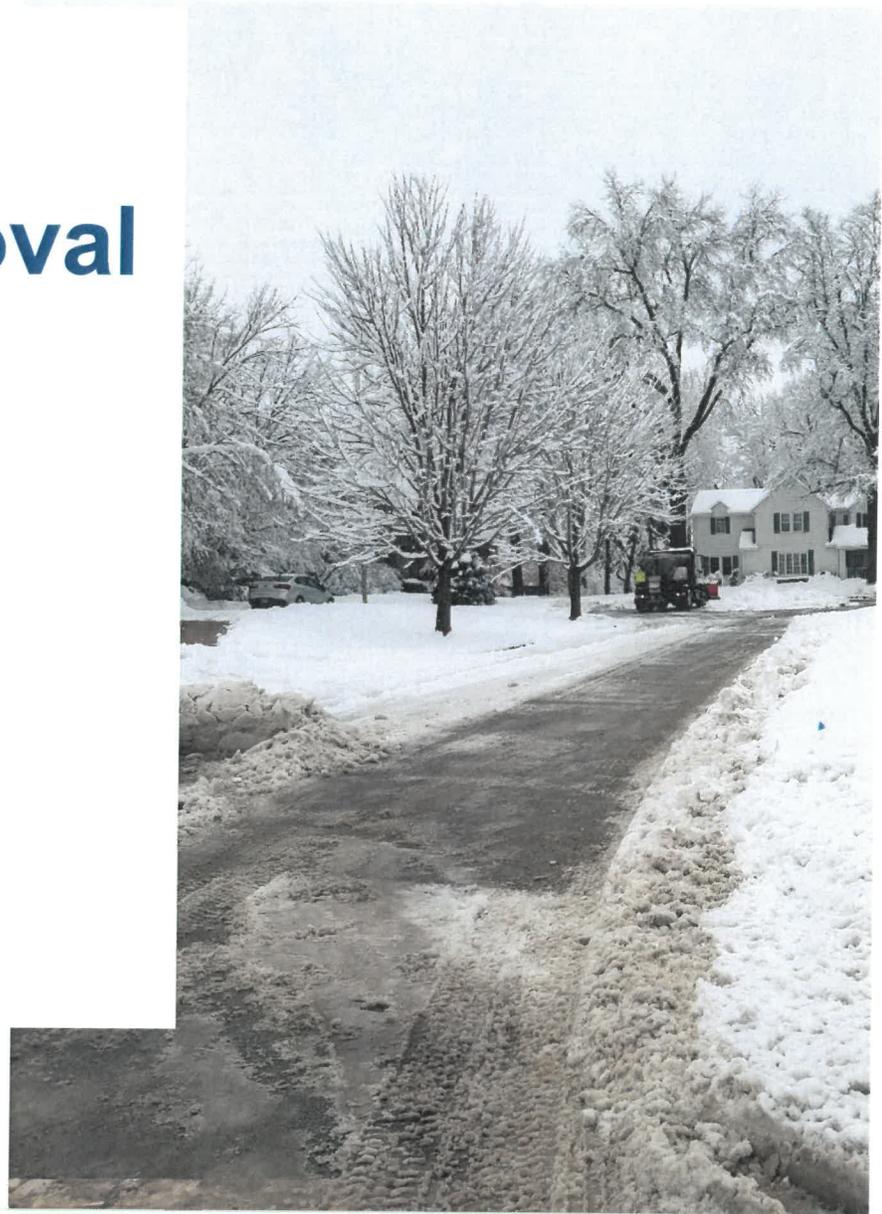
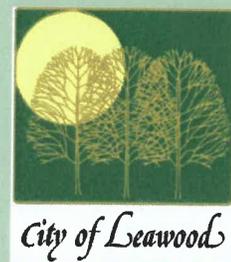

2019-2020 Snow Removal Program



PUBLIC WORKS DEPARTMENT

CITY OF LEAWOOD, KANSAS



MEMO

**To: Mayor Peggy J. Dunn
Leawood City Council**

**From: David Ley, P.E.
Director of Public Works**

Date: October 25, 2019
Re: 2019-2020 Snow Removal Program



We are pleased to present this year's Snow Removal Program for the 2019 – 2020 winter season.

New for this year is a Cul-De-Sac Crew consisting of four (4) pick-up trucks that will operate for one shift per day. This is a new snow crew from the Public Works Inspection Division who will focus on the cul-de-sacs and minor roadways to provide an increase in level of service during snow events. Their routes will be adjusted throughout this winter season as we develop the crew.

As you read the Guidelines/Policy section of this handbook, our objective is to keep vehicular traffic moving at a safe and constant speed. Clearing of streets is done by priorities with arterial and major collectors 1st priorities, collectors and major residential 2nd priority and all other residential streets and cul-de-sacs 3rd priority. These routes are color coded on the route maps.

When weather conditions dictate, drivers are assigned to one of two twelve hour shifts in order to provide 24-hour service. Snow and ice removal operations will continue until the storm event ends and all streets are cleared. **The goal is to have all streets cleared of snow and ice from curb to curb within 24-hours of the storm event ending.** In an effort to keep the public informed, we will continue to use Facebook to provide information on the storm and our progress.

The Public Works Department maintains over 425 lane miles of roadway with 26-snow plow operators including supervisors and four (4) employees from the Park's Department. The Parks Department maintains all City facilities and City parking lots. All snow removal vehicles in Public Works and Parks are equipped with GPS units to aid in tracking snow removal operations and aid in call backs. The City is at capacity with our salt supply and liquid products. The Parks Maintenance Building on 104th Street is operating at a limited capacity as we only have salt at this location.

The Public Works Department is prepared for another winter season and wishes everyone a safe driving experience to their destination.

**SNOW REMOVAL PROGRAM
2019-2020
OUTLINE**

Introduction Memo
Outline

GUIDELINES/POLICY

Snow and Ice Removal Policy and Non-Discrimination Statement
Snow Removal "Standard" Guidelines
Vehicle Technology

TRUCK ROUTES

TANDEM ROUTES: Arterials-First Priority
North Tandem, South Tandem

SNOW ROUTES AREAS MAP
SNOW ROUTE INDEX

ROUTE # 1	Primaries, Hot Spots, and Location Map
ROUTE # 2	Primaries, Hot Spots, and Location Map
ROUTE # 3	Primaries, Hot Spots, and Location Map
ROUTE # 4	Primaries, Hot Spots, and Location Map
ROUTE # 5	Primaries, Hot Spots, and Location Map
ROUTE # 6	Primaries, Hot Spots, and Location Map
ROUTE # 7	Primaries, Hot Spots, and Location Map
ROUTE # 8	Primaries, Hot Spots, and Location Map
ROUTE # 9	Primaries, Hot Spots, and Location Map
ROUTE # 10	Primaries, Hot Spots, and Location Map

CUL-DE-SAC CREW

COMMON BOUNDARIES

State Line Road
Intra-City Agreements (Shared Border Streets)

LISTS

Material Suppliers Phone Numbers
Sidewalk Information
Subdivisions with Private Streets

OPERATORS INFORMATION

Snow Removal Operator's Pre-trip Checklist
Supervisors Snow Report
Snow Removal Material Log
Liquid Deicer Dispensing System (North Facility and PW Maintenance Facility)

Guidelines / Policy

2019-2020 Snow Removal Program
Public Works Department, Leawood, Kansas



LEAWOOD PUBLIC WORKS DEPARTMENT SNOW AND ICE REMOVAL POLICY

The **SNOW AND ICE REMOVAL POLICY** is intended to keep vehicular traffic moving at a safe and constant speed. In order to accomplish this, the City is divided into ten (10) districts. Each district has three (3) priorities for snow and ice removal:

FIRST PRIORITY: Arterial roadways. Arterials are heavily traveled north- south, east-west, cross city routes and thoroughfares, (e.g. *95th Street, 119th Street, Mission Road*). These streets are maintained at all times by continuous plowing and applying deicing material until these roads are cleared of snow and the snow has stopped.

SECOND PRIORITY: Collector streets. Collector streets in residential areas provide primary access to arterial streets, (e.g. *Manor Road, 105th Street, 121st Street*). Snow removal on streets in this classification begin once the snow has stopped or all First Priority Streets have been cleared. These streets are plowed with applying deicing material (when the temperature is under 32°) until cleared of snow.

THIRD PRIORITY: Local residential streets. Snow removal on streets in this classification begins once the First and Second Priority Streets are cleared. Generally plowing of Third Priority Streets begins shortly after the snow event ends. These streets are plowed along with applying deicing material until the snow is cleared.

HOT SPOTS: Throughout the storm, known trouble locations, "hot spots" (steep intersections, hills and bridges) are continually plowed and treated with deicing material during the snow storm.

All snow is plowed to the side of the street. The City does not remove snow from in front of driveways or sidewalks. **The removal of snow on sidewalks is the responsibility of the abutting property owner.**

The City has recently established two different priorities for clearing streets:

1. Snow events with forecasts predicting **four inches of snow or less** are staffed with 14 Public Works vehicles equipped for snow removal. Snow removal operations run 24-hours a day utilizing two 12-hours shifts until all streets are cleared.
2. Snow events with forecasts predicting **over four inches of snow** are staffed with 19 vehicles equipped for snow removal. Both Public Works and Parks Maintenance equipment are used for these events. Snow removal operations run 24-hours a day utilizing two 12-hours shifts until all streets are cleared.

Vehicle Maintenance Personnel are called in on a 24-hour basis utilizing two 12-hour shifts during snow removal operations to perform vehicle maintenance and repairs.

The Leawood Public Works Department utilizes GPS technology, Automated Vehicle Locators (AVL) in all snow removal equipment. This added technology tracks the location of all vehicles including speed, direction, whether a plow is up or down, and rate of material application. The data will be overlaid on a City map showing where the trucks have been, direction they are going, streets that have been plowed, and streets that need plowing. This technology allows management to monitor the operation in real time improving response time and eliminate streets from being missed before a truck leaves its area.

These changes have been implemented to enhance the City's response time to clear all streets of snow. The Current Policy and Goal is to have all streets cleared within 24-HOURS OF THE SNOW EVENT ENDING.

NON-DISCRIMINATION STATEMENT

In accord with various Federal and State civil rights legislation, the City of Leawood does not discriminate against individuals regardless of race, ethnicity, color, religion, gender, national origin, age, marital status, medical condition, or disability.

WHAT YOU CAN DO TO HELP THE SNOW REMOVAL OPERATIONS

1. Parking off the street during inclement weather.



If street parking is absolutely necessary, do not park directly across from another parked car. Visibility is poor during snow removal and the trucks are large and need room to maneuver. Please give the trucks plenty of room.

2. Trimming low hanging branches from right-of-way trees.

Trees located close to the street must have their branches trimmed a minimum of **fourteen feet** above the pavement at the curb line. In the past, snow removal trucks have been damaged by low hanging limbs, resulting in equipment down time and a slower snow removal program.



3. Clearing the sidewalk in front of your home or business.



SNOW AND ICE TO BE REMOVED FROM SIDEWALKS

It is the duty of the property owner and/or occupant of any lot(s) abutting upon any sidewalks to clear all snow and ice within 48-hours of a snow event ending.

- ### 4. Not allowing children to construct snow structures or sled in the right-of-way. Snow plow trucks move several tons of snow off the pavement. It is extremely dangerous to allow children to play near the road during snow removal. Truck drivers cannot always see children playing and the weight and force of moving snow could cause serious injury.



SNOW REMOVAL GUIDELINES



1. **WHEN TO SALT?**

Apply salt when precipitation is forecast to accumulate on the pavement and the temperature will be between 15 and 32 degrees or when instructed by the snow shift supervisor.

2. **WHAT IS THE SALT APPLICATION RATE?**

Spreaders should be set to 300 lbs of salt per two lane mile. If conditions dictate, the snow shift supervisor will advise drivers when to alter application rates.

3. **WHEN TO USE LIQUID DEICER?**

Liquid Deicer is used when temperatures are dropping below 15 degrees and salt has lost its effectiveness or when instructed by the snow shift supervisor



4. **WHEN TO PLOW?**

We plow when snow accumulates to a depth of two (2) inches.

5. **WHEN TO ANTI-ICE?**

(Spraying liquid deicer directly on pavement)

Snow shift supervisors will determine the timing and routes of the anti-icing program based on temperature, amount and type of precipitation. Application rates should be approximately 50 gal per lane mile. Application to major intersections, bridges, and hills will be the priority of the anti-icing program.



Leawood Public Works Department began utilizing GPS technology (Automated Vehicle Locators) in all snow removal vehicles in December of 2011. GPS technology supplies management with unit identification, vehicle location and speed, travel direction, rate of application of material, and if a plow blade is up or down. The system is also capable of capturing engine diagnostic codes on our newer model trucks should the vehicle experience a malfunction.

The data is continuously collected and downloaded through a wireless connection to a server that hosts a specifically designed mapping software program. The mapped data is immediately available to Public Works Management for evaluation.

The tracking system enables Public Works to better coordinate their snow removal efforts. All of the processed information will allow management to view and evaluate the progress of the snow removal efforts, ensuring no public street has been missed, and improve the accuracy of information between drivers and supervisors at shift change as to what streets have been cleared of snow and what streets are still in need of attention.

Truck Routes

2019-2020 Snow Removal Program
Public Works Department, Leawood, Kansas



City of Leawood

**TANDEM ROUTES
ARTERIALS**

FIRST PRIORITY



TANDEM # 1

STATE LINE ROAD.....	79th Street to College Boulevard (Route 1 & 2)
83 RD STREET.....	State Line Road to Mission Road (Route 1)
95 TH STREET.....	State Line Road to Mission Road (Route 1 & 2)
103 RD STREET.....	State Line Road to Mission Road (Route 2)
MISSION ROAD.....	103 rd Street to College Boulevard (Route 2)
TOMAHAWK CREEK PARKWAY....	College Boulevard to Roe Avenue (Route 3)
COLLEGE BLVD.....	Nall Avenue to State Line Road (Route 3)
115 TH STREET.....	Roe Avenue to Tomahawk Creek Parkway (Route 3)
GRANADA.....	Roe Avenue to 115 th Street (Route 3)
TOWN CENTER DRIVE.....	Nall Avenue to Roe Avenue (Route 3)
117 TH STREET.....	Nall Avenue to Town Center Drive (Route 3)
ROE AVENUE**.....	College Boulevard to 119 th Street (Route 3)

TANDEM # 2

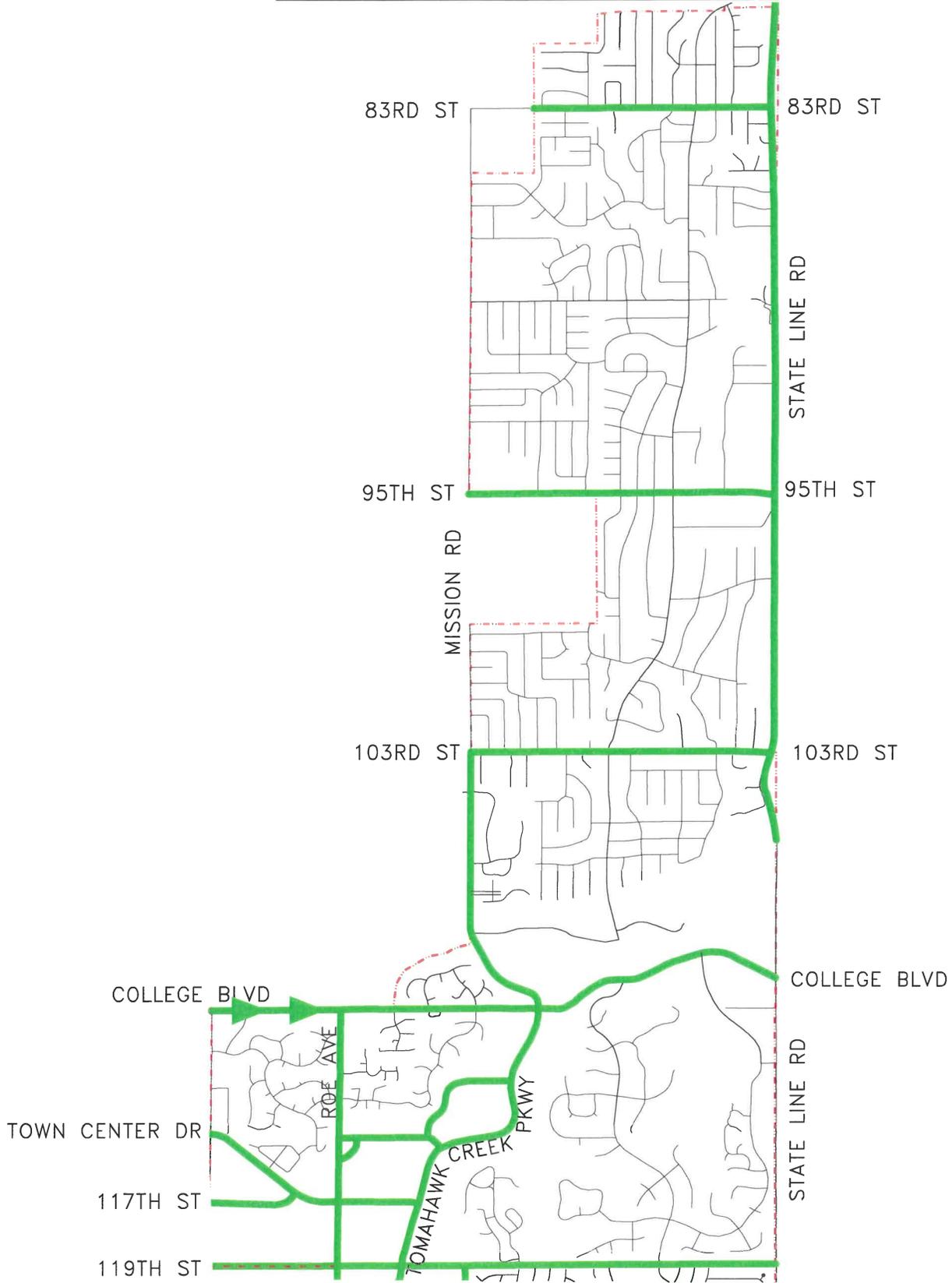
ROE AVENUE**.....	College Boulevard to 135th Street (Route 3, 5, & 6)
119 TH STREET.....	State Line Road to Nall Avenue (Route 3)
MISSION ROAD.....	119th Street to 135th Street (Route 4, 5, & 7)
133 RD STREET.....	Nall Avenue to State Line Road (Route 6, & 7)
BRIAR STREET.....	135 th Street to 133 rd Street (Route 6)
135 TH STREET.....	Nall Avenue to State Line Road (Route 6, 7 & 8)
137 TH STREET.....	Nall Avenue to Chadwick (Route 8)
KENNETH ROAD.....	135th Street to 151st Street (Route 8 & 9)
151ST STREET.....	Nall Avenue to Kenneth Road (Route 9 & 10)
123 RD STREET.....	State Line Road to Mission Road
127 TH STREET.....	Mission Road to Nall Avenue

The tandem trucks will clear and treat all first priority arterial streets with the assigned single axle trucks. When all the first priority streets are cleared and treated, the tandems will continue to clear and treat the entire route as needed. When the snow stops accumulating and the tandem routes are clear, the tandem drivers will contact the shift supervisor for re-assignment to smaller snow removal vehicles.

**** If freezing precipitation is forecast to begin one hour before or during rush hour traffic, the first priority of the tandem trucks is to pre-treat:**

ROE AVENUE.....	College Boulevard to 119th Street
MISSION ROAD.....	Hill south of 119th Street

NORTH TANDEM ROUTE

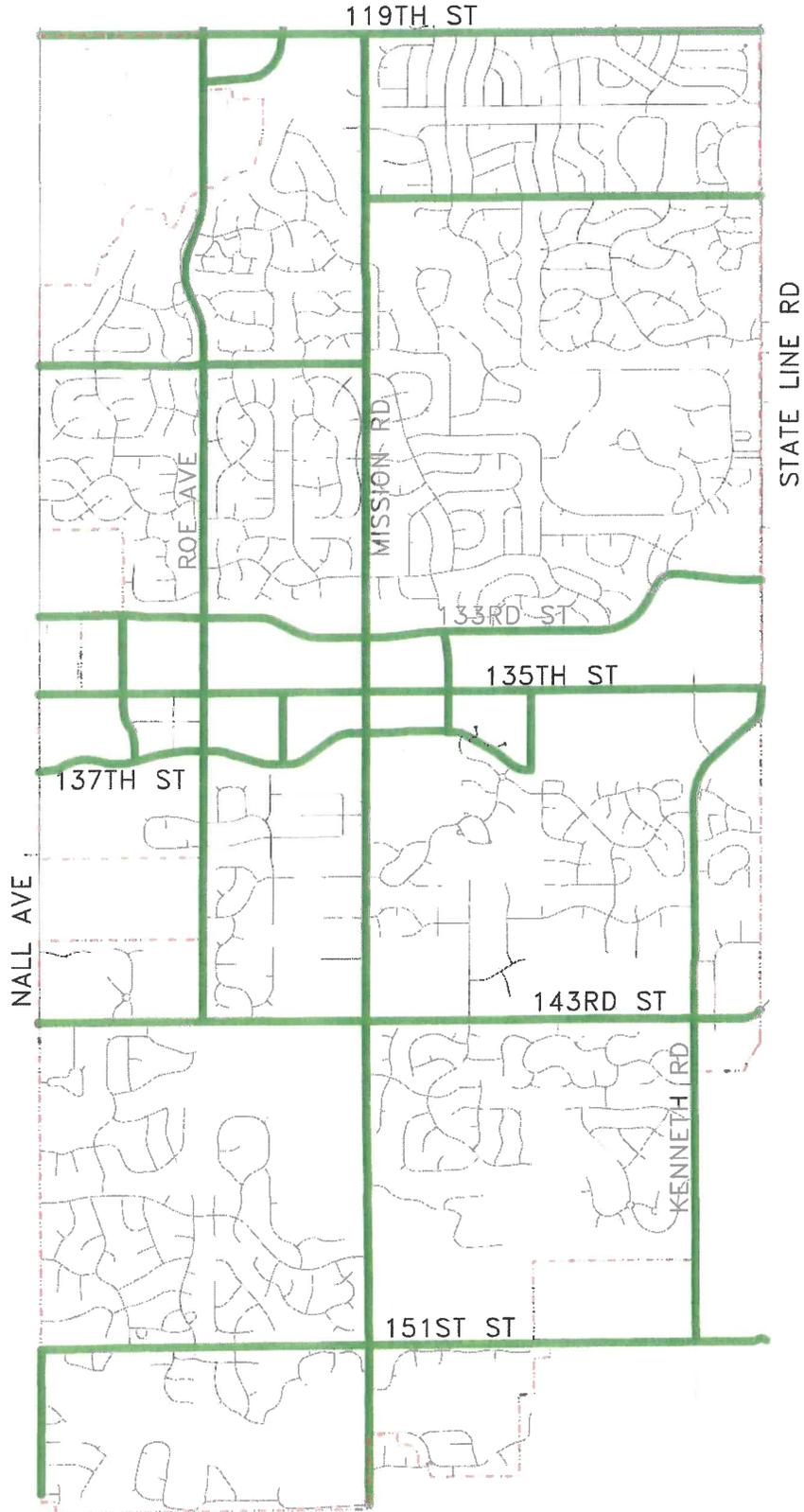


— ROUTE

City of Leawood

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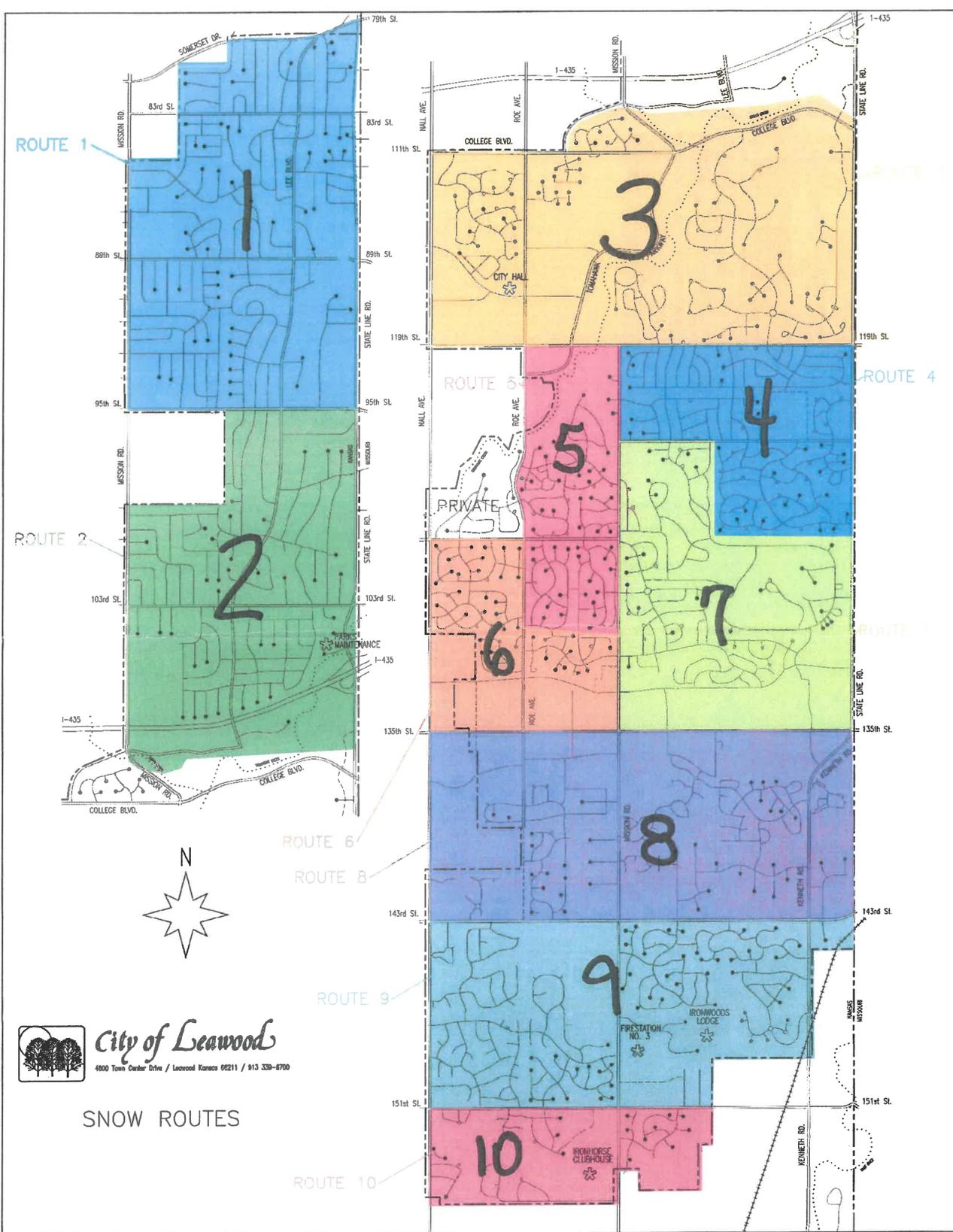
SOUTH TANDEM ROUTE



— ROUTE

City of Leawood

DEPARTMENT OF PUBLIC WORKS
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ROUTE 1

ROUTE 2

ROUTE 6

ROUTE 8

ROUTE 9

ROUTE 10



City of Leawood
 4000 Tom Center Drive / Leawood Kansas 66211 / 913 339-8700

SNOW ROUTES

SNOW ROUTE INDEX

1	Somerset to 95 th , Mission to State Line Road
2	95 th to Lee, south of I-435, Mission to State Line Road
3	College Boulevard to 119 th , Nall to State Line Road
4	119 th to 127 th , Mission Road to State Line Road
5	119 th to 131 st , Roe to Mission Road
6	119 th to 135 th , Nall to Roe/Mission Road
7	123 rd to 135 th , Mission to State Line Road
8	135 th to 143 rd , Nall to Kenneth Rd/east boundary
9	143 rd to 151 st , Nall to Kenneth Road
10	151 st to south boundary, Nall to east boundary

ROUTE 1

PRIMARIES:

83 RD STREET	Mission Road to State Line Road
95 TH STREET	Mission Road to State Line Road
89 TH STREET	Mission Road to Lee Boulevard
LEE BOULEVARD	Somerset Drive to 95th Street
STATE LINE ROAD	Tandem with Route # 2 (<u>79th to College Boulevard</u>)

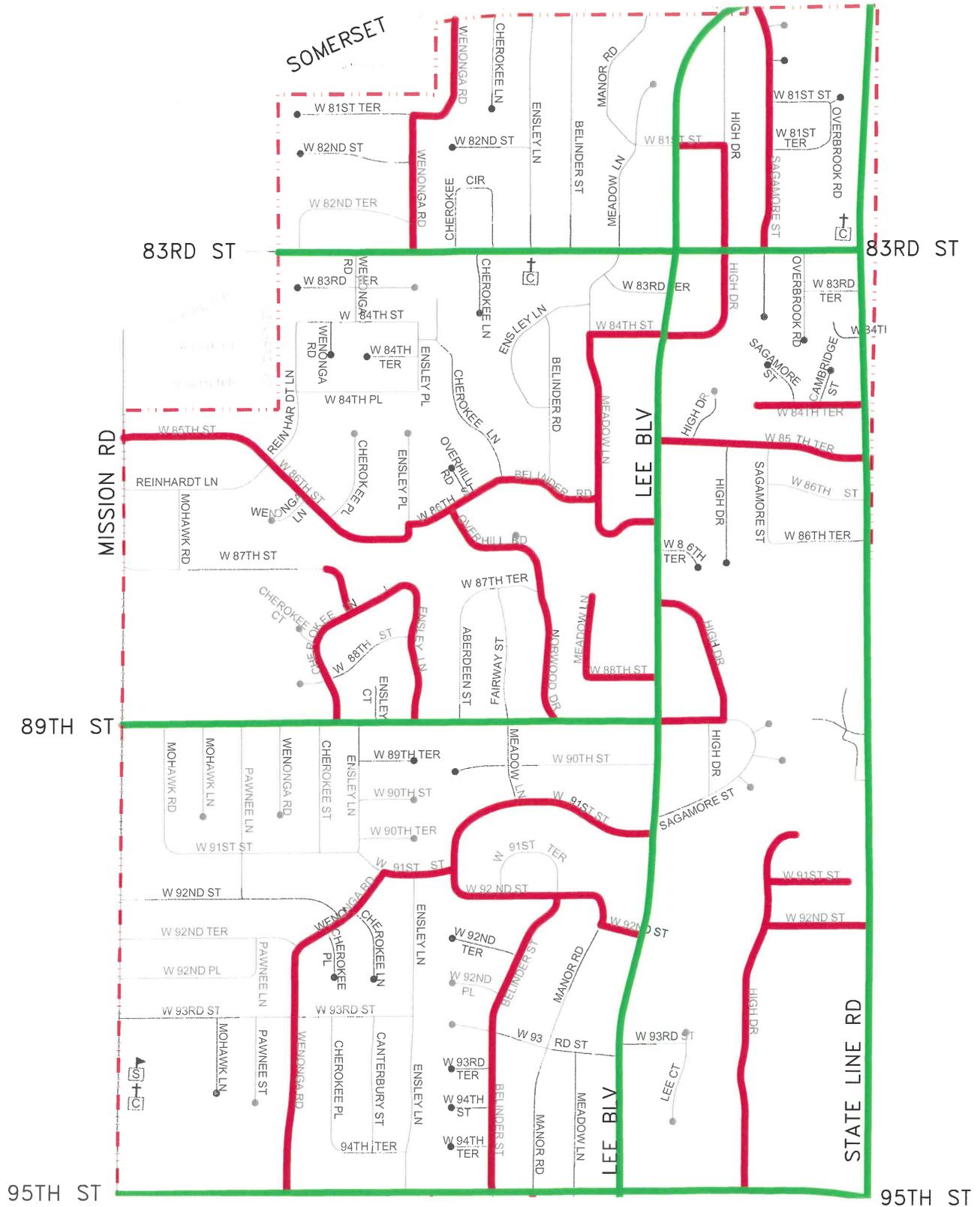
HOT SPOTS:

1. High Drive at 91st Street and 92nd Street
2. 92nd Street and State Line Road
3. 91st Street and Ensley
4. 91st Street and Mohawk
5. 89th Street and High Drive
6. 88th Street and Lee Boulevard
7. 87th Terrace and Norwood
8. 89th Street at Ensley and Cherokee Lane
9. 87th Street and Cherokee Lane
10. 86th Street and Overhill
11. 86th Street and Ensley
12. 86th Street and Meadow
13. 84th Street and Cherokee Lane
14. 84th Street and Lee Boulevard
15. 83rd Street and Cherokee
16. Cambridge St. Cul-de-sac off of 84th Terrace

Sidewalk Routes:

Brook Beatty Park Sidewalk	
Cul-de-sacs	61
Total Lane Miles	68

SNOW ROUTE 1



- PRIMARY ROUTE
- SECONDARY ROUTE
- PRIVATE STREETS

City of Leawood

DEPARTMENT OF PUBLIC WORKS

4800 TOWN CENTER DRIVE - LEAWOOD, KANSAS 66211 - (913) 339-6700

ROUTE 2

PRIMARIES:

103 RD STREET	Mission Road to State Line Road
LEE BOULEVARD	95th Street to Mission Road
STATE LINE ROAD	Tandem with Route #1 (<u>79th to College Boulevard</u>)
MISSION ROAD	103rd Street to College Boulevard

HOT SPOTS:

1. Belinder from 103rd Street to 104th Street
2. Lee Court from Lee Blvd to Cul-de-sac
3. Belinder off 98th Street (2 Cul-de-sacs)
4. 104th Terrace and Lee Boulevard
5. 97th Terrace and Manor Road (Intersection)
6. Belinder and Manor Road (Intersection)
7. Overbrook Court, North of 103rd Street
8. High Drive, North of 103rd Street

Sidewalk Routes:

98th and Lee Sidewalk

Fire Station 1 Sidewalks

West side of Mission Rd from Lee to College

Lee Blvd over I-435 to T-ball fields 11 and 12

City Park- Shelter E to parking lots including restroom

Cul-de-sacs	45
Total Lane Miles	57

ROUTE 3

PRIMARIES:

119 TH STREET	State Line to Nall Avenue
ROE AVENUE**	College Boulevard to 119th Street
COLLEGE BOULEVARD	Nall Ave. to Roe Ave. (Eastbound only)
COLLEGE BOULEVARD	Roe Ave to State Line Road
TOWN CENTER DRIVE	Roe Avenue to Nall Avenue
TOWN CENTER DRIVE	Roe Avenue to Tomahawk Creek Parkway
TOMAHAWK CREEK PARKWAY	College Boulevard to 119 th Street
115 TH STREET	Tomahawk Creek Parkway to Roe Avenue
114 TH STREET	Tomahawk Creek Parkway to 115th Street
GRANADA ROAD	Roe Ave. to 115th Street
BROOKWOOD	119th Street to College Boulevard
PAWNEE	119th Street-- North to Guard Shack

HOT SPOTS:

1. 117th and Pawnee (Hill-Intersection)
2. Brookwood 113th Street to College (Hill)
3. 118th Terrace and Fairway (Hill)
4. 113th Street Cul-De-Sac west of Brookwood (Hill)
5. Town Center Drive at Roe Avenue (Intersection)
6. Canterbury Circle at Manor Road (Hill)

****If freezing precipitation is forecast to begin one hour before or during rush hour traffic, the first priority of the Route 3 driver is to pre-treat:**

Roe Avenue.....College Boulevard to 119th Street.

ROUTE 3 continued on next page . . .

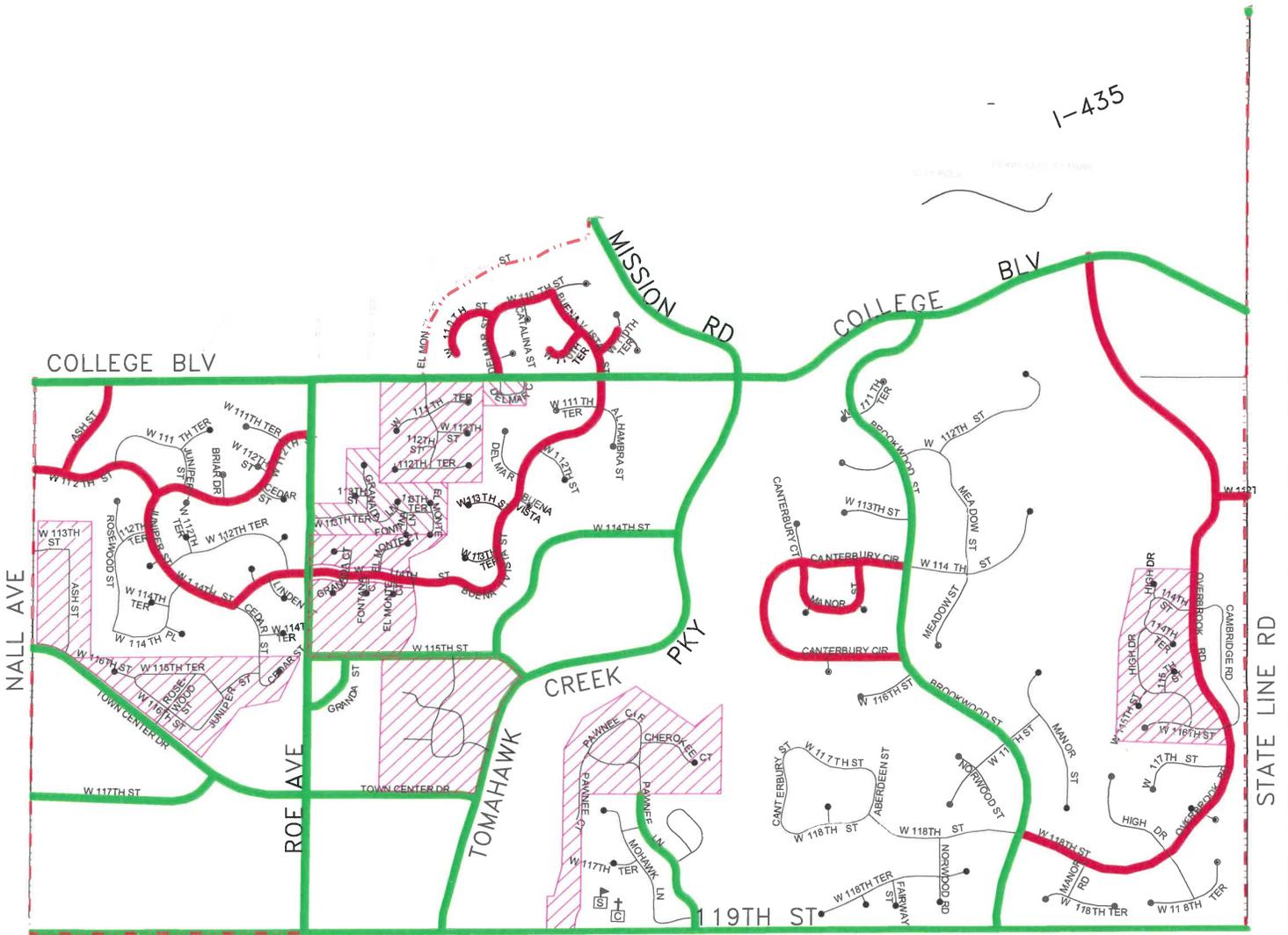
ROUTE 3 continued ...

Sidewalk Routes:

West side of Mission rd from Lee to College
College Blvd. from Stante line Rd to Tomahawk Creek Parkway
114th Street (old city hall site) sidewalk
Justice Center sidewalks and parking
N. side of Town Center Drive from Tomahawk Creek to Roe
Roe from Town Center to N of bridge
City Hall and Library. Paver path from parking to front entrance
Paver path from City Hall to Library
Sidewalks in front of Community Center
119th Street from Tomahawk Creek to Mission Rd. (North and South)

Cul-de-sacs	65
Total Lane Miles	65

SNOW ROUTE 3



- PRIMARY ROUTE
- SECONDARY ROUTE
- PRIVATE STREETS

City of Leawood

DEPARTMENT OF PUBLIC WORKS
4800 TOWN CENTER DRIVE - LEAWOOD, KANSAS 66211 - (913) 339-6700

ROUTE 4

PRIMARIES :

119 TH STREET	State Line to Mission Road
123 RD STREET	State Line Road to Mission Road
MISSION ROAD**	119th Street to 123rd Street

HOT SPOTS:

1. 119th Street and Mission Road (Hill)
2. 119th Street and Canterbury (Cul-de-sac)
3. 119th Street and Aberdeen (Hill)
4. 121st Street and Aberdeen (Hill)
5. 119th Street and Ensley Lane (Hill)
6. 119th Street and Cherokee Lane (Hill)
7. 119th Street and Wenonga (Hill)
8. 119th Street and Pawnee (Hill)
9. 121st Street and Mohawk Lane (Hill)
10. 120th Terrace and State Line Road
11. 122nd Street and Reinhardt Lane
12. 122nd Terrace and Cherokee Lane (Hill)
13. 122nd Street and Pawnee Lane (Cul-de-sac)
14. 123rd Street and Mission Road (Hill)
15. Fairway Road and 123rd Street (Hill)
16. Pembroke Lane and Sagamore Road (Hill)
17. 127th Street at State Line Road (Hill)

** If freezing precipitation is forecast to begin one hour before or during rush hour traffic, the first priority of the Route 4 driver is to pre-treat:

Mission Road.....Hill south of 119th Street

Sidewalk Routes:

None

Cul-de-sacs 43

Total Lane Miles 34

ROUTE 5

PRIMARIES:

119 th STREET	Mission Road to Roe Avenue
ROE AVENUE	119th Street to 135th Street
127 TH STREET	Mission Road to Roe Avenue
MISSION ROAD	119th Street to 135th Street (Shared with Route #6)

HOT SPOTS:

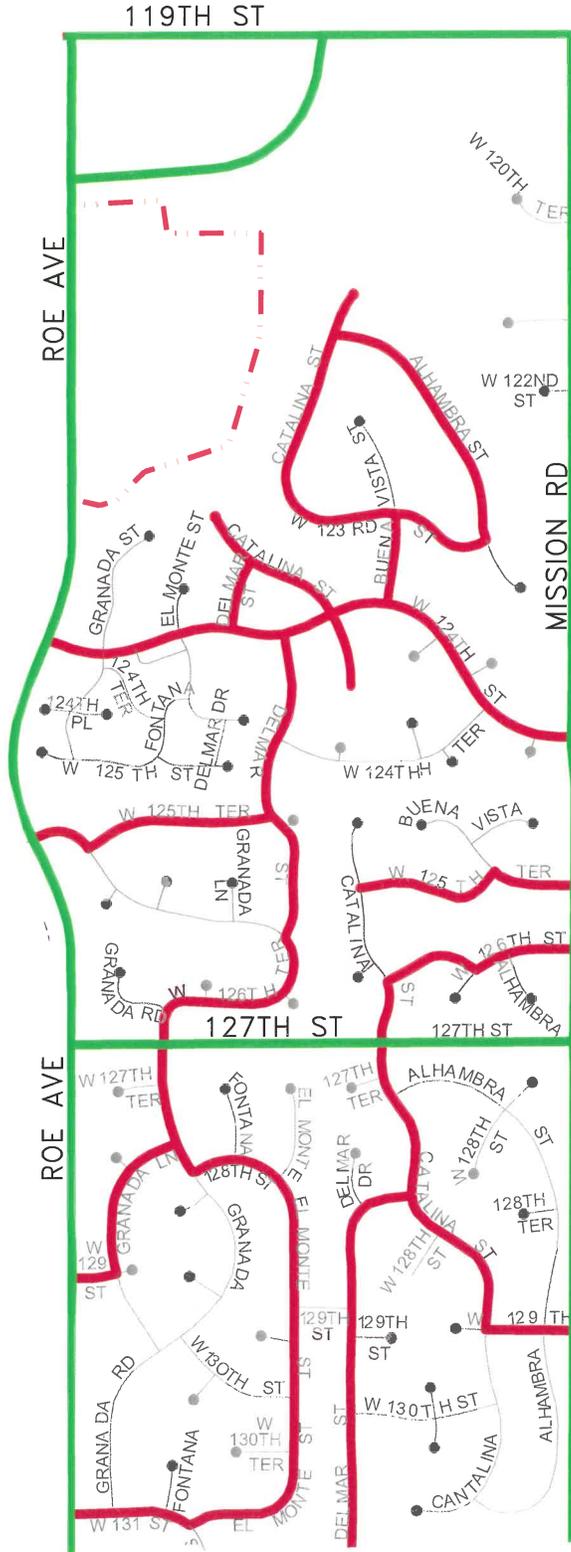
1. 124th Street and Mission Road (Hill)
2. Bridge at 124th Street on Roe Avenue
3. Alhambra Cul-De-Sac off 125th Terrace
4. 127th Street at Roe Avenue

Park Routes:

119th Street from Tomahawk creek to Mission Rd S side.
Roe Street Bridge from Trail access South to Large Wall

Cul-de-sacs	58
Total Lane Miles	32

SNOW ROUTE 5



-  PRIMARY ROUTE
-  SECONDARY ROUTE
-  PRIVATE STREETS

City of Leawood

DEPARTMENT OF PUBLIC WORKS

4800 TOWN CENTER DRIVE - LEAWOOD, KANSAS 66211 - (913) 339-6700

ROUTE 6

PRIMARIES:

ROE AVENUE	119th Street to 135th Street
127 TH STREET	Nall Avenue to Roe Avenue
132 ND STREET	Mission Road to Roe Avenue
133 RD STREET	Nall Avenue to Roe Avenue

HOT SPOTS:

1. 127th Street at Nall Avenue (Hill)
2. Bridge at 124th Street on Roe Avenue
3. 127th Street and Roe Avenue (Intersection)
4. 129th Place and Cedar (Hill)
5. 130th Street and Cedar (Hill)
6. 132nd Street and Roe Avenue (Intersection)

Sidewalk Routes:

I-Lan Park- all sidewalks within park
I-Lan Park Street Bridge on Nall and Trail going under Nall
Roe from 133rd to 135th east side only

Cul-de-sacs	44
Total Lane Miles	33

ROUTE 7

PRIMARIES:

MISSION ROAD	123rd to 135th Street
GLENFIELD	Mission Road to 132nd Street
OVERBROOK ROAD	123rd Street to Sagamore Road
SAGAMORE ROAD	Overbrook Road to 128th Street
133 RD STREET	Mission Road to State Line Road
PAWNEE STREET	133rd Street to 135 th Street
132 ND STREET	Mission Road to 133 rd Street

HOT SPOTS:

1. Overbrook Road and Pawnee (Hill)
2. Overbrook Road and Ensley Lane (Hill)
3. Overbrook Road and Cherokee Lane (Hill)
4. Wenonga Lane and Cherokee Lane (Hill)
5. Cherokee Lane and Ensley Lane (Hill)
6. Glenfield and Mission Road (Intersection)

Sidewalk Routes:

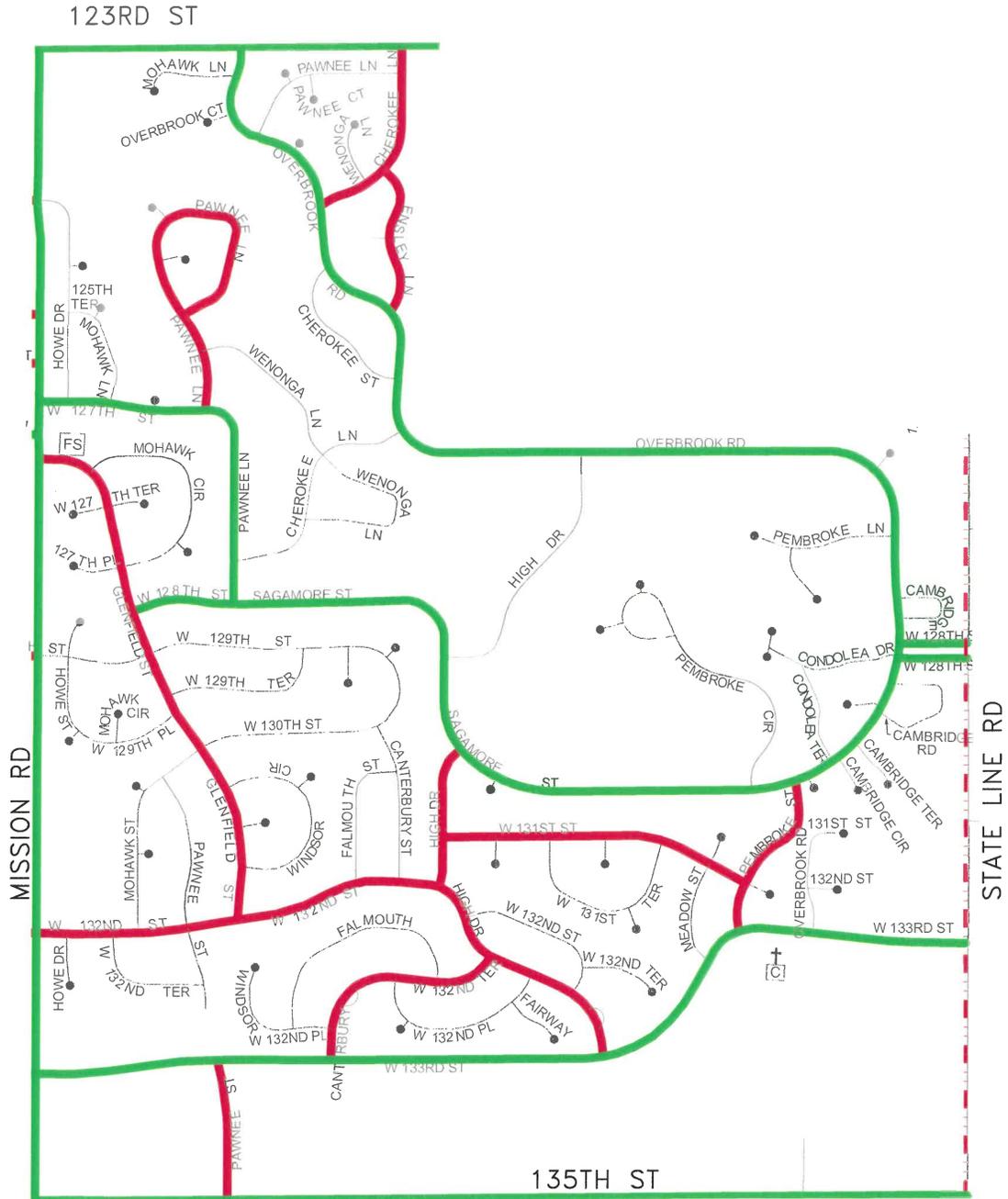
Gezer Park- all sidewalks

Note: Do not drive trucks or skid loaders over stone bridges

Fire Station 2. Sidewalks and building access

Cul-de-sacs	54
Total Lane Miles	48

SNOW ROUTE 7



- PRIMARY ROUTE
- SECONDARY ROUTE
- PRIVATE STREETS

City of Leawood

DEPARTMENT OF PUBLIC WORKS

4800 TOWN CENTER DRIVE - LEAWOOD, KANSAS 66211 - (913) 339-6700

ROUTE 8

PRIMARIES:

ROE AVENUE	135th Street South to 143 rd Street
143 RD STREET	Nall Avenue to East City Limit
KENNETH ROAD	135th Street to 143rd Street
MISSION ROAD	135th Street to 143 rd Street
137 TH STREET	Nall Ave to Mission Road
BRIAR	135th Street to 137th Street

HOT SPOTS:

1. 135th Street and Mission Road
(Both North and South of Intersection)
2. 142nd Street and Windsor
3. 142nd Street and Canterbury
4. 143rd Street (Windsor to Kenneth Road)
5. 141st Terrace (Cul-de-Sac east of Nall Ave)

Sidewalk Route:

None

Cul-de-sacs	71
Total Lane Miles	59

ROUTE 9

PRIMARIES:

KENNETH ROAD 143rd Street to 151st Street

151ST STREET Nall Avenue to Bridge east of Kenneth Road

MISSION ROAD 143rd Street to 151st Street

148TH STREET Nall Avenue to Mission Road

HOT SPOTS:

1. 148th Street west of Mission Road (Hill)
2. Mission Road north of 151st Street (Hill)
3. Aberdeen south to 143rd Street (Hill)
4. 144th Street and Kenneth Road (Intersection)
5. 145th Street east of Mission Road (Hill)

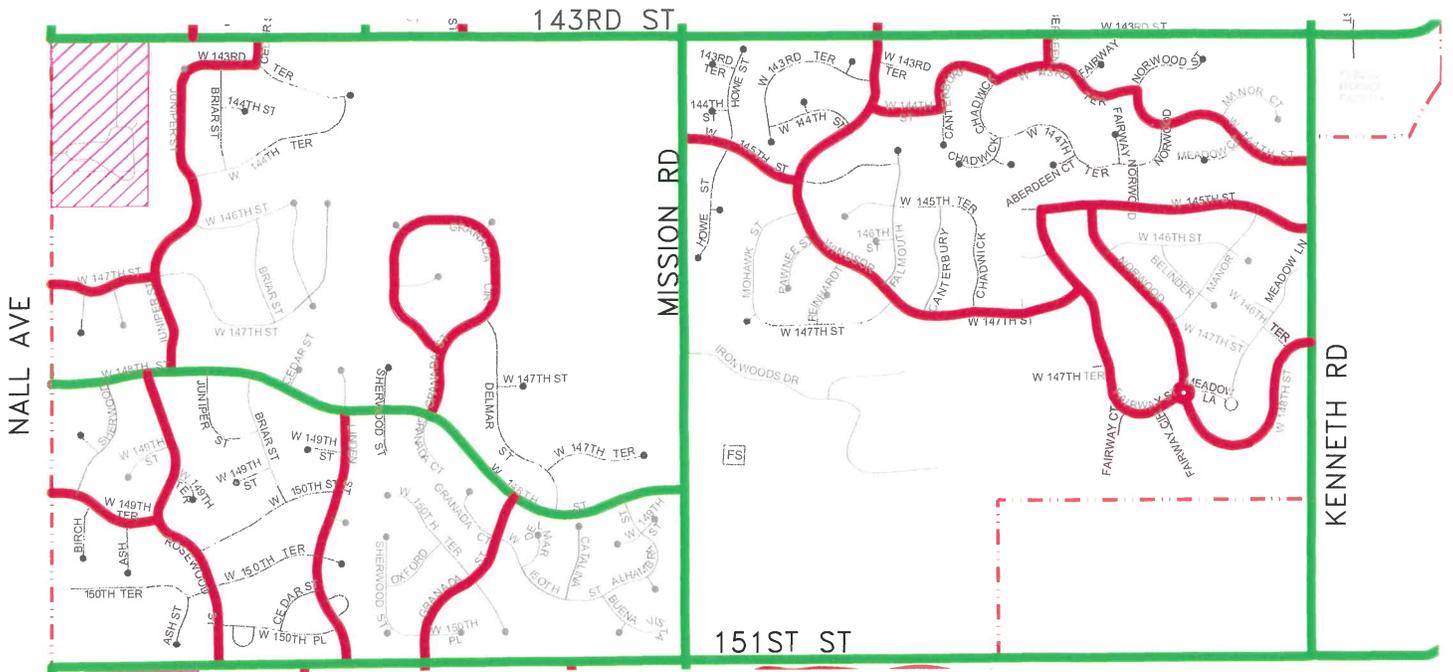
Sidewalk Route:

Ironwoods Park- Nature Center, Lodge, Oxford School, Playground shelter and Restroom, Sidewalk north of Park Entrance
Fire Station 3- Sidewalks and building access

Cul-de-sacs 83

Total Lane Miles 50

SNOW ROUTE 9



-  PRIMARY ROUTE
-  SECONDARY ROUTE
-  PRIVATE STREETS

ROUTE 10

PRIMARIES:

NALL AVENUE 151st Street to 154th Street
MISSION ROAD 151st Street to Bell Drive

HOT SPOTS:

1. 151st Street and Mission Road
2. 151st Street and Nall Avenue
3. Mission Road and Bell Drive
4. 154th south Cul-De-Sac
5. 151st Street (Kenneth Road east to Bridge)

**NOTE: Do not block privacy gate on Cherokee south of 154th with snow.
Back truck past driveway and plow snow away from gate.**



Sidewalk Routes:

None
Cul-de-sacs 30
Total Lane Miles 17.5

SNOW ROUTE 10



-  PRIMARY ROUTE
-  SECONDARY ROUTE
-  PRIVATE STREETS

City of Leawood

DEPARTMENT OF PUBLIC WORKS

4800 TOWN CENTER DRIVE - LEAWOOD, KANSAS 66211 - (913) 339-6700

Cul-De-Sac Crew

The goal of the Cul-de-Sac Crew is to assist the primary snow team by making an initial pass down each cul-de-sac of their assigned route within 24 hours of a measurable snow event.

The Cul-de-Sac Crew may not be relied on for smaller storms and are not required to clear curb to curb during the initial pass.

Scheduling Details:

Will work up to 8 hour shifts between the hours of 5:00 am and 5:00 pm. No time in excess of 8 hours a day will be asked of the crew.

- Mon – Fri: will not be required to arrive earlier than their normal start time unless the snow supervisor contacts them by noon the day before.
- Sat – Sun: will not be required to plow unless the storm is anticipated to produce 3” or more of accumulation and the snow supervisor contacts them by Friday at noon. The snow supervisor will be responsible for making the decision to call in the crew based on the anticipated accumulation.
- Will not be called in on City approved holidays including observed holidays. For example approved holidays that fall on a Saturday or Sunday are observed by the City on the preceding Friday or following Monday.
- Between October 26th and April 5th no more than half the cul-de-sac crew may be approved to take vacation at the same time. Exceptions may be approved based on short term weather forecasts.

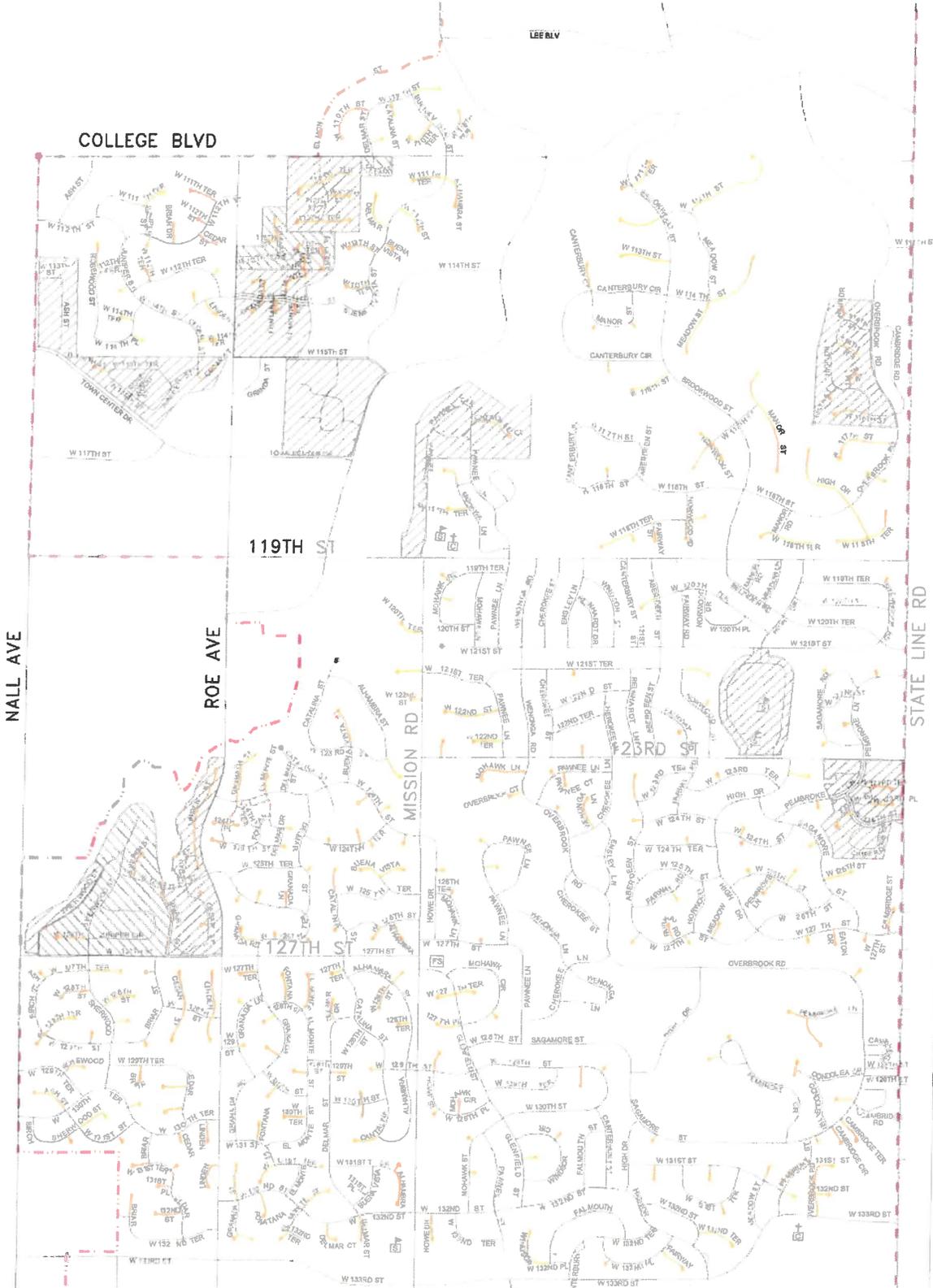
Additional Details:

The Cul-de-sac crew may be asked to assist with snow removal cleanup for larger storms on weekdays within the 8 hour shift.

- The crew is not required to have a CDL.
- The crew will utilize pickup trucks with a front articulating plow and AVL systems.
- The crew is responsible for inspecting their vehicle and coordinating with the maintenance shop for required servicing and maintenance.
- The crew will participate in an annual training course provided by the Maintenance Division prior to snow season.
- Cul-De-Sac Crew members should maintain communication with the active snow supervisor during each event as routes may be adjusted before, during, and after the storm.

CUL-DE-SACs

I-435



City of Leawood

DEPARTMENT OF PUBLIC WORKS
4000 TOWN CENTER DRIVE - LEAWOOD, KANSAS 66211 - (913) 333-6700

CUL-DE-SACS



City of Leawood

DEPARTMENT OF PUBLIC WORKS

4000 TOWN CENTER DRIVE - LEAWOOD, KANSAS 66211 - (913) 339-6700

Common Boundaries

2019-2020 Snow Removal Program
Public Works Department, Leawood, Kansas

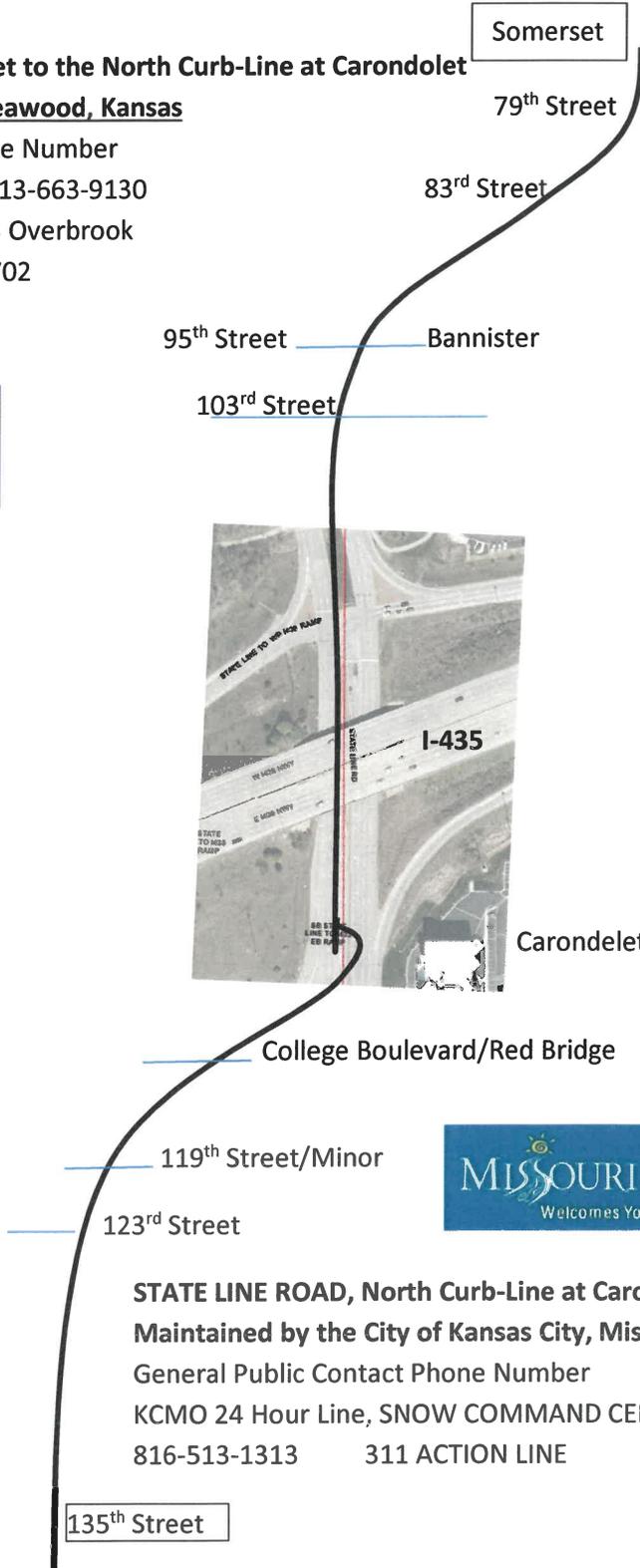


City of Leawood

SNOW REMOVAL ON STATE LINE ROAD

STATE LINE ROAD, 79th Street to the North Curb-Line at Carondelet
Maintained by the City of Leawood, Kansas

General Public Contact Phone Number
City Hall Voice Mail Box - 913-663-9130
Public Works Facility - 14303 Overbrook
913-696-7701 or 913-696-7702



STATE LINE ROAD, North Curb-Line at Carondelet to 135th Street
Maintained by the City of Kansas City, Missouri

General Public Contact Phone Number
KCMO 24 Hour Line, SNOW COMMAND CENTER
816-513-1313 311 ACTION LINE

Maintenance Division
6869 W. 153rd Street
Overland Park, Kansas 66223
913/327-6600 • Fax 913/327-5610

www.opkansas.org

October 04, 2019

Mr. David Ley
Director of Public Works
City of Leawood
14303 Overbrook Road
Leawood, KS 66224

INTER-JURISDICTIONAL AGREEMENT OF RESPONSIBILITY FOR SNOW AND ICE CONTROL ON COMMON BOUNDARY STREETS

The purpose of this letter is to reconfirm the mutually agreed upon responsibility for snow and ice control during the 2019-20 winter season on common boundary streets. The intent is to divide the total street mileage as equally and efficiently as possible, as follows:

CITY OF OVERLAND PARK MAINTAINS:

- College Blvd. * -- from Nall Avenue to Roe Ave. (North of median) Approx. 0.50 mile
- El Monte Street -- from College Blvd, North to end of 109th Terrace Approx. 0.25 mile
- Nall Avenue NB -- from 135th Street to College Blvd. Approx. 3.00 miles
- Nall Avenue SB-- from 148th place to 151st Street Approx. 0.38 mile
- Mission Road -- from 103rd Street to 99th Street Approx. 0.50 mile

CITY OF LEAWOOD MAINTAINS:

- College Blvd. * -- from Nall Avenue to Roe Ave.(South of median) Approx. 0.50 mile
- College Blvd. -- from Roe Avenue, East to Mission Road Approx. 0.50 mile
- Mission Road -- from 109th Terrace, North to 103rd Street Approx. 0.50 mile

* Continuous median street

Page 2

Mr. David Ley

Director of Public Works

CITY OF LEAWOOD MAINTAINS: (continued)

- Roe Ave. -- from 119th Street, South to Tomahawk Creek; and from 139th Street, South to 141st Street Approx. 0.75 mile
- 95th Street -- from Mission Road, to East of Chadwick Street Approx. 0.25 mile
- Kenneth Road -- from 151st Street, North for 7/8 mile Approx. 0.90 mile
- 151st Street -- from Kenneth Road, west to Mission Road Approx. 1.25 miles
- Mission Road -- from 151st Street, South for ½ mile Approx. 0.50 mile
- 119th Street -- from Nall Avenue to Roe Avenue Approx. 0.50 mile
- 135th Street -- East from Nall Avenue Approx. 0.10 mile
- 154th Street -- from Mission, East to Terminus Street, including the two cul-de-sacs at Howe and Mohawk Streets. Approx. 0.58 mile

If this proposal is not acceptable, please contact me by November 1, 2019.

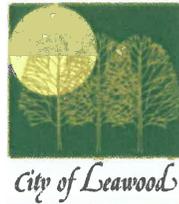


J. Richard Profaizer, P.E.
Manager, Maintenance Operations

cc: Tony Hofmann, Director of Public Works
Greg Scharff, Superintendent, Public Works
Brian Hutchinson, Maintenance Supervisor
Bill Billings, Superintendent of Public Works
Jeff Peevler, Street Maintenance Supervisor

Lists

2019-2020 Snow Removal Program
Public Works Department, Leawood, Kansas



MATERIAL SUPPLIERS

SNOW REMOVAL 2019-2020

PLOW BLADES

AMERICAN EQUIPMENT
3250 HARVESTER ROAD
KANSAS CITY, KS 66115
913.342.-1450 p / 913.342.1377 fax
sales@americanequipment.us

LACAL EQUIPMENT
Ship to: 101 Progress Drive
Mail to: PO Box 757
Physical address: 901 W Pike Street
JACKSON CENTER, OHIO 45334
937.596.6160 or 1.800.543.6161
sales@lacal.com

SALT

CENTRAL SALT LLC
1420 State Road 14
Lyons, KS 67554
1.800-879-7258, 1.620-257-5626 direct
info@centralsalt.com

INDEPENDENT SALT
PO BOX 36, 1126 20TH Road
Kanopolis, KS 67454
1.785.472.4421 p / 1.785.472.5196 fax

LIQUID DEICER

SCOTTWOOD INDUSTRIES
12980 METCALF AVE, SUITE 240
OVERLAND PARK, KS 66213
1-800-844-2022 or 913.851.3500
pcollins@scotwoodindustries.com

Sidewalk Snow Removal Routes



Route 1

Brook Beatty Park, 86th Terrace & Lee Boulevard, frontage sidewalk and playground
Fire Station #1/Historic City Hall Sidewalks, 9609 Lee Boulevard/9617 Lee Boulevard
Porchlights Sidewalk, Art feature at Somerset Drive & Lee Boulevard Intersection
West side of Mission Road from Lee Boulevard to College Boulevard (north of 1st business)
Lee Boulevard over I-435 to T-Ball/Fields 11 & 12 at Leawood City Park, 10601 Lee Boulevard
College Boulevard from State Line Road to Tomahawk Creek Parkway
City Park – Shelter E and restroom, sidewalk from parking lots to shelter E, 10601 Lee Boulevard

Route 2

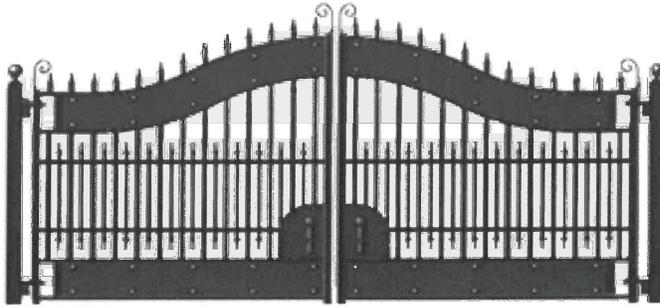
Justice Center, SW corner of Tomahawk Creek Parkway & Town Center Drive & all sidewalks providing access to the building.
Leawood City Hall & Library – paver path from the parking lot to the front entrance and paver route to the Library. Do not use metal shovels on the marble entry of city hall. North side of Town Center Drive from Tomahawk Creek Parkway to Roe Avenue, Roe Avenue from Town Center Drive to 115th St and Clear the sidewalks of the Community Center level (Lower Level City Hall)

Route 3

Gezer Park – all sidewalks in the park, NE Corner 133rd & Mission Road up to 132nd Street corner. All Stone Bridges in Gezer Park shall be cleared by hand or with a walk behind snow blower. Metal will damage the surface of the stone bridge. Skid Loaders & trucks exceed the weight capacity of these bridges and shall not be driven across them.
I-Lan Park – all sidewalks in the park, (approximately 125th & Nall). Including the trail on the street bridge and the path leading under Nall.
Ironwoods Park – Nature center, Lodge, Oxford School, playground shelter and restroom and Mission Road east sidewalk north of the Park entrance, 14701 Mission Road.
Fire Station # 2 – sidewalks and building access, 12701 Mission Road
Fire Station # 3 – sidewalks and building access, 14801 Mission Road
119th Street from Tomahawk Creek Parkway to Mission Road- both North and South sides
Roe Avenue Bridge from trail access south to large wall-124th to Bridge on East side of Roe
133rd Street Mixed Use Trail
137th Street Mixed Use Trail
143rd Street Mixed Use Trail

Trail/Multi-Use Path Route

Trails and public multi-use paths will be cleared within 48 hours after the storm event ends.



Private Subdivisions

2019-2020

Private Subdivisions and Shopping Centers are not maintained by the City.

Residents of Private Subdivisions and Tenants of Shopping Centers must contact their Homes Association or Private Developer for snow-removal.

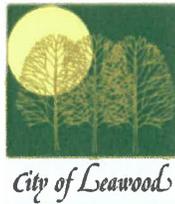
Subdivisions with Private Streets

- Brittany Court..... east of Roe at 113th Terrace
- Camden Woods 2800 block of W. 143rd Terrace (Patio Homes)
- Chartwell West..... west of Lee Boulevard at 102nd Street
- Edgewood north of Town Center Drive at Rosewood
- Grace Gardens south of 143rd Street and east of Nall Avenue
- Foxborough..... 124th and State Line (except 124th & Pembroke)
- Hallbrook Villas 114th and Overbrook (north of Country Club)
- Huntington Farms south of College Boulevard at El Monte
- Ironhorse Centre 151st Street and Nall (southeast corner)
- Leawood Forest Estates north of 127th at Sherwood
- Leawood Manor Apts. east of Kenneth (137th Terrace and 138th Terrace)
- Leawood Village south of College Boulevard at Delmar
- Manors of Mission Farms..... north of I-435 (107th Street), east of Mission Road
- Milano Apartments south of 137th, east of Mission Road
- Park Place Residences Buildings 1 & 2 south of Town Center Drive-north of 117th Street
includes: ALOFT Condo Residences..... on the east side of Nall Avenue
- Parkway Plaza Condos..... south of 133rd, west of Roe
- Patrician Woods..... west of Roe Avenue at 126th Street
- Tomahawk Creek Condominiums/Apartments.....north of Town Center Drive (east of Roe)
- Tomahawk Creek Estates..... north of 118th at Pawnee
- Tuscany Reserve Villas south of 135th, in between Chadwick & Pawnee
- The Woods (Patio Homes ONLY)..... 114th and Roe

To see a map of Subdivisions, go to www.leawood.org Click on the “RESIDENT” link, then select “Homes Associations”, in the left column select “HOA Public Info.Map”. You can then search for a specific name, or simply click on the map the area you want and the info will populate.

Operators Information

2019-2020 Snow Removal Program
Public Works Department, Leawood, Kansas



**SNOW REMOVAL
OPERATORS PRE-TRIP
CHECKLIST**

TRUCK # _____ DRIVER NAME _____ DATE _____ - _____ - _____
(Print Name Legibly)

This check is to be performed by each driver prior to their operation of the equipment. This record is to become part of the storm log. Report any deficiencies to the supervisor immediately.

PLACE A CHECK NEXT TO EACH ITEM IN THE APPLICABLE COLUMN.

	PASS	FAIL	N/A
EXTERNAL			
1. TIRES; check for condition, low or flat.	_____	_____	_____
2. PLOW BLADE	_____	_____	_____
3. PLOW CONNECTIONS (cylinder, lift cables)	_____	_____	_____
4. SPREADER (tie downs, hoses, oil tank)	_____	_____	_____
5. SPREADER (conveyer adjustment, greased)	_____	_____	_____
6. HYDRAULIC TANK (sight glass or dipstick)	_____	_____	_____
UNDER HOOD			
7. ENGINE OIL LEVEL	_____	_____	_____
8. ENGINE COOLANT (check at overflow tank)	_____	_____	_____
9. POWER STEERING FLUID	_____	_____	_____
10. WINDSHIELD WASHER FLUID	_____	_____	_____
11. HOSES, BELTS (visual inspection)	_____	_____	_____
START ENGINE			
12. UNUSUAL NOISES (exhaust leaks, etc.)	_____	_____	_____
13. TRANSMISSION FLUID (accurate when warm)	_____	_____	_____
14. HEADLIGHTS, TAILLIGHTS, MARKERS	_____	_____	_____
15. TURN SIGNALS, HAZARD FLASHERS	_____	_____	_____
16. BRAKE LIGHTS	_____	_____	_____
17. BEACONS and FLASHING LIGHT	_____	_____	_____

Continued on next page

	PASS	FAIL	N/A
18. PLOW, SPREADER LIGHTS	_____	_____	_____
19. FLUID LEAKS (under-hood and body)	_____	_____	_____
CAB INTERIOR			
20. GAUGE LIGHTS	_____	_____	_____
21. GAUGE INDICATORS OPERATIVE	_____	_____	_____
22. HEATER, DEFROSTER, BLOWER	_____	_____	_____
23. SEATBELTS	_____	_____	_____
24. FLASHLIGHT, FIRE EX. FIRST AID KIT	_____	_____	_____
25. TWO-WAY RADIO	_____	_____	_____
26. WIPERS	_____	_____	_____
27. OPERATE SNOW PLOW	_____	_____	_____
28. FLARES, SHOVEL	_____	_____	_____
29. ENGAGE POWER TAKEOFF (unusual noises?)	_____	_____	_____
30. ENGAGE SPREADER (check operation)	_____	_____	_____

RECHECK SPREADER TIE-DOWN CHAINS AFTER SPREADER IS FILLED EACH TIME!!!

When relieving a previous operator it is your responsibility to inspect the vehicle and have that person initial any noted problems.

Trucks and equipment are to be cleaned as soon as practical following use.

NO OPERATOR IS TO LEAVE THE NEXT OPERATOR WITH A KNOWN DEFICIENCY.

(Example: a blade that needs to be changed)

 (Name of driver performing check) Print name legibly

 radio no.

 (Name of previous driver) Print name legibly

 radio no.

SUPERVISORS SNOW REPORT

DATE _____ TIME SNOW STARTED _____ SNOW INCHES _____

TIME SNOW ENDED _____ OTHER _____

AVERAGE TEMP _____ HIGH _____ LOW _____

LOADS OF SAND _____ LOADS OF SALT _____ LOADS OF MIX _____ CHLORIDE _____

TONS OF SALT _____ TONS OF MIX _____ PLOW BLADES _____

TONS OF SAND _____ GAL OF CHLORIDE _____ SNOW MEALS _____

REG. WORK HOURS _____ O.T. HOURS _____ TOTAL HOURS WORKED _____

Truck #’s	NAME	TIME IN	TIME OUT	NAME	TIME IN	TIME OUT	COMMENTS
SUPV							
MECH							
421							
430							
431							
432							
434							
435							
436							
437							
447							
448							
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457							
458							
459							

**LIQUID DEICER DISPENSING SYSTEM
NORTH FACILITY**

**2008 W 104th Street
Leawood, KS 66206**

**NO FUEL TANKS AT THIS LOCATION AND
NOTES: NO INDOOR FACILITIES AT THIS LOCATION.**

Valve description:

1. OUTFLOW, STORAGE TANK A
2. OUTFLOW, STORAGE TANK B
3. PUMP INTAKE.
4. PUMP OUTPUT
5. RECIRCULATION TO TANK A
6. RECIRCULATION TO TANK B
7. FLOW CONTROL OUTSIDE FILLER HOSE

OPERATING INSTRUCTIONS

1. Turn on breaker 15 at the power panel. A green light should illuminate on the front of the building.
2. Open valve 1 to draw liquid from tank A or valve 2 to draw from tank B.
3. Open pump intake valve 3.

TO OPERATE OUTSIDE FILLER HOSE

4. Open output valve 7 to activate outside filler hose.
(Do not open valves 4,5,6 when using outside filler hose)
5. To shut down the system, turn the pump control toggle switch to the off position, close all the valves and turn breaker 12 to the off position.

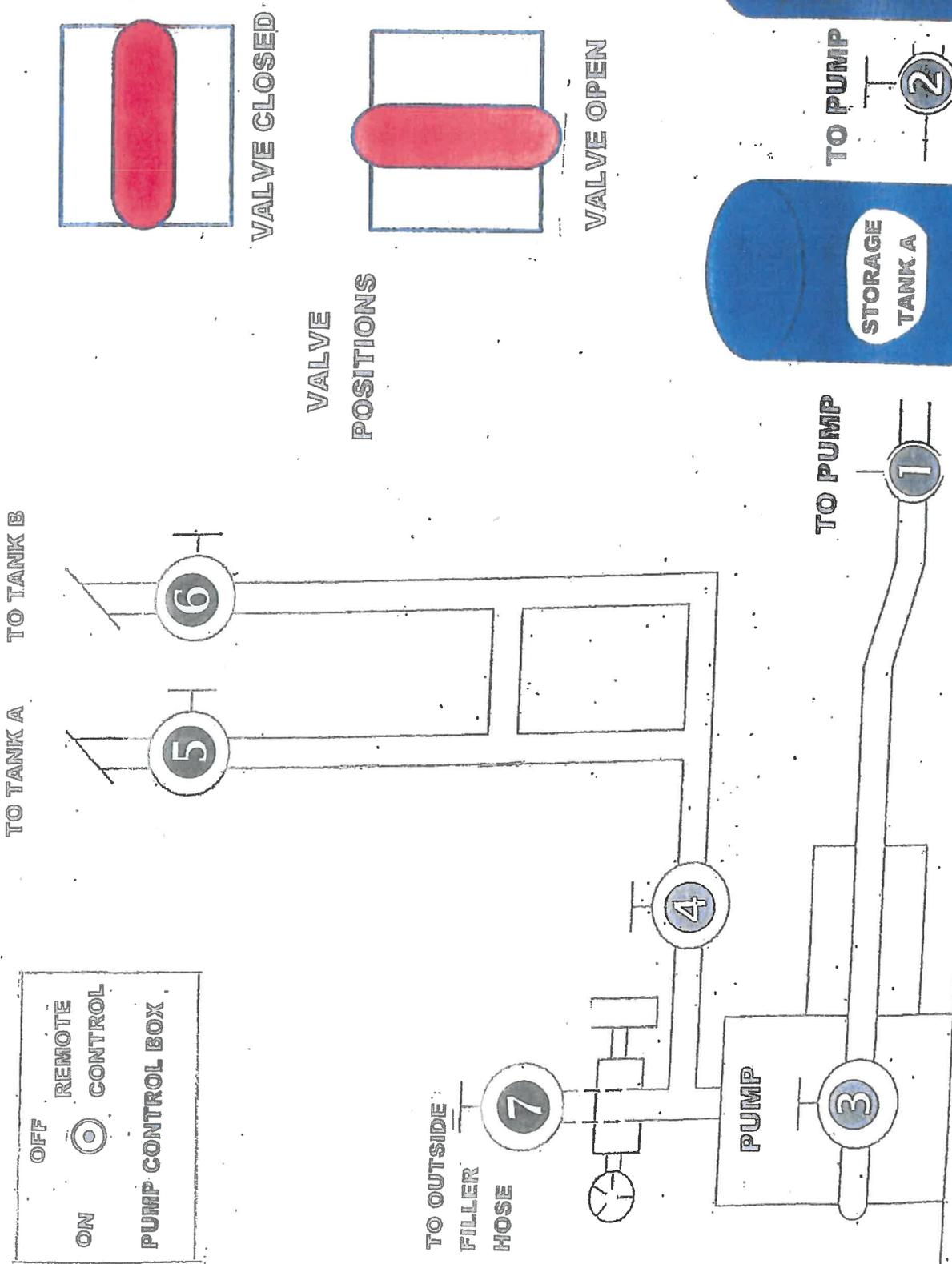
~ ~ SAFETY INSTRUCTIONS ~ ~

1. Keep unauthorized personnel away from area; especially from beneath the spray bars.
2. Never force valves. Valves are plastic and can break easily.
3. Be thoroughly familiar with the use of the system. If you are not sure, ask a supervisor for help.
4. Avoid contact with liquid deicer.
5. Closing valves 1 and 2 will shut off flow from those tanks; use them for emergency shut off, also shut off breaker 15 to disconnect power from the pump.
6. Watch your footing on the ladder and around the piping system.
7. Never open more than one of the following valves at one time: (valves 5, 6) or (7 and 4).
8. Notify a supervisor immediately of any accidents or problems.



SEE DETAIL OF CHLORIDE DISPENSING SYSTEM ON THE FOLLOWING PAGE.

NORTH FACILITY



CHLORIDE DISPENSING SYSTEM / VALVE LAYOUT

LIQUID DEICER DISPENSING SYSTEM

SOUTH FACILITY

14303 Overbrook Road

Leawood, KS 66224

Valve description:

1. TANK MAIN VALVE.
2. AUXILIARY TANK VALVE.
3. FLOW TO PUMP VALVE.
4. FLOW INTO PUMP ASSEMBLY VALVE.
5. AUXILIARY PUMP INPUT VALVE.
6. SMALL FILL HOSE VALVE.
7. AUXILIARY PUMP INPUT VALVE.
8. LARGE FILL HOSE VALVE.

OPERATING INSTRUCTIONS

1. Turn on breaker 1 and 3 at the power panel (east end of small vehicle storage building).
2. Open valves 1, 3, 4, and the appropriate hose valve (6-small fill hose, 8-large fill hose).
3. Turn safety electrical switch (located on the wall behind the pump) to the on position.
4. Remove the filler hose from hanger and turn nozzle valve on to fill truck tanks.
5. Close nozzle valve and return filler hose to hangers after filling tanks,
6. To shut down the system, close all valves, turn off the safety electrical switch, and turn breakers 1 and 3 to the off position.

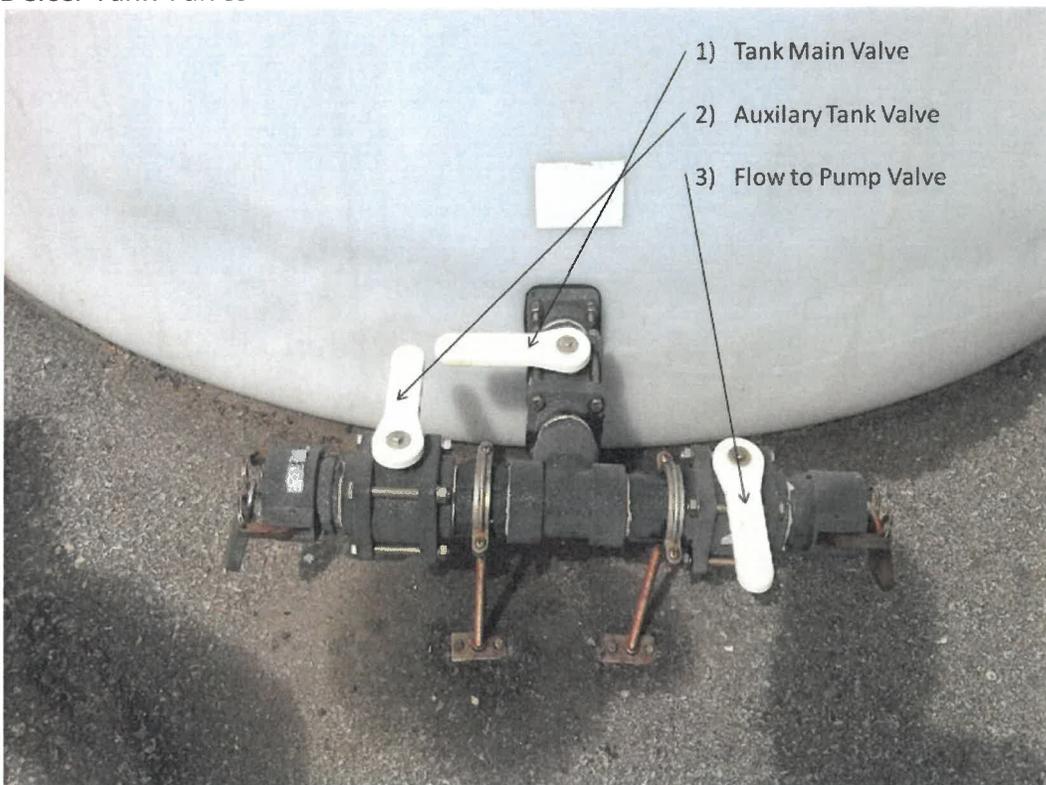
~ ~ SAFETY INSTRUCTIONS ~ ~

1. KEEP UNAUTHORIZED PERSONNEL AWAY FROM LOADING AREA.
2. NEVER FORCE VALVES. VALVES ARE PLASTIC AND CAN BREAK EASILY.
3. BE THOROUGHLY FAMILIAR WITH THE USE OF THE SYSTEM. IF YOU ARE NOT SURE, ASK A SUPERVISOR FOR HELP.
4. AVOID CONTACT WITH LIQUID DE-ICER.
5. CLOSING VALVE 1, 3, or 4 WILL SHUT OFF FLOW FROM TANK; USE THEM FOR EMERGENCY SHUT OFF. ALSO SHUT OFF ELECTRICAL SAFETY SWITCH AND BREAKERS 1 and 3 TO DISCONNECT POWER FROM THE PUMP.
6. WATCH YOUR FOOTING AROUND THE TANK AND PIPING SYSTEM.
7. NOTIFY A SUPERVISOR IMMEDIATELY OF ANY ACCIDENTS, LEAKS OR PROBLEMS.

Deicer Pump Valves



Deicer Tank Valves



Deicer Large Hose Valve



Deicer Small Hose Valve

