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Document History

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Revision History

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Approvals

This document requires the following approvals:

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Distribution

This document has been distributed to:

Grounds Maintenance Staff
Customer Service Center
Facilities Services

Table of Contents

Purpose	5
Preseason Planning	6
○ Review of Policy.....	6
○ Expendable Materials and Equipment	6
○ Contracted Snow Removal Services	6
○ Annual “Management/Union Snow/Ice Removal Planning Meeting” and Assignments	7
○ Preparation of University-Owned Snow Removal Equipment	7
○ Marking of Sidewalks, Drives and Parking Lots.....	7
○ Weather Forecasting Service.....	7
○ Facilities Operations Support Group.....	8
Event Management	9
○ Weather Monitoring.....	9
○ Forecast Discussion.....	9
○ Supervisor Schedule.....	9
○ Logistic Plan.....	9
○ Equipment Readiness	10
○ Mobilization	10
○ Assignments, Use of Equipment and Radio Communication.....	10
○ Stand Down from Operations.....	12
Post Event Debriefing.....	13
○ Restocking of Inventory	13
○ Cleaning, Evaluation and Repair of Equipment.....	13
○ Post Event Meeting.....	13
Post Season Shutdown.....	14
○ Equipment Mothballing	14
○ Storing of Expendable Equipment.....	14
General Guidelines	15
Definitions.....	16
Snow Season Inventory Stock Levels.....	17
Snow Melt Systems	18
Snow Route Maps.....	19-23

Purpose:

To provide a consistent process and accountabilities for the management of snow and ice on Facilities Operations Managed Properties at Yale University. Depending on the response necessary for the event, snow removal operations include Local 35 Grounds Maintenance staff, contracted plowing and contracted shoveling. The policy is intended to ensure all resources, training, staffing and communications are in place prior to and throughout the snow season.

Preseason Planning:

Review of Policy

The Snow Management Plan shall be reviewed and updated on an annual basis during the first three weeks of October for the upcoming snow season.

Expendable Materials and Equipment

In coordination with Facilities Procurement, a meeting will be held prior to the end of August to coordinate the bidding of bulk and bagged products for the purpose of deicing. Specifications shall be provided by Grounds Maintenance to Facilities Procurement for the purpose of bidding. Bids shall be received no later than the second week of September for review by Grounds Maintenance and Facilities Procurement, with the intention to award bids prior to the end of September. Materials in inventory from the previous year shall be verified and supplemented by delivery to establish a base level of bulk and bagged material. Each Grounds Maintenance work unit shall establish location(s), to which deliveries shall be made and stored for the snow season.

At each work unit an inventory shall be taken of expendable equipment such as shovels, gloves, snow stakes, etc. related to the business of snow and ice control. A list of items shall be formulated by the work unit supervisor as a base inventory and materials shall be acquired to meet the established minimum inventory stock level for that season (see Snow Season Inventory Stock Levels and Storage Locations).

In coordination with the Facilities Superintendent and upon request by means of a Facilities Work Request, containerized/properly labeled ice melt products will be delivered to buildings and be placed in secured locations for use in emergent situations.

Contracted Snow Removal Services

In coordination with Facilities Procurement, a meeting will be held prior to the end of August to discuss snow plowing and hand shoveling contracted services. Based on the outcome of the meeting, a decision will be made concerning the bid and specifications of contracted services. Specifications shall be provided by Grounds Maintenance to Facilities Procurement for the purpose of bidding. Bids shall be received no later than the second week of September by Grounds Maintenance and Facilities Procurement, with the intention to award bid prior to the end of September. Upon awarding of bid, Grounds Maintenance shall call a meeting with the accepted snow removal contractors to discuss the particulars of assignments for the upcoming snow removal season. This meeting shall occur in October. Based on the outcome of the meeting, assignment maps will be developed for posting and distribution to contractors and Grounds Maintenance Supervisory Staff. A follow-up meeting will occur within ten days to clarify assignments and discuss any open items.

Annual “Management/Union Snow/Ice Removal Planning Meeting” and Assignments

Prior to August, Grounds Maintenance Supervisors shall review staffing and equipment assignment maps from previous snow season and meet to discuss any appropriate changes regarding staff, equipment, and locations in preparation for the Annual “Management/Union snow/ice removal planning meeting” as per the Grounds Maintenance Agreement dated 10/24/2003.

Prior to the beginning of the “Snow Season” (see Definitions Section) each year a meeting will be held between Grounds Supervisory Staff and L35 as per the Grounds Maintenance Agreement dated 10/24/2003. The meetings will be held at each work unit and will include Master Gardener(s) and work unit Supervisor. The purpose of the meeting is to establish roles and responsibilities, assignment plans, resources, etc. In addition, an assignment map showing assigned areas will be reviewed and revised as required. This plan shall also include the deployment of staff specific to the individual work units. Based on the outcome of the meeting, assignment maps will be developed for posting and distribution to staff members specific to assigned areas of snow removal.

Preparation of University-Owned Snow Removal Equipment

Prior to November 15, the Grounds Maintenance Repair Facility shall endeavor to make ready all snow removal equipment owned or leased by the University. Equipment which is required for fall operations and also required for snow removal shall be converted as operationally appropriate or warranted by weather conditions.

Marking of Sidewalks, Drives and Parking Lots

Between November 15 and November 25 all sidewalks, drives and parking areas that are prone to plow damage shall be marked in a manner that clearly indicates the line of paving. Typically, marking shall be the responsibility of the work unit Master Gardener or as designated by the work unit Supervisor. Marking shall be done by driving reflective fiberglass snow stakes (or other suitable marking) at the edges of paved areas and at change of direction so that at least two stakes are visible in a straight line at each point of view. Markers need to be consistently reviewed and replaced throughout the snow season by the work unit Master Gardener if damaged or missing.

Weather Forecasting Service

2011/2012 Contract- Weather Data Network Inc.

A single, contracted, reliable and immediately available weather forecasting service will be used as the basis for formulating an event plan. The forecast shall be specific to Yale University and shall include short and long term forecasts as well as Watches/Warnings and Forecast Discussion. The forecast shall be sent by the forecasting service via email to the Director, Landscaping and Maintenance Services, seven days per week, three hundred and sixty five days per year at a minimum of two times per day and each time a major change in the forecast is indicated. Additional forecasts may be used to confirm data; however, the contracted forecast service shall serve as the primary planning tool and will be retained as part of the snow documentation.

Facilities Operations Support Center

In November a meeting shall be held between the Facilities Operations Support Center and representatives of Grounds Maintenance to discuss protocols for the communication process of requests to Grounds Maintenance from the Facilities Operations Support Center for ice and snow requests. The meeting shall cover pre-event, event, post event and calls unrelated to a particular event. A focus will be placed on the protocol for communication during the regular business hours of the University. Follow up meetings shall occur as frequently as desired by either group.

The Facilities Operations Support Center will assign a specialist to serve as a point person for storm response with Grounds Maintenance. The specialists' role is to create work orders, maintain communication with the Grounds Maintenance Management Team, provide communication support between Grounds Maintenance and the Customer, and dispatch calls to the Priority Response Team (see Definition Section).

Event Management:

Weather Monitoring

Monitoring of weather conditions will be the responsibility of the Director, Landscaping and Maintenance Services, or in his/her absence will be delegated to a Grounds Maintenance Supervisor.

Forecast Discussion

The Director, Landscaping and Maintenance Services shall confer with work unit Supervisors to discuss forecast and any predicted weather events and establish preliminary deployment plan.

A “pre event” discussion shall take place with the Master Gardener(s) and the work unit Supervisor(s) to discuss deployment of resources in that particular work unit, additional persons may be included at the discretion of Management. The purpose of the meeting will be to review and assign routines, schedules and resources consistent with pending weather conditions.

Upon completion of discussion with Master Gardener(s), Work unit Supervisor(s) shall confer with The Director, Landscaping and Maintenance Services and a decision will be made as to initial deployment of resources. Call-in and schedules will be as agreed during the discussion but subject to change at the discretion of the “supervisor in charge” based upon changes in weather conditions. The Director, Landscaping and Maintenance Services and work unit Supervisor will establish appropriate level of supervision required for specific event i.e., M&P/Supervisor/Master Gardener/Gardener/Contractor, etc.

Supervisor Schedule

A supervisor schedule or “supervisor in charge”(see Definition Section) will also be established to insure that at all times a minimum of one (1) “supervisor in charge” is on campus or immediately available at all times during an event and shall act in the capacity of leadership for all campuses (Central, Medical, Athletics and West). The nature, timing, duration and severity of the event will dictate the level of Supervision needed to physically be on each campus to ensure the safety of the Yale University Community, and shall be deemed “Person in Charge” (see Definitions Section).

Logistics Plan

A logistics plan will be established to insure adequate resources and supplies are available. This plan will include such things as equipment, fuel, tools, and food, etc. as well as bedding if necessary. The specifics of the plan are dependent on the nature, severity and duration of the event. It is the intention of the Snow Management Plan to maintain minimum levels of such supplies and resources which would only need to be supplemented in cases of an extreme nature.

Equipment Readiness

When a storm is forecast to occur during off shift hours, all equipment and vehicles shall be completely fueled before end of shift. Plows shall be attached to vehicles and tested by operator. Sanders shall be loaded only if they can be parked in an indoor location. The work unit Master Gardener shall be responsible for the coordination of fueling of equipment assigned to their area of snow responsibility. Vehicles and equipment shall be fueled at locations as directed by work unit Supervisor or as designated by the University.

Mobilization

All Grounds Maintenance Staff will be mobilized via pagers assigned to staff unless modified by the “supervisor in charge”. Messaging Pagers shall be the recognized form of notification to Local 35 staff for duty assignments during the snow season, for the purpose of General Call-ins. The “Supervisor in Charge” shall initiate the page and the message shall instruct the staff when and where to report.

All contracted snow removal services will be mobilized via telephone and/or email by the work unit supervisor.

“Person in Charge” and all reporting Grounds Maintenance staff will meet at each work unit location which will be established as the event command post for that work unit. Leadership including Master Gardeners and/or management may participate via teleconference. Local 35 staff shall be responsible for and will be expected to carry a properly functioning radio at all times while on duty. Upon reporting for duty, all Local 35 staff shall verify radio is in proper working condition by performing a communication check and report any deficiencies to the “person in charge”.

The Facilities Operations Support Center shall be notified via telephone when initiating snow operations by the “Person in charge” or work unit supervisor and when operations are discontinued. In addition, the Facilities Operations Support Center shall be notified when the “person in charge” is relieved and by whom.

Assignments, Use of Equipment and Radio Communication

Available staff will be assigned to equipment in accordance with the assignment plan or as warranted by weather conditions, available staff and equipment usability at the direction of the work unit supervisor or “person in charge”.

Operators of equipment shall be trained in the proper use of the specific piece of equipment prior to the operation of the same. Operator shall take care in the use of equipment to avoid damage to the equipment, personal property or the property of Yale University. Special care shall be exercised to avoid damage to hardscapes, trees, lawns, plantings, etc. Under no circumstance shall equipment be used in a manner for which it is not designed, intended or transported to where clear passage is not available.

Master Gardeners will be responsible for tactical management of units assigned within their respective regions or as assigned by work unit Supervisor. Master Gardeners may be assigned snow routes as operational needs warrant.

Prior to operating equipment, assigned operator shall fully inspect equipment to insure equipment is in safe operating condition including, but not limited to fluid levels and material defects. Operators should complete pre-use equipment checklist prior to operating equipment. Issues arising as a result of the pre trip inspection shall be brought to the attention of the Lead Mechanic for repair prioritization and operator shall report to “person in charge” for possible reassignment.

Upon completion of safety inspection, mobile units will deploy to assigned areas at the direction of the “Person in Charge”. Mobile units will establish radio communication with “Person in charge” upon exiting event command post en route to assigned location.

Operators are to remain on assigned route unless permission or direction has been received from “Person in charge”. At a minimum, each operator shall contact “Person in charge” and announce name and location for verification of route status and health and safety check every sixty minutes. In the event that an operator has received permission to leave route, the operator shall notify “person in charge” when they have returned to their route.

In the event that Local 35 staff not regularly assigned to a Grounds Maintenance work unit is utilized for snow/ice control services, they shall report via phone or radio to “Person in Charge” upon their arrival in order to assure coordination with Grounds team. All Local 35 staff shall remain in their respective assignment unless released by the “Supervisor in Charge”.

Upon experiencing any issue, concern, peril or defective condition related to the equipment, operators are to contact the Grounds Repair Facility via radio for instructions. Under no circumstances are operators to make repairs or undertake rescue operations without first receiving direction from the “Supervisor in Charge” or Grounds Maintenance Mechanic. Equipment issues arising at anytime shall immediately be brought to the attention of the Grounds Maintenance Mechanic for instruction and repair prioritization; operator shall report to “person in charge” for possible reassignment. Under no circumstance shall the operator wait for the equipment to be repaired unless specifically directed to do so by the “Person in Charge”.

Contracted services will be managed concurrently at the direction of the “Person in charge” or work unit Supervisor as conditions dictate and per contract specifications.

All requests for services will be triaged and managed through the command post and dispatched via radio.

A log will be maintained at the command post by the “Person in Charge” to include all assignments, deployments, etc. during the entire event. It is the intention of the Snow Management Plan to maintain passage to all areas of campus during an “event”. Timing of event and hours of operation of buildings shall dictate priority of removal services necessary to maintain the business function of Yale University. Contracted services shall be deployed in such a manner that resources are assigned to maintain pathways during the event and redeployed to clean areas in their entirety after the event.

Communications will be maintained via radio between all Local 35 staff employees and the “Person in Charge” at all times. If for any reason an individual must leave their assigned area they must report it to the “Person in Charge” and permission must be authorized by the same and recorded in event log.

Stand Down from Operations

In coordination with the Director, Landscaping and Maintenance Services, each “person in charge” shall discuss in person or via telephone when stand down from operations is called. A determination will be made if any follow up service or monitoring should be scheduled.

The Facilities Operations Support Center shall be notified by the “Person in Charge” when operations are discontinued and notify same of any follow up plans. The person in charge shall verify the name of the “to call” person should conditions warrant a call back to campus; otherwise, call-in procedures shall follow “Facilities Operations Emergency Contact List”.

Post Event Debriefing:

Restocking of Inventory

As soon as practical following an event, an inventory shall be taken of expendable equipment such as shovels, gloves, etc. related to the business of snow and ice control. A list of items shall be formulated by the work unit Supervisor to replenish inventory back to base inventory stock levels.

In coordination with the Facilities Superintendent and upon request via a Facilities Work Request, containerized/properly labeled ice melt products will be delivered to replenish stocks at previously approved locations.

Cleaning, Evaluation and Repair of Equipment

Operators shall clean and inspect equipment and report any damage, wear, defect or concern about equipment to the work unit Supervisor and a Grounds Maintenance Mechanic at the Grounds Repair Facility. Prior to storage, all equipment shall be brought to the Repair Facility for visual inspection by a Grounds Maintenance Mechanic. Under no circumstances shall equipment be stored until defects have been reported. The Grounds Maintenance Mechanics shall assess the equipment and schedule repairs. If the opinion of the Grounds Maintenance Mechanics is such that a piece of equipment is damaged beyond repair, unserviceable or unsafe for operation, this shall be brought to the attention of the Grounds Maintenance Repair Facility Supervisor for evaluation. Plow trucks shall be parked with the plows on for the duration of the snow season. Plows may be removed from trucks or equipment for operational reasons at the direction of the work unit Supervisor. Plows must be stored in the same location where the vehicle is routinely parked. Plows are to be positioned in a manner that allows for easy access and rigging.

Post Event Meeting

A post event meeting shall take place between Master Gardeners and unit Supervisor to debrief from event and discuss any necessary changes concerning personnel, equipment or logistical issues.

A post event discussion shall occur between each unit Supervisor and the Director, Landscaping and Maintenance Services to debrief from the event and discuss any necessary changes.

Post Season Shutdown:

Equipment Mothballing

As soon as practical, the Grounds Maintenance Repair Facility shall repair snow equipment and make ready for seasonal storage. Under no circumstances shall equipment be stored in a non-functional state unless deemed by the Grounds Maintenance Repair Facility Supervisor to be out of service, rendered unusable or if parts are temporarily unavailable.

Storing of Expendable Equipment

As soon as practical after April 15, but no later than April 30, snow stakes, safety cones or other devices used during the snow season shall be removed by Grounds personnel at their normally assigned locations. Stakes shall be brought to a location as directed by the work unit Supervisor and stored for the following season.

Expendable snow materials shall be inventoried and stored in a secure location. Bulk and bagged salt shall be stored neatly and in such a way so as to maintain the integrity of the product and protect the environment.

The work unit Supervisor shall secure and store snow equipment upon completion of repairs in a manner that protects the equipment from damage.

General Guidelines:

Food and refreshments will be provided at the discretion of management, considering timing and duration of event.

All rest breaks must be specifically authorized by the “person in charge”; this authorization shall be logged in the event documentation.

At intervals dictated by management, a meeting may be called where all the Master Gardeners discuss status and ongoing progress. Supervisor in Charge will be authorized to modify plans, allocation of resources, stand down from snow operations, etc. based on the information provided at such meetings.

Special consideration shall be taken when weather conditions such as high winds, ice, or flooding compound the issues related to an event. The Director, Landscaping and Maintenance Services or Supervisor in charge shall enlist contractors as needed to remediate any conditions or defects.

When Facility Stewards or Custodial employees are used for snow removal operations, specific assignments shall be specified, directed, managed and coordinated by the Facilities Superintendent normally assigned to that particular location. Facilities Superintendents upon employing the use of Facility Stewards or Custodial Staff shall notify the Facilities Operations Support Center, so that services are not duplicated. The Facilities Operations Support Center shall log the assignments and notify the “Supervisor in Charge”.

Prior to the Snow Season, each Facilities Superintendent shall confer with the Grounds Supervisor normally assigned to their area to discuss any changes or special requests specific to their areas that would aid in addressing issues.

Snow melt systems have been installed in several areas of campus; these are set on automatic and are maintained by Physical Plant or Utility Distribution as listed. These areas contacted by Facilities Operations Support Center in advance of snow season to ensure that these systems are properly maintained and ready to be utilized. Grounds Maintenance work unit Supervisors shall place work orders when systems do not appear operational.

Snow and ice control on areas other than paving will be assigned to Physical Plant, including but not limited to roofs and overhangs.

A Priority Response Team will be deployed at the discretion of the Director, Landscaping and Maintenance Services. A Facilities Operations Support Center Specialist will be assigned the role of point person and will dispatch priority work directly to the Priority Response Team.

Definitions:

Snow Season - *November 15-April 15*

Master Gardener – *Local 35 Service and Maintenance employee with job description “Master Gardener”*

Work Unit Supervisor – *Management and Professional employee normally assigned to supervise a particular Grounds Maintenance work unit.*

Supervisor in Charge - *Management and Professional employee assigned to assume managerial oversight for a particular event, must be immediately available whether on or off site.*

Person in Charge - *Dictated by conditions, timing and nature of event; may be Managerial and Professional or Local 35 Service and Maintenance employee. Employee is physically present at work unit and has oversight of operations at work unit level.*

Snow Routes - *Specified by piece of equipment for the purpose of snow or ice control on campus as directed by person in charge and typically outlined on campus map.*

Event Command Post - *A physical location established at each work unit, typically the same location as the work unit’s normal work reporting location.*

Supervisor - *Facilities Management and Professional employee who oversees Service and Maintenance employees.*

Event - *Weather conditions such as snow, ice, below freezing conditions, etc., which would cause the deployment of resources.*

Priority Response Team - *A small group assigned to the triage of requests that are urgent in regard to safety or political necessity.*

Snow Season Inventory Stock Levels and Storage Locations:

Central Campus (Goffe Street)

Bagged Deicer-16 pallets

Bulk Salt -10 ton

Medical School (Howard Avenue)

Bagged Deicer-6 pallets

West Campus (Building E35)

Bagged Deicer-3 pallets

Athletics (71 Central Avenue)

Bagged Deicer-1 pallet

Snow Melt Systems:

Beinecke Plaza - Utilities Distribution

Wright Hall - Physical Plant

Becton Loading Dock - Physical Plant

Loria - Physical Plant

Pierson College Master's Driveway - Physical Plant

Pierson College Stairway between 220 York - Physical Plant

149 Elm Courtyard - Physical Plant

SML - Entrance to Rose Walk - Physical Plant

Luce Hall Ramp - Physical Plant

Law School Handicap Ramp - Physical Plant

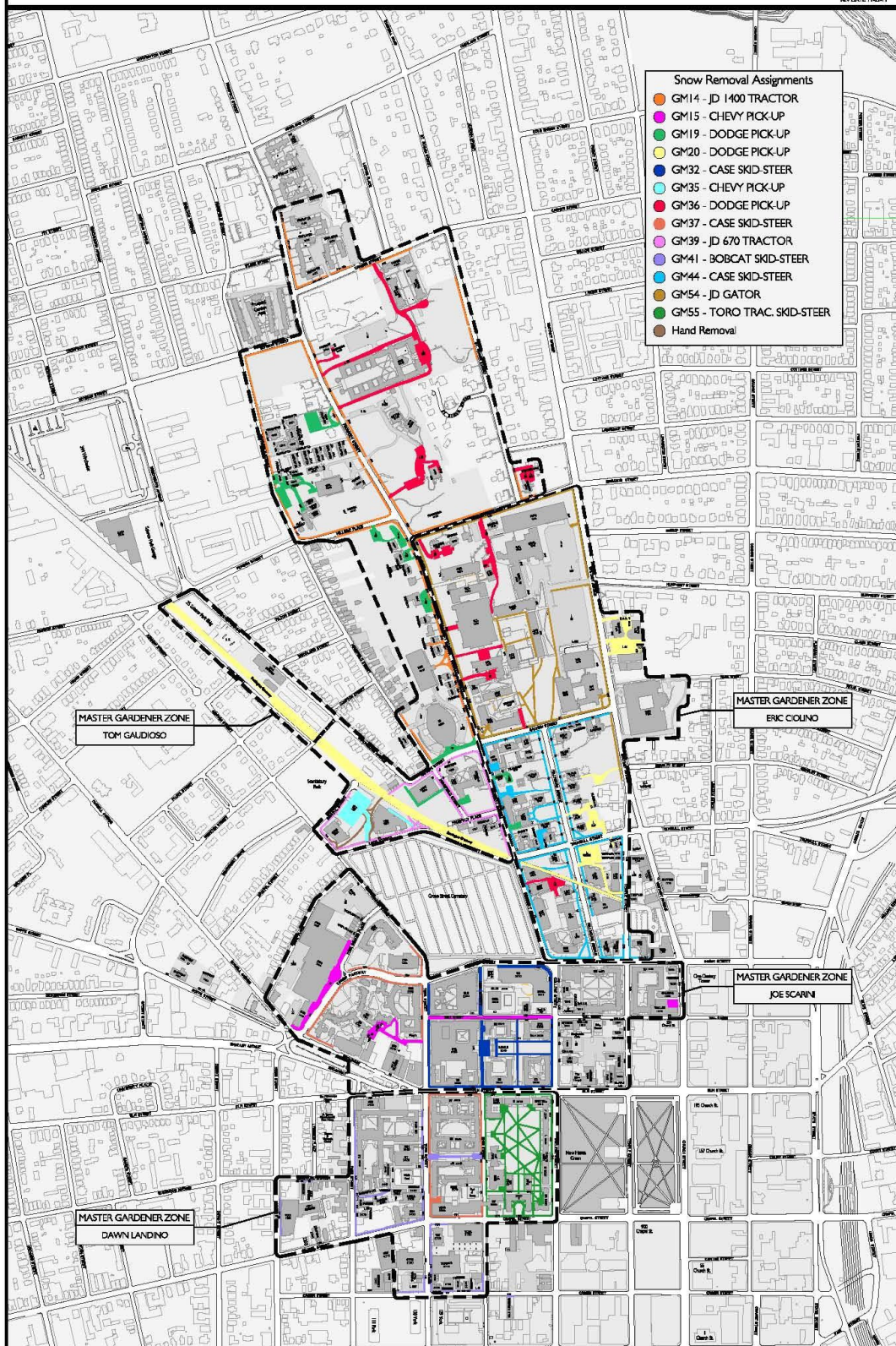


Facilities Snow Removal Map

2011-2012 Snow Season



REV DATE 11/25/11



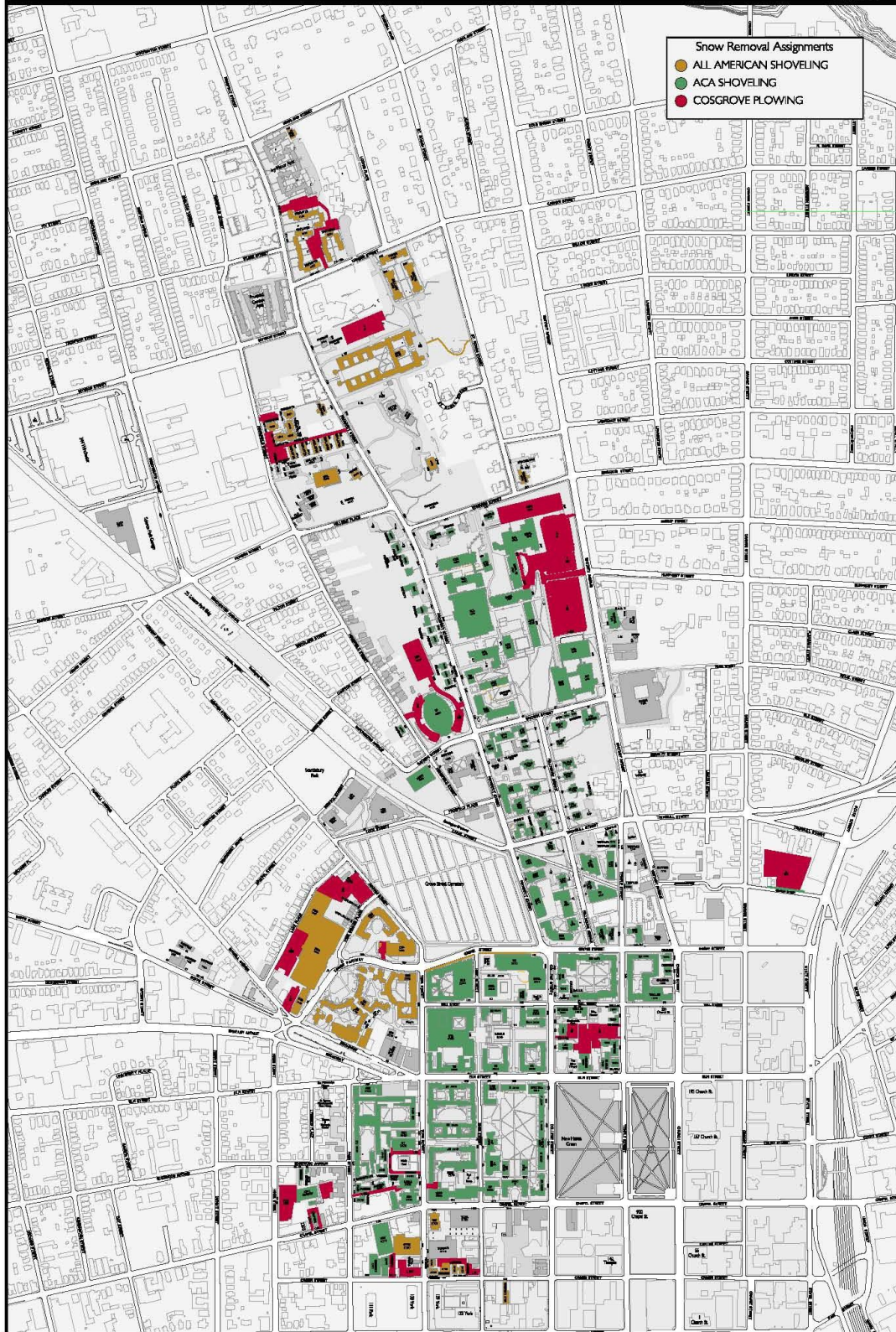


Facilities Contracted Snow Removal Map

2011-2012 Snow Season



REV DATE 1/25/11



YSM - Facilities Snow Removal Map

2011-2012 Snow Season

REV DATE 11/29/11





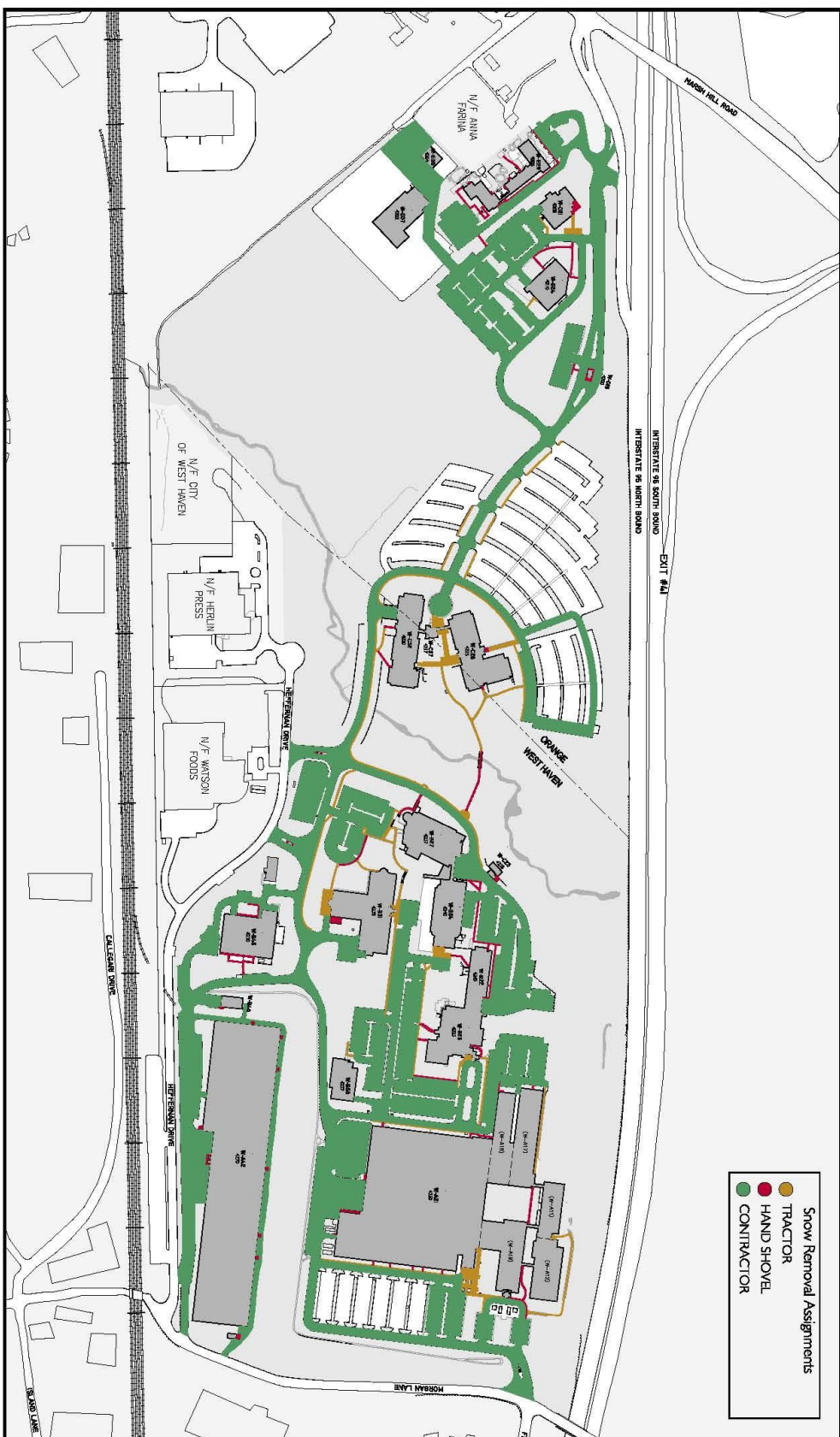
Facilities West Campus Snow Removal Map

2011-2012 Snow Season

2011-2012 Snow Season



REV DATE 11-29-11



Facilities Athletics Snow Removal Map

2011-2012 Snow Season

REV DATE 11/29/11

