crews check each bridge, hill, and intersection periodically to check for snow and ice accumulation. Some of the bridges and hills are listed below

### **BRIDGES and HILLS (Areas likely to freeze first)**

#### **Bridges**

Alumni Dr  
Clays Mill Rd  
Citation Blvd  
Henry Clay Blvd  
Jefferson St  
Loudon Ave  
Man-O-War Blvd  
Martin Luther King Blvd  
Seventh St  
Pasadena Dr  
Tates Creek Rd  
Versailles Rd  
Virginia Ave  
W Main St  
Wilson Downing Rd

#### **Hills**

Albany Rd  
Armstrong Mill  
Beacon Hill  
Castleton Way  
Clays Mill Rd  
DeLong Rd  
Emerson Dr  
Fontaine Rd  
Forbes Rd  
Fourth St  
Gainesway Dr  
Lakeshore Dr  
Lane Allen @ Parkers Mill  
Lansdowne Dr  
Malibu Dr  
N Upper St  
Oxford Circle  
Pasadena Dr  
Pebble Lake Dr  
Reynolds Rd  
Roanoke Dr  
S Broadway  
S Mill St  
S Upper St  
Shriners Ln  
Trent Blvd  
Zandale Dr

## **SUPPORT FROM OTHER DIVISIONS**

The **Division of Water Quality** clears a significant portion of lane miles, using its personnel, dump trucks and 4x4 pickup trucks. Also, the **Divisions of Environmental Services, Waste Management, Parks & Recreation, Traffic Engineering,** and **Engineering** provide equipment and personnel. Some normal operations of these divisions, such as refuse collection, may be suspended or curtailed as equipment and personnel are reallocated to the snow removal effort.

The Division of Fleet Services puts its staff on a 24-hours-a-day, 7-days-a-week schedule in severe weather to service and repair snow-removal equipment. Personnel from the Divisions of Streets & Roads and Water Quality are often activated to unclog storm-water basins and maintain stormwater sewers during snow emergencies.

## **SIDEWALK CLEARANCE**

To provide for pedestrian safety after snow events, LFUCG includes sidewalk clearance as a part of snow removal operations. The city divisions involved in sidewalk clearance include Facilities Management, Parks & Recreation, Fire, and Environmental Services.

### ***Sidewalk Ranking***

There are over 84 miles of sidewalk that LFUCG has identified for snow clearance by city operations. These include sidewalks that are adjacent to city owned property, sidewalks on local and state roads that have no directly abutting property owner, and sidewalks in areas currently maintained by the city (e.g. horticultural installations).

Each sidewalk segment is assigned one of four rankings, and sidewalks are cleared in order of rank. The rankings are based upon an assessment of pedestrian traffic impact due to the presence of snow and ice for each sidewalk segment. This assessment took into account several factors, including:

- anticipated level of pedestrian traffic,
- proximity to schools, hospitals, and LexTran bus-stops,
- city building or park operational status (e.g. open to public, open to staff, closed),
- road snow plowing rank,
- locations on bridges, culvert crossings, and viaducts,
- risk of sidewalk inundation due to plowing,
- lack of alternate pedestrian routes, and
- distance between the roadway and the sidewalk.

A separate interactive sidewalk snow clearance map is available on the city webpage,

( <https://www.lexingtonky.gov/snow-and-ice-control-plan> )

which shows all sidewalks in the city snow plan, and the rank and the responsible division for each segment.

### ***Level of Service***

The city requires property owners to clear their public sidewalks of snow within 24-hours after snow end if their roads have been plowed by city operations (Code of Ordinances Section 12-8.4). The ordinance requires clearance only when snowfall is greater than 4" in depth. Due to the extensive sidewalk mileage identified as the responsibility of the city, a modified approach is applied to city operations.

City sidewalk snow clearance operations may include one or more of the following activities: pretreatment, salting, clearing snow off of some or all of the sidewalk width, and full snow removal (i.e. snow hauled to an off-site location). Activities are implemented based upon site conditions, which include temperature, cloud cover, ice depth, snow depth, weather forecast, and road plowing status. Small events (< 2") may warrant minimal sidewalk snow clearance.

Snow events are distinctly different than ice events. For example, a layer of snow on top of an ice layer may be a safer walking condition than if the snow were removed. In addition, ice storms present additional public safety concerns, such as falling trees and downed power lines, which take precedence over sidewalk clearance. Therefore, during ice generating events, the level of service and type of operation will be evaluated to optimize public safety and may not follow this plan.

Sidewalk snow clearance must be coordinated with roadway plowing, as re-covering by plowed snow can occur where sidewalks are directly adjacent to the roadway. Viaducts, monolithic curb/sidewalk segments, and ADA ramps at intersections are particularly susceptible to this problem.

**Due to the risk of re-covering, city sidewalk snow clearance will begin at the end of the snow event.** Rank 1 and Rank 2 areas will be assessed and cleared in order of rank. Rank 3 areas will be cleared after road plowing operations. Rank 4 will be activated for snow events greater than 4 inches in depth and follow road plowing operations.

### **Sidewalk Snow Clearance Rank and Service Level (A map for locations is in Appendix 4)**

<b>Sidewalk Rank</b>	<b>Example</b>	<b>Sidewalk Miles</b>
<b>Rank 1</b>	- Overpasses and underpasses - High density city-maintained sidewalks and crosswalks	14.6
<b>Rank 2</b>	- City-maintained sidewalks on arterials and collectors (i.e. inner loop of Man O War, Wellington Way, Wilson Downing) - Near bus stops	24.0

<b>Rank 3</b>	- Perimeter sidewalks of Parks - high density areas	16.7
<b>Rank 4</b>	- City-owned parcels in lower density residential areas (i.e. Water Quality lots, greenways) - Perimeter sidewalks of parks – low density areas	15.3
<b>Rank 5</b>	- Sidewalk entrances to greenways - Outer loop of Man O War	13.8

**RURAL AREA PLAN**

The rural area snow plan designates snow removal responsibilities to the Lexington-Fayette Urban County Government and the Kentucky Transportation Cabinet. Currently, the LFUCG is responsible for salting and plowing 111 miles (222 lane miles) of rural roadways, while KYTC provides snow removal for approximately 840 lane miles of Fayette County's roadways.

The LFUCG rural snow plan divides the county into two sections that are separated by Leestown Rd./Main St./Richmond Rd. The direction the snowfall is moving dictates which sections of the county crews begin plowing first. All designated roads are basically of equal priority, with the exception of hilly areas near the Kentucky River. **Appendix 3** provides a map of the county roadways that are the responsibility of the LFUCG.

**KENTUCKY TRANSPORTATION CABINET (KYTC) RESPONSIBILITIES AND PROCEDURES**

Because of the joint responsibility for roadways in Fayette County between the KYTC and the Lexington-Fayette Urban County Government, it is imperative to include KYTC in the countywide snow plan. **Appendix 3** contains a map highlighting state and county routes, information on KYTC, and a list of state-maintained roads by priority.

The KYTC contracts the majority of snow removal on I-75, I-64, and New Circle Road, so its crews can concentrate on keeping the other routes in Fayette County salted and plowed. To help with response time, the state calls the Lexington Division of Police when snow moves into the counties within 30 miles of Fayette County. KYTC’s snow and ice priority maps are available online: <http://transportation.ky.gov/maintenance/pages/snow-and-ice-priority-maps.aspx>

**HOURS OF OPERATION**

During the snow season, Streets & Roads supervisors are on-call 24 hours a day, 7 days a week, on a rotating basis. If the Division of Police determines that slick or icy spots are developing on roadways, they alert Streets & Roads on-call personnel and salt trucks are dispatched to the trouble spots. In a snow emergency, crews from Streets & Roads and Water Quality work 12-hour shifts around-the-clock until the priority roads are cleared.

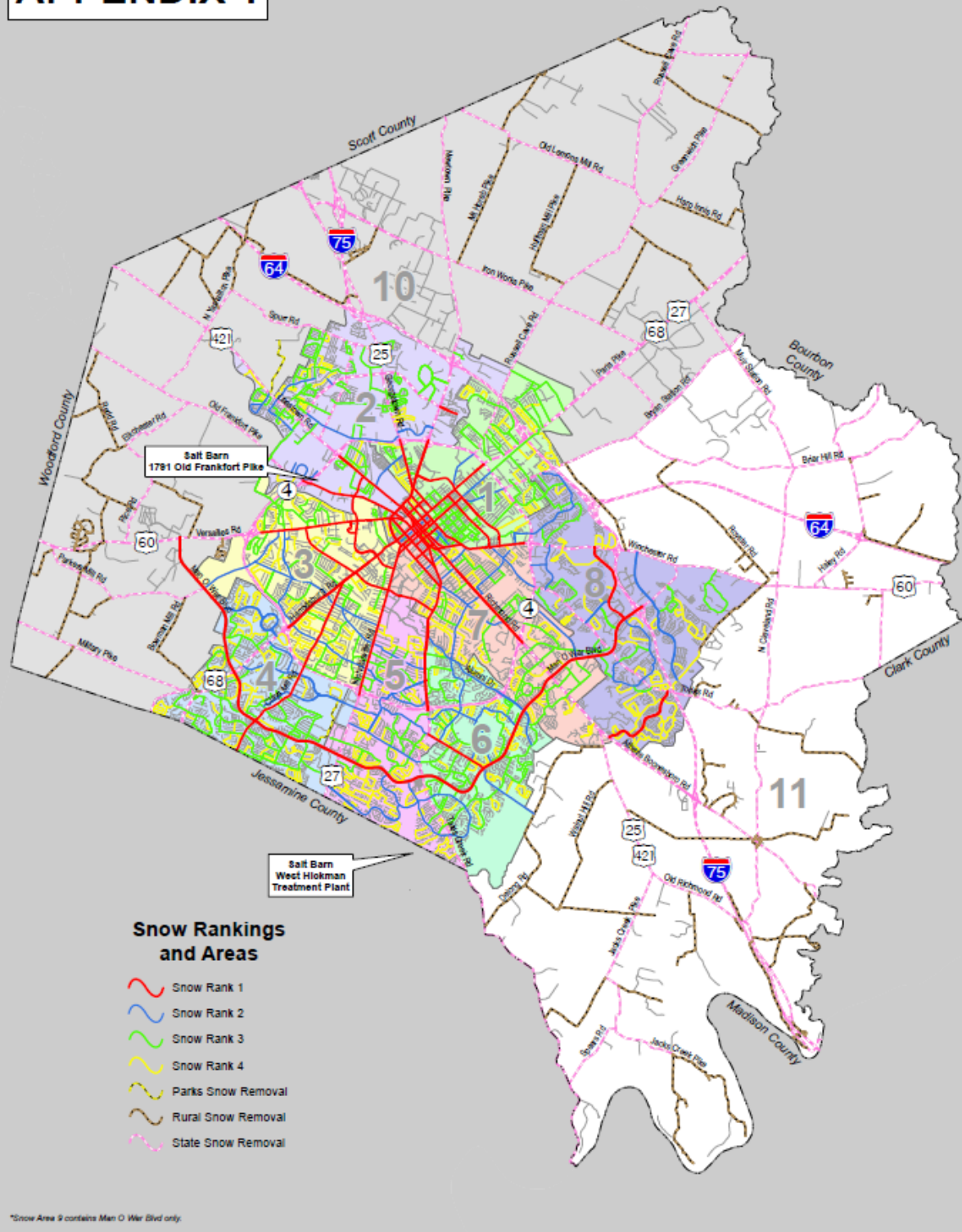
## **LFUCG REFUSE COLLECTION POLICY IN SNOW OR ICE EVENTS**

Municipal regulations and public health protection require that the Division of Waste Management provide garbage, recyclables, and yard waste collection regardless of weather conditions. The exception is in emergency situations such as heavy snow and ice when management, for the safety of its employees and the public, can suspend all collections to keep its heavy vehicles off the streets until road conditions improve. When collections are temporarily suspended, LexCall and the LFUCG's Government Communications office are notified to provide information to the public.

## **EMERGENCY COORDINATION**

The city has in place a mutual assistance agreement with KYTC District #7 and consensus across divisions for mutual aid and support should challenges similar to those posed by the COVID-19 pandemic and state of emergency occur. The Commissioner will serve as a lead communications coordinator for rapid staff reallocation as needed. Should staffing become too limited to safely execute on Rank 1 streets, LFUCG will focus on providing access to a subset of Rank 1 streets (Rank 1E) that prioritize access to emergency sites, identified in **Appendix 5**.

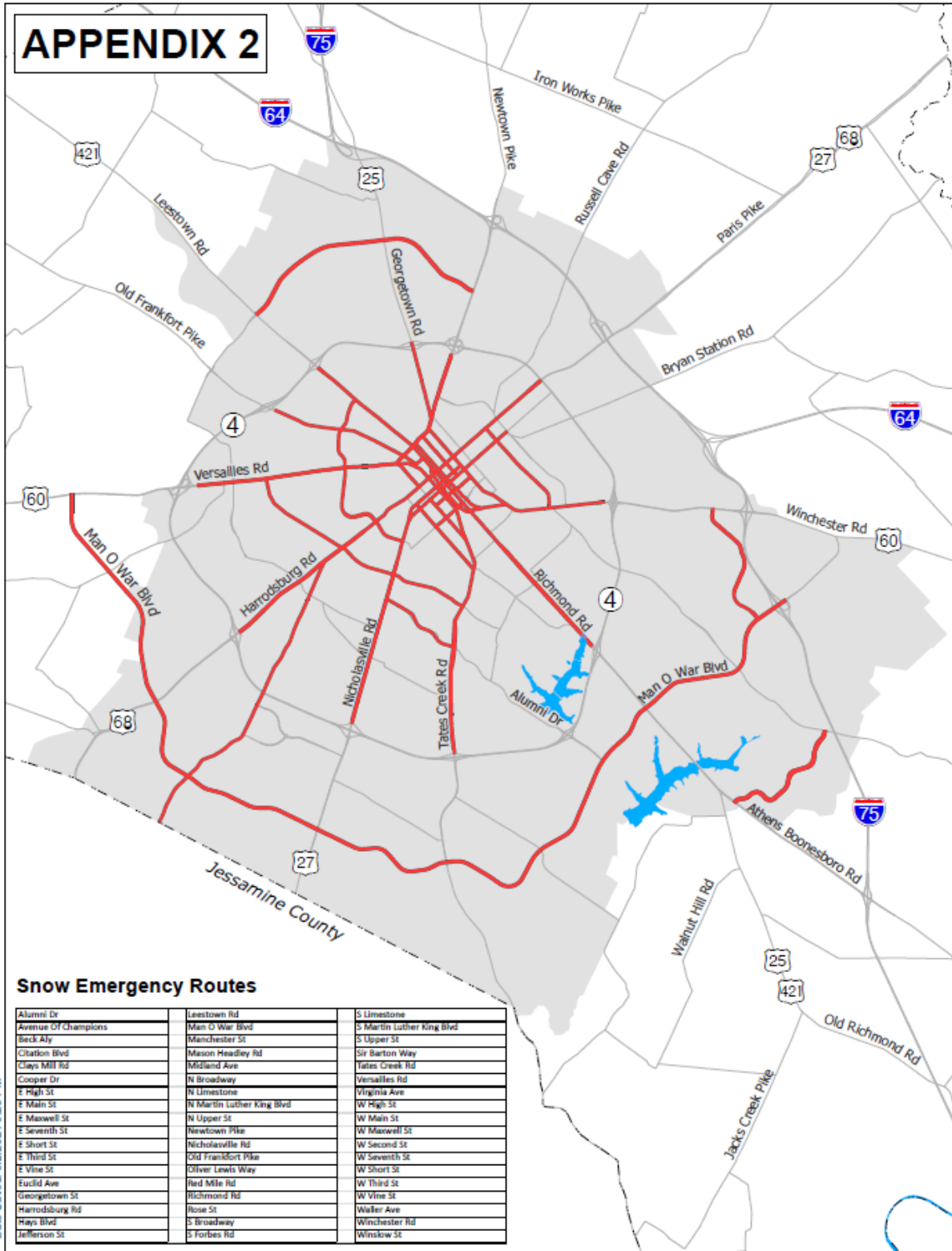
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# APPENDIX 2



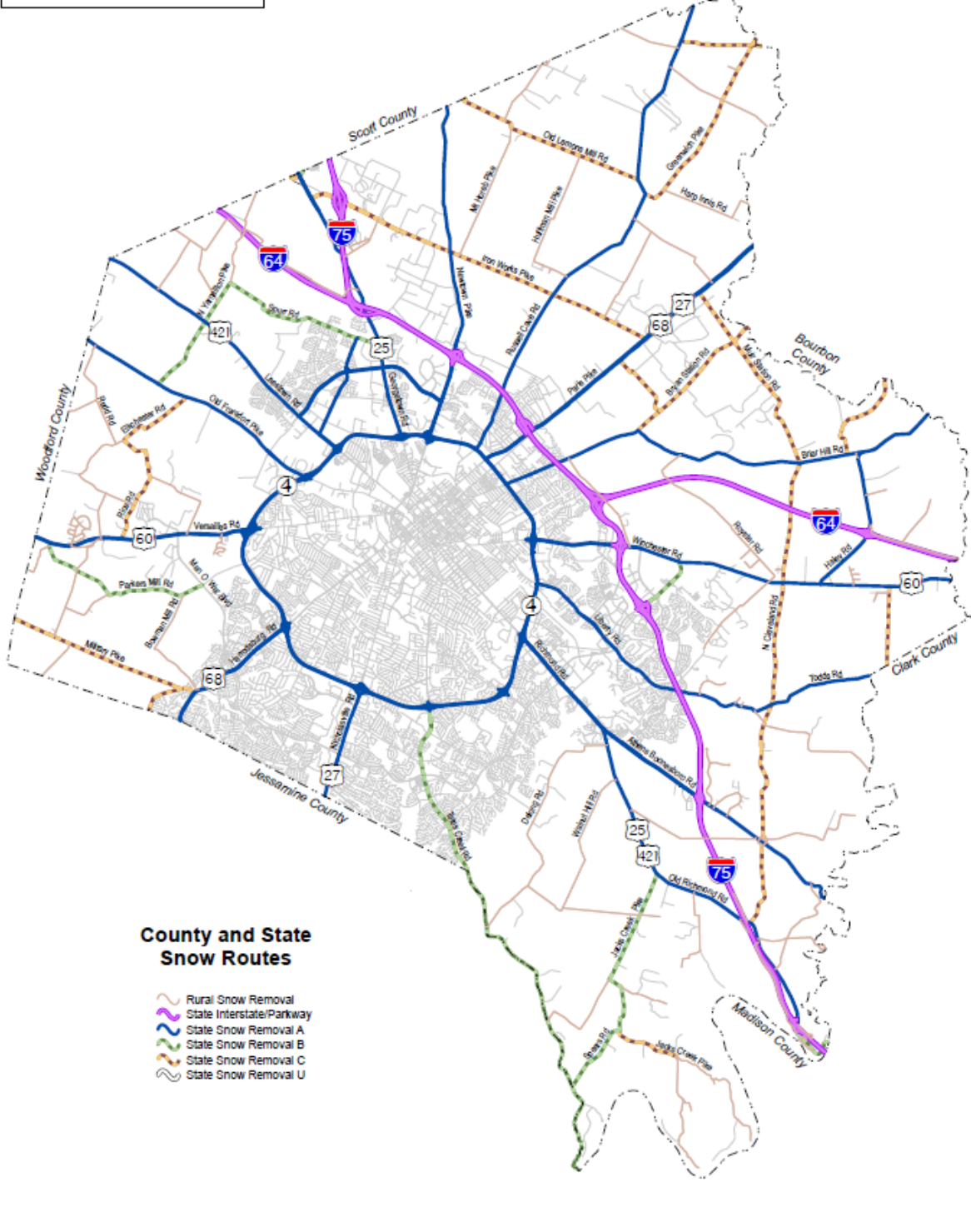
### Snow Emergency Routes

Alumni Dr	Leestown Rd	S Limestone
Avenue Of Champions	Man O War Blvd	S Martin Luther King Blvd
Beck Aly	Manchester St	S Upper St
Citation Blvd	Mason Headley Rd	Sir Barton Way
Clays Mill Rd	Midland Ave	Tates Creek Rd
Cooper Dr	N Broadway	Versailles Rd
E High St	N Limestone	Virginia Ave
E Main St	N Martin Luther King Blvd	W High St
E Maxwell St	N Upper St	W Main St
E Seventh St	Newtown Pike	W Maxwell St
E Short St	Nicholasville Rd	W Second St
E Third St	Old Frankfort Pike	W Seventh St
E Vine St	Oliver Lewis Way	W Short St
Euclid Ave	Red Mile Rd	W Third St
Georgetown St	Richmond Rd	W Vine St
Harrodsburg Rd	Rose St	Waller Ave
Hays Blvd	S Broadway	Winchester Rd
Jefferson St	S Forbes Rd	Winklow St

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# APPENDIX 3

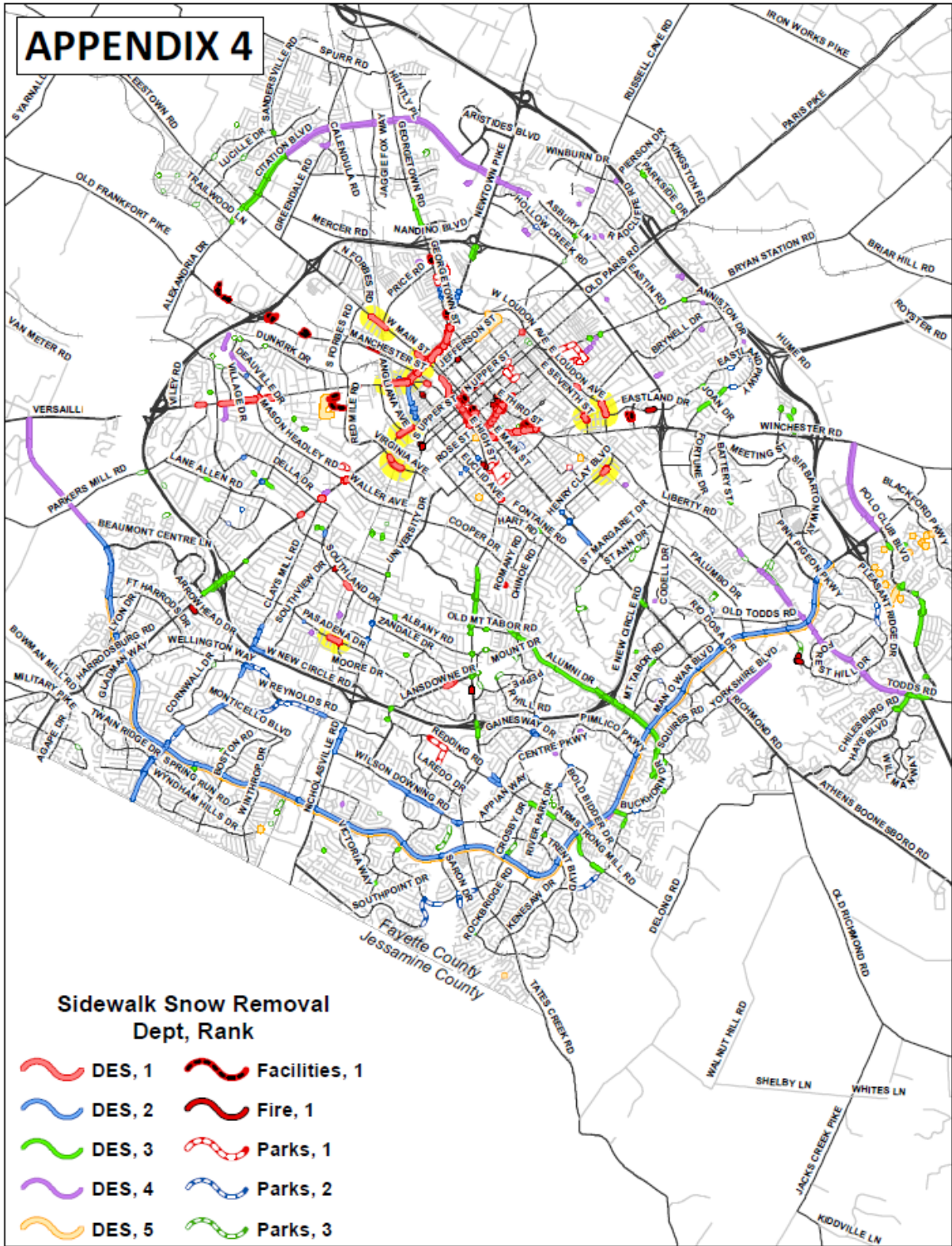


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# APPENDIX 4



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LFUCG Environmental Services

# APPENDIX 5

# LFUCG Critical Facilities

