

TOWN POLICY NUMBER: 013/2021

REFERENCE:

ADOPTED BY:
Town Council

SUPERSEDES:
012/2018

PREPARED BY:

Engineering & Operations Dept.

EFFECTIVE DATE:

December 7, 2021

TITLE: Roadway Winter Maintenance Policy

REVIEW DATE:

December 7, 2021

1. POLICY STATEMENT

It is the Town's objective that all roadways within the boundaries of Rocky Mountain House be maintained relative to safe winter driving conditions. In order to facilitate the orderly and economic use of resources, a priority system has been developed to ensure that critical areas requiring snow maintenance treatment be initially addressed while those streets deemed less immediate in terms of traffic volume, be dealt within a systematic fashion.

2. POLICY PURPOSE

When a major snowstorm occurs, all drivers throughout the Town are faced with deteriorating driving conditions at the same time. Without consideration to the limitations of a snow maintenance operation and regardless of the weather, these drivers expect cleared roadways and safe driving conditions within the shortest possible period of time. Rapidly cleared streets are important, not only for safe travel, but are also required to facilitate the handling of emergencies by fire, ambulance and police operation. The economic life of a Town is also affected when un-cleared roadways hamper the transportation of people and goods.

To meet public safety and convenience, the prime objective of a municipal snow maintenance operation is to establish reasonable mobility within Town boundaries and clear a network of roadways as quickly and efficiently as possible while at the same time realizing that there are financial limitations. Snow maintenance can become one of the major services provided by the Town.

This Roadway Winter Maintenance Policy represents the collective efforts of all staff. The purpose of the Roadway Winter Maintenance Policy is to provide information on procedures pertaining to winter maintenance operations. This policy will also be used as a

guideline for Managers when instructing their field personnel in normal winter operating procedures.

Providing guidelines of this nature will result in a uniform approach to roadway winter maintenance operations ensuring that quality service is provided.

The Roadway Winter Maintenance Policy includes a variety of activities including snow fencing, sanding, salting, plowing, snow removal, and drainage.

This policy will supersede all existing policies and procedures, written or implied.

3. DEFINITIONS

Bare Pavement: means that snow remaining on the pavement may not exceed 5 cm.

Compacted Snow Surface: shall mean that snow will be allowed to accumulate on the roadway surface to a maximum of 15.2cm (6 inches) and be packed by traffic or leveled by snowplows.

Courtesy Towing: Vehicles that are not removed from the curbside where snow plowing operations are to take place and provided that 24-hour advance notice was given to the area, may be ticketed and/or towed at the owner's expense. The Town Peace Officer may check vehicles for valid insurance/registration that are interfering with snow plowing operations. If the vehicle is not insured/registered the Town Peace Officer will take the necessary steps to have the vehicle removed.

Drainage Problems: Shall mean water run-off problems resulting from melting snow; for the purpose of this policy, references made to drainage problems shall mean those problems experienced in the spring of the year.

Downtown Core: For the purpose of snow removal, the downtown core is defined under Schedule A and the attached map.

Ice Control: The control of the buildup of packed snow or ice on roadways through the use of equipment, abrasive materials or chemicals.

Major Storm: For the purpose of this policy, a major storm shall mean a snowfall of 13cm or more or the experiencing of weather conditions, which, at the discretion of the Director of Engineering & Operations or his designate, constitute a major storm.

Minor Storm: For the purpose of this manual a minor storm shall mean a snowfall of less than 13cm.

Salting: The application of chemicals to roadways either manually or by mechanical spreaders, to control icing conditions.

Sanding: The application of treated or dry sand to roadways, either manually or by mechanical spreaders, to improve traction.

Signage: Large freestanding signs posted at entrances to each subdivision informing the public of the type of cleaning (i.e. snow removal) and dates (day snow removal will occur) that streets in their subdivision will be cleared. Public is notified 24 hours in advance to enhance snow removal operations.

Snow Fencing: The provision of protection from drifting snow to roadways, sidewalks, or lanes.

Snow Plowing: Crews with snow plowing equipment in clearing accumulated snow from the roadway surface.

Snow Removal: The removal of snow from a roadway, abutting curb and/or boulevard after the roadway has been plowed and/or windrowed.

Windrowing: The plowing of snow into a long continuous pile for storage or to facilitate removal or to provide protection from drifting.

4. RESPONSIBILITY

The Director of Engineering & Operations shall act as overall coordinator of all winter maintenance operations.

It should be noted that wherever the term “Director of Engineering & Operations” is mentioned, it is intended to mean either the Director of Engineering & Operations or any person who may be designated from time to time to act in his stead.

The Operations Manager will be responsible for the day-to-day operation and coordination of the winter maintenance program.

5. GENERAL PURPOSE

Maintain designated roadways and sidewalks in such a manner as to minimize economic loss and inconvenience to the community.

To prevent or reduce hazardous roadway and sidewalk conditions which may cause accident or injury.

To facilitate the handling of emergencies by fire, police, and ambulance services.

As a guideline for management and operating personnel in the handling of winter maintenance operations.

6. GUIDELINES

6.1 Snow Plowing

The following description of events shall be implemented in order of priority after a **major storm**.

- Snowplow Downtown Core and the **Collector Roadways** to a **bare pavement** state within 48 hours.
- Snowplow Highway Commercial within 72 hours.
- Snowplow other roads after collectors are complete and will endeavor to complete in a timely manner as resources allow at the discretion of the Director of Engineering & Operations or designate.

As a result of the above, the major streets will be plowed within 3 days (72 hours) following a **major storm**. A **snow plowing** priority schedule has been enclosed at the end of this policy and is identified as Schedule A.

If following a **major storm**, insufficient personnel and equipment are available in the Engineering and Operations Department to meet the above schedule; personnel and equipment from other Town departments will be shifted to lend assistance. For **major storms** or as may otherwise be directed by the Director of Engineering & Operations, rented equipment may be engaged to supplement Town forces at the recommendation of the Operations Manager.

In the event of a major incident (i.e. water/sewer break etc.), snow-plowing operations may, at the discretion of the Director of Engineering & Operations, cease until the incident is rectified.

After **major storms**, emphasis for plowing operations shall be placed on ensuring that there are no blocked roadways in the Town and that the major collector roadways within the Town are returned to **bare pavement** state as soon as possible after the storm. The requirement of plowing operations on residential roadways after these **major storms** shall be at the discretion of the Director of Engineering & Operations.

Laneways within the Town limits shall not be plowed unless in the opinion of the Director of Engineering & Operations the laneway warrants clearing.

6.2 Sidewalk Clearing

For the purpose of sidewalk/walkway clearing operations, the Town sidewalks surrounding and/or abutting the areas listed on the attached Schedule B, shall generally be serviced in order of priority following all **major storms**.

Sidewalk clearing operations shall be implemented within 48 hours following a **major storm**. After minor or localized snow storms, sidewalk clearing operations shall be implemented at the discretion of the Director of Engineering & Operations.

6.3 Snow Removal

Snow removal operations shall be undertaken only in situations where lack of adequate storage prohibits the normal winter movement of vehicles and/or pedestrian traffic.

Emphasis for **snow removal** will be given to highway commercial, the **downtown core** and collector roadways. **Snow removal** will be carried out only on collector and residential streets for reasons of safety and restricted access at the discretion of the Director of Engineering & Operations. See attached Schedule A for removal priorities.

6.4 Drainage

The necessary procedures to combat **drainage problems** shall be implemented to ensure a reasonable level of protection to the general public and the properties within the Town that may be subjected to **drainage problems**.

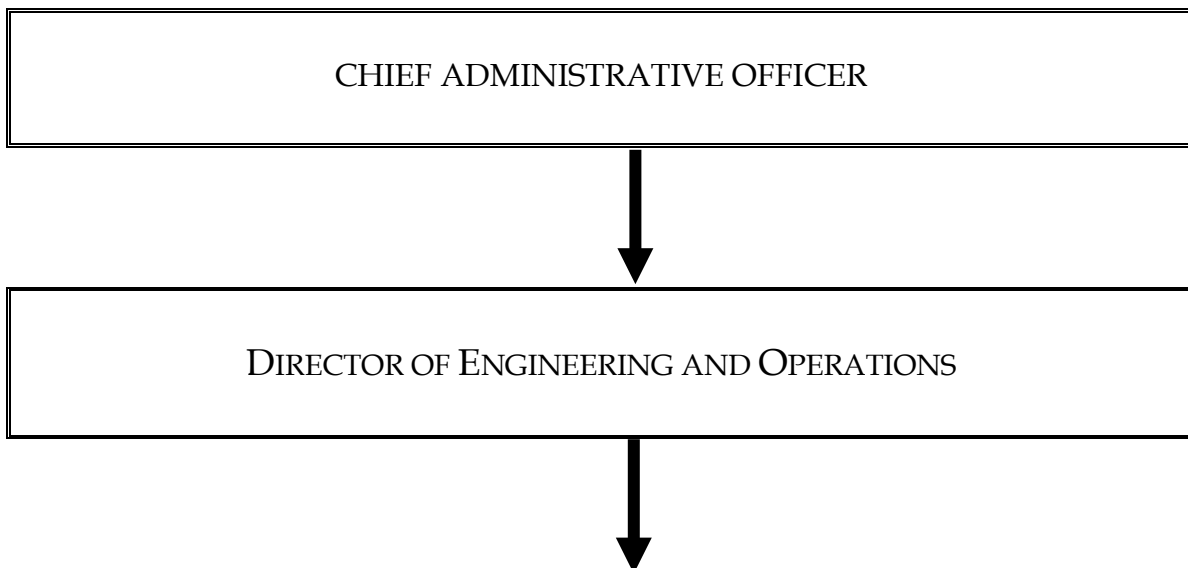
6.5 Snow Fencing

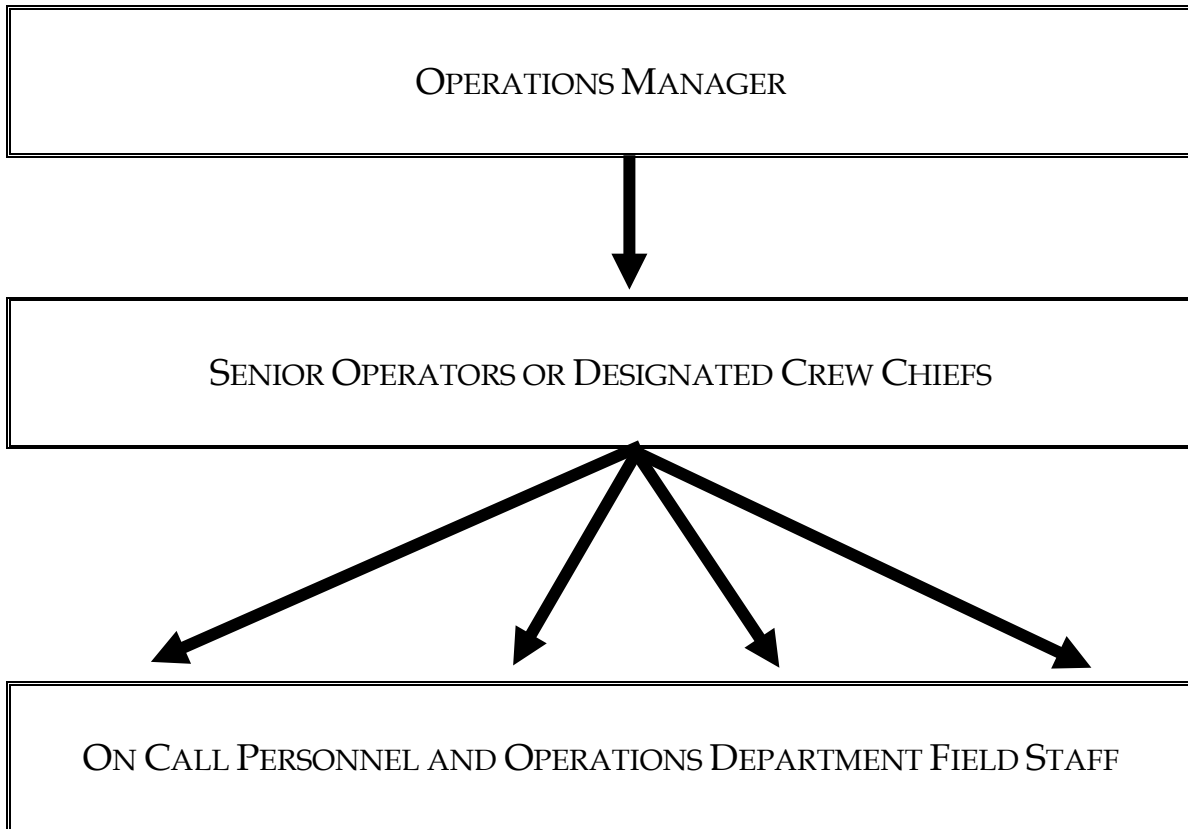
In determining locations requiring **snow fencing**, equal consideration will be given to all areas in the Town where drifting is a problem and protection is required for roadways, sidewalks, and lanes.

6.6 Ice Control

Sanding and/or **salting** of streets, lanes, and sidewalks shall be undertaken in designated areas to ensure a reasonable level of safety to motorists and pedestrians as local conditions dictate.

6.7 Organization Chart





6.8 Public Relations

The Engineering & Operations Department will handle all complaints between 7:00 a.m. and 4:00 p.m. Monday to Friday. Standby employees or personnel will handle after hour complaints at 845-3220 on a 24-hour basis 7 days a week and includes Town designated holidays.

All complaints and inquiries shall be recorded as they are received and their phone call returned ensuring the public that their inquiry has been acknowledged.

Complaints of a routine nature will be transmitted to appropriate field personnel for action. Records shall be kept as to whom the complaint was passed to for action.

7. OPERATING PROCEDURES

7.1 Snow Fencing

7.1.1 Effectiveness

In the spring of each year, the Director of Engineering & Operations in conjunction with the Operation Manager will conduct a review as to the effectiveness of the snow fence, which was erected the previous winter, if any. Upon completion of the review, the Director of Engineering & Operations shall prepare comments regarding additions or deletions.

The Director of Engineering & Operations or his designate shall order materials for the next winter's **snow fencing** operation.

7.1.2 Requirement

The prevailing winds are typically from the northwest. Therefore, in determining locations requiring **snow fencing**, consideration will be given to all areas in the Town where drifting is a problem and protection is required for high usage roadways, sidewalks and lanes.

Various obstacles may be used as **snow fencing** such as shrubs, windrows, lathing and a combination of these; however, prefabricated **snow fencing** shall be utilized to the extent that it is available in areas where snow drifting on pavement is prevalent.

The general rule for determining the distance snow fences are to be placed from the area to be protected is 15 meters horizontal distance to windward for every 1-meter vertical height of snow fence.

As the season progresses, windrows accumulating from maintenance operations may hamper the effectiveness of the snow fences. The Operations Manager will monitor the windrows and from time to time the windrows will be removed by distributing the snow in the abutting field.

7.1.3 Installation

The fence posts will be installed mechanically prior to freeze up. The fence shall be hung on the windward side of the fence posts.

Removal of snow fence including posts shall be undertaken at the earliest possible date in the spring. The fence shall be removed prior to removing the posts. When the ground has sufficiently thawed, the posts will be removed by mechanical means.

7.2 Ice Control By Sanding & Salting

In order to ensure a reasonable level of safety to motorists and pedestrians, this procedure shall be undertaken as conditions dictate.

Sanding operations shall be initiated by the Operations Manager and shall be continued at his discretion until a reasonable level of **ice control** has been attained.

The Operations Manager shall be responsible for scheduling crews to be available for **sanding** and **salting** operations. Also, Operations staffs are on call for weekends and after hour operations.

Back lanes in the **downtown core** and in major commercial areas shall generally be sanded at street intersections. **Sanding** in back lanes may only be done after an inspection confirms the need for service.

The Operations Manager shall arrange for sidewalk **sanding** in designated areas as may be required. Dry sand shall be used for sidewalks unless a severe icing condition occurs at which time an alternate method shall be used.

Sand with approximately 5% concentration of salt shall be used on roadways as directed by the Operations Manager.

Lengths of areas to be sanded and/or salted are based on calculated stopping distance requirements assuming vehicles are equipped with highway tread tires, a sanded ice surface and a temperature of -10C (310F) as follows:

<u>Posted Speed Limits</u>	<u>Length to be Sanded</u>
30-50 km/h	60 m
60 km/h	90 m

In addition to the above, should the condition of a major arterial roadway be such that icing is extensive, the whole street may be sanded.

Unless otherwise directed by the Operations Manager, residential streets shall be sanded. These streets shall generally be sanded for a length of 20m back from the intersection. Water breaks and other emergencies shall be in accordance with instructions issued by the Operations Manager.

7.3 **Snow Plowing**

Snow plowing operations shall generally follow the priority street program as per Schedule A unless otherwise directed by the Director of Engineering & Operations.

All blocked highway commercial, downtown, arterial and collector roadways shall be opened up with graders and front-end loaders prior to implementing the priority street-cleaning program. All other blocked residential and lane roadways shall be opened by front-end loaders and other available equipment at a time coinciding with the early stages of the priority street cleaning program.

As required, the Operations Manager will coordinate manpower and equipment between sections.

If following a **major storm**, insufficient personnel and equipment are available in the Operations Department; rented equipment shall be engaged to supplement Town forces.

Unless otherwise directed by the Director of Engineering & Operations, **minor storms** will normally be handled by priority. After **minor storms**, emphasis for plowing operations shall be placed on ensuring that there are no blocked roadways in the Town and that major arterials within the Town are returned to a **bare pavement** state as soon as possible after a storm.

Piling of snow into open areas will be limited as much as possible so as to eliminate further congesting of the area by drifting. In certain designated areas where snow storage is limited, snow ridges will be accumulated along the center median to be hauled away by the removal crews as time and resources permit.

The majority of work on highway commercial, downtown and arterial roadways shall be done during the morning shift, as much as possible, in order to minimize the problems associated with traffic and parked vehicles.

When **windrowing** snow along roadways, the operators of graders equipped with snow gates shall clear the front driveways along the roadway. **THE TOWN SHALL NOT BE RESPONSIBLE FOR THE CLEARING OF MINOR AMOUNTS OF SNOW LEFT ON THE DRIVEWAYS AS A RESULT OF THE EFFORT.** Personnel may return to clear a front driveway, which may have inadvertently been missed or where the grader that windrowed the roadway was not equipped with a snow gate, as times and resources permit.

Highway commercial, downtown and arterial streets shall be plowed to a **bare pavement** state during plowing operations.

NOTE: Hydrants shall be clear of snow at all times for Fire Department use. The Town will attempt to keep all hydrants clear of snow but will require adjacent residents to assist with process.

7.4 Snow Removal

Snow removal shall be undertaken only in situations where lack of adequate storage prohibits the reasonable movement of vehicular and/or pedestrian traffic. Emphasis for **snow removal** will be given to the **Downtown Core** and Arterial Roadways. **Snow removal** will be carried out on other residential streets for reasons of safety and restricted access at the discretion of the Director of Engineering & Operations. **Snow removal** operations will generally follow Schedule A.

Due to limited visibility, **snow removal** may be undertaken at specific locations. Examples:

- Signalized intersections for a distance of 15 m from the intersection.
- Railroad crossings for a distance of 15 m
- At pedestrian corridors and handicap drops and sidewalk crossings identified as such by a sign for a total distance 15 m
- Where center boulevards have been used for the storage of snow, these areas shall be cleared 15 m from each intersection

The Operations Manager will determine the crew sizes and trucks for hauling. Blowers will generally be used for loading of snow from streets.

When possible, blowing and hauling should not be undertaken near schools between the hours of 8:00 a.m. to 9:30 a.m., 11:30 a.m. to 1:30 p.m., and 3:00 p.m. to 4:30 p.m.

For school zone and congested areas, the following procedure was established for a safe and efficient operation and to provide safety for pedestrians and traffic flow.

1. Vehicles that have flashing lights will have them on at all times to provide guidance and clearance for the snow blower and truckers.

7.5 Drainage

The Director of Engineering & Operations shall act as the overall coordinator of forces and equipment during the implementation of drainage procedures.

The Operations Manager shall be responsible for assessing, prioritizing and coordinating the effective implementation of procedures to combat normal **drainage problems** throughout the Town.

Accumulated snow and ice on catch basins in the Town shall be removed by manual and/or mechanical means in order to promote better drainage as soon as possible. The Town realizes that its resources are limited and therefore cannot notice all drainage issues as they occur. Notification of a problem area by the general public is appreciated and encouraged. In order to minimize the risk of having to redo this work, this process shall normally not begin until after March 1. During years of early spring breakup, this process will be initiated prior to March 1.

Where necessary, graders and/or other appropriate equipment, which may be available, will be used to trench the snow and ice along the curb in order to promote better drainage to the catch basins.

Steamers shall be utilized to thaw catch basins and culverts in streets and lanes

7.6 Snow Dump Sites

Early each fall the Director of Engineering & Operations shall confirm proposed snow dumpsites with private owners and other Town Departments. Once confirmed, a schedule outlining these areas shall be provided to all concerned personnel. Commercial haulers and the general public will not be allowed to use Town disposal sites unless prior approval is obtained from the Operations Manager. Town personnel observing any unlawful dumping by a commercial hauler or the general public should gather information, such as license number of the vehicle and the company name on the vehicle if possible. This information should then be forwarded to the Director of Engineering & Operations for further action.

From time to time, the Operations Manager will dispatch equipment to snow dumpsites in order to arrange the snow in such a manner that congestion of snow hauling vehicles does not occur. The Operations Manager will arrange to clear the

snow dumpsites of accumulated debris as soon as possible following the thawing of the accumulated snow.

Locations of our current snow dump sites are:

- Directly west of the Town's Engineering & Operations Yard located at 4607 48 Street
- Town Owned Land located northeast of the 52A Avenue & 43 Street intersection
- Old Sewage Lagoon located on the east side of Highway 11 between 61 Avenue and 71 Avenue.

7.7 Town Owned Equipment

The Town Mechanic/Welder shall be responsible for the preparation and overhauling of equipment used in the winter maintenance operations.

The operators of all equipment requiring repair shall complete an Equipment Work Order outlining the nature of the problem and notify the Operation Manager as soon as possible after the breakdown. Throughout the winter season priority shall be given to the servicing and repair of all equipment used in winter maintenance. In anticipation of spring **drainage problems**, the Town Mechanic/Welder shall ensure that all pumps and their accessory equipment and all steamers are in proper working order by the end of February of each year.

In the spring of each year, a review of the adequacy of the equipment utilized during the past season's winter maintenance operations will be performed. From this review, possible additions and/or changes in the present fleet of equipment will be recommended.

7.8 Materials

Materials used in winter **ice control** operations shall be stockpiled at the Town Operations yard. The amount of stockpiled materials shall vary in accordance with usage patterns from previous years.

Sufficient road sand shall be stockpiled in the Town yard for the whole winter season. This road sand shall consist of sand or processed sand. The sand will have been screened in order to produce such a size as will comply with the Town requirements.

All aggregate should be clean and durable and should not contain clay balls, organic materials or non-durable particles.

As required, this sand and salt shall be mixed with the ratio of approximately 5% salt to 95% sand in order to form treated sand used in **ice control** operations.

In preparing for the winter season, stockpiled materials (sand, salt, and rock chips) shall be ordered in September/October so that the Town is prepared well in advance.

Additional supplies of sand and/or salt shall be prepared or ordered as required throughout the winter season.

7.9 **Hiring Equipment**

In order to complete snowplowing operations within 3 days following a **major storm** additional equipment may be hired to supplement Town forces.

Each year, prior to September 30, a list shall be prepared outlining the following items:

- Names and telephone numbers of firms, which have indicated an interest in participating in winter maintenance operations on a call-out basis. These firms must supply proof of insurance liability, WCB coverage and a valid Town of Rocky Mountain House business license.
- Types of equipment available from these sources.
- Names of individuals from these firms who can be contacted after office hours.
- Stipulations regarding provision of supplies.
- Rates of pay for various types of equipment to be rented.
- Annual Vehicle Safety Inspection Certificate.
- Working Alone Regulations.
- Certificate of Recognition relating to Safety Policies, Practices and Procedures.

The Director of Engineering & Operations, with the assistance of the Operations Manager, shall be responsible for arrangements pertaining to the renting of equipment.

Mayor, Debbie Baich

CAO, Dean Krause

8. SCHEDULE A (See attached map)

Snow Plowing

1. **Downtown core** including:
 - 48 Street from 51A Avenue to 53 Avenue
 - 49 Street and 50 Street from Edgerton Drive to 53 Avenue
 - 51 Street and 52 Street from Edgerton Drive to 50 Avenue
 - 47 Avenue from 49 Street to 46 Street
 - 49 Avenue from 49 Street to 51 Street
 - 50 Avenue from 49 Street to 52 Street
 - 51 Avenue from 49 Street to 50 Street
 - 52 Avenue north service road from 48 Street to 50 Street
 - Town Office Parking Lot
 - Swimming Pool, Arena, Community Centre, Museum Parking Lots

2. **Highway 11 Service Roads**
 - 46 Street north of 52 Avenue
 - 53 Avenue from Highway 11 to 46 Street
 - 44A Street from 51 Avenue to 52 Avenue
 - 51 Avenue from Highway 11 Service Road to 44A Street

3. **School Zones** including:
 - 48 Street from 49 Avenue to 50 Avenue
 - 50 Street north of 52 Avenue
 - 54 Street from 54 Avenue to 57 Avenue
 - 58 Street from 57 Avenue to 59 Avenue
 - 49 Avenue from 46 Street to 48 Street
 - 50 Avenue from Highway 11 to 49 Street
 - 54 Avenue west of 54 Street
 - 55 Avenue west of 54 Street
 - 57 Avenue from 54 Street to 56 Street

4. **54th Street** from 44 Avenue to 54 Avenue
 - 44 Avenue from Highway 752 to 54 Street

 - 60 Street from 52 Avenue to 71 Avenue
 - 71 Avenue from 60 Street to Highway 11
 - Edgerton Drive from 54 Street to 49 Street
 - 59 Avenue from 54 Street to Highway 11
 - 61 Avenue from 54 Street to Highway 11
 - 50 Avenue west of Town Office

5. **46 Street** from 42 Avenue to 47 Avenue
 - 42 Avenue from 46 Street to Highway 11
 - 49 Avenue from 49 Street to 48 Street
 - 51 Avenue from 49 Street to 48 Street
 - 51 Avenue from 54 Street to 50 Street

53 Avenue 54 Street to 48 Street
Remainder of 48 Street

6. Industrial Areas including:
 - 42 Street from 45 Avenue to 47 Avenue
 - 43 Street from 45 Avenue to 46 Avenue
 - 43 Street from 47 Avenue to 52A Avenue
 - 44 Street south of 47 Avenue
 - 44 Street from 52 Avenue to 53 Avenue
 - 44 Street from 49 Avenue to 50 Avenue
 - 44 Street north of 50 Avenue
 - 45A Street south of 42 Avenue
 - 41 Avenue from 45 Street to 45A Street
 - 45 Avenue east of 44 Street
 - 45A Avenue from 44 Street to Highway 11
 - 46 Avenue from 42 Street to 44 Street
 - 47 Avenue east of Highway 11
 - 49 Avenue from 43 Street to 44 Street
 - 50 Avenue from 44 Street to Highway 11
 - 52A Avenue from 43 Street to 44 Street
 - 53 Avenue from 44 Street to 46 Street
7. 42 Avenue east of Highway 11
42 Street south of 42 Avenue
McNutt Subdivision.
8. Remaining residential areas & Pioneer Center

9. SCHEDULE B

Sidewalk / Walking Trails Clearing Schedule

1. Town Office
2. Library, Fire Hall, Post House
3. Walking Trails
4. 50 Street intersection bulb-outs (Edgerton Drive, 49 Avenue, 50 Avenue & 51 Avenue) – See attached Figures B.1 to B.3
5. 52 Avenue from Highway 11 to 60 Street (south side), 52 Avenue from 50 Street to 58A Street
6. All Town Owned Parks
7. All Walking Trail Accesses
8. All Walkways Between Houses (54 St to 59 St Between 57 Ave & 60 Ave)
9. CN overpass on Highway 11 & bridge on Highway 11A.
10. 61 Avenue from 54 Street to Highway 11, 59 Avenue from 54 Street to Highway 11 (northside only), East side of 54 Street from 48 Avenue to the northwest property line of 5320 45 Avenue.
11. 57 Avenue from 60 Street to 57 St Close (south side only)