TOWN OF ESSEX

VILLAGE OF ESSEX JUNCTION

PUBLIC WORKS

WINTER OPERATIONS PLAN

PUBLIC VERSION
2017-2018

This plan addresses the wintertime Public Works operations for ice and snow control on Town and Village roads, walkways and municipal parking lots. It also identifies essential community services provided by the Public Works Department of both communities for winter water and sewer emergencies and discusses wintertime coordination actions.

Dennis E. Lutz, P.E., Town Public Works Director
Ricky Jones, Village Public Works Superintendent

If you have an emergency or a complaint, the daytime contact hours are

For the Town:

The Town Public Works Offices at 878-1344

For the Village:

The Village Offices at 878-6944

For the State:

District V VTRANS at 655-1580

After normal working hours, please contact:

The Essex Police at 878-8331

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RESOLUTION

BE IT RESOLVED that the Board of Selectmen of the Town of Essex and the Trustees of the Village of Essex Junction adopt the following statements of policy regarding winter snow and ice clearing operations:

1) NOTWITHSTANDING the circumstances involved with changing climatic conditions, the Town and Village will endeavor to keep Town and Village roads, designated walkways and municipal parking lots in a reasonably safe condition for travelers and

2) Town and Village employees will endeavor to exercise reasonable care and diligence in the performance of their duties, consistent with the intent of the current Town of Essex and Village of Essex Junction Public Works Winter Operations Plan and

3) Travelers who use the Town and Village roads, and designated walkways and municipal parking lots are expected to demonstrate due care and reasonable caution, especially under adverse winter conditions.

Executed at Essex Junction this 10th of NOV. 2015.

Town of Essex Selectboard

Max G. Levy, Chair

Irene A. Wrenner, Vice Chair

Andy L. Watts, Clerk

Brad M. Luck

R. Michael Plageman

Village of Essex Junction Trustees

George A. Tyler, President

Daniel S. Kerin, Vice President

Andrew P. Brown

Elaine H. Sopchak

Lori A. Houghton

INTRODUCTION

The Town of Essex and the Village of Essex Junction are responsible for providing winter services, such as plowing, sanding, and salting of roads, clearing of sidewalks and maintaining access to municipal buildings and parking lots within their respective municipal boundaries. A Winter Operations Plan has been developed and adopted by the respective legislative boards for the following reasons:

1) To align the policies set by the Town Selectboard and Village Trustees with regard to winter operations with the execution of policy by their Public Works/Highway departments.
2) To help ensure that the winter practices of each department are consistent with the resources available through the budget process, including but not limited to equipment, manpower, overtime and materials.
3) To provide a source of information to Town and Village officials, the Police Department, Fire Departments, school officials, commercial businesses and the general public regarding what actions will and will not be performed by the respective Public Works Departments during the winter.
4) To provide an internal resource document for operational use and training by Public Works supervisors and employees.
5) To reflect current practice, conditions and funding of the winter operations within each community.
6) To assist in the reduction of citizen complaints through a better informed citizenry.
7) To foster coordination and cooperation between the Town and Village Public Works Departments during winter operations.

The intent is to update the document on an annual basis, prior to the onset of winter conditions and submit the document to the elected officials for their review and approval. Public input will be sought prior to presentation of the document to the two legislative boards.

The Winter Operations Plan consists of three sections, each with its own Appendix. Two versions of the Plan will be prepared with one version prepared for internal use only and a second version for the public. The internal version contains personal employee's information and communications/contact information, the public release of which would be detrimental to individuals and operations. The three sections of the Plan consist of the following:

Section 1. This section covers topics and operational procedures utilized in common by both the Town and the Village. Appendices that are common to both communities are found in this section.

Section 2: Town of Essex (outside the Village). This section is specific to operations within this community, including Appendices pertinent only to the Town.

Section 3: Village of Essex Junction. This section is specific to operations within this community, including Appendices pertinent only to the Village.

GENERAL MANAGEMENT OF OPERATIONS

During the winter operations period generally extending from early November through mid-April, the principal effort of the Departments is directed towards control of snow and ice on highways, walkways and around municipal buildings. The Departments have developed procedures to perform anti-icing and snow and ice removal operations for varying weather conditions. Personnel will respond each time that the Departments are notified or become aware that weather conditions include potential hazardous road or walkway conditions and that conditions warrant a response. The procedures have been developed over many years of experience and use of alternative methods, materials and equipment.

To accomplish the objectives and policies of the Town and Village, general operating procedures and training have been established and implemented. The operating procedures take place over four distinct periods including:

1) Pre-winter preparation, orientation and training (Section 1, Appendix 1)

2) Winter storm operations (Reference general information in Section 1 and specific Municipal information in Sections 2 and 3)

3) Continuing operations during non-storm periods (Section 1, Appendix 2)

4) Post-winter follow-up (Section 1, Appendix 3)

In general, the Town and the Village perform all winter operations in a similar manner, especially with respect to general procedures and pre-winter, continuing operations and post-winter follow-up. A general discussion on procedures follows with the other periods covered in Appendices to this section or in the specific municipal sections. The elements of winter operations that are detailed and specific to each community are described in Section 2 (Town) and Section 3 (Village).

Determination of Operations

Using the resources identified in the Winter Operations plan for each community and judgment based on experience, the respective Public Works Superintendent or his designated representative will determine the appropriate level and timing of snow and ice control to be performed by each Department. The Superintendent of Public Works or his designee will contact employees in their Department using their alert notification lists.

Although significant improvements have been made in weather forecasting, accurate predictions of the specific effect of winter conditions on the roads, walkways and municipal parking lots in the Village and the Town of Essex are not possible. An overall plan has been developed to provide for clearing of the roads and related infrastructure and this plan is generally followed. However, each storm event is unique and deviations from the plan occur often. Decisions must be made using individual judgment based upon a current assessment of the situation. Following every major storm event, an after-action informal review of the methods used, the materials, the equipment, the complaints and the manpower effect will be done by the Public Works Superintendent. These reviews will provide the basis for adjustments in managing future winter storm operations.

Emergency situations may occur requiring deviation from normal procedures and planned routes. In general, the types of situations that may require this change are:

1) An immediate need for Police, Fire and/or Emergency Medical assistance.
2) Relief for school buses that cannot negotiate a roadway and are stuck.
3) The need to address icy conditions due to a water main break or clearing of streets due to debris blocking streets or access.
4) Relief for isolated problem areas where it is determined by the municipality that access is urgently needed before all other areas are handled.

Control Center/ Internal Communication/Resource Management

The Public Works supervisor or his designee on duty will be the main line of communication between the respective Public Works Department and the Police Department/School Departments. Contact with other emergency service providers if needed should be through the Police Department Dispatcher.

The Storm Control Center for the Town is the Town Highway Garage off Sand Hill Road and for the Village is the Village Highway Garage. Contact with the Village Highway Garage is through the Village offices.

During the winter of 2017-2018, selected employees in each department will carry a pager on a rotating schedule and will be assigned the responsibility, when carrying the pager, to make an initial determination of how the storm will be handled, including the immediate level of staffing at the outset of the storm. The employee (with the pager) in each community will be temporarily in charge of operations until the Public Works Superintendent or his designee arrives at their respective Control Center and takes over responsibility.

Whichever individual arrives first - the Public Works Superintendent or the pager carrier - shall contact the Police Department Dispatcher at 878-8331 upon their arrival at the Town or Village Highway Garage. It is important to notify the Police Dispatcher that the Highway Departments are aware of conditions and starting the snow removal process. It also provides a record of event timing and crew availability.

Upon notification and arrival at their respective Control Centers (Highway Garages), employees will complete a pre-startup check of equipment and proceed to perform the necessary snow and/or ice clearing operations. The Superintendent in each community will periodically leave the Control Center to evaluate conditions and assist in the operations. During the period of time in which he is absent from the Control Center, he can be reached via radio or cell phone (reference notification rosters in Sections 2 and 3).

In a similar manner, contact must be made with the Police Dispatcher when the winter clearing operation has ended and employees are no longer on the road. This is important for continuous follow-up after the storm and the need for reactivation of the alert call-out system.

All operators of snow and ice equipment will keep in communication with the Public Works Superintendent or the Highway Garage at all times. Cell phones may only be used with a "Bluetooth", 100% hands-free device or when pulled over to the side of the road and the vehicle stopped.

Radio should be the primary means of contact during all storm events. Radio contact between the Town and Village for coordination of effort should only be between the two Superintendents. The list of radio call numbers for the Police, Fire and Public Works Departments is contained in Section 1, Appendix 5.

Equipment

To support the winter operations, each Department has equipment available for use as outlined in the equipment appendices under Section 2 (Town) and Section 3 (Village). However, the equipment used is generally consistent with the following:

Dump trucks, with either 7 cy capacity or 12 cy capacity, plow and apply materials to paved and gravel roads. All dump trucks doing paved roads are equipped with "ground-speed control devices" that are calibrated to apply a specific amount of product. They also stop application of product when the vehicle is stationary. Calibration is an important action to ensure an accurate application and reduce the impact of road salt and other products on the environment.

All three cubic yard dump trucks (Low-Pro) in both the Village and the Town are equipped with ground speed control devices.

Dump trucks plowing gravel roads are not equipped with ground speed control devices since the material being applied is sand.

Sidewalk plows are used in the Town and in the Village for clearing of sidewalks. Due to their size and configuration, they do not have adequate capacity for applying sand or salt to sidewalks.

In an emergency situation where equipment is out of service for repair or the situation is beyond the ability of the community to handle, equipment and operators may be obtained from the other community. If such equipment or operators are not available, supplemental equipment may be rented/hired from area contractors. A list of potential contractors is indicated in Section 1, Appendix 7.

Also, assistance may be secured from other neighboring communities, although help in this area is unlikely if the storm event affects neighboring communities. Major winter disasters may require the assistance of the Vermont National Guard, if authority is given by the Governor. Both the Town and the Village utilize contract operations to assist in plowing or removing snow.

Materials

Both communities use solid sodium chloride (rock salt) as the primary deicer for paved roadways and parking lots, when temperatures are in the appropriate range of effectiveness. At 30 degrees Fahrenheit, one pound of salt melts 46.3 lbs. of ice in 5 minutes. At 15 degrees Fahrenheit, one pound

of salt melts 6.3 lbs. of ice and it takes 1 hour. Because of the properties of salt, it is generally not applied by itself below 15 to 20 degrees. It is also used as a liquid either alone, prior to a storm to break the ice-road bond, or applied in combination with the solid salt to help the solid salt stay on the roadway.

Additives and other products improve the effectiveness of salt at lower temperatures. There are many other commercial products used to augment the effectiveness of salt and most have trade-names such as Ice-Be-Gone. It is a magnesium chloride based product combined with agricultural materials from the distillation process (grains or sugars) and it operates more effectively than salt at lower temperatures.

Liquid Calcium Chloride will provide more melting at lower temperatures and it is usually applied with salt or alone as a liquid solution (20 to 30% solution).

Guidelines for application of deicing product have been developed nationally and one set is included from the American Public Works Association. Both the Town and the Village utilize the guidelines but may vary the application rates as local conditions dictate. The Guideline is included in Section 1, Appendix 4.

Quantities of winter deicing products and sand are maintained at each Highway Garage. Onsite storage is not sufficient for full winter usage. The Town has approximately 100% of its needed winter sand usage stored onsite at the start of winter and approximately 40% of its average winter salt usage onsite. The Village has 80% of its needed materials usage onsite at the start of the winter. The onsite supplies are augmented during the season with direct delivery from vendors. In some years, the availability of product has been a major issue and it has impacted operations. The price per ton for salt delivered to storage is set based on State bids by highway district, or as separately negotiated by each community.

Each plow operator in the Town and Village is required to complete the form in Section 2 and 3, Appendix F on a daily basis, submitted weekly to record the materials used.

External Communication/Public Information/Complaints

Town: All communication from the public concerning conditions, problems and complaints should be directed during normal working hours (7:30 A.M. to 4:30 P.M.) to the Town Public Works Office via telephone as the principal and fastest means of communication (878-1344).

Requests for winter service can also be sent directly via the Town website at www.essex.org. In addition, complaints or requests for service can be written on a request form service slip with the required information noted and provided to the Public Works Secretary. This information will be converted to a work order within the Public Works office. The Town also utilizes a web-based application called See-Click-Fix in conjunction with the Village for registering complaints. The See-Click-Fix application is not intended for winter complaints that require immediate attention.

Village: All communication from the public concerning conditions, problems and complaints should be directed during normal working hours (8:00 A.M. to 4:30 P.M.) to the Village Office (878-6944). Complaints or requests for service, when received, should be written on a request form service slip with the required information noted and provided to the Village Public Works Superintendent.

Other forms of receiving complaints are through the Village's "See-Click–Fix" App. Request for winter service can also be sent directly via the Village website at essexjunction.org. The See-Click-Fix application is not intended for winter complaints that require immediate attention.

After Hours: Emergency requests during non-working hours in either community should be directed to the Police Department Dispatcher (878-8331) for relay to the appropriate Superintendent, Highway Foreman, Director or Highway Garage. The Highway Garage phone systems are intended for internal control only and not for direct communication between the public and the Department.
All complaints will be reviewed and investigated and corrective action taken as appropriate.

General Notification for Winter Storm Emergencies

When conditions are especially severe, the Municipal Manager, the Town Public Works Director, the Public Works Superintendent in the Village, or the Police Chief may issue a special snow emergency statement advising the local media, radio station, major community employers and schools that conditions may adversely affect their operations. Appendix 6 to this section provides a list of contacts and phone numbers for various organizations that may be contacted. Social media may also be used.

During the winter season, frequent contact is made between the School Management staff and the Public Works staff regarding road and weather conditions. Public Works' role is solely to provide information on current and anticipated road conditions. Any decisions relative to late school openings or school closure rests entirely with School Management staff.

RESOURCES AVAILABLE TO ASSIST IN THE PLANNING AND EXECUTION OF WINTER OPERATIONS

In order to provide timely winter services and to gauge the level of activity required prior to, during and following winter storms, the following are utilized:

Weather forecasts are provided by the National Weather Service located at Burlington International Airport (862-2475). In addition, the weather forecasts are broadcast continually and receivers monitor this forecast at the Public Works buildings.

Weather forecasts are provided by local radio and television stations, including the dedicated weather channel on cable television, and through the internet at www.intellicast.com; www.nws.noaa.gov and www.accuweather.com

Road and weather conditions throughout the State are monitored by the State Transportation Agency in Montpelier and this information can be obtained by calling 511. Two state radio frequencies also can be monitored on the scanner for current information.

State highway frequencies: 159.075 (car to car) and 159.195 (District wide)
VTRANS also provides weather information of interest to municipalities directly to the Highway Departments through the VT. Local Roads Program.

Assistance is available on local road conditions from the Essex Police Department. During off-duty Public Works hours (3:30 PM to 7:00 AM), the Public Works Departments utilize information provided by police officers on duty/patrol as well as the on-call public works employee. To provide the best possible response in the shortest time, it is important that timely and accurate information be provided by the Police Department and conveyed to Public Works at the time contact is made. The needed input is identified in Section 1, Appendix 10.

WINTER UTILITY OPERATIONS

Prior to the onset of winter, the Water/Sewer Departments of each Public Works Department will:

1. Check hydrants and valves to insure their operability
2. Flag all hydrants for winter locations
3. Inventory and order necessary emergency materials
4. Insure that used fire hydrants are drained prior to winter

During storms, the Water/Sewer Departments may be called upon to assist in snow and ice clearing operations. Although it is anticipated that the winter highway operations will be primarily handled by the highway crew, selected water/sewer employees will also be utilized as the need arises for qualified plow operators. This use of water/sewer personnel may be on a set schedule or to meet overtime needs or relief plowing during extended storm durations.

Following storms, Water/Sewer Department employees shall endeavor to clear snow and ice from around hydrants and to clear access lanes to pumps stations, as possible and as time allows within the normal workday. It is acknowledged that the municipal workforce cannot clear all hydrants within the community following each winter storm and that access to hydrants during the winter cannot be effective without a joint effort between the municipal workforce and affected landowners. To help achieve the goal of keeping hydrants clear, the Public Works Department will coordinate with the Police Department for use of volunteer and neighborhood groups to shovel hydrants (Adopt a Hydrant Program) as well as assistance from the community's Fire Departments.

The Water/Sewer Department also has responsibility for repair of broken and frozen water mains, within the overall limit of municipal responsibility up to and including the service curb stop. Frozen service lines are the responsibility of the owner and not the municipality. The municipality may provide assistance but is not required to provide assistance on non-public portions of the municipal water system.

In the event of a power failure at any of the "canned" wet-well/dry-well pump stations, the Town and Village have a number of portable generators and mobile pumps which can be connected to any of these stations.

When fire hydrants are used by the Fire Departments during the winter, the Fire Department will notify the Police Dispatcher immediately following the fire and identify the used hydrants by number. The Police Dispatcher will immediately notify Public Works through the alert notification roster, so the hydrants can be drained before they freeze.

APPLICABLE ORDINANCES/LAWS/LEGAL RULINGS

Winter Parking Bans

Both communities have adopted winter parking bans.

Section 815 of the Village of Essex Junction Municipal Code states that:

"No person shall park or leave unattended a vehicle of any type on any street, road or right-of-way in the Village of Essex Junction during the period December 1 through April 1 of the next year between the hours of 12 midnight and 7 a.m."

Section 7.20.050 of the Town of Essex Municipal Ordinances states that:

A. *"No person shall park or leave unattended a vehicle of any type on any street, town road, alley, lane, park or public grounds in the town of Essex and the village of Essex Junction during the period of December 1st through April 1st of the next year between the hours of midnight and 7 a.m.*
B. *The parking or leaving of any vehicle in violation of this section is hereby deemed a nuisance."*

Towing of Vehicles:

Parking violation will result in the towing of vehicles. The Village towing procedures and requirements are defined in section 825 of the Village Municipal Code. The Town's towing requirements are defined in Chapter 7.24 of the Town Ordinances. Copies of these documents are contained in the Appendices for Section 2 and 3.

State Laws Relevant to Winter Operations:

Title 19, Section 1111, Vermont Statutes Annotated Permitted Use of the Right of Way makes it unlawful to "...develop, construct, re-grade or resurface any driveway, entrance or approach or build a fence or building, or deposit material of any kind within, or to in any way, affect the grade of a highway right of way, or obstruct a ditch, culvert or drainage course that drains a highway, or fill or grade the land adjacent to a highway so as to divert the flow of water onto the highway right of way, without a written permit from the Board of Selectmen of a Town, as the case may be". Title 19, Section 1111 prohibits encroachment of the Town or Village right-of-way without prior approval by the Selectboard or Trustees. Objects in the ROW are placed there at the owner's risk and the Town /Village assumes no responsibility for any damage to objects placed in violation of the statutes. Common items damaged are fences placed within the municipal ROW, flowerpots, basketball hoops, etc.

Also, Title 19, Section 1105, states that "...A person other than a municipality acting with respect to highways under its jurisdiction who places or causes to be placed an obstruction or encroachment in a public highway or trail, so as to hinder or prevent public travel, or to injure or impede a person traveling on the highway or trail, shall be fined not more than $1,000.00 plus the actual costs of repairing the damage and a reasonable attorney's fee, to be recovered in a civil action in the name of

the town or state. One or more items of logging or other equipment temporarily within the right-of-way of a trail shall not be actionable under this section if located in such a way as not to unreasonably impede passage. If the court finds that an action under this section was brought without substantial basis, the court may award a reasonable attorney's fee against the person bringing the action."

Title 24, Section 2291, Enumeration of Powers provides "…For the purpose of promoting the public health, safety, welfare and convenience, a town, city or incorporated village shall have the following powers:

> …to provide for the removal of snow and ice from sidewalks by the owner, occupant or person having charge of the abutting property."

In June of 2010, the State Supreme Court held that plowing snow onto property adjacent to a public highway is not a trespass or unconstitutional taking of property for public use. A copy of the full excerpt from this Court finding is included in the Appendix. The Town and Village will make reasonable attempts to evenly distribute plowed snow between and among neighboring properties. However, the location of driveways, fire hydrants, mailboxes and the like may not enable an "equal" distribution of plowed snow along roadways. Neither the Town nor the Village has the resources in terms of manpower, equipment or funds to expend time and effort in redistribution of snow piles along roadways. The primary function and objective of the departments during the winter is as designated in the jointly adopted resolution in the Winter Plan, i.e., . . . "The Town will endeavor to keep Town roads and designated walkways in a reasonably safe condition for travelers" . . .

Title 23, Section 1126a, Depositing snow onto or across certain highways prohibited, states that …."(a) No person, other than an employee in the performance of his or her official duties or other person authorized by the agency of transportation (in the case of state highways) or selectboard (in the case of town highways), shall plow or otherwise deposit snow onto the traveled way, shoulder or sidewalk of a state highway or a class 1, 2 or 3 town highway.

(b) Nothing in this section should be construed to be in derogation of any municipal ordinance regulating the deposit of snow within the limits of town highways."

The purpose of these statutes is to protect the public. The practice of plowing snow from driveways across Town roads (perpendicular to the road) without removing the pile by plowing with the road creates an obstruction which is dangerous. Shoveling snow into the roadway will cause similar problems. Once frozen, the piles can cause vehicles to lose control and can also cause damage to the vehicles.

The Public Works Departments will generally warn the responsible residents on the first occurrence. On subsequent violations, Public Works will notify the Police Department for appropriate action against motorists and residents who violate either the towing ordinance or obstruction statute.

Information flyers covering these topics have been developed to notify customers of violations of these regulations and ordinances. Such notices are not legally enforceable documents but do provide the basis for police enforcement if such warnings are ignored. Copies are contained in Appendix 13.

APPENDIX 1

Pre-Winter Preparation, Orientation and Training

The Importance of Coordination

Update the operations plan yearly based on the previous years' experience and let the media, Police Department, Fire Department, School Department and other officials know about the plan. Conduct coordination meetings.

Know the plowing and spreading routes

1. All employees will make trial runs of their routes before winter to familiarize themselves with routes, road conditions, obstacles and problem areas. Remember that road conditions change from year to year and obstacles may be present now that were not there in the past. Plan fall meetings to familiarize road crews with their winter duties and all routes in case someone becomes ill and another crewmember must take over the route.

2. During trial runs, pinpoint drains and waterways that must be opened after every storm. Mark other structures that will be hidden from a plow, including fire hydrants, guard rails, drop inlets, catch basins and curbing ends. Discuss and mark, if needed, areas that have been consistent sources of complaints in the past.

3. Plan plowing routes to bring trucks back to storage facilities when they are almost empty of deicing material. This saves time and fuel.

4. Review the new development plowing plan with the full crew in late fall. Identify which new roads not yet accepted will be plowed by the Town.

Effective Radio/TV Communication

1. Review the alert notification roster and radio calls with all employees.

2. Check all radio equipment and insure that working spares are stockpiled at the garage.

3. Review the storm warning system with all affected employees.

Equipment - Operation and Maintenance

1. Each Public Works Superintendent is responsible for cross-training of operators in the use of all equipment. Equipment will not be operated by inexperienced personnel without supervision.

2. Prior to the onset of winter, the mechanic and superintendent will perform complete vehicle inspections on all winter equipment to include at a minimum:

   check of all wing and plow hydraulic systems to insure proper operation

   check on the condition of moldboards, cutting edges

   operation of snow plow hoists, towers, sanders and controls to include calibration tests for sand or salt spreading and operational checks of the computer-controlled material feed systems

   brake checks, air and hydraulic hose checks

   all vehicle lighting, including wiring and sockets on headlights, taillights, stop lights and turn signals. (Warning lights must be visible from all sides, whether bodies are raised or lowered).

   replacement of side or end-body reflective tape as necessary

3. The Town mechanic or the Village Public Works Superintendent as appropriate will order and keep on hand an adequate emergency supply of critical equipment, such as tires, spreader repair parts, hydraulic fluid and fittings, tire chains, plow parts, lights.

4. The Public Works Superintendent will insure that operators perform and document preventive maintenance on a daily basis to include at a minimum:

   inspection of tires for wear
   checks on brakes and air systems
   checks of hydraulic hoses for leaks
   visible structural checks of frames and the pins holding the bed to the frame
   all electrical equipment, especially lights, wiring and sockets
   wipers
   plow blade wear
   safety equipment checks (see Appendix 8)

Materials

1. The Public Works Superintendents are responsible for insuring that adequate supplies of sand, salt and other winter products are on hand prior to the start of winter.

2. The Public Works Superintendents are responsible for maintaining adequate supplies of gravel, pea-stone, salt, calcium chloride, liquid salt (brine) and other winter products throughout the winter.

Training

Training will be conducted annually and as needed based upon the experience of the workforce on some or all of the following subjects in support of winter operations:

1. The winter snow plan
2. How salt, salt brine, calcium chloride and other deicing agents work
3. How and when to use the appropriate materials and mix of materials
4. Application rates/salt reduction
5. Special storm situations/ review of problems and complaints from previous year
6. Special deicing problems/locations
7. Winter safety considerations
8. Police/Public Works communications
9. Parking/towing ordinance
10. Public relations/complaint procedures / interaction with the public
11. Other subjects as appropriate
12. Accident procedures
13. Record keeping on material usage

APPENDIX 2

Continuing Operations During Non-Storm Periods

Soon after a storm event or during periods of lessened storm activity, a number of operations need to take place to insure readiness for subsequent winter operations.

Equipment needs to be inspected, using preventive maintenance techniques, and repairs made as necessary. Special attention needs to be given to tires, brakes, snowplows - including wings, shoes, bearings, spinners and chloride feed systems.

Written documentation is needed on a daily basis by each equipment operator during the winter on the hours plowed, the amount and type of materials used and any identification of ongoing problems or hazards that need be addressed.

Plow routes need to be driven and checked for identification of problems, especially illegal plowing by driveway contractors, problem mailboxes, snow castles, etc. It is the responsibility of the route driver to identify these problems and report them to the supervisor.

Materials, especially salt, need to be reordered to try and provide an adequate stockpile on-site.

It is important to wing-back snow on road shoulders following each major deposition of snow and to clear critical areas to make room for future storage. If the snow bank height becomes excessive, the top of banks will have to be cut down for proper visibility or future snow storage. If the snow is allowed to melt in place and refreeze, the result is a heavily compacted mass which cannot be moved without considerable effort by snow plows. Therefore, winging-back is an ongoing function which needs to be addressed as soon as storms subside and the amount of stockpiled snow dictates that winging-back is needed.

It is important that roadway drains and catch basins be kept open to allow melting ice and snow to run off. A salt or solid calcium chloride application may be needed to free them of ice and snow.

Following a storm, generally within 48 hours, an investigation will be made of all complaints received during the storm. The investigation will be completed by the Director, Superintendent, Foreman or their designated representatives. Their findings shall be made known to the complainant as soon as practicable.

Hauling of Snow: The Town outside the Village

The Winter Operating Plan does not include hauling snow in the Town outside the Village. The Town plowing equipment is configured to haul and spread winter products – sand, salt and other materials. It is not configured to haul snow with major, time consuming and labor intensive changes to the equipment. In addition, the Town has no location established and permitted for ecologically safe dumping of snow.

However, at specific locations, intersections, cul-de-sacs without storage space, school bus route problem areas or sites of repeated accidents, the Town may selectively utilize the loader and contract dump trucks to haul limited quantities of snow from a specific site. The principle purpose of snow removal is for the public's safety and not for the convenience of the public. The hauled snow shall be dumped on Town owned land where it will have the least possible impact on the environment. The location will be determined by the Public Works Director or Superintendent.

Hauling of Snow: The Village

The Village hauls snow from a number of select locations to include but not necessarily limited to Railroad Street and the parking lot serving the Village offices. As determined by the Village Public Works Superintendent, snow may also be hauled from approximately 16 cul-de-sac locations. The designated snow storage area is at the Village Wastewater Treatment Facility.

APPENDIX 3

Post-Winter Follow-Up

Review the winter snow clearing operations as soon as possible in the spring with all in-house personnel and outside affected groups, including fire, rescue, police, schools, industry, the public and elected officials to obtain input for improvement in the coming season.

Give all equipment a thorough maintenance check after the last snowstorm of the winter.

1. Sandblast and paint all plows, blades and spreader assemblies as appropriate.

2. Order new plow blades and other equipment as necessary.

3.. Oil and grease all moving parts before storing equipment.

Schedule summer construction for areas where road defects have resulted in problems all winter long, such as but not limited to ice patches, frost heaves, and poor ditching.

Identify new equipment needs for improving operations.

Provide the opportunity for employees to attend snow conferences and other events to broaden their understanding of snow clearing operations and to become aware of changing equipment and technology.

Develop and maintain a list of the significant complaints and/or plow route or technique changes that occurred during the past winter. Use these notes to develop changes to plow routes or special situations for incorporation into the Winter Operations Plan for the next year.

APPENDIX 4

Material Application Guidelines

Application rates and use of various materials will need to be adjusted not only for different storm events but also during each event. Storms seldom do what they are predicted to do. During a snow or ice event, traffic volumes and patterns will vary. All these variables are the reason that all application tables relating to snow and ice control refer to themselves as guidelines. Important things to remember include:

Techniques:

Common sense and careful adherence to material application rates are key components of an effective snow removal operation. Also, timing is critical in applying salt, salt brine, calcium chloride, other deicing products or mixes and sand. Deicing should begin as soon as the snow starts to accumulate to keep snow and ice from bonding to the pavement.

Take advantage of nature when deicing. Let the wind help to spread salt or sand over the road. On elevated curves, let gravity work by spreading on the high part of the curve.

Sand does not melt anything. It has ability to aid in traction and that is it. It may be used in a mix with salt or other de-icing products during a freezing rain event or when temperatures are so low as to render deicing agents useless.

Always plow before applying any kind of chemical. If the blade can scrape anything off the pavement, it should be down.

Higher traffic volumes will aid in the melting of snow and ice. In general application rates can be lower on these roads.

To know when to reapply deicer on the road, watch the tires of cars travelling along the road. If snow falls directly behind the tires, it is time to reapply salt. If snow fans out under the tires, the deicer is still working. When snow begins to accumulate, generally plow and stop the application of deicer.

Higher traffic speeds will sweep straight salt off the road leaving less deicing product on the road, which reduces its ability to address the precipitation.

Remove snow, if necessary, from intersections, sharp corners and bends to improve visibility.

It is not cost effective to use dry salt when pavement temperatures are below 15 degrees F.

Give salt and treated salt time to work. Generally apply salt or brine early to create a brine at the snow/road interface and salt late for clearing.

Increase salt application during the night and on sunless days when the temperature drops sharply. Without the sun, you lose the effect of pavement radiation and warmth.

Know the pavement temperatures and their trends. Pavement temperature is affected by sunshine, clear skies at night, air temperature and wind. Pavement temperatures in the spring on a

sunny day are often sufficiently high that salting is not needed other than on bridges or heavily tree canopied roadways.

Adjust the spinner speed to the lowest possible for the conditions.

The goal should be to never melt everything. It should be to break the bond to the pavement made by the snow and ice.

Sometimes, it is best to do nothing or postpone plowing until there is a build-up on the road.

Tables on the following two pages are taken from the American Public Works Association document entitled Municipal Snow and Ice control by Matt Wittum, latest version dated August 2014.

These rates are not fixed values, but rather the middle of a range to be selected and adjusted by an agency according to its local conditions and experience.

			Lbs. / one -lane mile			
Pavement Temp. (ºF) and Trend (↑↓)	Weather Condition	Maintenance Actions	Salt Pre-wetted/ Pretreated with Salt Brine	Salt Pre-wetted Pretreated with Other Blends	Dry Salt *	Winter Sand (abrasives)
	Snow	Plow treat intersections only	80	70	100*	Not Recom-mended
>30º ↑	Frz. Rain	Apply Chemical	80	70	100*	Not Recom-mended
	Snow	Plow & apply chemical	80	70	100*	Not Recom-mended
30º ↓	Frz. Rain	Apply Chemical	150	130	180*	Not Recom-mended
	Snow	Plow & apply chemical	120	100	150*	Not Recom-mended
25-30º ↑	Frz. Rain	Apply Chemical	150	130	180*	Not Recom-mended
	Snow	Plow & apply chemical	120	100	150*	Not Recom-mended
25-30º ↓	Frz. Rain	Apply Chemical	160	140	200*	400
20-25º ↑	Snow or frz. Rain	Plow & apply chemical	160	140	200*	400
	Snow	Plow & apply chemical	200	175	250*	Not Recom-mended
20-25º ↓	Frz. Rain	Apply Chemical	240	210	300*	400
	Snow	Plow & apply chemical	200	175	250*	Not Recom-mended
15-20º ↑	Frz. Rain	Apply Chemical	240	210	300*	400
15-20º ↓	Snow or frz. Rain	Plow & apply chemical	240	210	300*	500 for frz.rain
0-15º ↑↓	Snow	Plow, treat with blends, sand hazardous areas	Not Recom-mended	300	Not Recom-mended	500 spot treat as needed
< 0º	Snow	Plow treat with blends, sand hazardous areas	Not Recom-mended	400**	Not Recom-mended	500 spot treat as needed
* Dry salt is not recommended It is likely to blow off the road before it melts ice.						
** A blend of 6-8 gal/ton $MgCL^2$ or $Ca\ Cl^2$ added o NaCl can melt ice as low as -10º						

Deicing Application Rate Guideline 12' of pavement (one lane)

APPENDIX 6

Contacts for Winter Storm Emergencies

NOT AVAILABLE IN PUBLIC VERSION

APPENDIX 7

List of Contractors for Assistance

NAME	TELEPHONE #
Ormond Bushey & Sons, Inc. (Ormond) **2 Bushey Lane** **Essex Jct., VT**	**872-8110**
John Leo & Sons **P.O. Box 8265** **Essex, VT 05451**	**878-4982**
Don Weston Excavating, Inc **349 Commerce Street** **Essex, VT. 05451**	**860-1566**
Dave Stygles **Woods Hollow Road** **Westford, VT**	**879-0178**
Dave's Rubbish Removal **6 Curtis Avenue** **Essex Jct., VT**	**878-2668**
Wayne Russin Excavating **Underhill, VT.**	**899-3396**
S & D Landscapes **66 Logwood Circle** **Essex, VT. 05452**	**879-8970**

APPENDIX 8
Winter Safety Practices

Personal Safety

The potential for personal injury increases significantly during winter operations due to the effects of cold temperatures, inclement weather, long periods of continuous operation, working in traffic areas during storm conditions and the tendency to "rush" to handle emergencies. Each employee needs to take personal responsibility for his/her own safety by exercising common sense and good judgment. To help prevent cold weather injuries, the following guidelines are provided:

Wear Proper Clothing

1. Dress in loose-fitting layers for the most adverse conditions expected. Loose clothing allows the blood to circulate freely which helps prevent frostbite. Layers can and should be removed while in a heated cab; however, all appropriate clothing, i.e., wet or cold weather outer-garments needs to be carried in the vehicle each time the vehicle leaves the garage. The gear has to be available in the case of an accident, vehicle breakdown or assistance to other drivers.

2. Protect your feet by wearing warm, dry boots; keep dry socks and wet weather boots readily available for use. When outside vehicles, non-insulated boots will not keep your feet warm if you remain inactive or motionless for long periods.

3. Keep an extra pair of dry gloves in the vehicle.

4. When outside the cab, wear a cold weather hat that protects the ears from frostbite. Heat loss from the body is more rapid when a hat is not worn.

Prevent Dehydration

1. The first evidence of dehydration is dark, yellow-colored urine. Other indicators are slow motion, no appetite, stomach sickness, drowsiness, tingling in the arms and difficulty in walking.

2. Carry fluids in the vehicle -- water, tea, coffee, soup. Any employee using alcohol on the job or driving under the influence of illegal drugs or alcohol will be subject to immediate suspension or termination.

Recognize Symptoms of Common Injuries/Life Threatening Conditions

1. Exposure to cold and wind chill factors

Wind, in combination with cold temperatures, creates an equivalent lower temperature. A 0°F actual temperature with a 15 mph wind is equivalent to -24°F temperatures.

Initial symptoms of exposure to cold include shivering, numbness, low body temperatures, drowsiness and marked muscular weakness.

Treatment involves getting to a warm area as quickly as possible, re-warming by adding clothing, wrapping in a blanket, drinking of hot liquids.

2. Frostbite

Frostbite results when crystals form in the fluids and underlying soft tissues of the skin. The effects are more severe if the injured area is thawed and then refrozen. Frostbite is the most common injury resulting from exposure to cold elements. Usually, the frozen area is small. The nose, cheeks, ears, fingers and toes are most commonly affected. Just before frostbite occurs, the affected skin may be slightly flushed.

Symptoms include: skin becomes white, gray or waxy yellow; skin tingles, then becomes numb; pain may occur, then let up - pain will be intense during thawing; blisters may form; the area of frostbite swells and feels hard.

Treatment includes:

(1) Protect the frozen area from further injury

(2) Gradually warm the frostbitten area as soon as possible

(3) Seek medical assistance immediately in the case of severe frostbite

3. Snow blindness

Snow blindness occurs when the ultra-violet rays of the sun are reflected from a snow-covered surface.

Symptoms include: gritty feeling in your eyes; pain over the eyes; red, watery eyes.

Prevention: use sunglasses on bright sunny days

Treatment: wet compresses applied to the eyes, blindfolding the eyes, rest and recovery.

4. Carbon monoxide poisoning

Carbon monoxide is a deadly gas and is particularly dangerous because it is odorless and colorless.

Symptoms include: headaches, dizziness, yawning, a sick stomach and ringing ears in cases of mild poisoning. Severe cases will cause the heart to throb or flutter.

Treatment involves getting ventilation or outside air. Unconscious victims should be given mouth-to-mouth resuscitation and medical assistance obtained immediately.

Equipment Safety

Perform all pre-operation checks of vehicles to insure that critical vehicle systems are operational before leaving the garage.

Check each vehicle for working safety/emergency equipment onboard to include:

1. flashlight
2. fire extinguisher
3. first aid kit
4. safety flares
5. warning signs with reflectors
6. operational communications equipment
7. shovel, hammer, pliers, screwdrivers
8. safety vests

Do not exceed appropriate speeds for the equipment or operation. Obey posted speed limits.

Operational Safety

The foreman is responsible for routinely checking fatigue levels and switching/relieving drivers as necessary. In general, operators should not exceed shift lengths of 16 hours, except in extreme emergencies. The foreman also needs to pre-qualify drivers to ensure that they have the capability and skill to operate assigned equipment.

On Town vehicles, the mechanic will routinely check vehicles to verify operator preventive maintenance and to check on the operational capability of the equipment. On Village vehicles, the Public Works Superintendent performs this task.

Operators need to be especially cognizant of the following situations:

1. Changes along the route, such as relocated mailboxes, new curb cuts, deep ditches, etc.

2. Pedestrians in the roadway or in a position where thrown snow can knock an individual down.

3. Children playing in snowbanks; snow forts.

4. Inability to see immediately behind vehicles, especially when backing up.

5. Crowding the centerline.

6. Excessive speed.

Safety briefings will be held as part of the Snow Day session and periodically during the winter on at least a monthly basis.

APPENDIX 9
Adjacent Towns' Contact Lists

NOT AVAILABLE IN PUBLIC VERSION

APPENDIX 10
Winter Notes to Police

1. Is the problem Town-wide, restricted to one area of Town or at a specific location?

   The problem location needs to be defined as accurately as possible.

2. What is the specific nature of the problem?

   Snow - How much is on the road(s) and how much is falling? Is the problem on paved or gravel roads or both?

   Ice - How severe is the condition and is it widespread or site specific? Is the problem on paved or gravel roads or both?

   Miscellaneous - explain what the problem is in as much detail as possible.

   Debris - What is it (i.e., tree in road)? What is its size? Is it blocking all traffic or only one lane, etc.?

   Washouts - How large an area is affected (size) and is the washout in progress or over?

   Emergency Access - Police, Fire or Rescue cannot get to a location because of specific road conditions or problems.

3. What is being done by the Police Department pending arrival of Public Works employees?

   Will the Officer remain on site?
   Will barricades be put up?
   Will roads be closed?
   Will Fire/Rescue be contacted?
   Will the media be contacted?

4. A decision on what effort is needed to correct the problem will be made by the Public Works Department. However, any input from the Police Officer on site may assist Public Works in the timely arrival of help.

APPENDIX 11

Warning Notes/Fliers

1. **PARKING BAN**
2. **CHILDREN WARNING**
3. **SNOW ON WALKS**
4. **HIT MAILBOX**
5. **MAILBOX INSTALLATION/CORRECTION**

Town of Essex
Village of Essex Junction
Department of Public Works
Police Department

Town Public Works 878-1344
Village Public Works 878-6944
Police Dept. 878-8331

"No person shall park or leave unattended a vehicle of any type on any street, town road, alley, lane, park or public grounds in the Town of Essex or the Village of Essex Junction during the period of December 1st through April 1st of the next year between the hours of midnight and seven a.m. (Section 7.20.050A of the Town Ordinance)"

The ban applies whether or not it snows.

Vehicles found in violation of the Town or Village Towing Ordinance shall be towed and subject to a fine.

The owner of vehicles parked within the Town or Village right-of-way may also be liable for damages.

Town of Essex
Village of Essex Junction
Department of Public Works
Police Department

Town Public Works 878-1344
Village Public Works 878-6944
Police Dept. 878-8331

A WARNING

Do not allow your children to play on or build fort or tunnels in roadside snow banks. Snow plows cannot change their speed or direction quickly enough to prevent injury or death to children playing in the snow banks.

Town of Essex
Village of Essex Junction
Department of Public Works
Police Department

Town Public Works 878-1344
Village Public Works 878-6944
Police Dept. 878-8331

REMINDER:

According to Title 19, Section 1111B of the Vt Statutes, "it is illegal to deposit material of any kind within, or in any way affect the grade of a highway right of way without a written permit from the Board of Selectmen of a Town."

It is illegal to remove snow from private property and deposit it on the sidewalk, roadway or against such authorized structures such as fire hydrants.

Under Title 19, Section 1105, . . "A person other than a municipality who places or causes to be placed an obstruction or encroachment in a public highway or trail so as to hinder or prevent public travel, or to injure or impede a person traveling on the highway or trail, shall be fined not more than $1,000 plus . . ."

PLEASE CONSIDER THIS A WARNING.

Town of Essex
Village of Essex Junction
Department of Public Works

Town Public Works 878-1344
Village Public Works 878-6944
Police Dept. 878-8331

The Public Works Dept. has determined that the damage to your mailbox was done by a Town/Village plow truck. A municipal employee will either repair your mailbox and/or post or install a standard new one, depending on the extent of the damage sometime in the next few days.

In some cases where poles/posts are damaged, a temporary fix will be made until a permanent replacement is installed in the spring.

The Selectboard and Trustees have established an upper limit for mailbox reimbursement of $45.

Residents with specialty mailboxes costing more than this amount will be limited to the stated reimbursement.

To report a damaged mailbox, please call the Town or Village Public Works Office as appropriate during normal working hours Monday through Friday, 7:30 a.m. to 4:30 p.m.

Town of Essex
Village of Essex Junction
Department of Public Works
Town Public Works 878-1344
Village Public Works 878-6944

MAILBOX CORRECTION NEEDED

Please make the following corrections to your mailbox to reduce the chance of damage during winter plowing operations. The mailbox is:

- ☐ **Leaning forward, needs to be straightened**
- ☐ **Too close to road, move back**
- ☐ **Too low, raise to appropriate height**
- ☐ **Secure fastener(s) / Connection loose**
- ☐ **Other**

American Association of State Highway and Transportation Officials (AASHTO) "A Guide for Erecting Mailboxes on Highways"

- **Height - - 42" to 48" from road surface**
- **Setback - -**
  with curb - - 6" to 12" from face of curb

  uncurbed - - a minimum 12" from the

  edge of pavement

APPENDIX 12

Vermont Supreme Court Ruling 2010

Vermont Supreme Court: Snow and Snowplowing are Facts of life in Vermont; Trespass and Takings Claims must be Dismissed.

In a decision very favorable to Vermont municipalities, the Vermont Supreme Court has held that plowing snow onto property adjacent to a public highway is not a trespass or unconstitutional taking of property for public use. *Ondovchik Family Limited partnership v. Agency of Transportation,* 2010 VT 35

The plaintiff, Ondovchik Family Limited Partnership (OFLP), is a property owner in Shelburne. As a result of the expansion of State Route 7, a building on the property is located less than eight feet from the highway. OFLP complained that the Vermont Agency of Transportation's (VTrans) snowplows propel snow and contaminated water runoff across the sidewalk and onto OFLP's building and brought suit. The Vermont Supreme Court held that VTrans is under a lawful duty to remove snow from Vermont's highways and this duty carries with it the privilege to deposit snow on adjacent property so long as this actions is reasonably necessary to performance of the duty. VTrans has discretion to choose an efficient method of removing snow, even if the method it chooses causes some intrusion into or incidental damage to adjacent property.

OFLP also asserted that VTrans' plowing activities resulted in a taking of its property for public use, in violation of the Fifth Amendment of the United States Constitution, Article 2 of the Vermont Constitution. The Supreme Court rejected this argument as well, stating, "When winter road maintenance activities result in the intermittent snow throw and water runoff, it is an incidental incursion only and does not represent the kind of invasion that would amount to a taking."

OFLP's injury was no different than those of other landowners whose property fronts on plowed roads, all of whom benefit from having the roads plowed and who must "deal with the consequential and incidental incursions and damage that snow throw and water runoff may cause." The Court noted that "snow and snowplowing are facts of life in Vermont, and we do not find a cause of action when defendant had done nothing more than protect public safety by plowing roads that it has an ongoing legal duty to plow."

Vermont municipalities maintain approximately 11,500 miles of local highways, about five times the number of miles maintained by the state. The Supreme Court's common sense approach to the inevitable consequence of winter and snowplowing is welcomed by all. A copy of the decision is at http://info.libraries.vermont.gov/supct/current/op2009-182.html

Jim Barlow, Senior Staff Attorney, Municipal Assistance Center.

VLCT News, June 2010

SECTION 2

WINTER OPERATIONS

SPECIFIC

TO THE TOWN

OUTSIDE THE VILLAGE

SECTION 2

WINTER OPERATIONS SPECIFIC TO THE TOWN

OUTSIDE THE VILLAGE

General

The Town of Essex Public Works Department has the responsibility of maintaining essential services on over 75.68 miles of accepted Town roadways, 23.16 miles of which are gravel and 52.50 miles paved, as well as over 58 miles of waterline, over 30 miles of sewer, over 1,700 catch basins and associated piping and maintenance of public buildings. A significant portion of the Department's overall efforts are directed towards maintaining the essential transportation and utility services during the winter season.

The Public Works Director has direct responsibility for management of the Department, acting under the general policy direction of the Municipal Manager and authority of the Selectboard. The Public Works Director manages seven functional areas within the Department - Administration, Engineering, Vehicle Maintenance, Highway, Conservation, Water/Sewer and Public Buildings. The day-to-day operations of Vehicle Maintenance, Highway and Public Buildings are supervised and coordinated by the Public Works Superintendent. The Public Works Superintendent is responsible for winter field-crew operations. Administration is the primary responsibility of the Public Works Secretary. The Town Engineer/Utility Director is responsible for the Water/Sewer and Engineering Divisions and acts for the Public Works Director in his absence. Section 2, Appendix A contains an organizational chart identifying Department structure; section 2, Appendix B lists vehicle and route assignments; Section 2, Appendix C lists vehicles available for plowing.

The general procedures used by the Town during winter operations have been identified in Section 1. More specific details on Town operations are as follows:

Pager Responsibility

During the winter of 2017-2018, the non-working-hours pager responsibility (HIGHWAY PAGER) will be shared among selected Public Works Highway Level III and IV employees rotating on a published schedule. The person carrying the pager will make an initial determination on how the storm event will be handled. The employee with the pager will be temporarily in charge of operations until the Public Works Superintendent, Highway Foreman or Public Works Director arrives and takes over responsibility. A list of persons carrying the pager and dates has been published and is in effect.

If contact cannot be made with the Highway Pager, the Public Works Superintendent should be paged followed by use of the Notification list identified in Section 2, Appendix E.

Winter Storm Operations

Determination of Town Operations

Using the resources available to the Town and judgment based on experience, the Public Works Superintendent or his designated representative will determine the appropriate level and timing of snow and ice control to be performed by the Department. The Superintendent of Public Works or his designee will contact employees in the Department using the alert notification list.

Control Center

Upon notification, employees at the Highway Garage on Sand Hill Road complete a pre-startup check of equipment and proceed to perform the necessary snow and/or ice clearing operations. The Control Center is contacted either using the Highway Garage telephone number or the Superintendent's number.

Equipment

To support the operation, the Department has equipment available as noted in Section 2, Appendix C. Three 7 cy dump trucks have automatic salt calibration devices installed (#103, #107, #105) as well as all three of the 3 cy dump trucks (low pro's #112, #104 and #123). The remaining "gravel" road 14 cy dump trucks do not have calibration devices installed. Trucks #103, #107 and #105 are equipped with liquid application tanks for use in pre-wetting the salt at the spinners using either liquid salt brine (NaCl) or Calcium Chloride.

Materials

At the Highway Garage yard located on Sand Hill Road, ice and snow clearing materials are stockpiled for use during the winter season. The materials used by the Town are:

1. 5,000 to 6,000 tons of sand.

2. Approximately 500 tons of salt are maintained on-site in covered salt sheds. Usage increased last winter --- due entirely to winter weather conditions. In recent preceding years salt usage has generally been lower due to less severe winter weather, improved application and control equipment on more trucks, increased monitoring, supervisor direction on salt application and greater use of a variety of products, matched against the temperature, road condition and precipitation level.

As the on-site stockpile of salt is depleted, additional salt is ordered. The Town source currently being used is:

Cargill Salt Company
c/o Barrett's Trucking
16 Austin Drive
Burlington, VT 05401

Another potential source is:

American Rock Salt Co, LLC
P.O. Box 190
MT. Morris, NY 14510

3. 3,500 gallons of 32% liquid calcium chloride are stockpiled in a weather-protected fiberglass storage tank at the Highway Garage. This material is utilized in connection with rock salt to speed the thawing process and depress the thaw point.

4. Salt brine may be utilized under certain conditions. It was created on-site through a system constructed by Town employees. The salt brine is used sparingly to pre-wet roads prior to a storm when temperatures are 32° or slightly lower and to routinely pre-wet salt distributed off the plow-truck spinner. Salt brine is only effective within a narrow range of temperatures and weather conditions, and therefore, the Town only has a stockpile of 500 to 600 gallons available for use during a given storm.

5. Other alternative chemical/organic products will be purchased and stored this year for use during low temperature situations. One product used in 2016-2017 was Ice-be-Gone (Magic Salt). It will be sprayed onto a portion of the stored salt and will be used at temperatures around 15 degrees or less.

Snow Plowing and Sanding/Salting Operations

The Public Works Department has organized the equipment into seven major routes for routine operations. During very heavy snowfalls, the road grader may be used on an eighth route in the northeast quadrant to free up one additional dump truck to assist in clearing other priority routes. In general, two heavy-duty dump trucks (14 cy capacity each) plow and spread sand on the gravel roads and certain designated paved roads, three heavy-duty dump trucks (7 cy) and three medium duty dump trucks (3 cy) plow and spread salt on the paved roads. The routes are described in section 2, Appendix D. Each complete route for a single truck is approximately 35 miles in length and takes in excess of four hours to complete, once a major snow event is over.

1. The routes have been established to provide highest priority coverage to the roads with heaviest usage (the major arterials) and history of severest conditions and/or accidents. The highest priority roads for each designated route are:

S.Wilson Paved Route (Truck 105 – 7 cy)
Susie Wilson Road
Susie Wilson Road Bypass
Kellogg Road
Gardenside Lane

Susie Wilson Support Route (Truck 123 – 3 cy)
Old Colchester Road
Gentes Road
Pinecrest Drive

NW Gravel Roads (Truck 106 – 14 cy)
Brigham Hill Road
Lamore to Discovery
Chapin Road
Lost Nation Road to Discovery Road
Discovery Road

Central Route A (Truck 103 – 7 cy)
Essex Way
Towers Road
Old Stage Road
Clover Drive

Central Route B (Truck 104 – 3 cy)
Billie Butler Drive/Carmichael Street
Tanglewood Drive
Lamell area

Central Route C (Truck 112 – 3 cy)
Upper Sand Hill Road area
Foster Road
Maplelawn Drive
Margaret Street
Deer Crossing

NE Gravel/Paved Route (Truck 108-14cy)
Weed Road
Osgood Hill Road
Bixby Hill Road
Sleepy Hollow

SE Paved Route (Truck 107)
Lower Sandhill Road
Valleyview Drive/Pinewood Drive loop
North Williston Road
Allen Martin Drive

2. The cycle capability of each vehicle will be maximized so that unnecessary reload trips are not made for re-supply of materials at the Highway Garage.

3. Plow routes are designed for mostly right-hand turns to avoid leaving windrows in intersections.

4. An intermediate priority will be given to collector streets with lesser traffic loads and a reduced history of accidents. (A collector street is one that is being used or will be used to carry a substantial volume of traffic from a minor street(s) to a major street or community facility, and normally includes the principal entrance street to a large subdivision or group of subdivisions, and the principal circulation streets within such subdivisions). Examples of this type of street are Greenfield Road, Greenbriar Drive, Sleepy Hollow Road, Brigham Hill Road, Indian Brook Road, Lost Nation Road, Sydney Drive, Willoughby Drive, etc.

Because of their location adjacent to collector streets, many minor streets (not including dead-end streets and cul-de-sacs) will be cleared concurrent with collector streets or immediately following the collector streets. Examples are Margaret Street, Lavigne and Perry Roads, Colonel Page Road and Pioneer Street.

Dead-end streets follow in priority.

Some collector, minor or dead-end streets may be cleared earlier in a given storm event to meet the objectives of cycling, access on steep grades and school routes/pick-up points.

Due to the inability of the 7 cy trucks to effectively clear many dead-end streets and cul-de-sacs, the operations plan has been revised to clear more of the dead-end roads with the intermediate plow trucks (3 cy). These trucks can clear the streets and dead-ends and not require that separate trips be made with pickups and one-tons. Clearing of cul-de-sacs and dead-end streets is extremely time-consuming. Very often these areas will not be cleared until well after all other clearing operations are completed. This also occurs when manpower is not available to man all Town equipment (extended storms, illness, etc.).

5. Sidewalk clearing in designated areas will generally begin in priority areas with the onset of a storm, except during weekends. During some storm events, lack of manpower or equipment may prevent sidewalks from being cleared until well after the end of the storm. Road clearing takes precedence over sidewalk clearing.

The areas of sidewalk which are planned for clearing include:

` (a) The bikepath from the Town/Village line in the Countryside Development to Rt. 15, including the spur to the Commons at Essex Way

(b) Rt. 15 in Essex Center, Alder Lane, Rt. 128 to the Elementary School and Jericho Road from the intersection with Rt. 128 to Sandhill Road (new walkway section in Essex Center)

(c) Sandhill Road from Rt. 15 to Allen Martin Parkway

(d) Rt. 15/Susie Wilson Road (west end of Town) from Ethan Allen Avenue to Kellogg Road (both sides), Ewing Place, and the Marketplace and David Drive (one side)

(e) Pinecrest Drive (both sides) to northern entrance to Suffolk Lane (one side), and Kimberly Drive

(f) Essex Way from Rt. 15 to the end of bituminous path in the Woodlands Development, between Repa and Bashaw Drive (one side)

(g) Bixby Hill Road from Rt. 128 to Iris Street

(h) Foster Road & Founders Rd. bike path

(i) Allen Martin Parkway to the intersection with Partridge and Laurel Drive and back to Saxon Hollow Drive to Greenbriar Drive to Alderbrook Road (one side)

(j) The Craftsbury Court to Rt. 15 interconnecting trail

(k) From the interconnecting trail at Craftsbury Ct. west on Craftsbury to Old Stage Rd., north on Old Stage Rd. east onto Peacham Lane extension (street travel only), north on Peacham Lane to Willoughby, east on Willoughby to Cavendish, west on Cavendish to Peacham Lane, north on Peacham Lane (street travel only) west on Willoughby to Old Stage, south on Old Stage to the Rt. 15 intersection.

(l) Kellogg Road to the Colchester Town line (both sides)

(m) Saxon Hollow Drive and Greenbriar Drive from Saxon Hollow Drive to Alderbrook Road

(n) Blair Road

(o) Iris Street to Bobolink Circle, north on Bobolink to Clover Drive, Clover Drive to Towers Road (all one side), Bobolink Drive on the southern side and return to Rt.15 (new)

(p) Gauthier Drive and New England Drive (one side)

(q) Path adjacent to Old Colchester Rd from Rt. Rte. 2A to the Village boundary

(r) Carmichael Street (both sides) to the end of the accepted roads and the paved connecting path on the unaccepted portion of future Carmichael Street.

(s) The path on Marion and Irene Avenues (one side)

(t) The path on Rt. 128 from Irene Avenue to Thomas Lane

(u) The sidewalk on the east side of Frederick Road, Lamell Ave between Frederick and Richard Street and Richard Street to Rt. 15.

(v) Laurel Drive from Allen Martin Parkway to the start of the circular portion of Laurel Drive

(w) The temporary gravel path from Rt. 15 (Butlers Corners) to the Town Center parking lot.

(x) Pioneer Drive from Pinecrest Drive to Blair Road

(y) Saybrook Road from Rt. 15 to the 1st driveway intersection on the west side.

(z) The multiuse pedestrian path on the south side of Rt.15 from Saybrook Road to Sunset Road

(aa) The paved, multi-use path along Rt.15 from Essex Way west to the end of the paved section in the Town green-space

(bb) The concrete sidewalks on Carmichael Street from Essex Way to the existing and fully completed elderly housing complex

(cc) Joshua Way from Pinecrest Drive to Susie Wilson Road

(dd) Rt. 15 from Sunset Drive to the Shopping Center ped crossing

(ee) Commonwealth Ave (east side) from Rt. 15 to the NBT Bank entrance road and from Commonwealth Ave (east side) over the gravel path to the Town Center parking lot.

(ff) A new pedestrian crossing on Sand Hill Road near Founders Road will be kept open. The sidewalk on Maplelawn Drive will not be plowed.

(gg) North side of Freeman Woods to and around cul-de-sac.

Sidewalks have been chosen for clearing on high traffic roads where pedestrians may be at greater risk if they were to walk in the roadway and to provide at least "one side of the street" coverage from the entrance of major subdivisions to schools, commercial areas, library, etc. The intent of sidewalk plowing is to try and open sidewalks to a central point within the major developments on the main entrance road to the development.

The amount of sidewalk plowing is limited both by the amount of equipment and the lack of manpower in Public Works to place an employee on the sidewalk plows. In a full storm situation, every truck used for plowing is manned by one employee. There are 10 trucks and 10 employees for winter operations. The Department has two sidewalk plows but insufficient staffing for both. The sidewalk plow is staffed by utilizing either a temporary employee, a water/sewer operator or the Town mechanic. When the water/sewer operator or Town mechanic is taken from his normal duties to run the sidewalk plow, coverage is lost in their area of primary responsibility.

Without additional staffing, sidewalk plowing is a secondary task generally undertaken only after the primary vehicle routes are open. A one-pass coverage of the sidewalks designated for plowing takes from 6 hours (v-plow) to 10 hours (blower) to accomplish with one employee.

Special Practices for 2017-2018

1. The winter of 2016-2017 was characterized by generally harsh conditions and ~~low~~ moderate snowfall with an increase in materials usage and overtime. Supply availability of salt, sand and other materials was not a problem. A comparison of overtime, sand and salt provides an indicator of activity level and conditions over the past two years.

	2015-2016 (actual)	2015-2016 (budget)	2016-2017 (actual)	2017-2018 (budget)
Overtime (hours)	1,402	4,150	2,642	4,150
Sand (tons)	1,560	4,700	5,653	4,600
Salt (ton)	977	1,700	1,359	1,600

2. The procedures followed in the winter of 2016-2017 to reduce overtime, sand and salt use will again be used in the winter of 2017-2018.

3. Salt use will be applied at reduced application levels on flat roads and dead- end streets with cul-de-sacs, but not necessarily eliminated. At the appropriate times and weather conditions, salt and/or salt brines or sand will be applied to keep the areas trafficable. Snow may accumulate more on the flat roads than on hilly sections or on the priority routes.

4. Low traffic-volume, flat development roads will also have lower salt application than other roads. Salt, salt brine and sand will be used to keep areas trafficable; salt will be used to reduce the build-up of thick snow and ice in the streets and to prevent the blockage of catch basins by ice. Some build-up of snow and ice will be allowed to accumulate. Typical streets are: Hillside Circle, Butternut Court, Patricia Place, Maplelawn Drive, Rosewood Trail, Cindy Lane, Circle Drive, Ronald Court, Sunset and Lida Drive, Colbert Street and Gauthier Drive.

5. The areas of sidewalk clearing are kept level from last year. The intent is to generally clear sidewalks without extensive use of week-end overtime; although sidewalks will be plowed on weekends when they are part of a continuous storm cleanup or when conditions warrant as determined by the P.W. Superintendent or P.W. Director. Unless the sidewalks are cleared immediately following a Friday or Saturday storm, followed by dropping temperatures, cleanup cannot be effective on Monday. The surface is too frozen to move without the high use of salt and excessive labor.

6. During the evening hours of a storm event between 11:00 P.M. and 3:00 A.M., unless there is a continuous heavy snowfall or continuous ice storm, the Town forces will be reduced to a minimum staffing or no staffing.

7. Each driver is given the responsibility to make decisions regarding the blend of materials and application rates to keep the roads trafficable and reasonably safe while concurrently minimizing costs. However, the Superintendent or his designated representative will establish a general material type and application rate prior to each major storm event and employees are expected to use these settings as a starting point for the storm.

8. On paved roads, salt brine may be used in combination with salt in the 25 degree (+ or -) to 34 degree range; salt with liquid calcium chloride and other alternative chemical/organic additives will be used generally below 25 degrees down to 15 degrees (+ or -) and below that level, either higher concentrations of salt plus additives, sand or no material will be placed. All trucks will be calibrated and all drivers will be required to report on their salt usage following each storm to the Superintendent.

9. The Town used contract plowing services last year to plow certain sidewalks and angled parking in the Town Center area (Carmichael Street), beyond the operational capability of the Town. A contract has been signed for this specific service for 2017-2018. Contractor plowing will be used for all Carmichael Street and Commonwealth Avenue.

10. It is important to note that the plan which has been presented and the accompanying map are subject to change with each storm. Also, the time frame for clearing can vary markedly depending upon conditions and continuing effects of a storm. Other factors affecting the plan are:

night-time plowing
commuter traffic
parked cars
equipment breakdown
assistance to the Fire or Police Departments
assistance to school buses
time length since the start of the storm
availability of materials
budget funds

11. In order to guide the Department in utilizing the best available techniques in snow and ice clearing operations, a set of guidelines (not requirements) is provided in Section 1, Appendix 4. Operator judgment and close control of materials are key elements in managing snow/ice clearing operations.

Town snow removal operations generally will not start until one hour after the initial call, because of the time factor in getting crews in, equipment checked and materials loaded. Also, with routes requiring four to five hours to plow completely, notification has to occur by 2 AM or it is not likely that the major roads will be open by 7 AM.

Snow Removal on State Highways in the Town of Essex

Within the Town of Essex, there are over 22 miles of State highways, including:

Rt. 15 (Center Road, Jericho Road)
Rt. 117 (River Road)
Rt. 128 (Browns River Road)
Rt. 2A (Colchester Road)
Rt. 289 (Circumferential Highway & ramps)

Snow removal on these roads is the responsibility of the State of Vermont administered by the District 5 Highway Garage, located in Fort Ethan Allen. Questions or comments on these highways are to be directed to the District Highway Administrator, Dave Blackmore, Dan Shepard or Dick Hosking.

Use of Sand / Salt from the Town Highway Garage

The Town of Essex expects that homeowners and businesses will obtain sand and salt from the private sector for use in keeping their driveways and walkways clear. The clearing of private driveways / walkways is the responsibility of the individual property owner as noted in Title 24, section 2291.

The Town prohibits the taking of any amount of road salt from the Town highway garage for private use.

The Town purchases winter sand solely for use on Town roads and walks; it is not purchased for routine use by residents or businesses on private driveways or walkways.

It is understood that emergency (non-routine) situations may occur, such as during an ice storm, when residents may need sand on an emergency basis. It is not considered an emergency when local businesses that sell sand are open and sand is readily available for purchase. In emergency situations, residents and businesses may obtain no more than two (2) 5-gallon pails of sand from a stockpile outside the gate to the highway garage.

Mailbox Policy and Encroachment in the Public Right of Way

Because of the volume of complaints specific to objects in the Town right-of-way and damage to property, the following Town policy has been established:

1. Title 19, Section 1111 prohibits encroachment of the Town right-of-way without prior approval by the Selectboard. Objects in the ROW are placed there at the owner's risk and the Town assumes no responsibility for any damage to objects placed in violation of the statutes. Common items damaged are fences, flowerpots, basketball hoops, etc., (placed within the Town ROW).

2. To insure mail delivery to all rural residents, the Town has provided blanket authorization for mailboxes located in the Town right-of-way. The Town retains control over specific location of the mailboxes and may require the homeowner to move the box to a more suitable location.

    a) The Town will fix a damaged mailbox or replace a mailbox (up to a monetary limit of $45 per mailbox per event) only when the Department determines that a plow physically hit the mailbox. This determination is made by observation of cut marks, paint off the plow blades, etc.

    b) Heavy snow coming off the plow blade will often knock over and damage mailboxes which have not been adequately mounted or braced or those mailboxes whose doors have been left open. Also, mailboxes are damaged by private contractors and homeowners during driveway clearing operations. The Town will not fix or replace mailboxes in these situations.

c) Owners of mailboxes have a responsibility to contact Public Works at 878-1344 during daytime hours within 72 hours of damage to a mailbox if they intend to seek repairs, a new mailbox or reimbursement from the Town. The Town will inspect the mailbox to determine if it is the Town's responsibility for the mailbox damage. No payment of the $45 to replace a mailbox will be made by the Town until the replacement has been completed and verified as being in place by the Town.

d) <u>The clearing around mailboxes is the sole responsibility of the owner and not the Town</u>. With the large number of streets to plow and limited municipal resources, Town plows cannot provide a level of service that clears the road to every mailbox.

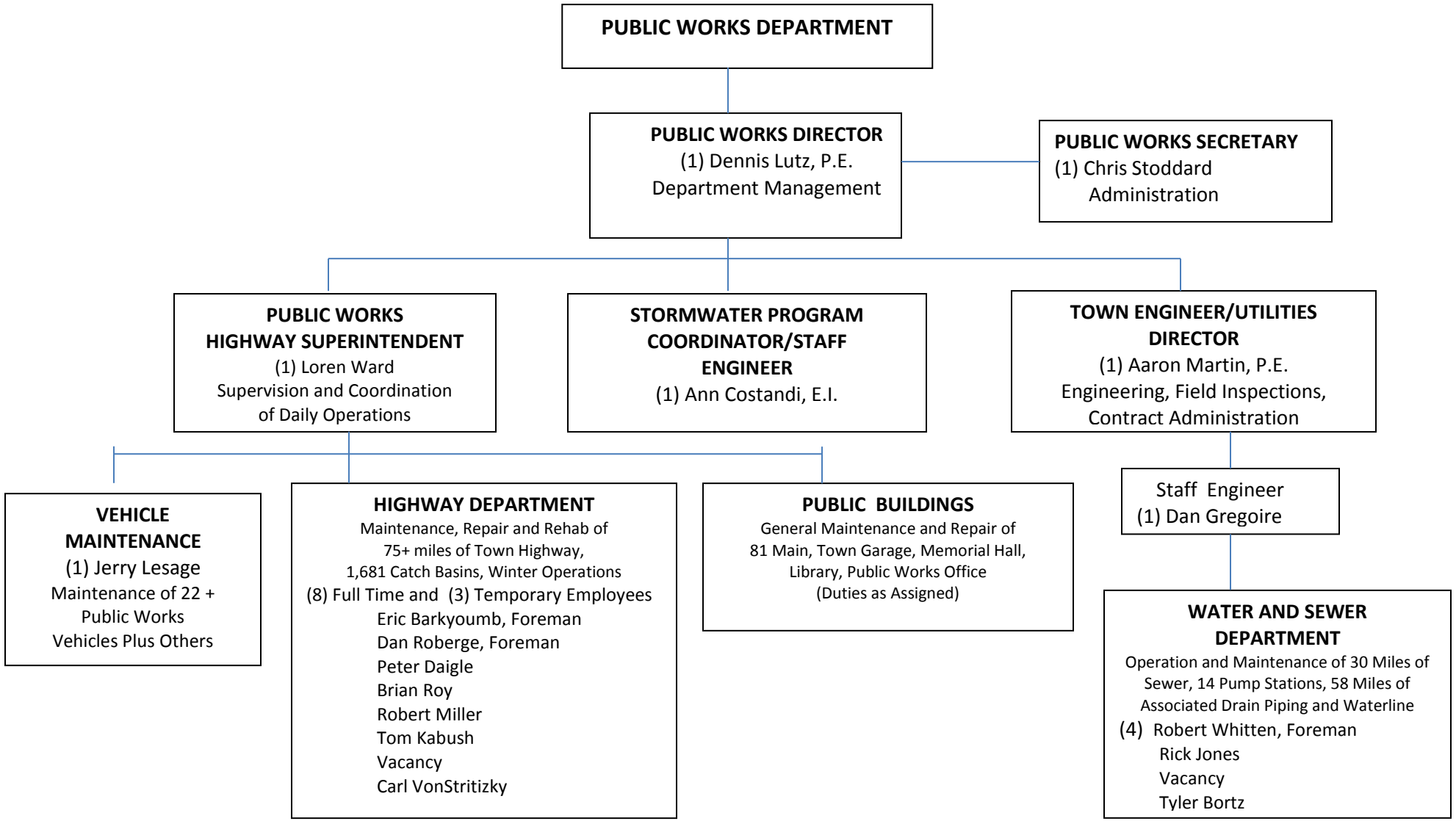
e) The Town will notify residents prior to the start of winter regarding mailboxes that need repair or movement. The Town will not repair mailboxes that are noted as being damaged or inoperative prior to winter.

3. The Town will restore or replace objects located on <u>private property</u> damaged as a result of its snow or ice clearing operations, when it has been determined that the Town was responsible for the damage, consistent with the Supreme Court Ruling in 2010.

4. Recovery of damages will be pursued by the Town, if Town equipment is damaged due to objects placed in the Town ROW.

SECTION 2, APPENDIX A
2017-2018

ORGANIZATIONAL CHART OF THE TOWN PUBLIC WORKS DEPARTMENT



SECTION 2, APPENDIX B
2015-2016

VEHICLE AND ROUTE ASSIGNMENTS

NOT AVAILABLE IN PUBLIC VERSION

SECTION 2, APPENDIX C
2017-2018

TOWN EQUIPMENT FOR SNOW OPERATIONS

PRIMARY ROUTES

2010 Int'l 14 cy dual axle D/T with 1-way, 11' snow plow and 10' wing with under carriage discharge (#106) - gravel roads
2007 Int'l 7 cy D/T with one-way, 11' snow plow & 10' wing and liquid brine dispenser (paved roads) (#105)
2009 Int'l 7 cy D/T with one-way, 11' snow plow & 10' wing liquid brine dispenser with under carriage discharge (Truck #107)
2012 Int'l 7 cy D/T with one-way, 11' snow plow & 10' wing with liquid brine tank (paved roads) (#103)
2017 14 cy D/T with one-way, 11' snow plow & 10' wing, under carriage discharge (gravel roads) (#108)
2014 Freightliner, 3 cy with angle 9' 8" snow plow and 9' wing plow (#123-partial time)
2015 Int'l 3 cy D/T with angle, 9' 8" snow plow and 9' wing plow (#104 – partial time)
2016 Int'l 3 cy/D/T with angle 9'8" plow and 9' wing plow (#112 – partial time)

CUL-DE-SACS, PARKING AREAS, SCHOOL TURNAROUNDS

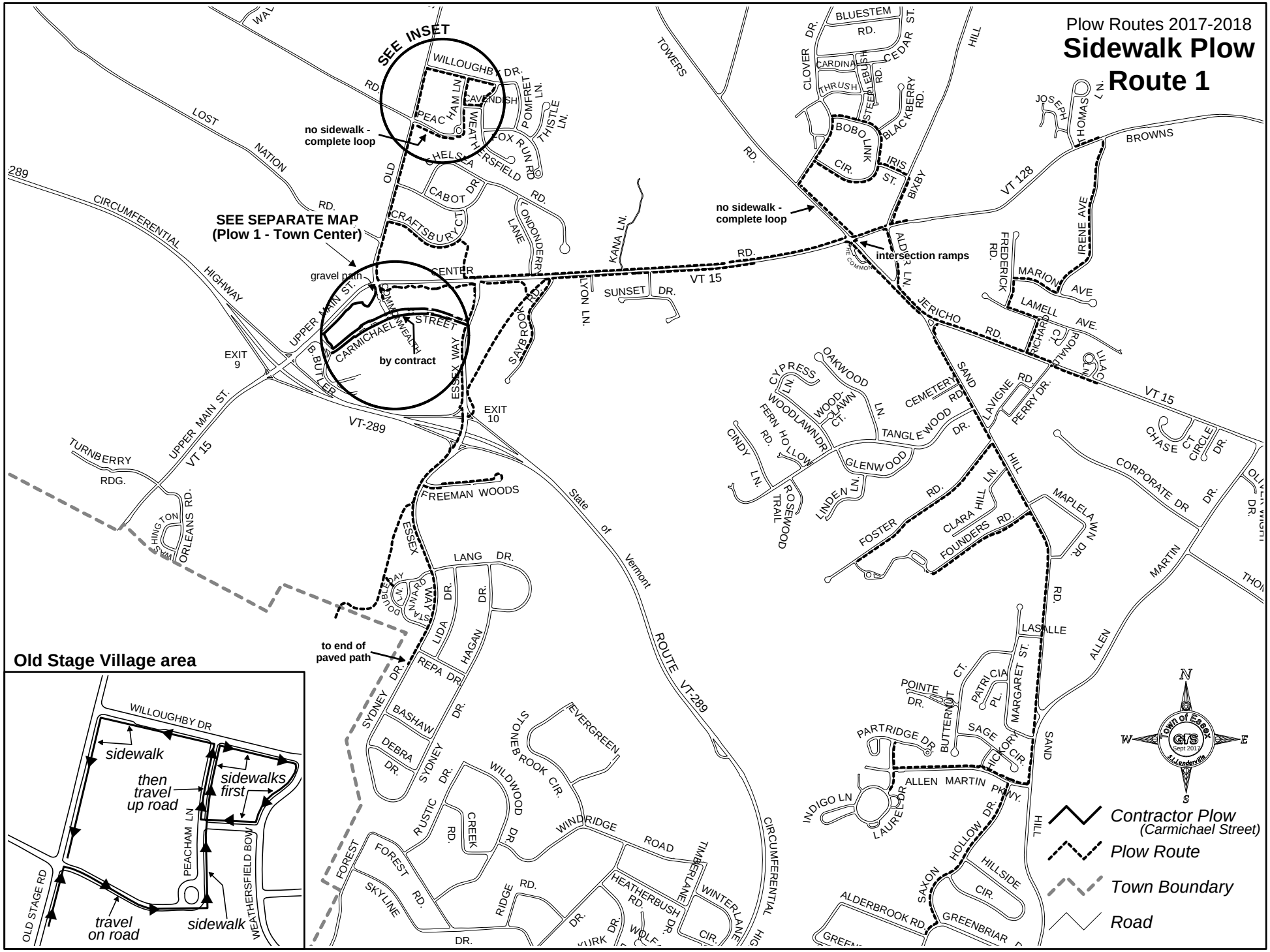
2015 Int'l 3 cy D/T, 9' 8" all angle plow, with 9' wing plow (#104) primary route (partial time)
2014 Freightliner 3 cy D/T, 9' 8" plow with 9' wing (#123) primary route (partial time)
2016 Int'l 3 cy D/T, 9' 8" plow with 9' wing (#112)
2017 Chevrolet 4x4 Crew Cab all-angle, 9' hydraulic snow plow (#102) (as needed to fill in)
2016 Ford F350 1-ton pickup with plow and drop-in sander (#25)

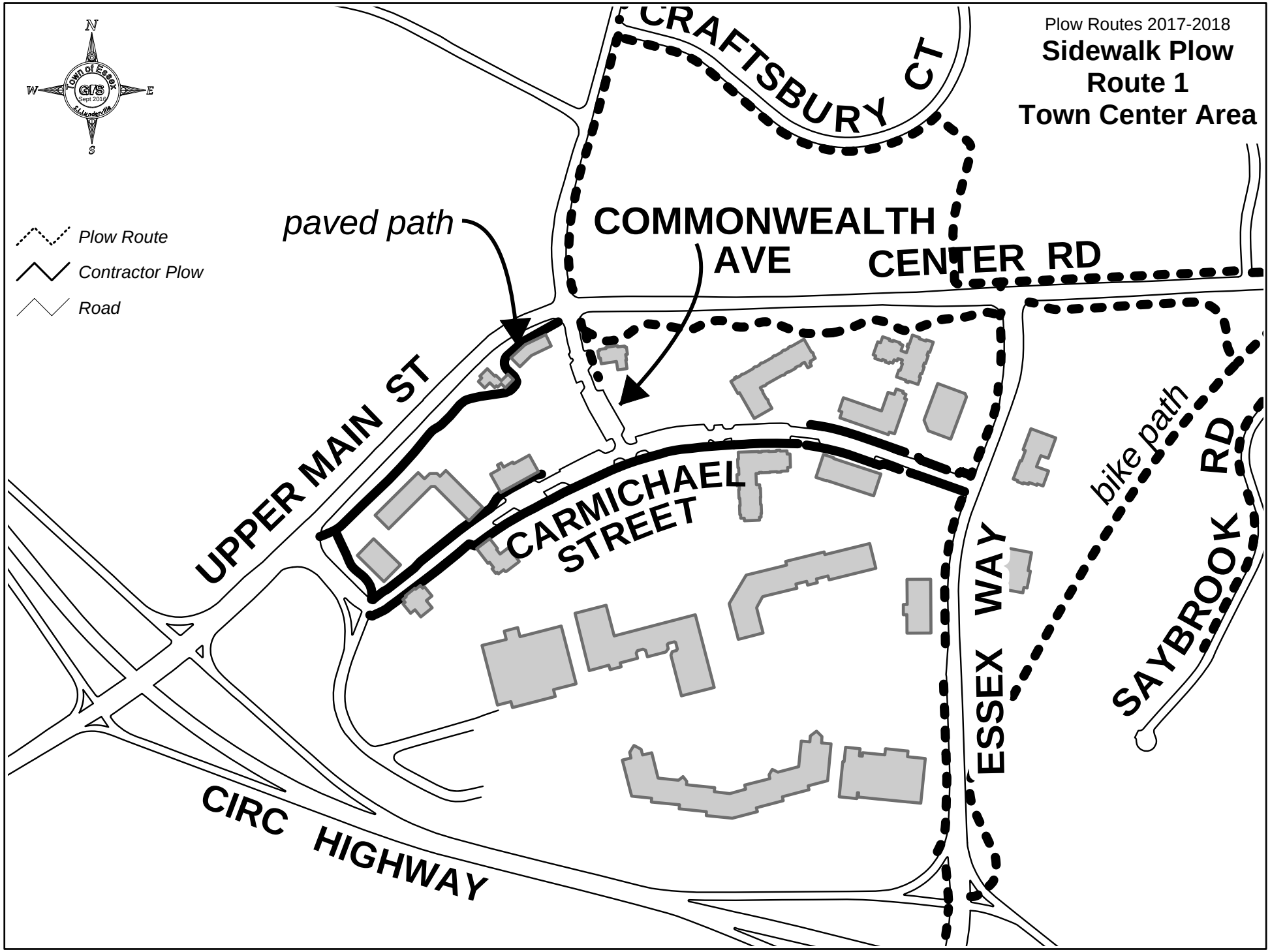
SUPPORT EQUIPMENT

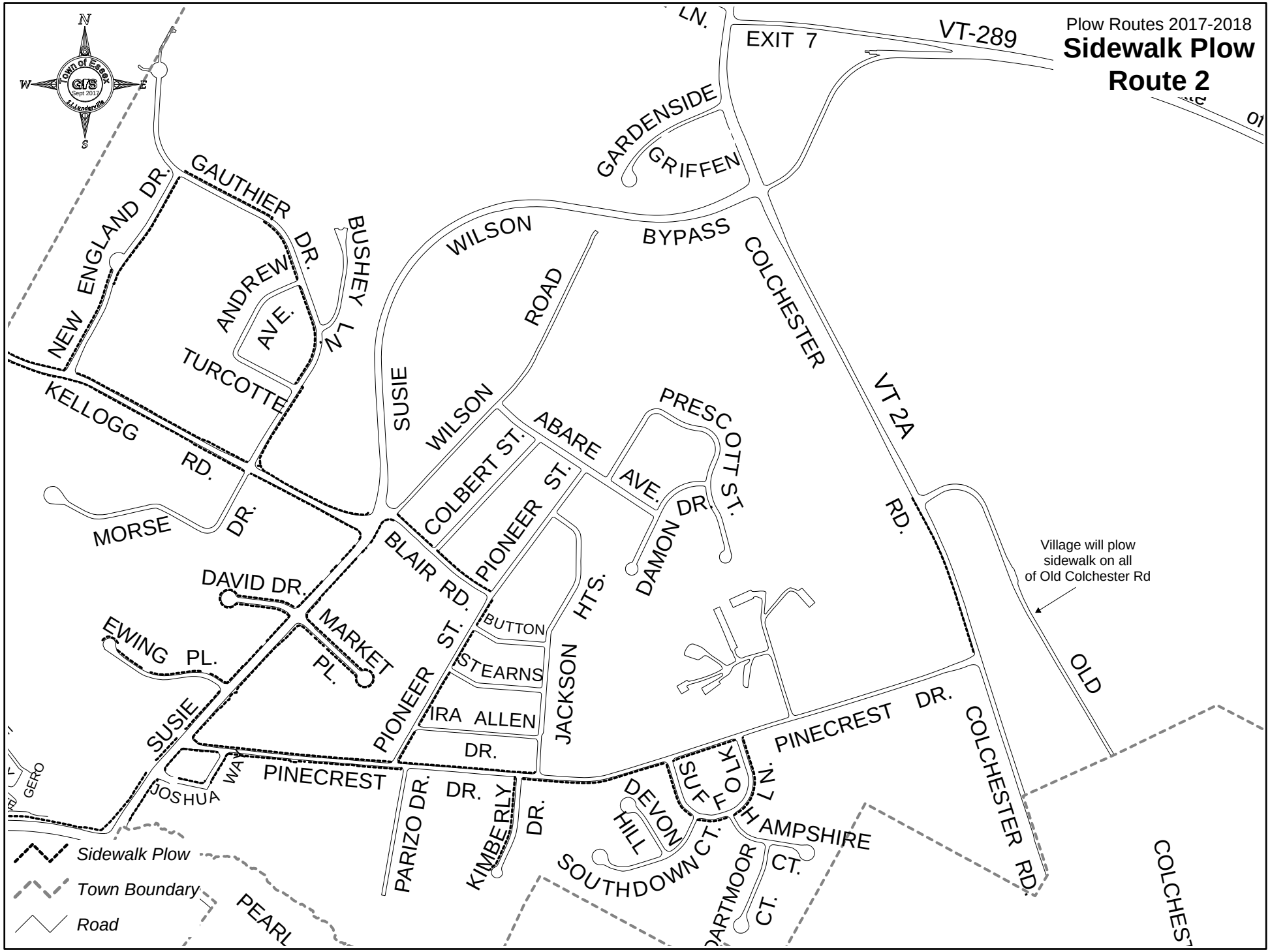
2010 Case backhoe/loader (emergency loading/digging) (#113)
2001 Trackless Sidewalk Snow Plow (#118)
2006 Caterpiller 143H grader (emergency plowing use only or for gravel roads) (#116)
2015 John Deere 524 Bucket Loader (#219)
2012 MB MSV Sidewalk Snow Plow (#119)

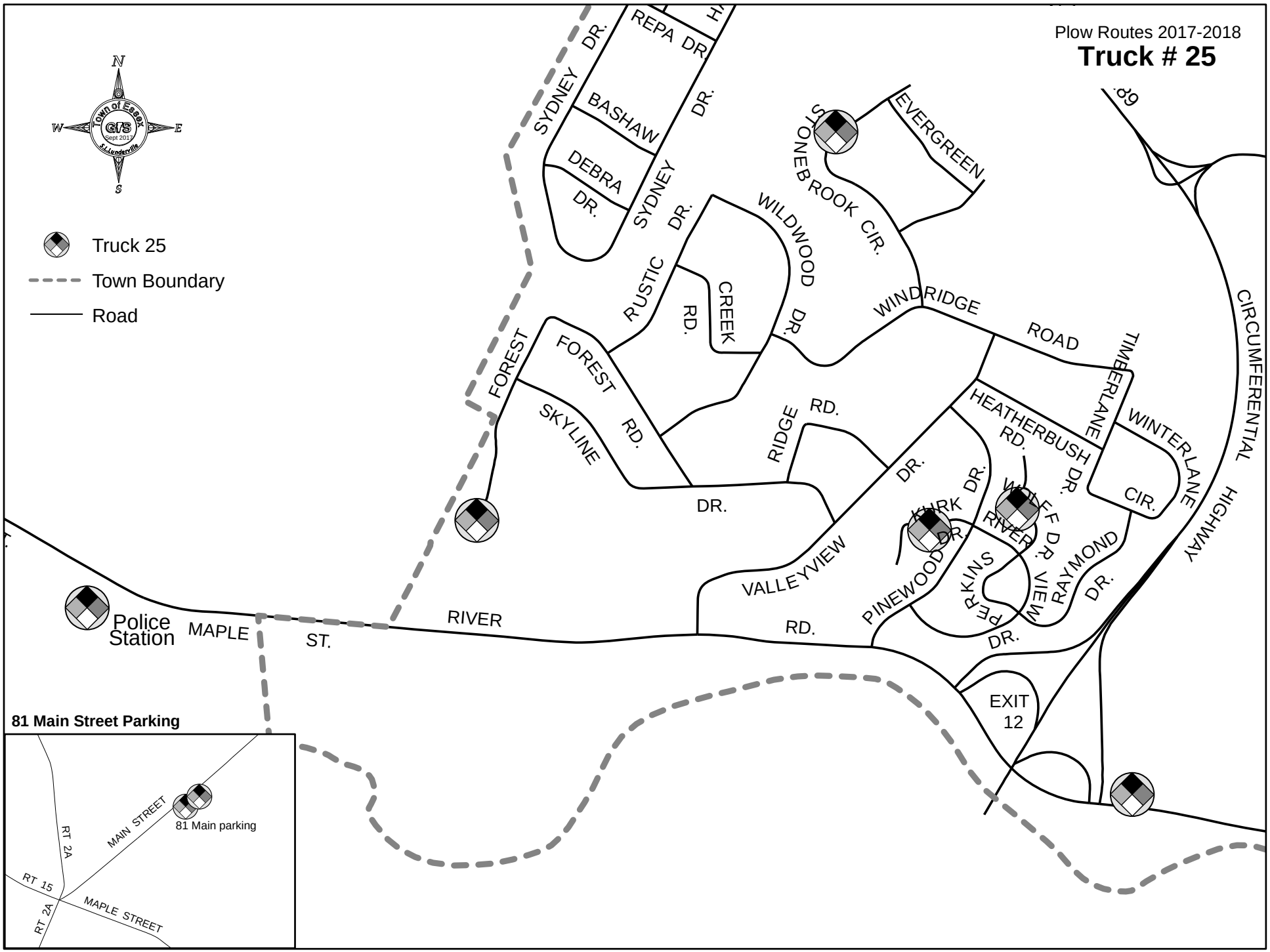
SECTION 2, APPENDIX D
2017-2018

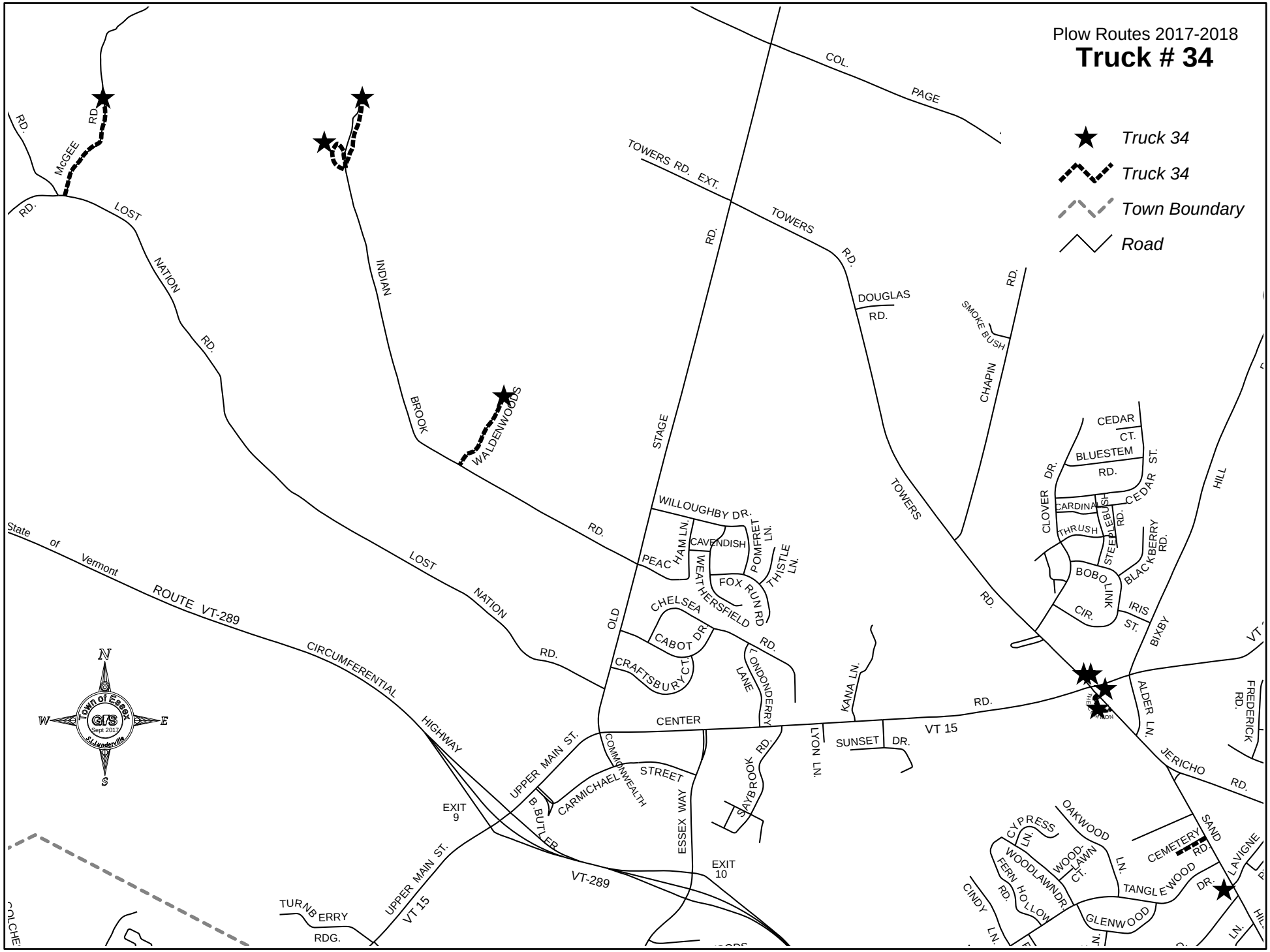
MAPS OF HIGHWAY ROUTES (TOWN)


Plow Routes 2017-2018
Sidewalk Plow
Route 1
SEE INSET
no sidewalk - complete loop
SEE SEPARATE MAP
(Plow 1 - Town Center)
gravel path
by contract
no sidewalk - complete loop
intersection ramps
to end of paved path
Old Stage Village area
sidewalk
then travel up road
sidewalks first
travel on road
sidewalk
Contractor Plow
(Carmichael Street)
Plow Route
Town Boundary
Road
Town of Essex
GIS
Sept 2017
S.J.Lunderville
N
S
E
W


Plow Routes 2017-2018
Sidewalk Plow
Route 1
Town Center Area
N
W
E
S
Town of Essex
GIS
Sept 2015
Plow Route
Contractor Plow
Road
paved path
CRAFTSBURY CT
COMMONWEALTH AVE
CENTER RD
UPPER MAIN ST
CARMICHAEL STREET
bike path
SAYBROOK RD
ESSEX WAY
CIRC HIGHWAY


Plow Routes 2017-2018
Sidewalk Plow
Route 2
Village will plow
sidewalk on all
of Old Colchester Rd
Sidewalk Plow
Town Boundary
Road
VT-289
EXIT 7
GARDENSIDE
GRIFFEN
GAUTHIER DR.
NEW ENGLAND DR.
ANDREW AVE.
BUSHEY LN.
TURCOTTE
KELLOGG RD.
MORSE DR.
WILSON BYPASS
WILSON ROAD
SUSIE
COLCHESTER RD.
VT 2A
PRESCOTT ST.
ABARE AVE.
DAMON DR.
COLBERT ST.
PIONEER ST.
BLAIR RD.
DAVID DR.
EWING PL.
MARKET PL.
BUTTON
STEARNS
IRA ALLEN DR.
JACKSON HTS.
PINECREST DR.
PINECREST DR.
JOSHUA WAY
PARIZO DR.
KIMBERLY DR.
DEVON HILL
SUFFOLK LN.
HAMPSHIRE CT.
SOUTHDOWN CT.
DARTMOOR CT.
COLCHESTER RD.
OLD
PEARL
GERO


Plow Routes 2017-2018
Truck # 25
Truck 25
Town Boundary
Road
N
S
E
W
Town of Essex
GIS
Sept 2017
S.L.Lunderville
REPA DR.
SYDNEY DR.
BASHAW DR.
DEBRA DR.
SYDNEY DR.
RUSTIC DR.
CREEK RD.
WILDWOOD DR.
STONEBROOK CIR.
EVERGREEN
WINDRIDGE ROAD
TIMBERLANE
WINTERLANE CIR.
CIRCUMFERENTIAL HIGHWAY
FOREST
FOREST RD.
SKYLINE DR.
RIDGE RD.
HEATHERBUSH RD.
DR.
KURK DR.
WOLFF DR.
RIVER
PINEWOOD DR.
PERKINS DR.
VIEW DR.
RAYMOND DR.
VALLEYVIEW RD.
EXIT 12
Police Station
MAPLE ST.
RIVER
81 Main Street Parking
MAIN STREET
81 Main parking
RT 2A
RT 15
RT 2A
MAPLE STREET


Plow Routes 2017-2018
Truck # 34
Truck 34
Truck 34
Town Boundary
Road
COL. PAGE
TOWERS RD. EXT.
TOWERS RD.
DOUGLAS RD.
SMOKE BUSH
CHAPIN RD.
McGEE RD.
LOST NATION RD.
INDIAN BROOK RD.
WALDENWOODS
STAGE RD.
WILLOUGHBY DR.
CAVENDISH
PEACHAM LN.
POMFRET LN.
THISTLE LN.
WEATHERSFIELD
FOX RUN RD
CHELSEA
CABOT DR.
CRAFTSBURY CT.
OLD LONDONDERRY LANE
KANA LN.
TOWERS RD.
CEDAR CT.
BLUESTEM RD.
CEDAR ST.
CLOVER DR.
CARDINAL
THRUSH
STEEPLEBUSH RD.
BLACKBERRY RD.
BOBOLINK CIR.
IRIS ST.
BIXBY
HILL
ALDER LN.
FREDERICK RD.
JERICHO RD.
VT 15
SUNSET DR.
LYON LN.
SAYBROOK RD.
CENTER
UPPER MAIN ST.
COMMONWEALTH
CARMICHAEL STREET
B. BUTLER
ESSEX WAY
EXIT 9
EXIT 10
VT-289
State of Vermont
ROUTE VT-289
CIRCUMFERENTIAL HIGHWAY
TURNBERRY RDG.
OAKWOOD CYPRESS LN.
WOODLAWN DR.
WOODLAWN CT.
FERN HOLLOW RD.
CEMETERY RD.
SAND
LAVIGNE
TANGLEWOOD DR.
GLENWOOD
CINDY LN.
N
W
E
S
Town of Essex
GIS
Sept 2017
St.Lunderville

Plow Routes 2017-2018

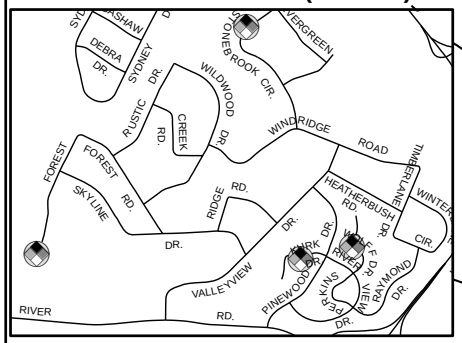
Truck # 102

Assists Trucks 25 & 34

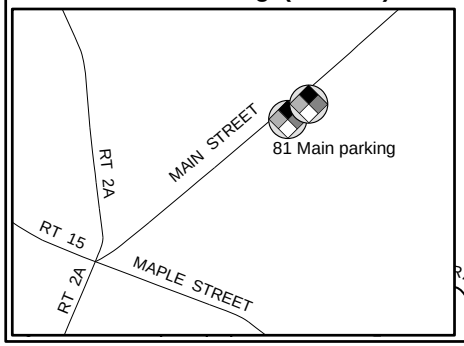
TRUCK

- *Truck 25*
- *Truck 34*
- *Truck 34*
- *Town Boundary*
- *Road*

Pinewood / Perkins Area (truck 25)

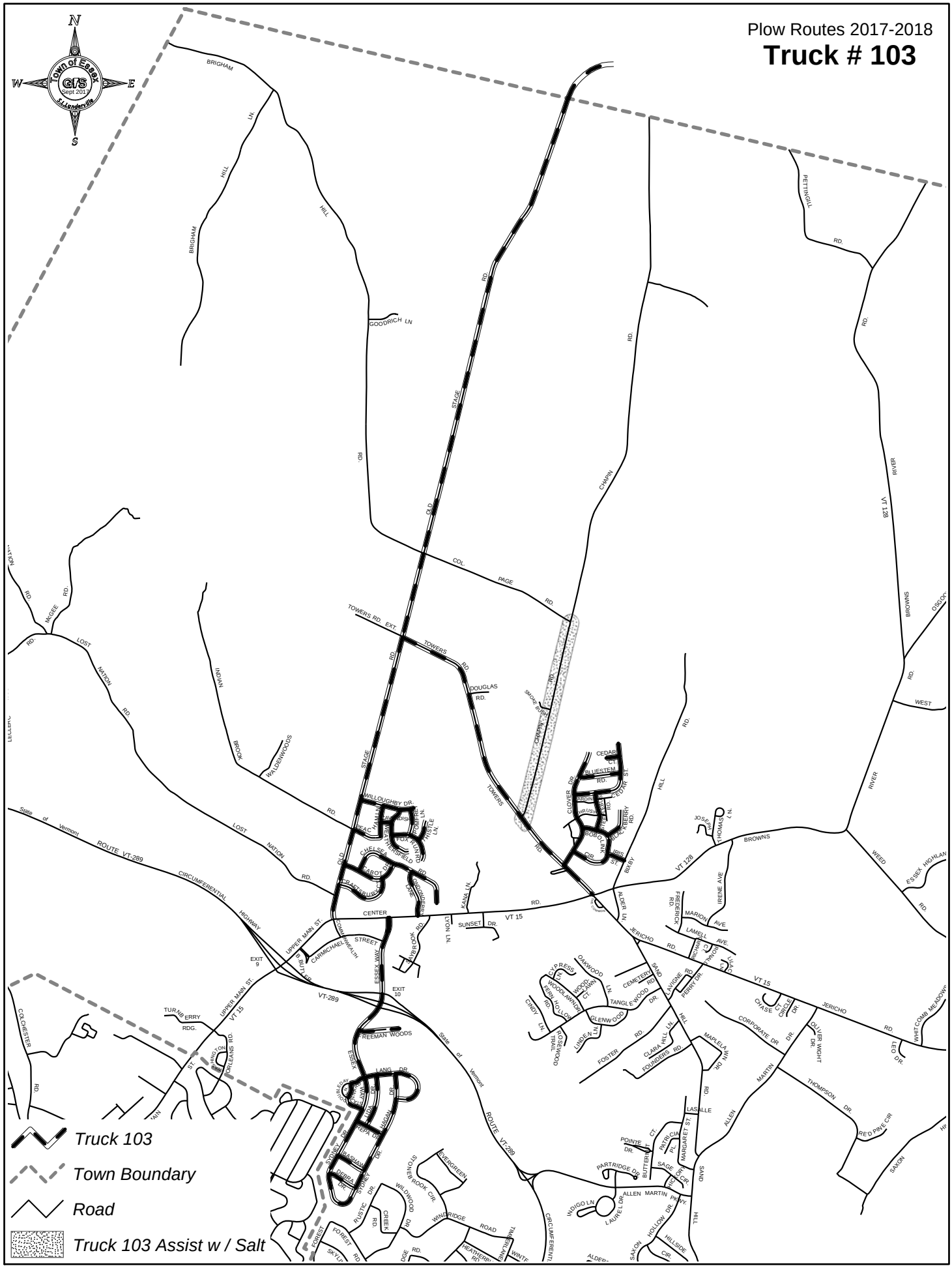


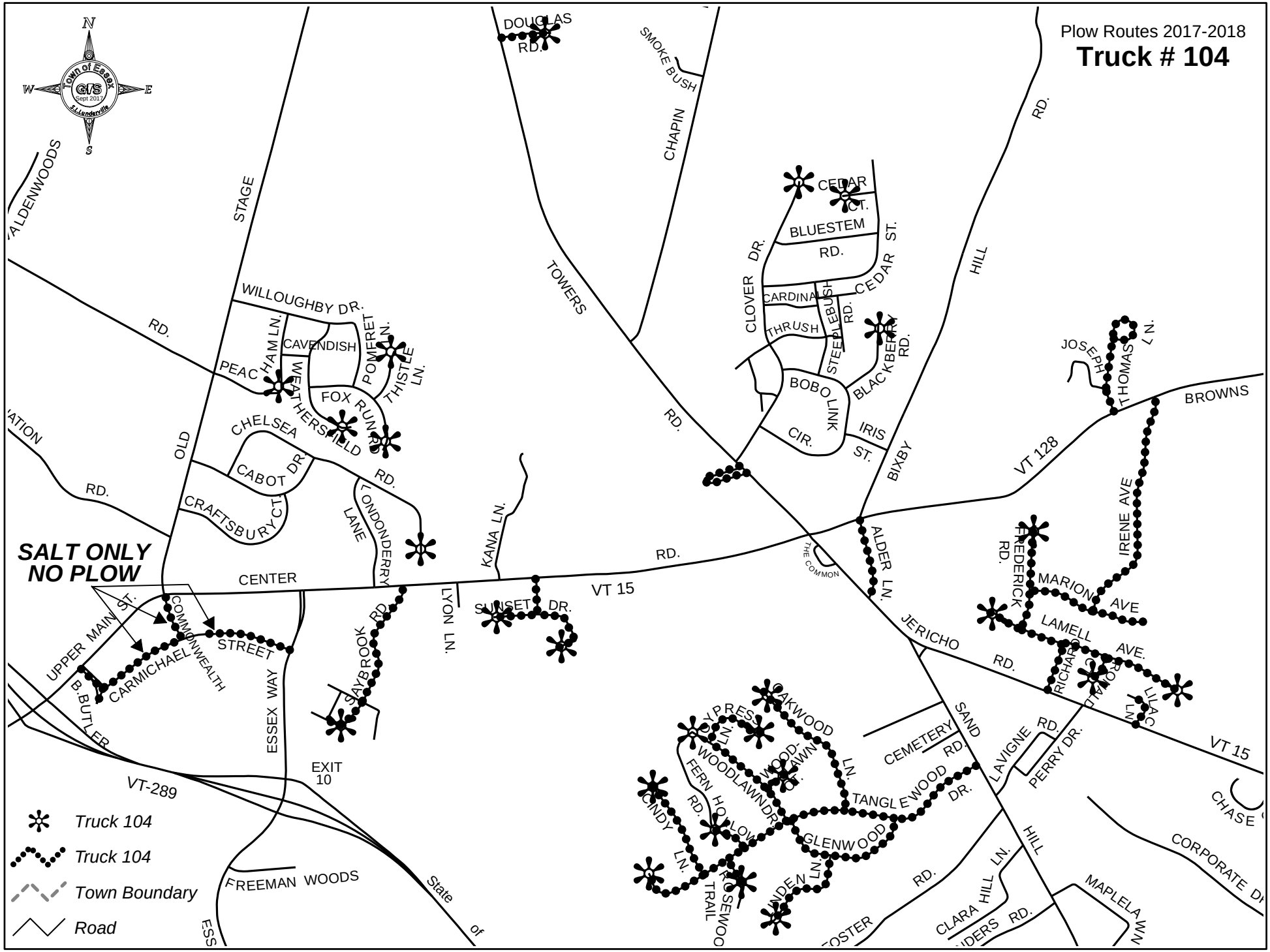
81 Main Street Parking (truck 25)

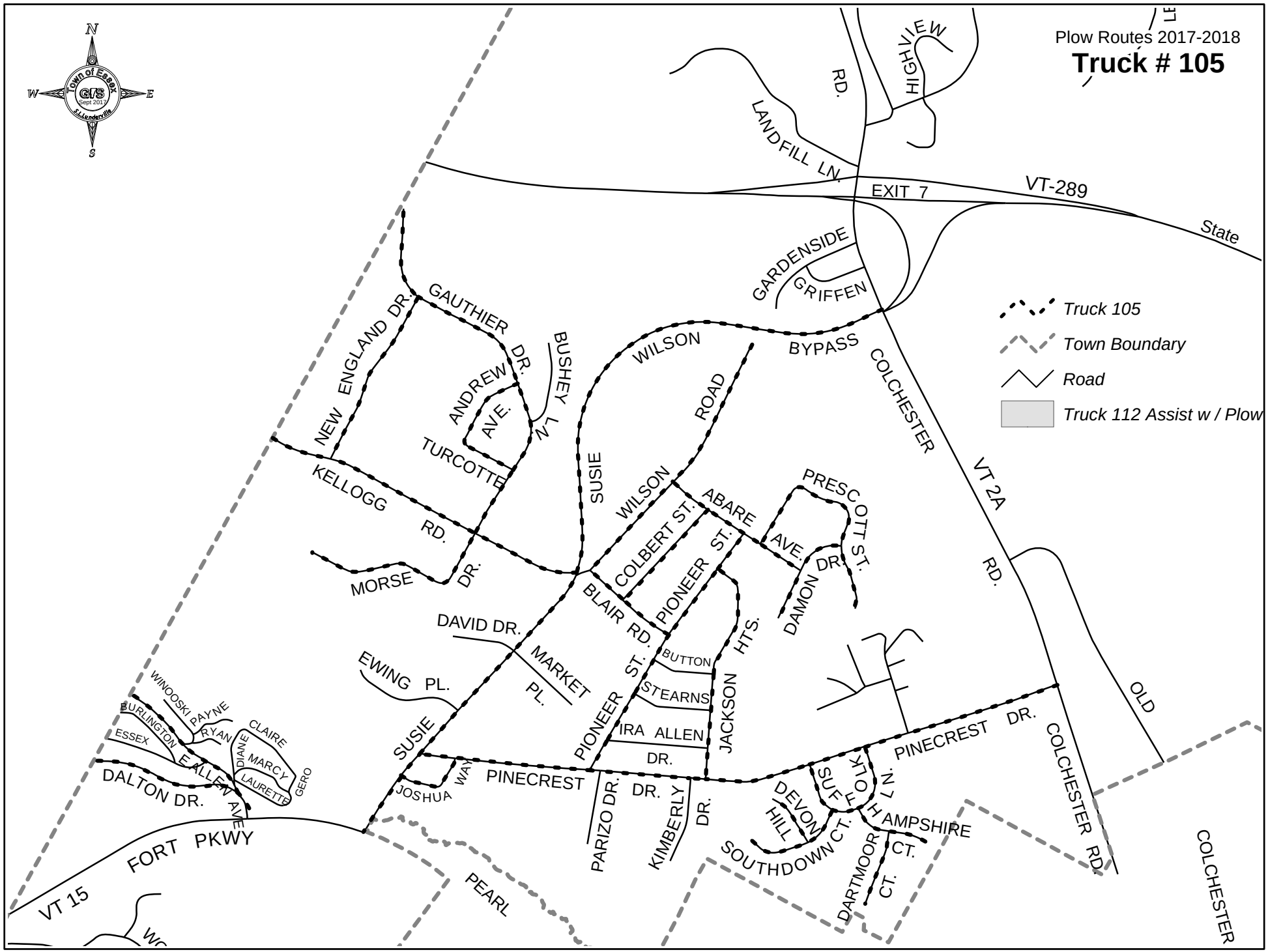


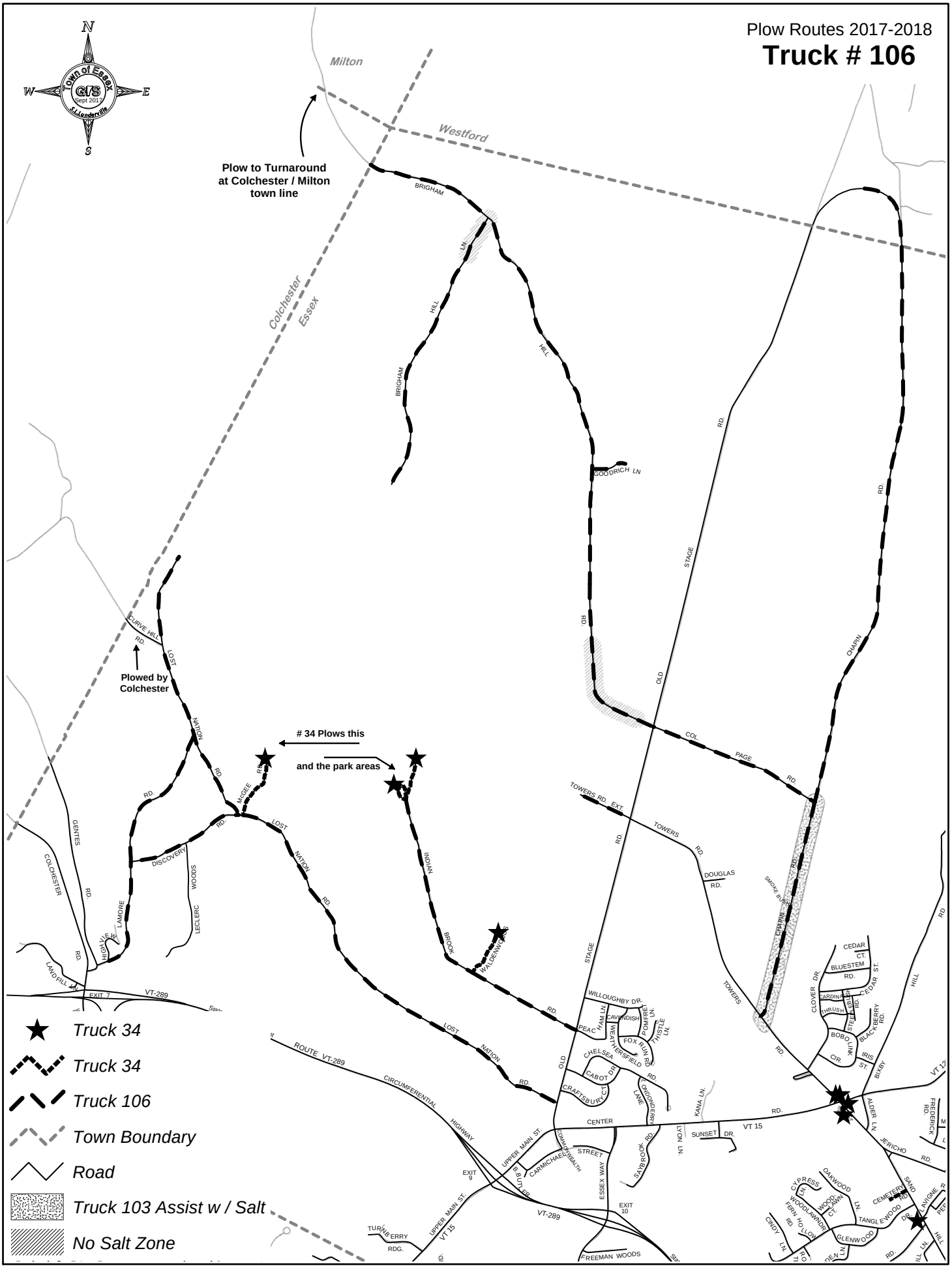
Plow Routes 2017-2018

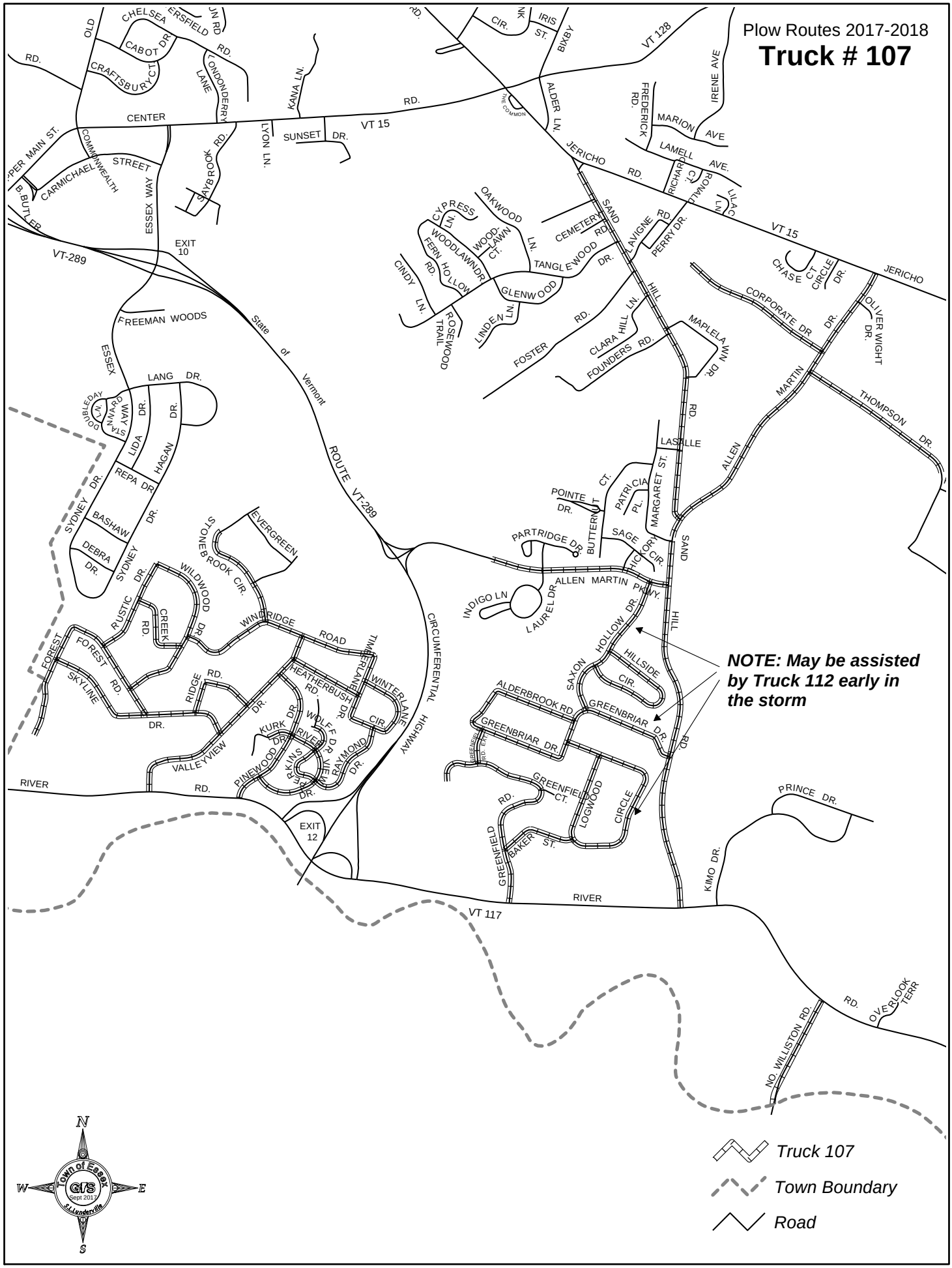
Truck # 103

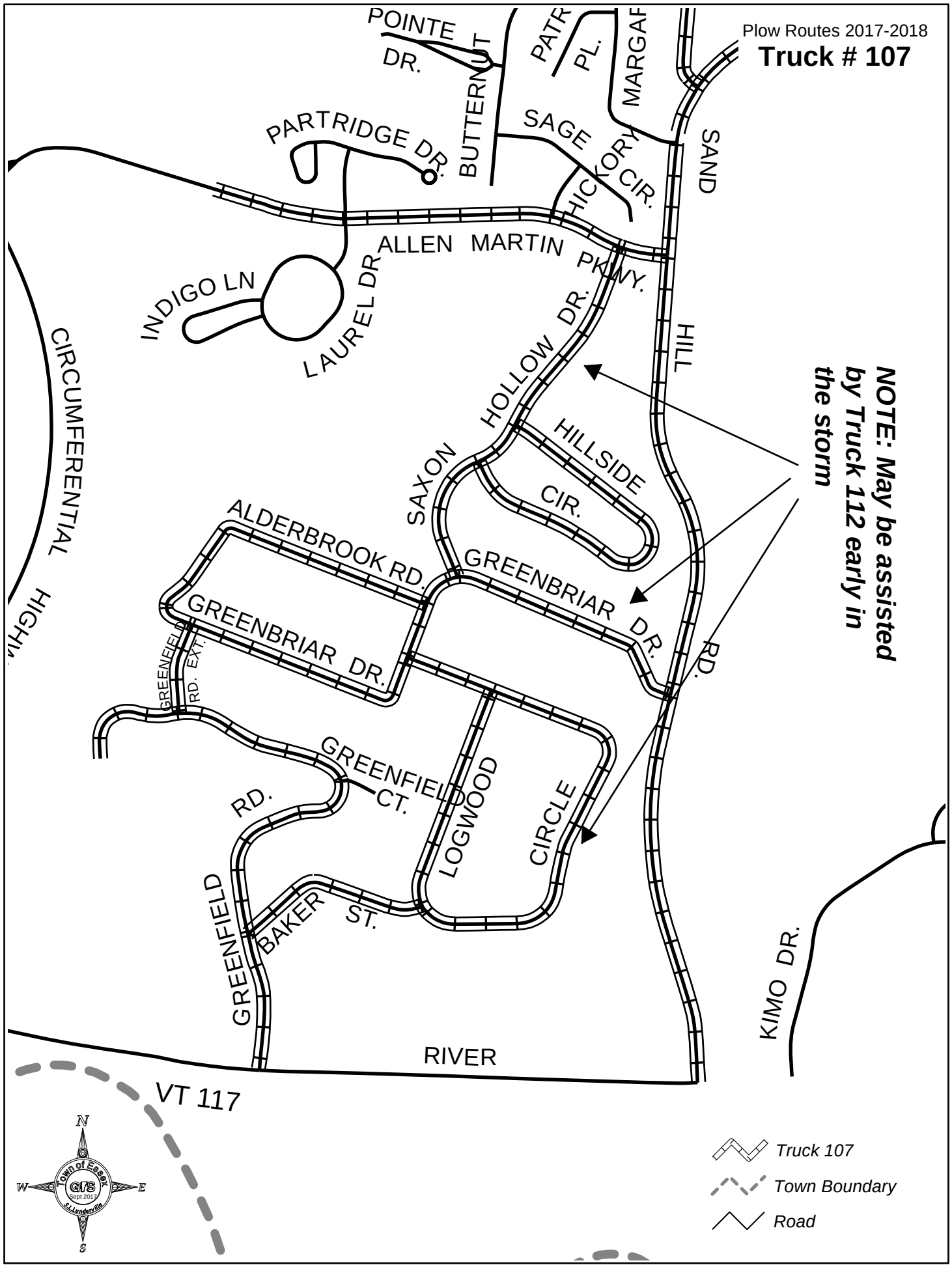


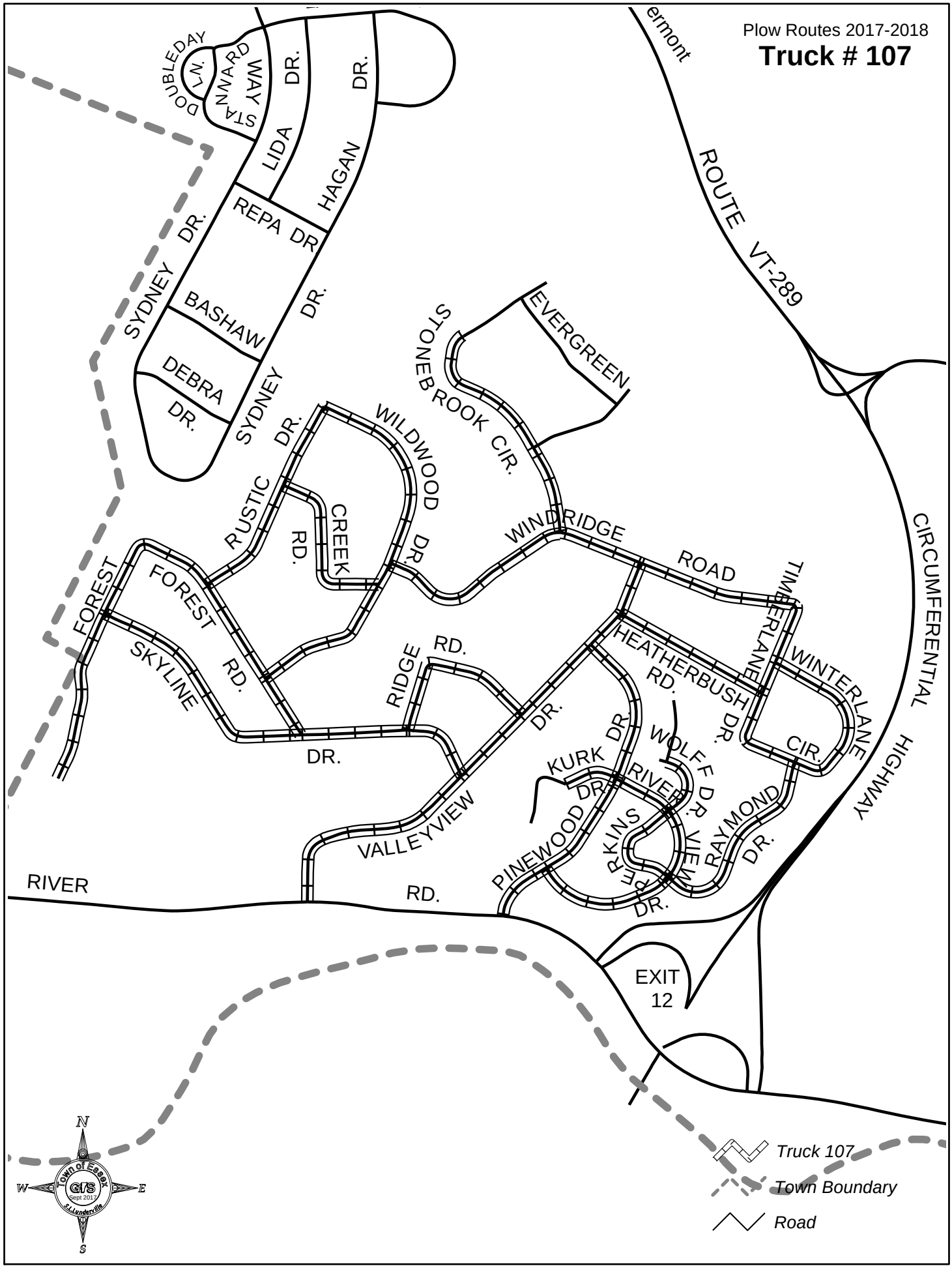

Plow Routes 2017-2018
Truck # 104
SALT ONLY
NO PLOW
Truck 104
Truck 104
Town Boundary
Road
DOUGLAS RD.
SMOKE BUSH
CHAPIN
STAGE
TOWERS
RD.
CEDAR CT.
BLUESTEM RD.
CEDAR ST.
CLOVER DR.
CARDINAL
THRUSH
STEEPLEBUSH RD.
BLACKBERRY RD.
BOBO LINK CIR.
IRIS ST.
BIXBY
HILL
RD.
JOSEPH
THOMAS LN.
BROWNS
VT 128
IRENE AVE
FREDERICK RD.
MARION AVE
LAMELL AVE.
RICHARD
RONALD
LILAC LN.
VT 15
WILLOUGHBY DR.
HAM LN.
CAVENDISH
POMFRET LN.
THISTLE LN.
PEAC
WEATHERSFIELD
FOX RUN RD.
CHELSEA
CABOT DR.
CRAFTSBURY CT.
OLD
RD.
LONDONDERRY LANE
KANA LN.
CENTER
VT 15
LYON LN.
SUNSET DR.
SAYBROOK RD.
UPPER MAIN ST.
COMMONWEALTH
STREET
CARMICHAEL
B.BUTLER
ESSEX WAY
EXIT 10
VT-289
FREEMAN WOODS
State of
THE COMMON
ALDER LN.
JERICHO RD.
SAND
CEMETERY RD.
LAVIGNE RD.
PERRY DR.
CHASE
CORPORATE DR
CAKWOOD LN.
WOODLAWN DR.
TANGLEWOOD DR.
GLENWOOD
FERN HOLLOW RD.
CINDY LN.
ROSEWOOD TRAIL
INDEN LN.
CLARA HILL LN.
MAPLELAWN
FOSTER RD.
ALDENWOODS
ATION RD.

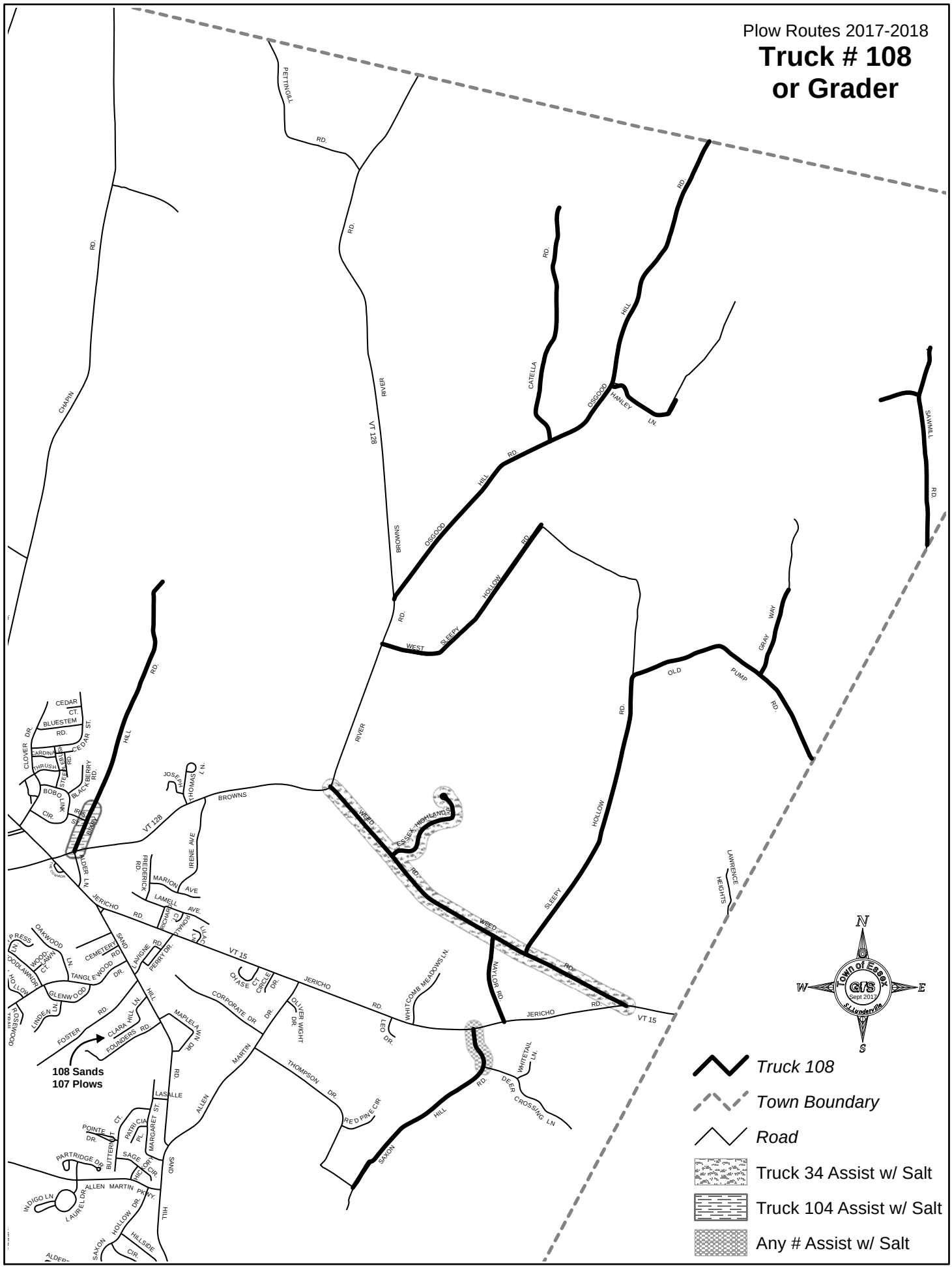

Plow Routes 2017-2018
Truck # 105
Truck 105
Town Boundary
Road
Truck 112 Assist w / Plow
LANDFILL LN.
RD.
HIGHVIEW
EXIT 7
VT-289
State
GARDENSIDE
GRIFFEN
BYPASS
COLCHESTER
VT 2A
RD.
OLD
COLCHESTER RD.
GAUTHIER DR.
NEW ENGLAND DR.
BUSHEY LN.
ANDREW AVE.
TURCOTTE
KELLOGG RD.
MORSE DR.
WILSON ROAD
SUSIE
WILSON
ABARE
PRESCOTT ST.
AVE.
DAMON DR.
COLBERT ST.
PIONEER ST.
BLAIR RD.
DAVID DR.
EWING PL.
MARKET PL.
BUTTON
STEARNS
IRA ALLEN DR.
JACKSON HTS.
PINECREST DR.
PARIZO DR.
KIMBERLY DR.
SOUTHDOWN CT.
DEVON HILL
SUFFOLK LN.
HAMPSHIRE CT.
DARTMOOR CT.
JOSHUA WAY
WINOOSKI
BURLINGTON
ESSEX
PAYNE
RYAN
CLAIRE
DIANE
MARCY
LAURETTE
GERO
E ALLEN AVE
DALTON DR.
FORT PKWY
VT 15
PEARL

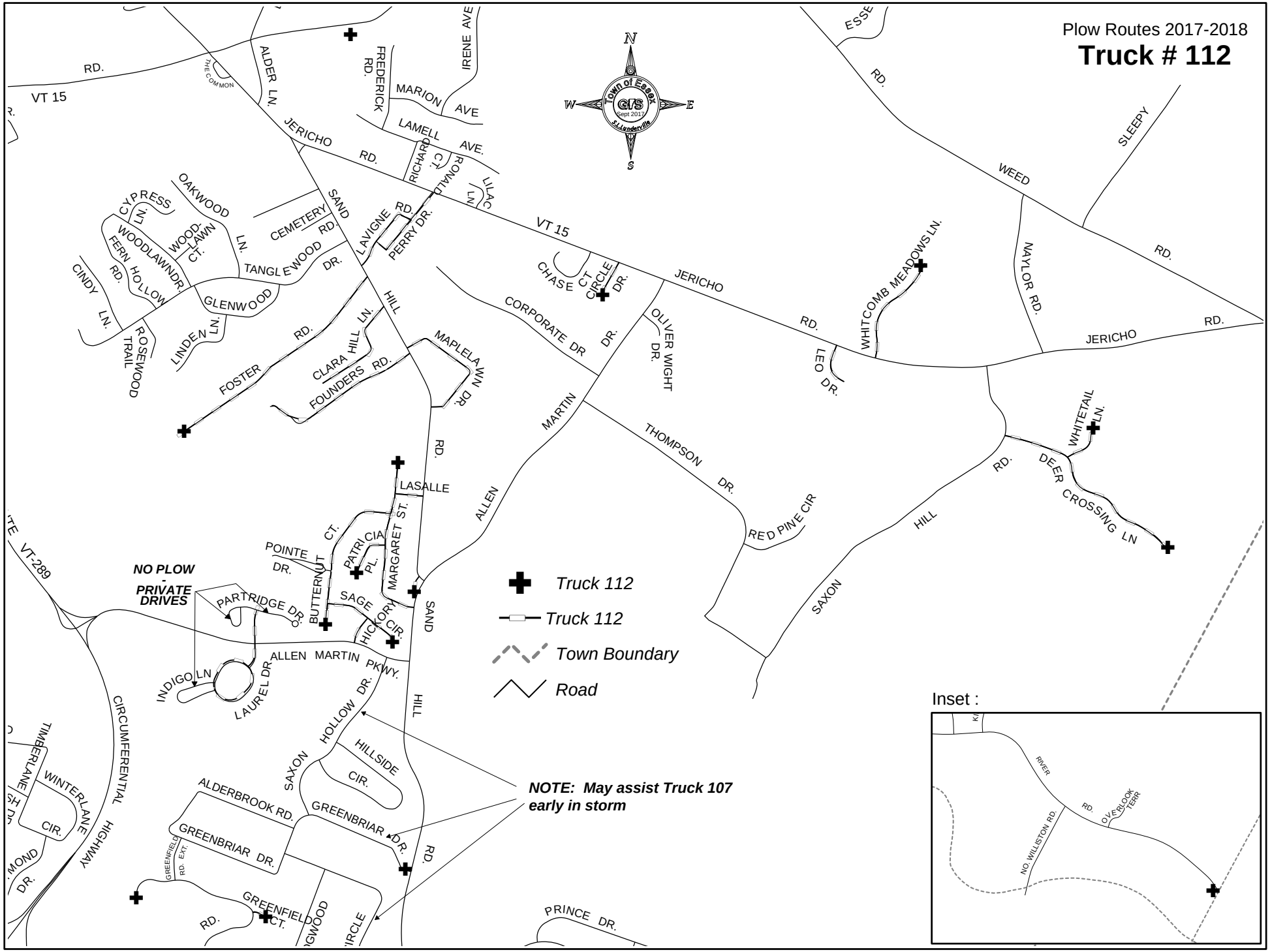

Plow Routes 2017-2018
Truck # 106
Milton
Westford
Colchester
Essex
Plow to Turnaround at Colchester / Milton town line
Plowed by Colchester
34 Plows this
and the park areas
Truck 34
Truck 34
Truck 106
Town Boundary
Road
Truck 103 Assist w / Salt
No Salt Zone

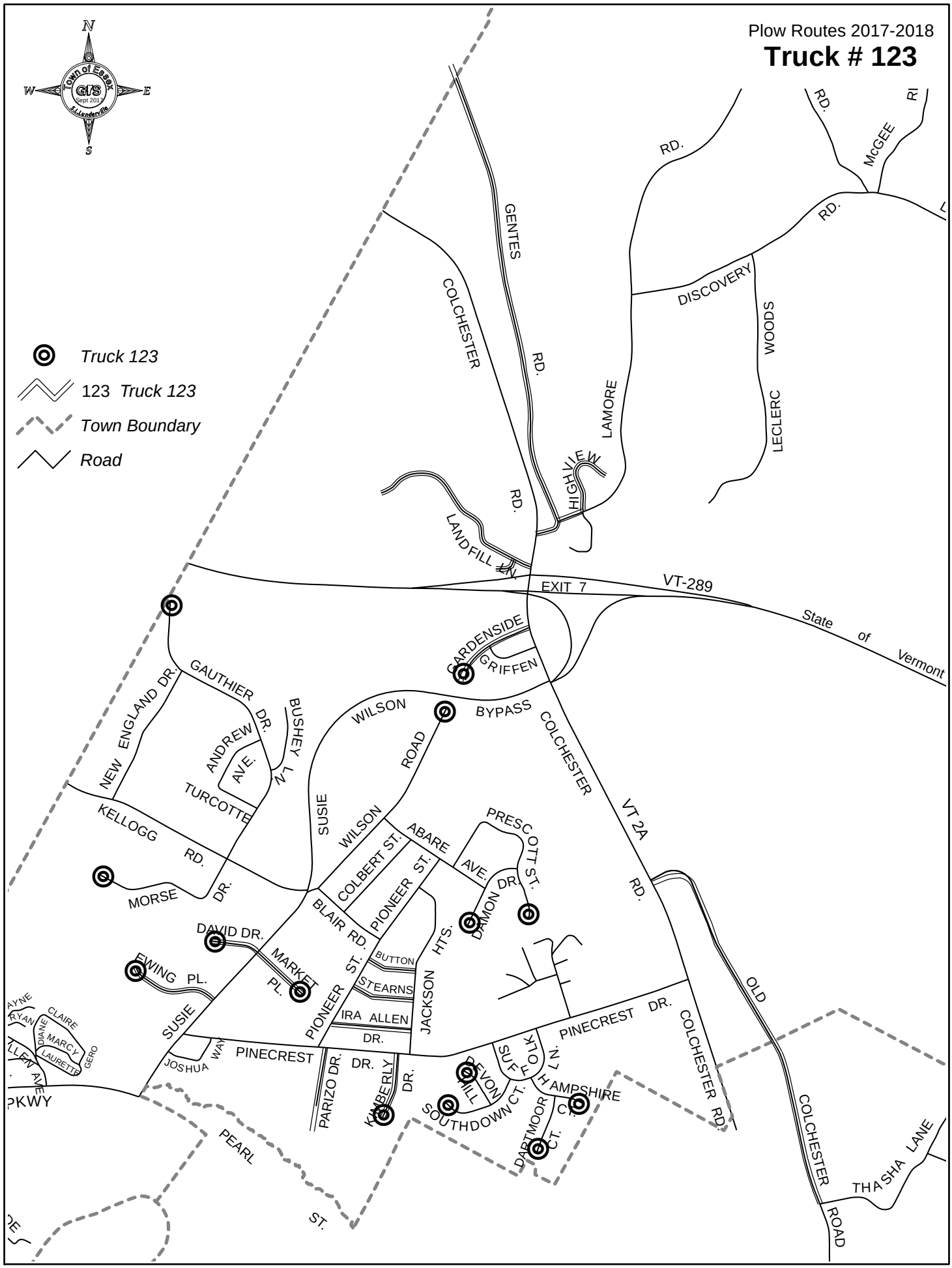

Plow Routes 2017-2018
Truck # 107
NOTE: May be assisted by Truck 112 early in the storm
Truck 107
Town Boundary
Road
Town of Essex
GIS
Sept 2017
S.L.Lunderville
N
S
E
W
VT 15
VT 128
VT-289
VT 117
ROUTE VT-289
State of Vermont
CIRCUMFERENTIAL HIGHWAY
EXIT 10
EXIT 12
JERICHO RD.
CENTER RD.
ALLEN MARTIN PKWY.
SAND HILL RD.
RIVER RD.
ESSEX WAY
FREEMAN WOODS
CHELSEA
CABOT DR.
CRAFTSBURY CT.
LONDONDERRY LANE
KANA LN.
SUNSET DR.
LYON LN.
SAYBROOK RD.
COMMONWEALTH
CARMICHAEL STREET
B. BUTLER
ALDER LN.
IRIS ST.
BIXBY
FREDERICK RD.
MARION AVE
IRENE AVE
LAMELL AVE.
RICHARD CT.
RONALD LN.
LILAC LN.
CHASE CT.
CIRCLE DR.
OLIVER WIGHT DR.
CORPORATE DR.
THOMPSON DR.
MARTIN
ALLEN
LAVIGNE RD.
PERRY DR.
CEMETERY RD.
OAKWOOD LN.
CYPRESS LN.
WOODLAWN DR.
WOOD-LAWN CT.
FERN HOLLOW RD.
CINDY LN.
ROSEWOOD TRAIL
TANGLEWOOD DR.
GLENWOOD
LINDEN LN.
FOSTER RD.
CLARA HILL LN.
FOUNDERS RD.
MAPLELAWN DR.
LASALLE
MARGARET ST.
PATRICIA PL.
POINTE DR.
BUTTERNUT CT.
PARTRIDGE DR.
SAGE CIR.
HICKORY
INDIGO LN
LAUREL DR.
HOLLOW DR.
SAXON
HILLSIDE CIR.
ALDERBROOK RD.
GREENBRIAR DR.
GREENFIELD CT.
LOGWOOD CIRCLE
GREENFIELD RD.
BAKER ST.
PRINCE DR.
KIMO DR.
OVERLOOK TERR
NO. WILLISTON RD.
LANG DR.
DOUBLEDAY LN.
STANNARD WAY
LIDA DR.
HAGAN DR.
REPA DR.
SYDNEY DR.
BASHAW
DEBRA DR.
EVERGREEN
STONEBROOK CIR.
WILDWOOD DR.
RUSTIC DR.
CREEK RD.
WINDRIDGE ROAD
TIMBERLANE DR.
WINTERLANE CIR.
HEATHERBUSH RD.
FOREST RD.
SKYLINE DR.
RIDGE RD.
KURK DR.
WOLFF DR.
RIVER VIEW DR.
PERKINS DR.
RAYMOND DR.
PINEWOOD DR.
VALLEYVIEW DR.
OLD RD.
CHELSEA
CABOT DR.
CRAFTSBURY CT.
LONDONDERRY LANE
CENTER RD.
UPPER MAIN ST.
CARMICHAEL STREET
B. BUTLER
ESSEX WAY
EXIT 10
EXIT 12


Plow Routes 2017-2018
Truck # 107
POINTE DR.
BUTTERNUT
PATR
PL.
MARGAF
SAGE
HICKORY CIR.
SAND
PARTRIDGE DR.
ALLEN MARTIN PKWY.
INDIGO LN
LAUREL DR
HOLLOW DR.
HILL
SAXON
HILLSIDE CIR.
CIRCUMFERENTIAL HIGH
ALDERBROOK RD.
GREENBRIAR DR.
GREENBRIAR DR.
GREENFIELD RD. EXT.
RD.
GREENFIELD CT.
RD.
LOGWOOD CIRCLE
GREENFIELD
BAKER ST.
KIMO DR.
RIVER
VT 117
NOTE: May be assisted by Truck 112 early in the storm
Truck 107
Town Boundary
Road
N
W
E
S
Town of Essex
GIS
Sept 2017
St.Lunderville


Plow Routes 2017-2018
Truck # 107
ermont
ROUTE VT-289
CIRCUMFERENTIAL HIGHWAY
DOUBLEDAY LN.
STANWARD WAY
DR.
DR.
LIDA
HAGAN
REPA DR
SYDNEY DR.
BASHAW
DR.
DEBRA
DR.
SYDNEY
STONEBROOK CIR.
EVERGREEN
WILDWOOD DR.
RUSTIC
CREEK RD.
WINDRIDGE ROAD
TIMBERLANE
WINTERLANE
CIR.
FOREST
FOREST RD.
SKYLINE RD.
RIDGE RD.
HEATHERBUSH RD.
DR.
DR.
DR.
KURK DR.
WOLFF RIVER DR.
PERKINS VIEW DR.
RAYMOND DR.
PINEWOOD DR.
VALLEYVIEW
RIVER RD.
RIVER
EXIT 12
N
W
E
S
Town of Essex
GIS
Sept 2017
St. Lunderville
Truck 107
Town Boundary
Road


Plow Routes 2017-2018
Truck # 108
or Grader
108 Sands
107 Plows
Truck 108
Town Boundary
Road
Truck 34 Assist w/ Salt
Truck 104 Assist w/ Salt
Any # Assist w/ Salt
N
S
E
W
Town of Essex
GIS
Sept 2017
S.L.Lunderville
PETTINGILL RD.
CHAPIN RD.
BROWNS RIVER RD.
VT 128
CATELLA RD.
OSGOOD HILL RD.
HANLEY LN.
SAWMILL RD.
WEST SLEEPY HOLLOW RD.
OLD PUMP RD.
GRAY WAY
SLEEPY HOLLOW RD.
LAWRENCE HEIGHTS
WEED RD.
ESSEX HIGHLANDS
JERICHO RD.
VT 15
WHITCOMB MEADOWS LN.
NAYLOR RD.
WHITETAIL LN.
DEER CROSSING LN
SAXON HILL RD.
RED PINE CIR
THOMPSON DR.
ALLEN MARTIN RD.
CORPORATE DR
CHASE CT
CIRCLE DR.
OLIVER WIGHT DR.
LEO DR.
MAPLELAWN DR.
FOSTER RD.
CLARA HILL LN.
FOUNDERS RD.
LASALLE
MARGARET ST.
PATRICIA PL.
POINTE DR.
BUTTERNUT CT.
PARTRIDGE DR.
SAGE CIR.
ALLEN MARTIN PKWY.
INDIGO LN
LAUREL DR.
HOLLOW DR.
HILLSIDE CIR.
SAND HILL
JOSEPH THOMAS LN.
IRENE AVE
MARION AVE
LAMELL AVE.
FREDERICK RD.
ALDER LN.
CEDAR CT.
BLUESTEM RD.
CEDAR ST.
CLOVER DR.
CARDINAL
THRUSH
STEELEBERRY RD.
BLACKBERRY RD.
BOBO LINK CIR.
IRIS ST.
OAKWOOD LN.
CEMETERY RD.
TANGLEWOOD DR.
GLENWOOD
LINDEN LN.
ROSEWOOD
LAVIGNE RD.
PERRY DR.
CHASE CT.


Plow Routes 2017-2018
Truck # 112
Truck 112
Truck 112
Town Boundary
Road
NOTE: May assist Truck 107 early in storm
NO PLOW - PRIVATE DRIVES
Inset :
Town of Essex
GIS
Sept 2017
S.L.Lunderville
VT 15
VT-289
JERICHO RD.
ALDER LN.
FREDERICK RD.
MARION AVE
IRENE AVE
LAMELL AVE.
RICHARD CT.
RONALD
LILAC LN
SAND HILL RD.
LAVIGNE RD.
PERRY DR.
CEMETERY RD.
OAKWOOD LN.
CYPRESS LN.
WOODLAWN DR.
WOOD-LAWN CT.
FERN HOLLOW RD.
CINDY LN.
ROSEWOOD TRAIL
TANGLEWOOD DR.
GLENWOOD
LINDEN LN.
FOSTER RD.
CLARA HILL LN.
FOUNDERS RD.
MAPLELAWN DR.
CHASE CT
CIRCLE DR.
CORPORATE DR
OLIVER WIGHT DR.
MARTIN
THOMPSON DR.
RED PINE CIR
LEO DR.
WHITCOMB MEADOWS LN.
NAYLOR RD.
WEED RD.
SLEEPY
ESSE RD.
WHITETAIL LN.
DEER CROSSING LN
SAXON HILL RD.
LASALLE
MARGARET ST.
PATRICIA PL.
POINTE DR.
BUTTERNUT CT.
SAGE CIR.
HICKORY
PARTRIDGE DR.
ALLEN MARTIN PKWY.
INDIGO LN
LAUREL DR.
HOLLOW DR.
HILLSIDE CIR.
ALDERBROOK RD.
GREENBRIAR DR.
GREENFIELD RD. EXT.
GREENFIELD CT.
PRINCE DR.
CIRCUMFERENTIAL HIGHWAY
TIMBERLANE
WINTERLANE CIR.
RIVER RD.
OVERLOOK TERR
NO. WILLISTON RD.


Plow Routes 2017-2018
Truck # 123
Truck 123
123 Truck 123
Town Boundary
Road
N
S
E
W
Town of Essex
GIS
Sept 2017
S.J.Lunderville
GENTES
RD.
COLCHESTER
RD.
LAMORE
HIGHVIEW
DISCOVERY
WOODS
LECLERC
McGEE
RD.
LANDFILL LN.
EXIT 7
VT-289
State of Vermont
GARDENSIDE
GRIFFEN
BYPASS
WILSON
ROAD
COLCHESTER
VT 2A
RD.
GAUTHIER DR.
NEW ENGLAND DR.
ANDREW AVE.
BUSHEY LN
TURCOTTE
KELLOGG RD.
MORSE DR.
SUSIE
WILSON
COLBERT ST.
PIONEER ST.
ABARE AVE.
PRESCOTT ST.
DAMON DR.
BLAIR RD.
DAVID DR.
EWING PL.
MARKET PL.
BUTTON
STEARNS
IRA ALLEN DR.
JACKSON HTS.
PIONEER ST.
SUSIE
JOSHUA WAY
PINECREST DR.
PARIZO DR.
KIMBERLY DR.
DEVON MILL
SOUTHDOWN CT.
SUFFOLK LN.
HAMPSHIRE CT.
DARTMOOR CT.
PINECREST DR.
COLCHESTER RD.
OLD COLCHESTER ROAD
THASHA LANE
PEARL ST.
PKWY
CLAIRE
MARCY
LAURETTE
GERO
DIANE
RYAN
AVE

SECTION 2, APPENDIX E

TOWN OF ESSEX
PUBLIC WORKS NOTIFICATION LIST

NOT AVAILABLE IN PUBLIC VERSION

Date / Day	Time From	Time To	Hrs	Air Cond.	Ground Cond.	Total Hrs.	Sand CY	Salt CY	Sand/Salt CY	CaCl2	Other Material	Fuel Gal.	Comments
Mon													
Tues													
Wed													
Thurs													
Fri													
Sat													
Sun													
Week Totals													

Ending Mileage _____

Starting Mileage _____

Total _____

Operators _____

Air Conditions

1. Clear
2. Fog/Mist
3. Rain
4. Sleet
5. Light Snow
6. Heavy Snow
7. High Winds

Weather Conditions

A. Dry
B. Icy/Freezing
C. Black Ice
D. Dusting of Snow
E. Light Snow Cover (less than 1”)
F. Moderate Snow Cover (1” to 3”)
G. Heavy Snow Cover (over 3”)
H. Drifting/Blowing on Road

SECTION 2, APPENDIX G
2017-2018
TOWN TOWING ORDINANCE

Chapter 7.24

TOWING

Sections:

7.24.010 Findings.
7.24.020 Seasonal hours when parking prohibited.
7.24.030 Unattended or obstructing vehicles prohibited.
7.24.040 Removal of Vehicles authorized when.
7.24.050 Towed vehicles – Registered owner responsibility.
7.24.060 Commercial towing service authorized when.
7.24.070 Redemption of towed and stored vehicles – Costs.
7.24.080 Citing in addition to towing when.
7.24.090 Chapter provisions not exclusive.

7.24.010 Findings.

It has been determined that motor vehicles parked in such a manner as to create or constitute an impairment to traffic or to interfere with the removal of snow or ice, of the sanding or salting of public streets and highways or to delay or preclude the delivery of emergency services, police, fire and ambulance, constitute a hazard contrary to the public health, safety and welfare, and therefore the selectmen of the town of Essex ordain as set out in this chapter (Preamble of Ord. Passed 2/27/78)

7.24.020 Seasonal hours when parking prohibited.

Any person who shall park or leave unattended a vehicle of any type on any street, road or highway during the period beginning December 1st through April 1st of the following year after midnight and before seven a.m. shall be in violation of this chapter (§ 4 of Ord. Passed 2/27/78)

7.24.030 Unattended or obstructing vehicles prohibited

Any person who shall leave parked of unattended a vehicle of any type which is a hazard to the safe flow of traffic, blocks the use of fire hydrants, or obstructs the movement of emergency vehicles, shall be in violation of this chapter. (§ 6 of Ord. passed 2/27/78)

7.24-040 Removal of vehicles authorized when.

In time of actual emergency, the fire department or ambulance crews may remove vehicles as described in Section 7.24.030 above by operating, pushing, using other vehicles or manpower, or by towing or pushing by other vehicles and may enlist person and vehicles or others to assist in such removal without the assistance of police officer as required by Section 7.24.060, when life or property

would be jeopardized by the delay of summoning police officers. (§ 6 of Ord. passed 2/27/78)

7.24.050 Towed vehicles – Registered owner responsibility.

Any vehicle found in violation of this chapter and towed shall be deemed under the control of the registered owner at the time of parking. (§ 3 of Ord. passed 2/27/78)

7.24.060 Commercial towing service authorized when.

Any vehicle found in violation of this chapter may be removed by a commercial towing service upon the orders of any state of local police officers, constable or deputy sheriff.
(§ 1 of Ord. passed 2/27/78)

7.24.070 Redemption of towed and stored vehicles – Costs.

Any vehicle removed to storage under this chapter may be redeemed by the owner of the vehicle upon payment of all towing charges, storage charges or other expenses incurred in the moving of the vehicle, except that the charge of towing and storage for each vehicle shall not exceed an amount as established by the town manager. (Ord. passed 9/08/03 (part): Ord. passed 5/15/89: § 2 of Ord. passed 2/27/78)

7-24-080 Citing in addition to towing when.

Any person who parks of leaves unattended any vehicle contrary to this chapter may, in addition to having such vehicle towed, be cited by any police officer, in an action returnable to the district court, where upon conviction a fine not to exceed fifty dollars may be imposed. (§ 7 of Ord. passed 2/27/78)

7.24.090 Chapter provisions not exclusive.

The ordinance codified in this chapter is in addition to and separate form any other ordinance of the Town of Essex, and Vermont Statutes regulating parking or interference with traffic or emergency services. (§ 9 of Ord. passed 2/27/78)

SECTION 3

WINTER OPERATIONS SPECIFIC TO THE VILLAGE OF ESSEX JUNCTION

SECTION 3

WINTER OPERATIONS SPECIFIC TO THE VILLAGE

OF ESSEX JUNCTION

General

The Village of Essex Junction Public Works Department has the responsibility of maintaining essential services on over 35 miles of accepted Village roads, all of which are paved, 38 miles of paths/sidewalks of which 32 miles are plowed, as well as over 40 miles of waterline, over 40 miles of sewer, over 1,700 catch basins and associated piping and maintenance of public buildings. A significant portion of the Department's overall efforts are directed towards maintaining the essential transportation and utility services during the winter season.

The Village Public Works Superintendent has direct responsibility for management of the Department, acting under the general policy direction of the Municipal Manager and authority of the Village Trustees. The Public Works Superintendent manages six functional areas within the Department - Administration, Vehicle Maintenance, Highway, Conservation, Water/Sewer and Public Buildings. The Public Works Superintendent is responsible for winter field-crew operations. Section 3, Appendix A contains an organizational chart identifying Department structure; Section 3, Appendix B lists vehicle and route assignments; Section 3, Appendix C lists vehicles available for plowing.

The general procedures used by the Village during winter operations have been identified in Section 1. More specific details on Village operations are as follows:

Pager Responsibility

During the winter of 2017-2018 the non-working-hours on-call responsibility will be shared among selected Public Works Highway employees rotating on a published schedule. The person on-call will make an initial determination on how the storm event will be handled. The on-call employee will be temporarily in charge of operations until the Public Works Superintendent, arrives and takes over responsibility. A list of persons being on-call and dates has been published and is in effect.

If contact cannot be made with the on-call employee, the Public Works Superintendent should be called followed by use of the Notification list identified in Section 3, Appendix E.

Winter Storm Operations

Determination of Village Operations

Using the resources available to the Village and judgment based on experience, the Public Works Superintendent, or his designated representative, will determine the appropriate level and timing of snow and ice control to be performed by the Department. The Superintendent of Public Works, or his designee, will contact employees in the Department using the alert notification list.

Control Center

Upon notification, employees at the Village Highway Garage off Jackson Street complete a pre-startup check of equipment and proceed to perform the necessary snow and/or ice clearing operations. The Control Center is contacted either using the Highway Garage telephone number or the Superintendent's number.

Equipment

To support the operation, the Department has equipment available as noted in Section 3, Appendix C. Three 7 cy dump trucks have automatic salt calibration devices installed (#34, #6, #5) as well as 1 of the 3 cy dump trucks (low pro #7).

Materials

At the Highway Garage yard located off Jackson Street, ice and snow clearing materials are stockpiled for use during the winter season. The materials used by the Village are:

250 tons of sand.

Approximately 800 tons of salt are maintained on-site in covered salt sheds. Other alternative chemical/organic products will be purchased and stored this year for use during low temperature situations.

As the on-site stockpile of salt is depleted, additional salt is ordered. The primary Village source currently being used is:

Cargill Salt Company
c/o Barrett's Trucking
16 Austin Drive
Burlington, VT 05401

Another potential source is:

American Rock Salt Co, LLC
P.O. Box 190
MT. Morris, NY 14510

Alternative deicing agents such as Magic Salt or Ice-Be-Gone are utilized under certain conditions. It is rock salt treated with a liquid, agricultural by-product of the distilling process blended with magnesium chloride. It is applied in combination with straight rock salt as a material that is effective at lower temperatures. It is less corrosive than calcium chloride, biodegradable and has less impact on the environment. The product is sprayed onto rock salt and then mixed to create a semi-homogeneous mixture. The Ice-Be-Gone is obtained through the following distributor:

Magic Salt of Vermont
9 Oak Street
St Albans VT 05478

Snow Plowing and Salting Operations

The Public Works Department has organized the equipment into three subareas of the Village for routine operations. The areas are designated red, green and blue. The red area covers the northwestern part of the Village; the green area covers the central and northwestern area and the blue area covers the southern and southwestern portion. The smaller Low Pro and pic-up trucks are generally used to plow the smaller, less travelled routes and for clearing of the municipal parking lots. Each complete route for a single truck takes in excess of 3.5 hours to complete, once a major snow event is over.

1. The Village plan for clearing of roads generally follows the priority of State road classification:

   a. Class 1 Town highways are those town highways which form the extension of a State highway route and which carry a State highway route number.
   b. Class 2 town highways are those town highways selected as the most important highways in each town. As far as practicable they shall be selected with the purposes of securing trunk lines of improved highways from town to town and to places which by their nature have more than the normal amount of traffic.

The Trustees, with the approval of the Agency of Transportation, shall determine which highways are to be Class 2 highways.

c. Class 3 town highways are all traveled town highways other than Class 1 or 2 which meet certain standards by the Agency of Transportation.
d. Class 4 town highways are all those highways that are not Class 1, 2 or 3. There are none in the Village.

2.The routes have been established to provide highest priority coverage to the designated Class 1 roads with heaviest usage (the major arterials) and history of severest conditions and/or accidents. The highest priority roads are:

<u>Trucks 5 and 6 Plow the Class 1 roads in tandem</u>
Park Street
Maple Street
Lincoln Street
Pearl Street
Main Street

3. Other high traffic volume roads, including all of the Class 2 roads follow shortly after the Class 1 roads or in conjunction with the plowing on the Class 1 roads:

<u>Trucks 5 and 6 Plow independently:</u>
West Street
South Street (east of West Street)
South Summit Street
Iroquois Road

<u>Truck 34</u>
Brickyard Road/Mansfield Avenue
Assists with salting the Class 1 and 2 roads
Other critical Red Zone roads

<u>Truck 7</u>
Prospect St.
Hillcrest Road
West Hillcrest Road
Other critical Green Zone roads

4. The next priority of plowing is the collector roads and lesser traffic volume roads within each color zone. Typical collector roads are Cascade Street, Fairview Drive, Rivendell Drive, Central Street, etc. Because of their location adjacent to collector streets, many minor streets (not including dead-end streets and cul-de-sacs) will be cleared concurrent with collector streets or immediately following the collector streets. Dead-end streets follow in priority,

although many may be cleared earlier in the process to meet the objectives of cycling and access on steep grades. In general, the trucks plow in the following areas:

Truck 5 and 6 : Blue Zone
Truck 7: Green Zone
Truck 34: Red Zone

5. The cycle capability of each vehicle will be maximized so that unnecessary reload trips are not made for re-supply of materials at the Highway Garage.

6. Plow routes are designed for mostly right-hand turns to avoid leaving windrows in intersections.

7. Sidewalk clearing throughout the Village begins concurrent with street plowing. It is an important and critical element of the overall snow clearing operation due to the absence of school busing and the significant number of people who use the sidewalks in the winter. Only during periods of continuous heavy snowfall over an extended time frame will sidewalk clearing be delayed for clearing of streets.

8 .The general plan for clearing of sidewalks is for all Class 1 and Class 2 roads with sidewalks or paths to be cleared on both sides of the road with the sidewalks on Class 3 roads cleared on only one side. Sidewalk clearing is performed concurrent with road clearing.

9. Sidewalk clearing is performed by both permanent and temporary employees using two sidewalk plows. A one-pass coverage of the sidewalks designated for plowing takes from 3.5 hours (v-plow) to 15 hours (blower) to accomplish with the two employees and two sidewalk plows.

10. Sidewalk clearing will be reduced and generally stopped in late spring when conditions indicate the sidewalks are useable and the sidewalk plows will do damage to private property and lawns.

Special Practices for 2017-2018

1. The winter of 2016-2017 was characterized by harsh conditions with ~~low~~ moderate snowfall and ice with an increase in materials usage and overtime. Availability of salt, sand and other materials was not a problem. A comparison of overtime and materials provides an indicator of activity level and conditions over the last year (note that overtime is estimated at 80% of overtime hours).

	2015-2016 (actual)	2015-2016 (actual)	2016-2017 (budget)	2017-2018 (budget)
Overtime ~~(cost)~~ (manhours)	497	1,000	966	1,000
Materials ~~(cost)~~ (salt/tons)	910	1,300	1,362	1,400

2. Significant changes are not planned for the winter of 2017-2018. Public Works will purchase the deicing agent directly and fill storage tanks onsite. Public Works will then mix the product with the road salt, saving costs. In addition, the trucks will be calibrated both before the season and partially through the season to ensure more accurate application rates.

3. Salt use will be applied at reduced levels where possible, on flat roads and cul-de-sacs but not eliminated.

4**.** The areas of sidewalk clearing are kept level from last year. With the sidewalk on the eastern portion of Maple Street and the ~~installation of a~~ linking sidewalk on River Road in the Town, the Village will plow the sidewalk out to the general area of JP's Restaurant. The location is too isolated and far for the Town sidewalk plow to cover and there is a demonstrated need to keep the sidewalk in this area open due to the influx of new businesses along River Road.

5. During the evening hours of a storm event between 9:00 P.M. and 3:00 A.M., unless there is a continuous heavy snowfall or continuous ice storm, Village forces will be reduced to a minimum staffing or no staffing.

6. Each driver is given the responsibility to make decisions regarding the blend of materials and application rates to keep the roads trafficable and reasonably safe while concurrently minimizing costs. However, the Superintendent, or his designated representative, will establish a general material type and application rate prior to each major storm event, and employees are expected to use these settings as a starting point for the storm.

7. The Village used contract plowing services last year to plow the area of Railroad Ave., Lincoln Place, Lincoln Hall, the Fire Station and a portion of Main Street. The call for contract services generally occurs when the projected snowfall accumulation is on the order of 3 to 4 inches. In the past this request for assistance has been handled informally and the intent is to formalize this service through a more formal services agreement.

8. It is important to note that the plan which has been presented and the accompanying map are subject to change with each storm. Also, the time frame for clearing can vary markedly, depending upon conditions and continuing effects of a storm. Other factors affecting the plan are:

night-time plowing
commuter traffic
parked cars
equipment breakdown
assistance to the Fire or Police Departments
time length since the start of the storm
availability of materials
budget funds

11. In order to guide the Department in utilizing the best available techniques in snow and ice clearing operations, a set of guidelines (not requirements) is provided in Section 1, Appendix 4. Operator judgment and close control of materials are key elements in managing snow/ice clearing operations.

Village snow removal operations generally will not start until one hour after the initial call, because of the time factor in getting crews in, equipment checked and materials loaded. Also, with routes requiring three to four hours to plow completely, notification has to occur by 2 AM or it is not likely that the major roads will be open by 7 AM.

Use of Sand / Salt from the Village Highway Garage

The Village of Essex Junction expects that homeowners and businesses will obtain sand and salt from the private sector for use in keeping their driveways and walkways clear. The clearing of private driveways / walkways is the responsibility of the individual property owner as noted in Title 24, section 2291.

The Village prohibits the taking of any amount of road salt from the Village highway garage for use on private driveways.

It is understood that emergency (non-routine) situations may occur, such as during an ice storm, when residents may need sand on an emergency basis. It is not considered an emergency when local businesses that sell sand are open and sand is readily available for purchase. In emergency situations, residents and businesses may obtain sand from a stockpile inside the gate to the highway garage. It is intended that the "public stockpile" will not be accessed or used by any commercial venture engaged in snow clearing operations.

Mailbox Policy/Encroachment in the Public Right of Way/Lawn Restoration

Because of the volume of complaints specific to objects in the Village right-of-way and damage to property, the following policy has been established:

1. Title 19, Section 1111 prohibits encroachment of the Village right-of-way without prior approval by the Trustees. Objects in the ROW are placed there at the owner's risk and the Village assumes no responsibility for any damage to objects placed in violation of the statutes. Common items damaged are fences placed within the Village ROW, flowerpots, basketball hoops, etc.

2. To insure mail delivery to all residents, the Village has provided blanket authorization for mailboxes located in the Village right-of-way. The Village retains control over specific location of the mailboxes and may require the homeowner to move the box to a more suitable location.

   The Village will fix a damaged mailbox or replace a mailbox (up to a monetary limit of $45 per mailbox per event) only when the Department determines that a plow physically hit the mailbox. This determination is made by observation of cut marks, paint off the plow blades, etc.

   Heavy snow coming off the plow blade will often knock over and damage mailboxes which have not been adequately mounted or braced or those mailboxes whose doors have been left open. Also, mailboxes are damaged by private contractors and homeowners during driveway clearing operations. The Village will not fix or replace mailboxes in these situations.

   Owners of mailboxes have a responsibility to contact Public Works during daytime hours within 72 hours of damage to a mailbox if they intend to seek repairs, a new mailbox or reimbursement from the Village. The Village will inspect the mailbox to determine if it is the Village's responsibility for the mailbox damage. No payment of the $45 to replace a mailbox will be made by the Village until the replacement has been completed and verified as being in place by the Village.

   <u>The clearing around mailboxes is the sole responsibility of the owner and not the Village.</u> With the large number of streets to plow and limited municipal resources, Village plows cannot provide a level of service that clears the road to every mailbox.
   The Village will notify residents prior to the start of winter regarding mailboxes that need repair or movement. The Village will not repair mailboxes that are noted as being damaged or inoperative prior to winter.

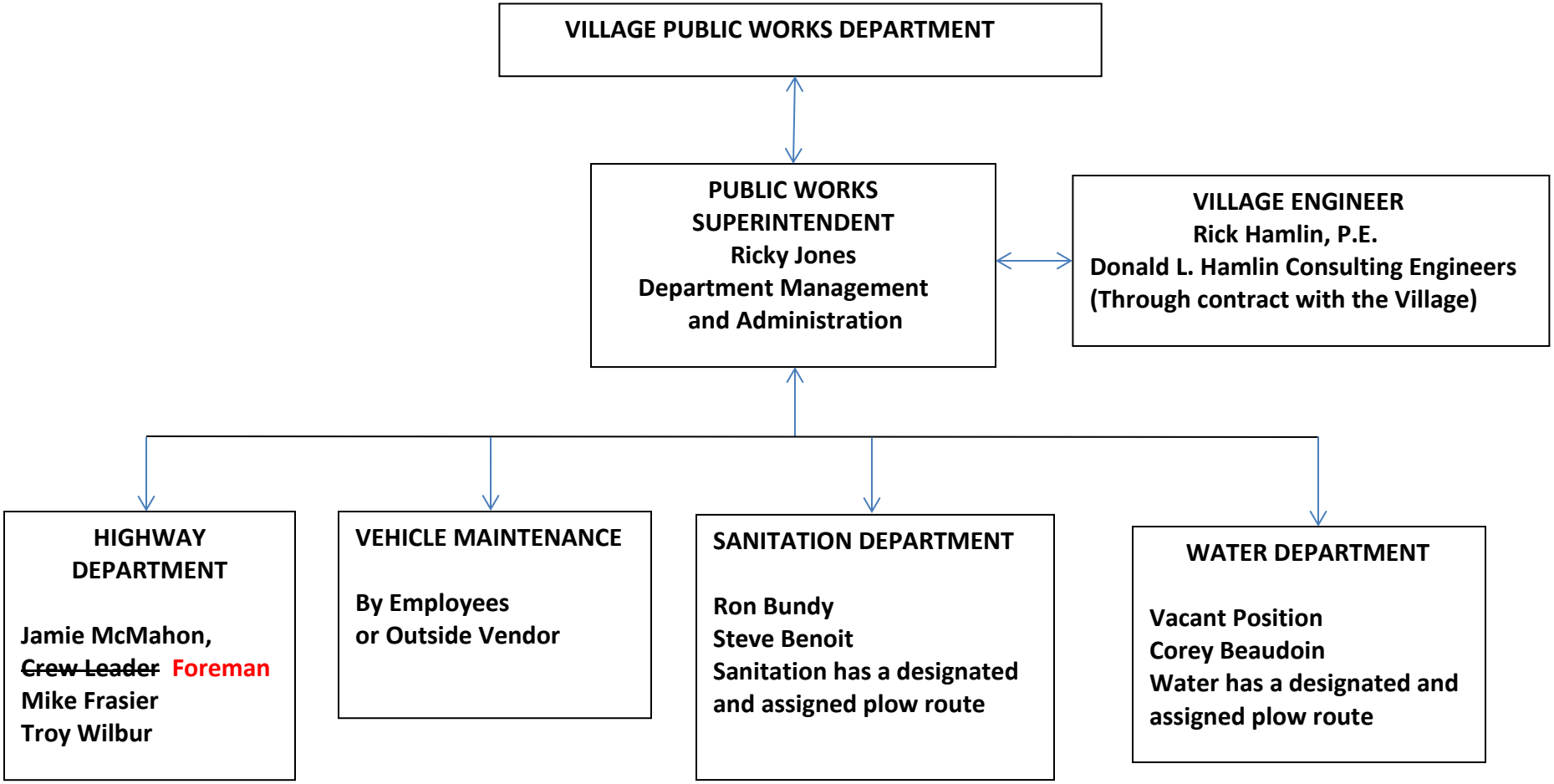
3. The Village will restore or replace objects outside the Village road right of way damaged as a result of its snow or ice clearing operations, only when it has been determined that the Village was responsible for the damage, consistent with the State Supreme Court Ruling in 2010.

4. Recovery of damages will be pursued by the Village, if Village equipment is damaged due to objects placed in the Village ROW.

5. Lawns damaged by municipal sidewalk plowing or municipal road plowing will be restored by the Village following the winter season.

SECTION 3, APPENDIX A
2017-2018

ORGANIZATIONAL CHART OF THE VILLAGE PUBLIC WORKS DEPARTMENT



SECTION 3, APPENDIX B
2017-2018

VILLAGE VEHICLE AND ROUTE ASSIGNMENTS

NOT AVAILABLE IN THE PUBLIC VERSION

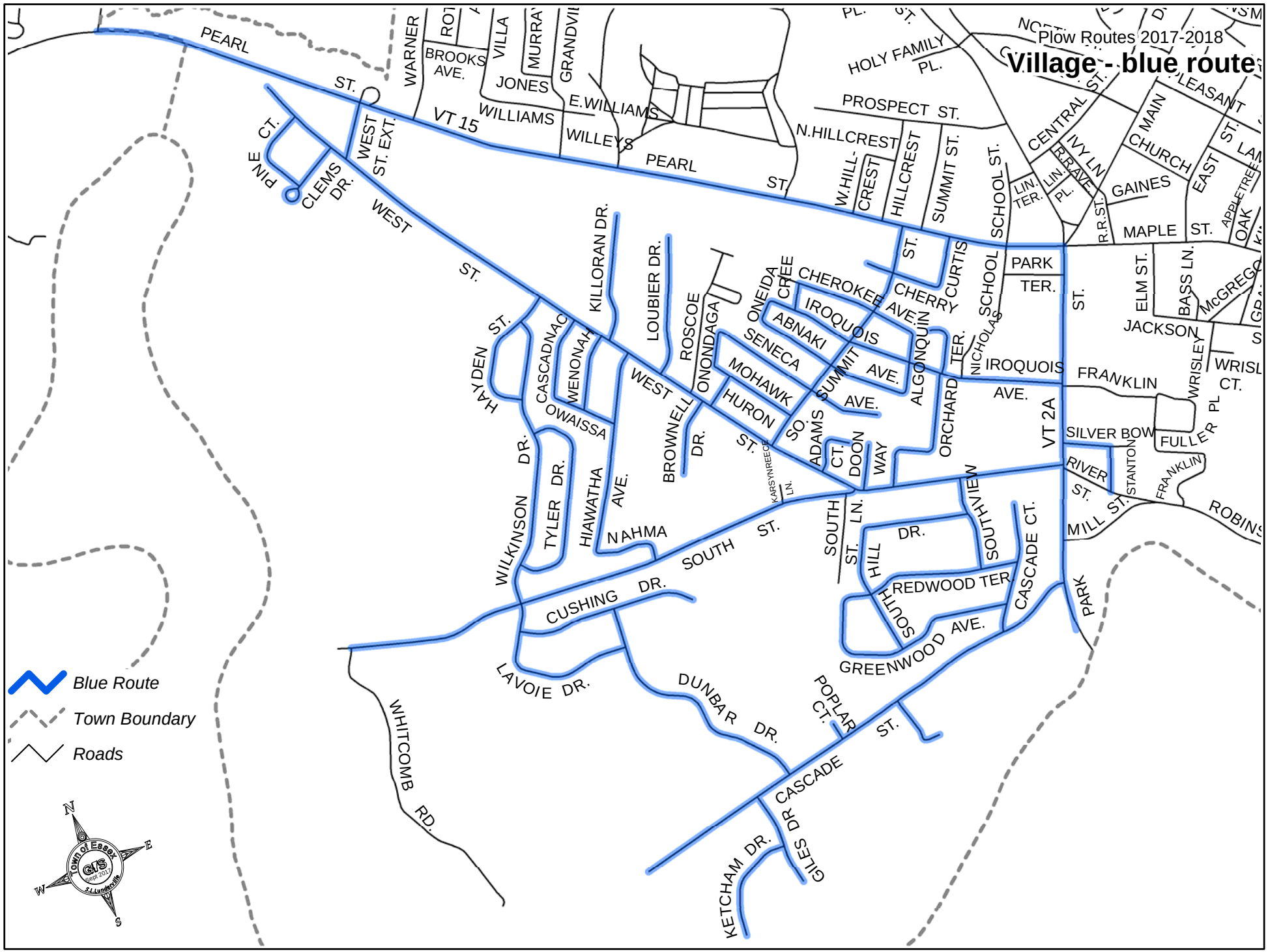
SECTION 3, APPENDIX C
2017-2018

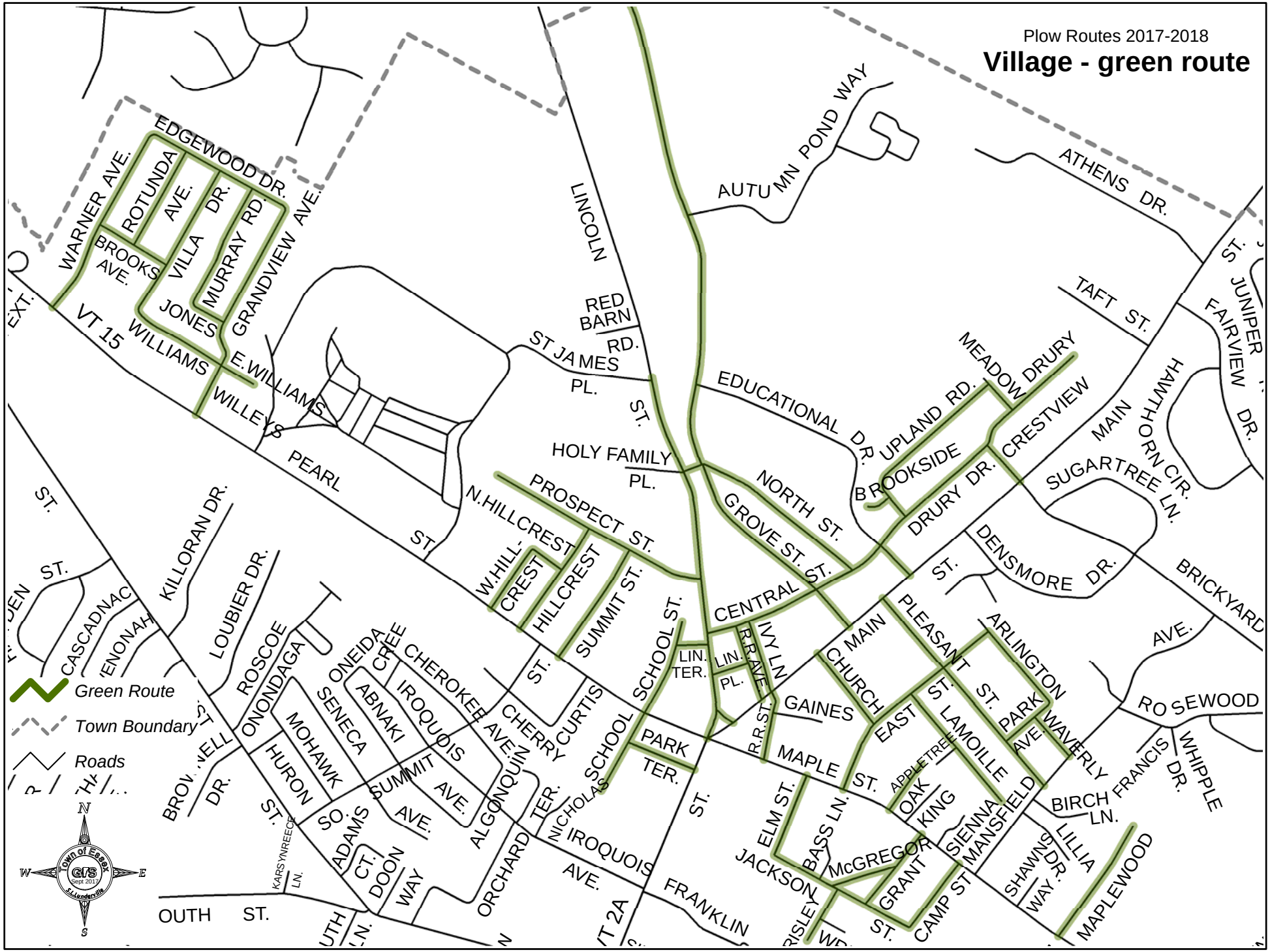
VILLAGE EQUIPMENT FOR SNOW OPERATIONS

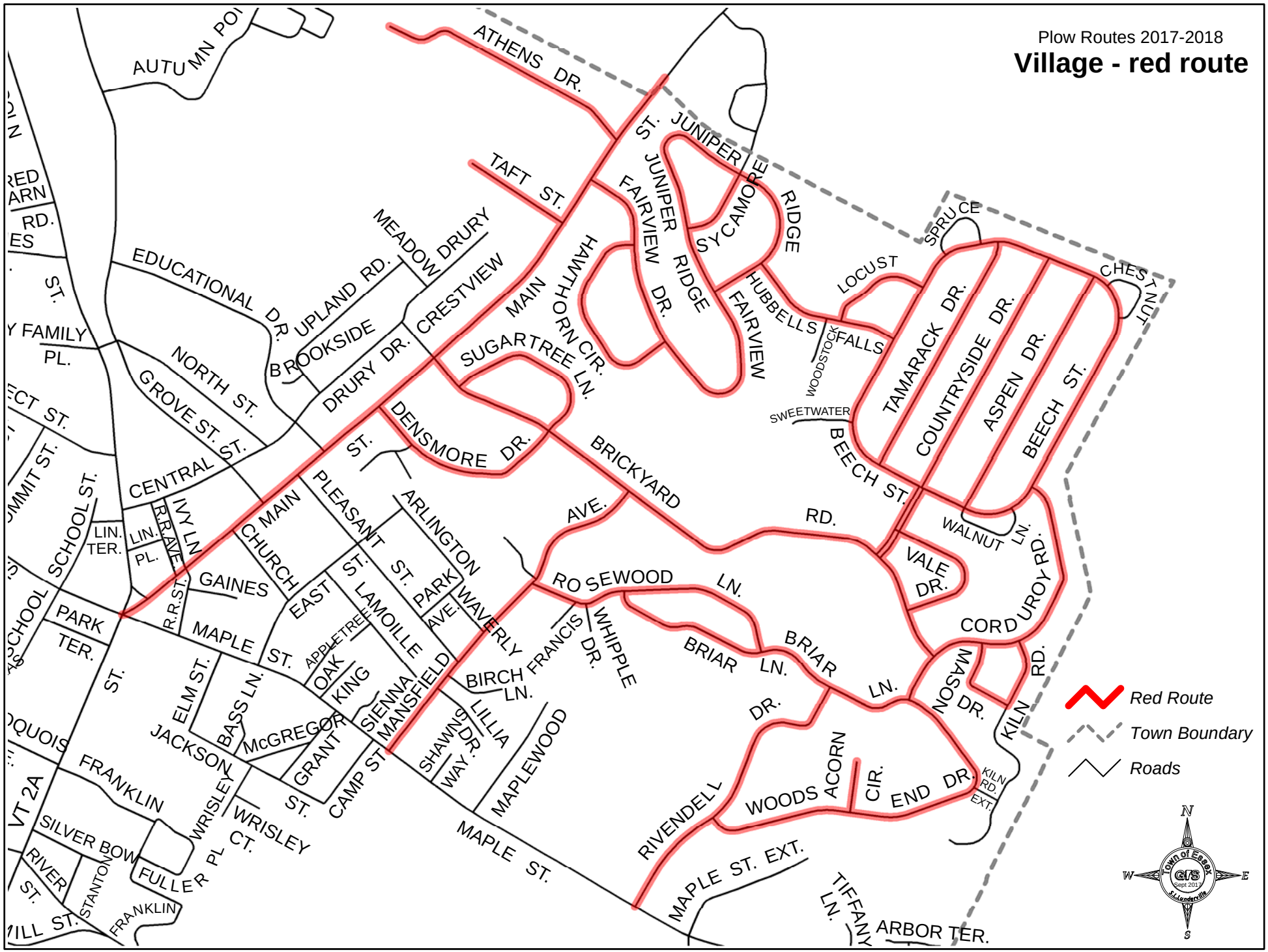
Truck #5	2014 Freightliner 7 cy. Dump Truck with tailgate sander, wing and all directional front plow
Truck #6	2015 Freightliner 7 cy. Dump Truck with tailgate sander, wing and all directional front plow
Truck #34	2016 Freightliner 7cy. Dump truck with multi-directional front plow, tailgate sander and wing
Truck #7	2012 International 3 cy. Low Pro Dump Truck with all-directional front plow, tailgate sander and wing
Truck #1	2011 Chevrolet Pickup with v-plow and sander.
Truck #15	2011 Chevrolet Pickup with v-plow and sander.
Sidewalk Plow #10	2015 Trackless
Sidewalk Plow #11	2008 Belos
Loader #9	2013 Caterpillar 924K
Skid Steer #12	2001 Cat 228, Back up for sidewalk plowing

SECTION 3, APPENDIX D
2017-2018

MAPS OF HIGHWAY ROUTES (VILLAGE)


Plow Routes 2017-2018
Village - blue route
Blue Route
Town Boundary
Roads
PEARL ST.
VT 15
WEST ST.
WEST ST. EXT.
PINE CT.
CLEMS DR.
WARNER
BROOKS AVE.
VILLA
MURRAY
GRANDVIEW
JONES
WILLIAMS
E.WILLIAMS
WILLEYS
PEARL ST.
HOLY FAMILY PL.
PROSPECT ST.
N.HILLCREST
W.HILL-CREST
HILLCREST
SUMMIT ST.
SCHOOL ST.
CENTRAL ST.
IVY LN
R.R.AVE.
LIN. TER.
LIN. PL.
R.R.ST.
MAIN
CHURCH
GAINES
EAST ST.
APPLETREE
MAPLE ST.
OAK
PLEASANT
PARK TER.
ELM ST.
BASS LN.
McGREGO
JACKSON
WRISLEY
WRISL CT.
FRANKLIN
IROQUOIS AVE.
VT 2A
SILVER BOW
FULLER PL
RIVER ST.
STANTON
FRANKLIN
MILL ST.
ROBINS
PARK ST.
CURTIS
CHERRY
CHEROKEE AVE.
ONEIDA CREE
IROQUOIS
ABNAKI
SENECA
MOHAWK
HURON
SUMMIT AVE.
ALGONQUIN
NICHOLAS
ORCHARD TER.
ADAMS CT.
DOON WAY
SO.
KARSYNREECE LN.
KILLORAN DR.
LOUBIER DR.
ROSCOE
ONONDAGA
HAYDEN ST.
CASCADNAC
WENONAH
OWAISSA
WEST ST.
BROWNELL DR.
HIAWATHA AVE.
NAHMA
TYLER DR.
WILKINSON DR.
SOUTH ST.
SOUTH LN.
SOUTHVIEW
HILL DR.
SOUTH
REDWOOD TER.
CASCADE CT.
GREENWOOD AVE.
CUSHING DR.
LAVOIE DR.
DUNBAR DR.
POPLAR CT.
CASCADE ST.
GILES DR
KETCHAM DR.
WHITCOMB RD.
N
E
S
W
Town of Essex
GIS
Sept 2017
S.L.Lundervile


Plow Routes 2017-2018
Village - green route
Green Route
Town Boundary
Roads
EDGEWOOD DR.
WARNER AVE.
ROTUNDA AVE.
VILLA DR.
MURRAY RD.
GRANDVIEW AVE.
BROOKS AVE.
JONES
WILLIAMS
E.WILLIAMS
WILLEYS
VT 15
PEARL ST.
LINCOLN
RED BARN RD.
ST JAMES PL.
ST.
HOLY FAMILY PL.
PROSPECT ST.
N.HILLCREST
W.HILL-CREST
HILLCREST
SUMMIT ST.
AUTUMN POND WAY
ATHENS DR.
TAFT ST.
JUNIPER ST.
FAIRVIEW DR.
EDUCATIONAL DR.
MEADOW DRURY
UPLAND RD.
BROOKSIDE
CRESTVIEW
DRURY DR.
MAIN
HAWTHORN CIR.
SUGARTREE LN.
NORTH ST.
GROVE ST.
CENTRAL ST.
DENSMORE DR.
BRICKYARD AVE.
KILLORAN DR.
LOUBIER DR.
CASCADNAC
ROSCOE
ONONDAGA
ONEIDA
CREE
CHEROKEE AVE.
SENECA
ABNAKI
IROQUOIS
MOHAWK
HURON
SUMMIT AVE.
ALGONQUIN
CHERRY
CURTIS
SCHOOL ST.
LIN. TER.
LIN. PL.
R.R. AVE.
IVY LN
R.R. ST.
GAINES
MAIN
CHURCH
PLEASANT ST.
ARLINGTON
EAST ST.
LAMOILLE
PARK AVE.
WAVERLY
ROSEWOOD
MAPLE ST.
APPLETREE
OAK
KING
SIENNA
MANSFIELD
BIRCH LN.
FRANCIS
WHIPPLE DR.
ELM ST.
BASS LN.
McGREGOR
GRANT
CAMP ST
JACKSON
SHAWNS DR.
LILLIA WAY
MAPLEWOOD
PARK TER.
NICHOLAS
IROQUOIS AVE.
FRANKLIN
ORCHARD TER.
ADAMS
SO.
CT.
DOON WAY
KARSYNREECE LN.
OUTH ST.
VT 2A
N
S
E
W
Town of Essex
GIS
Sept 2017
S.L.Lunderville


Plow Routes 2017-2018
Village - red route
Red Route
Town Boundary
Roads
N
S
E
W
Town of Essex
GIS
Sept 2017
S.L.Lunderville
ATHENS DR.
TAFT ST.
JUNIPER ST.
JUNIPER RIDGE
SYCAMORE RIDGE
FAIRVIEW DR.
FAIRVIEW
HAWTHORN CIR.
MAIN
SUGARTREE LN.
DENSMORE DR.
BRICKYARD RD.
AVE.
ROSEWOOD LN.
BRIAR LN.
BRIAR LN.
WHIPPLE DR.
FRANCIS
BIRCH LN.
LILLIA DR.
SHAWNS WAY
MAPLEWOOD
MAPLE ST.
MAPLE ST. EXT.
TIFFANY LN.
ARBOR TER.
RIVENDELL DR.
WOODS ACORN CIR.
END DR.
KILN RD. EXT.
KILN RD.
MASON DR.
CORDUROY RD.
VALE DR.
WALNUT LN.
BEECH ST.
BEECH ST.
TAMARACK DR.
COUNTRYSIDE DR.
ASPEN DR.
SPRUCE
CHESTNUT
LOCUST
HUBBELLS FALLS
WOODSTOCK
SWEETWATER
EDUCATIONAL DR.
UPLAND RD.
MEADOW DRURY
CRESTVIEW
BROOKSIDE
DRURY DR.
NORTH ST.
GROVE ST.
CENTRAL ST.
MAIN ST.
PLEASANT ST.
ARLINGTON
CHURCH
EAST ST.
LAMOILLE
PARK AVE.
WAVERLY
GAINES
R.R.ST.
MAPLE ST.
APPLETREE
OAK
KING
SIENNA
MANSFIELD
ELM ST.
BASS LN.
McGREGOR
GRANT
CAMP ST
JACKSON ST.
WRISLEY CT.
WRISLEY
FULLER PL
FRANKLIN
SILVER BOW
RIVER ST.
STANTON
FRANKLIN
SCHOOL ST.
PARK TER.
LIN. TER.
LIN. PL.
IVY LN
R.R.AVE
AUTUMN POI
RED BARN RD.
Y FAMILY PL.
ECT ST.
UMMIT ST.
SCHOOL ST.
VT 2A
MILL ST.

SECTION 3, APPENDIX E
2017-2018
NOT AVAILABLE IN THE PUBLIC VERSION

SECTION 3, APPENDIX F
2017-2018

VILLAGE TOWING ORDINANCE

Village of Essex Junction, VT **Municipal Code**

SECTION 825. VIOLATION DEEMED NUISANCE – NOTICE, TOWING & CHARGES:

(a) The parking or leaving any vehicle in violation of this chapter is hereby declared to be a public nuisance.

(b) The fact that a vehicle which is illegally parked is registered in the name of the person, rental agency or company shall be prima facie proof that such person, rental agency or company was in control of the automobile at the time of such notice.

(c) It shall be sufficient notice of violation for a law enforcement officer to leave written notice on an official form securely on the vehicle indicating the violation, the time and date of the violation, the location of the violation, and the registration number of the vehicle, and such other information as seems appropriate.

(d) "Parking," for these purposes, shall mean leaving the vehicle at rest with or without an operator in attendance unless otherwise provided.

(e) The Public Works Department, the Fire Department of the Village of Essex Junction, or any lawful police official of the State of Vermont, are hereby authorized to remove and tow away, or have towed away, by commercial towing service, any vehicle illegally parked in any place where such parked vehicle violates this chapter, creates or constitutes a public nuisance, creates or constitutes a traffic hazard, blocks the use of fire hydrants, obstructs or may obstruct the movement of emergency vehicles, or interferes with the free flow of traffic, or has three or more unpaid violations. In addition to towing, a police officer may issue a ticket in accordance with Section g.

(f) A vehicle so towed away to storage under the provision of this chapter may be redeemed by the owner of the vehicle upon payment of all towing charges, storage charges, or other expenses incurred in the moving of the vehicle, except that the charge of towing each vehicle shall not exceed an amount as established by the Village Manager. The operator of the commercial towing service may hold such vehicle until such charges have been paid. In addition, any vehicle towed due to three or more outstanding violations shall be required to pay all fines prior to the vehicles being released to them by the commercial towing service.

(g) Any person who violates the provisions of this chapter may be ticketed for such offense by any lawful police official of the state of Vermont as listed below:

Twenty-five dollars per violation.

(h) The Village may choose to have a vehicle towed to a location other than a commercial storage facility and may choose to bear the cost of such towing (i.e. to clear streets for special events).

(i). The provisions of this chapter are declared to be separable in that any provision declared to be invalid shall not affect the validity of the remaining provisions.

VILLAGE OF ESSEX JUNCTION
MUNICIPAL CODE`

CHAPTER 2.
GENERAL REGULATION OF PUBLIC STREETS

SECTION 201: ENACTMENT AUTHORITY:

This article is adopted by the Trustees of the Village of Essex Junction pursuant to the authority granted them under Sec. 1.07 (d) and (e) of the Village Charter.

SECTION 2O2:

(a) No person shall throw or put, or cause to be thrown or put, snow or ice in any street, road park or public ground without first having secured permission of the Public Works Superintendent or his designee.

(b) No person shall sprinkle any salt, or chloride in any street, road or public ground without first having secured permission of the Public Works Superintendent or his designee.

(c) No person shall slide on a sled or sleigh in any street, road, walk, lane or alley.