



Advanced Snow Management Best Practices

How would you best describe your role as it relates to snow & ice management?

- A. Self Perform – Manage in house crew
- B. Sub Contract – Manage other contractors
- C. Mix – Self Perform & Outsource
- D. Neither – Just curious about the topic

Who is SIMA?

SIMA is a the non-profit international association that provides resources, leadership and support for anyone that deals with snow & ice management

- Established in 1996 by industry professionals
- 1,700 + members including independent contractors, in-house operations, manufactures, suppliers and consumers of the snow & ice industry
- Certified Snow Professional 
- Advanced Snow Manager 
- Best Practices Checklist

BEST PRACTICES CHECKLIST

DOES YOUR SNOW & ICE MANAGEMENT PLAN INCLUDE THESE IMPORTANT GUIDELINES?

ENVIRONMENTAL HEALTH, SAFETY, LIABILITY & RISK MANAGEMENT:

- Verify insurance liability coverage to include specific 'snow rider'/endorsement
- Documented site engineering plan to verify areas to properly locate and stack snow to prevent melt/refreeze areas and line-of-site issues
- Documented safety program and policies including incident reporting process, on-going education, training and implementation (i.e. tailgate talks, perimeter inspections, safety equipment and PPE)
- Parking lots and sidewalk clearing process includes ADA compliance guidelines
- Awareness of salt's impact on fresh water resources related to proper application rates and storage

ESTIMATING, PLANNING & COST EFFECTIVENESS:

- Documented snow site engineering plan to verify client and site expectations for proper planning of equipment and capacity utilization (i.e. aerial maps with zone assignments & priority area designations)
- Utilizes a verifiable estimating system/tool to verify capacity related to size of site (e.g., sq. ft.)
- Capacity planning based on estimating system guidelines and cycle time expectations

EXECUTION & RESPONSIVENESS:

- Documented snow site engineering plan to verify proper resource capacity has been dedicated related to cycle-time expectations and to identify priority areas to be serviced first
- Documented snow response planning process for variability of storm scenarios
- Minimum required ice control product in inventory at all times necessary for 2-weeks' worth of average storm activity (average 2-5 storms dependent on geographic market) including product variety for variable temperature requirements (NaCl, MgCl, CaCl)
- Planned reserve equipment & labor capacity

QUALITY OF SERVICE:

- Documented snow site engineering plan to verify priority areas & zones (e.g., handicap zones, fire exits & hydrants, drains, etc.) and areas for snow to be relocated to ensure proper drainage, line of site, etc.
- Utilizes a site inspection process
- Consistent manager assigned to manage quality expectations

COMMUNICATION, DOCUMENTATION & VERIFICATION:

- Documented verification process (e.g., site visit/work completion logs)
- Technology enabled (e.g., electronic reporting systems)
- Utilizes communication system (e.g., phone tree, electronic notification, centralized call center or contact)
- Documented organizational communication process flow (e.g., Plan > Do > Verify > Re-Do > Invoice)

CERTIFICATION / STANDARDS & EDUCATION:

- Certified Snow Professional (CSP™) on staff
- Advanced Snow Manager (ASM™) on staff
- Attends continuing education seminars, webinars, trade shows, etc.

EXPERTISE & PROFESSIONALISM:

- Manager/Foreman assigned to manage site(s) has 5 years or more field experience
- Staff assigned to perform work on the site(s) has 2 years or more field experience
- Documented organizational and accountability structure for the company and site(s)
- Company/management is an active member of SIMA

Download this checklist
at www.sima.org/bestpractices



www.sima.org/hireapro

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The Best Practices Checklist and related presentation are offered to SIMA members for informational purposes only, and are not a substitute for using sound professional judgment during snow and ice management activities. Best practice always depends on the individual circumstances of each snow and ice management project. SIMA, its officers, employees, authors and agents assume no responsibility for consequences arising from the use of, or failure to use, these recommended best practices.

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Priority 'Parking Lot'

- Insurance
- Snow Site Engineering
- Cycle Time Rate, Expectations and Capacity Demand
- Communication & Documentation
- Other 'nuggets' if we have time

Why Do Best Practices Matter?

- By definition, a best practice is a method or technique that has consistently shown results superior to those achieved with other means, and that is used as a benchmark. In addition, a "best" practice can evolve to become better as improvements are discovered.
- **There is no industry mandated education, standards or regulations.**
- Reduce Risk and Liability.

Beneficiaries of Best Practices

- **Clients / Consumers**
- Employers (Owners, Executives, Managers)
- Employees (Operators, Labor)
- Insurance

Safety, Liability & Risk Management

- ❑ Company Insurance coverage verified to include CGL w. proper 'snow plowing' endorsement – CAL and / or Personal coverage DO NOT count! Potentially ½ of the industry is underinsured.

Claims?



BEST PRACTICES CHECKLIST
DOES YOUR SNOW & ICE MANAGEMENT PLAN INCLUDE THESE IMPORTANT GUIDELINES?

ENVIRONMENTAL, HEALTH, SAFETY, LIABILITY & RISK MANAGEMENT:

- Verify insurance liability coverage is suitable specific to your risk/seasonal
- Documented site inspection plan to verify safety for property, workers and each other in general, verified keep areas and line of site clear
- Documented safety program and policies including incident reporting process, on-going education, training and implementation (i.e. fatigue risks, perimeter inspection, safety equipment and PPE)
- Working site and network clearing process includes ADA compliance guidelines
- Assessment of salt impact on trees, water resources related to proper application rates and storage

ESTIMATING, PLANNING & COST EFFECTIVENESS:

- Documented cost site engineering plan to verify client and site expectations for proper planning of equipment and capacity utilization (i.e. avoid trips with over-allocations & priority area designations)
- Obtain a verifiable estimating spreadsheet to verify capacity related to size of site (e.g., sq. ft.)
- Capacity planning based on engineering system guidelines and cycle time expectations

EXECUTION & RESPONSIVENESS:

- Documented cost site engineering plan to verify proper resource capacity has been allocated related to cycle-time expectations and to identify priority work to be serviced first
- Documented cost response planning process for availability of storm clearing
- Minimum required on control product in inventory at all times necessary for 2-weeks' worth of average storm activity (average 3-5 storms dependent on geographic market) including product ready for variable temperature requirements (HCL, MgCl₂, NaCl)
- Planned stock in equipment & labor capacity

QUALITY OF SERVICE:

- Documented cost site engineering plan to verify priority areas & zones (e.g., handicap zones, fire exits & hydrants, stairs, etc.) and areas for areas to be reseeded to avoid proper drainage, fire of site, etc.
- Assign a site inspection process
- Document manager assigned to manage quality expectations

COMMUNICATION, DOCUMENTATION & VERIFICATION:

- Documented verification process (e.g., site status completion logs)
- Technology enabled (e.g., electronic reporting systems)
- Storm communication system (e.g., phone tree, electronic, individual, centralized call center or website)
- Documented organizational communication process flow (e.g., Plan-Do-Verify/Re/Document)

CERTIFICATION / STANDARDS & EDUCATION:

- Certified Snow Professional (CSP®) on staff
- Ongoing continuing education seminars, webinars, trade shows, etc.

EXPERTISE & PROFESSIONALISM:

- Manager/Personnel assigned to manage vehicles has 3 years or more field experience
- Staff assigned to perform work on the site(s) has 2 years or more field experience
- Documented organizational and accountability structure for the company and sites
- Company management & an active member of SIMA

ASMA
www.asma.org

CSP
www.csp.org

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Columbus, IN 47332
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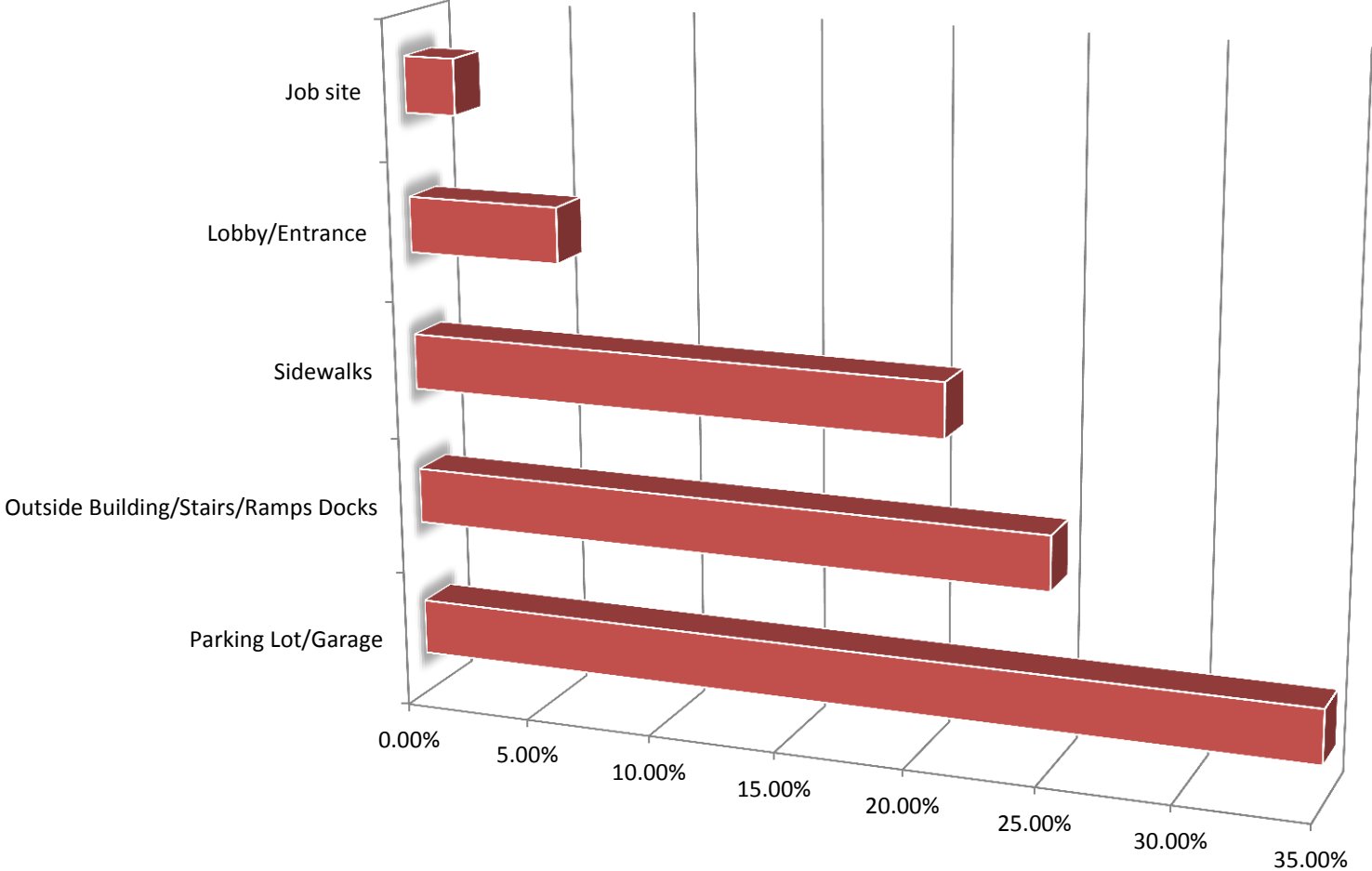
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SIMA
www.sima.org/bestpractices

YOUR SOURCE FOR SNOW & ICE MANAGEMENT LEADERSHIP
www.sima.org

Where do losses occur?

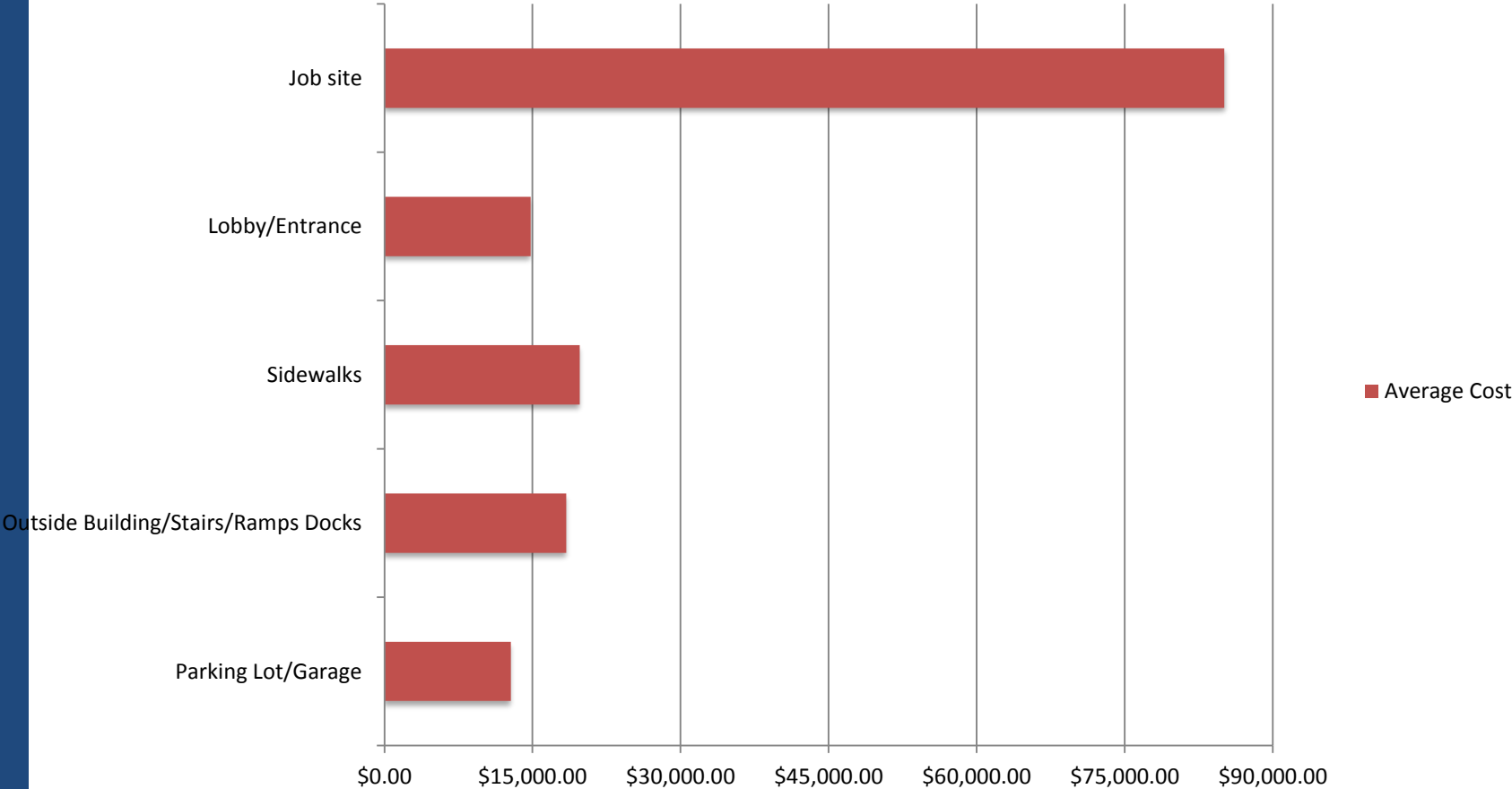
Statistics from Zurich Insurance North America



What does it cost?

Statistics from Zurich Insurance North America

Average value of loss by area of property



By the Numbers...

Statistics from Zurich Insurance North America

- ❑ The average cost of a claim as a result of a slip & fall caused by snow & ice by the member of the public is \$15,132; 73% of claims settle for less than \$20k – 50% due to lack of verified / documented service
- ❑ The average cost of an employee claim as a result of a slip & fall caused by snow & ice is \$35,132
- ❑ Zurich Insurance North America reserves One Billion dollars annually for snow related claims
- ❑ 4% Go To Trial; 53% Settled; 43% of claims are thrown out (frivolous)
- ❑ Over \$2 benefits paid out for every \$1 of coverage for settled claims

Safety - PPE



ASM 
ADVANCED SNOW MANAGER™



Safety, Liability & Risk Management

Documented and practiced Environmental Health and Safety program including;

- Policies related to PPE
- Safety tools and equipment to be utilized
- Documented 'tailgate' safety training program for employees and subcontractors (aka - 'toolbox talks')
- Verification and Incident reporting process



Safety Training Kit available at www.sima.org/resources

Liability & Risk – ADA

ADA PAR Compliance*:

- Accessibility** of Pedestrian Access Routes (PAR) shall consist of one or more of the following components:
 - Walkways
 - Ramps
 - curb ramps (excluding flared sides) and landings, blended transitions, crosswalks, pedestrian overpasses and underpasses

**From section R301.2 Components*

***Accessibility compliance includes keeping the PAR clear of snow and ice.*

Liability & Risk - PROWAG

PROWAG*:

- **Public Right-of-Way Accessibility Guidelines (PROWAG)** are federal guidelines on their way to becoming standards.
- Once they are standards, municipalities or governing bodies can be held legally responsible for these guidelines.
- Many governing bodies including states and large municipalities have already adopted these guidelines in their own standards.
- **Applies to sidewalks and parking lots which are owned by a government.**
- **Canada has started a similar initiative.**

**Universal design and compliance of these guidelines is a best practice regardless of the accessibility issues of the pedestrian (i.e. a healthy able-bodied person can still slip on ice)*

Safety, Liability & Risk Management

- ❑ Verify areas to properly locate / stack snow to prevent refreeze of melting piles and line of site issues using **Snow Site Engineering Plans**



Safety, Liability & Risk Management

- ❑ Near Miss:
 “Snow Forts”



Buried in snow for 7 hours, boys feared death

By **Kevin Conlon**, CNN

updated 1:06 AM EST, Sun November 30, 2014



STORY HIGHLIGHTS

- Two cousins, ages 9 and 11,

(CNN) -- The two boys who were discovered early Thanksgiving morning buried under 5 feet of snow -- and the officer with a hunch

Safety, Liability & Risk Management

❑ Near Miss:

Stacking / piling snow under overhead utility wires.

Is operator safe?

What if children play on top of the piles?



Safety, Liability & Risk Management

- ❑ Pre-season site visits to include existing condition assessments – locate on a site map
- ❑ Pictures to document damage & areas of concern



Safety, Liability & Risk Management

- ❑ Awareness of proper salt application rates, storage and salt's impact on the environment - including landscape plantings and fresh water resources



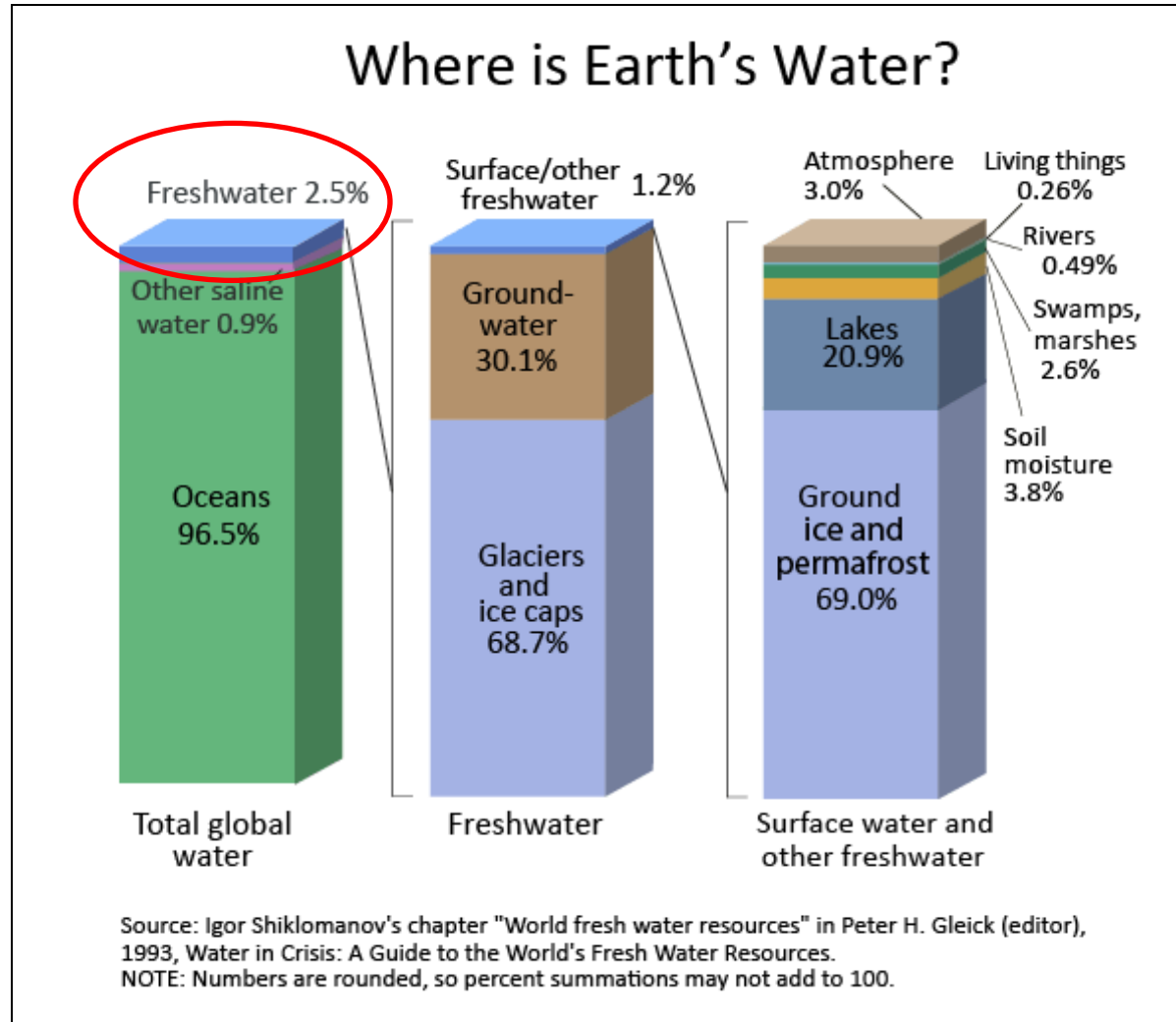
Chloride Impacts Review

- Salt has hidden infrastructure costs
 - Concrete & Steel Structures Big & Small
- Salt Negatively Impacts Life
 - Plants
 - Fish/Aquatic Life
 - Humans Health (Water)

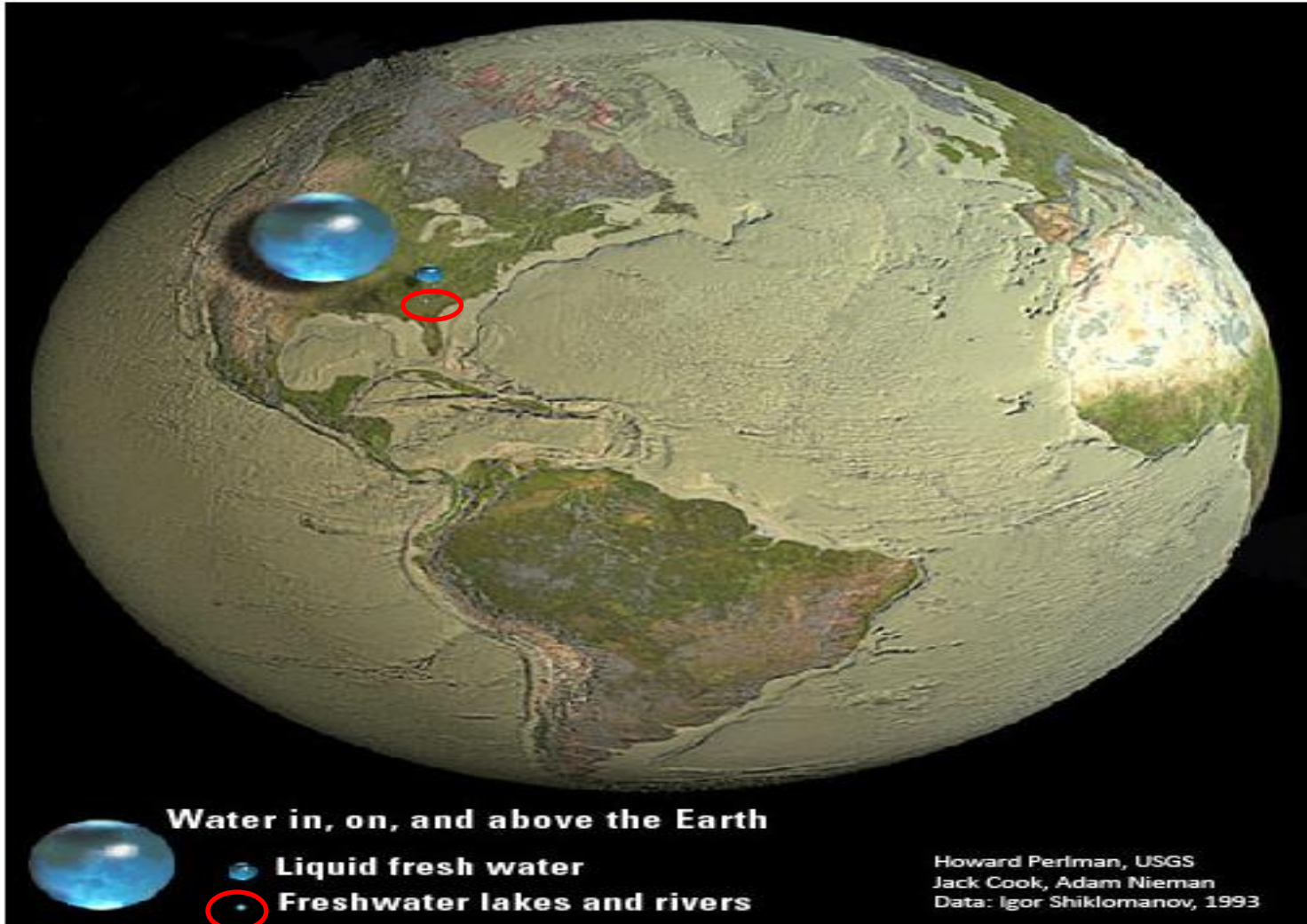


- Chloride Contamination Exists in Many States
- No Viable Clean Up Solution

Freshwater Resources



Freshwater Perspective

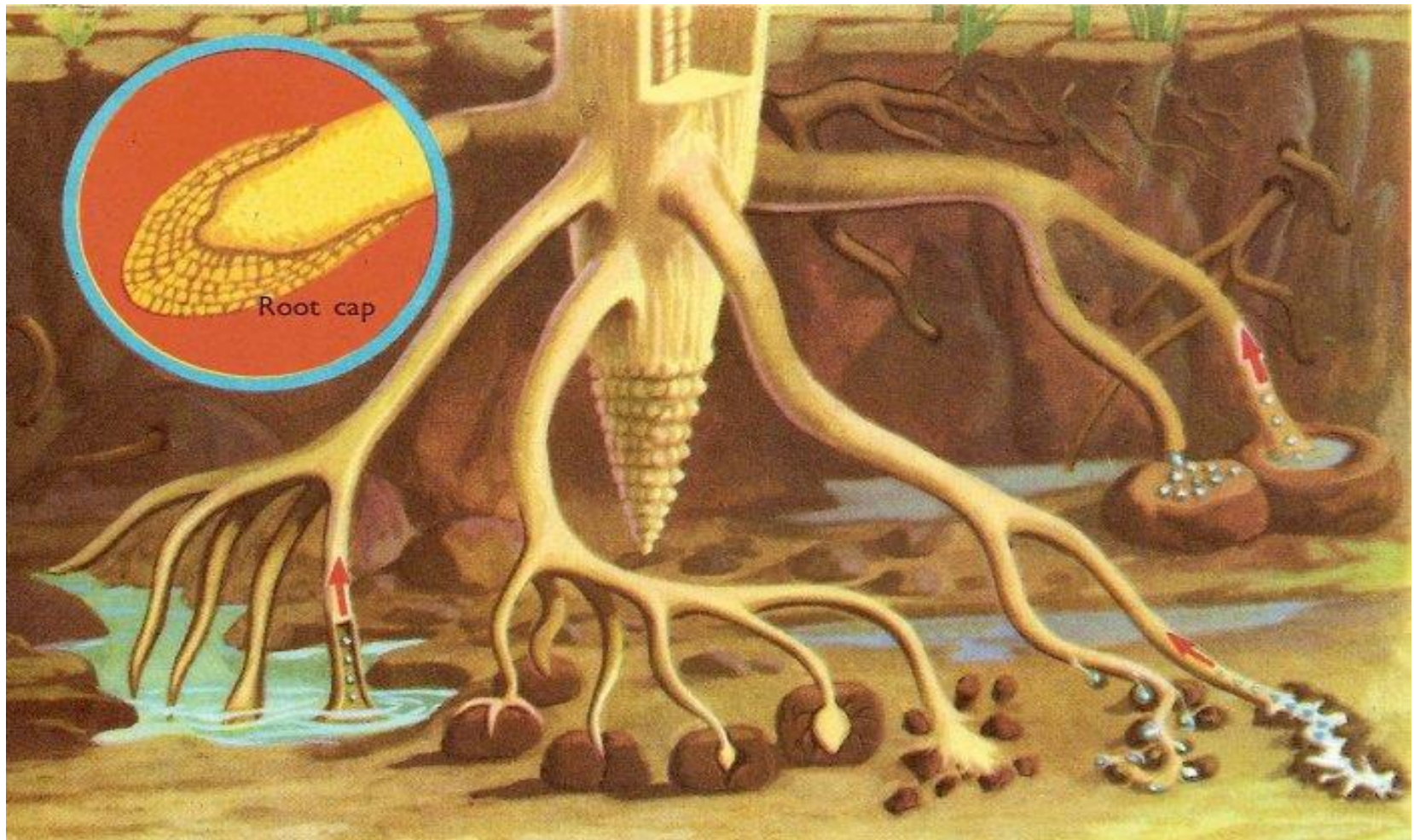


Snow & Salt Storage



Source: Minnesota Winter Parking Lot & Sidewalk Maintenance Manual

Root Systems



Vegetation Desiccation



Salt Induced Turf Damage & Erosion



Soil hard as concrete!

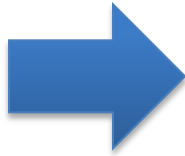
Resulting Erosion Problems!

Why Anti-Ice / Pretreat? A Parallel Example:

Would You Ever Do This?



“Stick”
Frying
Pan



Cook Without
Butter or Oil



Effect:

Cleaning Time?

Soap & Water?

Anti-icing (Pre-Treating)

- “A strategy in which a chemical is applied directly to a roadway surface before a storm begins or **before any snow or ice has bonded to the pavement.**”
- **Proactive** approach to winter maintenance
- Forms a **“bond-breaker”** between the road surface and the snow/ice layer (**just like greasing a pan before cooking**)
- Jump starts the melting process



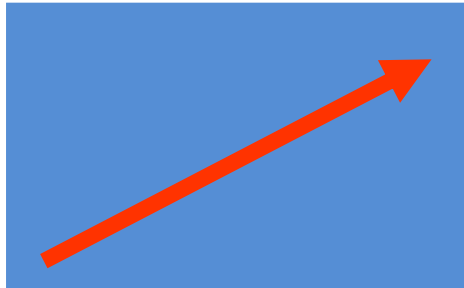
Anti-icing

- Reduces the amount of time required to clear pavement
- Up to 75% material reduction
- Up to 90% cost savings
- Improved results because snow/ice bond never forms with the pavement



Source: <http://www.icenator.com/liquid-deicer.htm>

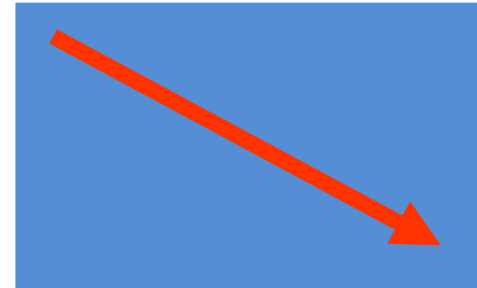
Effect of Anti-Icing



Liquids



Solids



**Total
Salts/Abrasives**



**Environmental
Impact**



**Useful Life of
infrastructure**



**Total
Operational
Cost**

Sidewalk / Road Crew Harmony



1' foot / 30 cm Rule



“No Man’s Land”

Estimating, Planning & Cost Effectiveness

- ❑ Snow Site Engineering plan to verify proper equipment allocation and capacity utilization compared with customer /site expectations (i.e. aerial maps with zone assignments & priority areas)
- ❑ Utilize an estimating system / tool to verify capacity related to size of site (i.e. square feet of asphalt, sidewalks)
- ❑ Plan capacity based on estimating system guidelines and cycle time expectations (sq. ft. production rates per hour) – Eliminate Trigger Depths

Snow Site Engineering



Define Priority Areas

Store Entrance



Snow Site Engineering Plans

Color coded site map that includes:

- ✓ Property Boundaries
- ✓ Areas to be services (Roads, Lots, Walks, Loading Docks)
- ✓ Where to properly locate snow piles
- ✓ Priority levels for each area
- ✓ Drains, Emergency Access Fire Hydrants, Handicap Access
- ✓ Patterns to plow or spread salt so the operator can keep moving forward and avoid having to back up (reverse)?
- ✓ **A picture to communicate and verify expectations to your clients and operators**

Virtual Site Inventory



EXTERIOR MARKETING FOR BUSINESS



- Sidewalk
- Exit Door
- Ramp
- Door
- Show Zone
- Show Thread



PRIMARY SNOW LOCATIONS



SECONDARY SNOW LOCATIONS



NO SNOW HERE



DIRECTION TO PLOW SNOW



DRAINS



HYDRANTS

* Plow lumber yard
 Gate open @ 5 AM
 Mon - M, W, FR.

BUILDING

SITE PLAN

→ - Slope

□ - Do NOT Pile

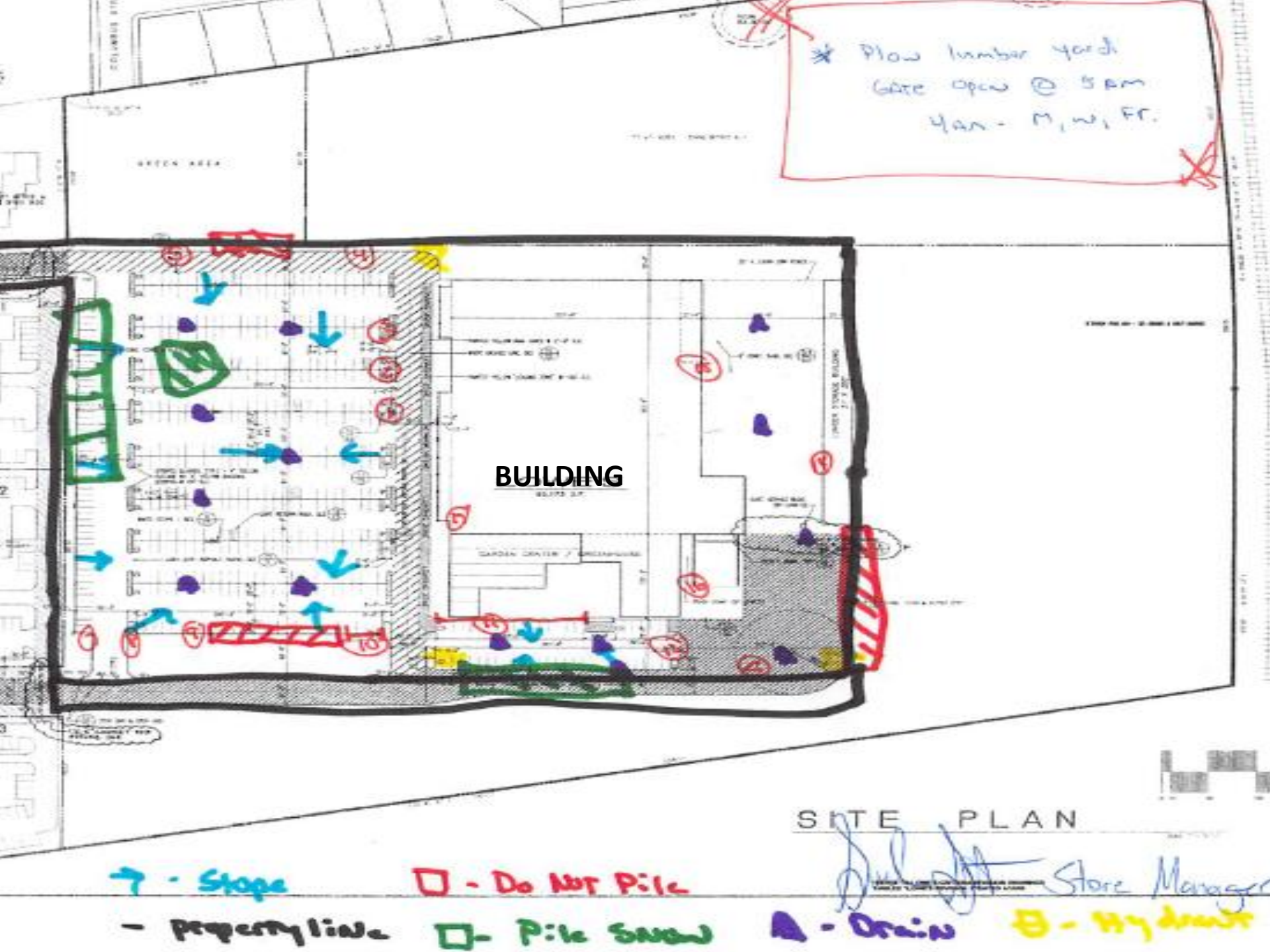
[Signature] Store Manager

- Property line

□ - Pile SNOW

▲ - Drain

■ - Hydrant



Plowing Directions and Storage

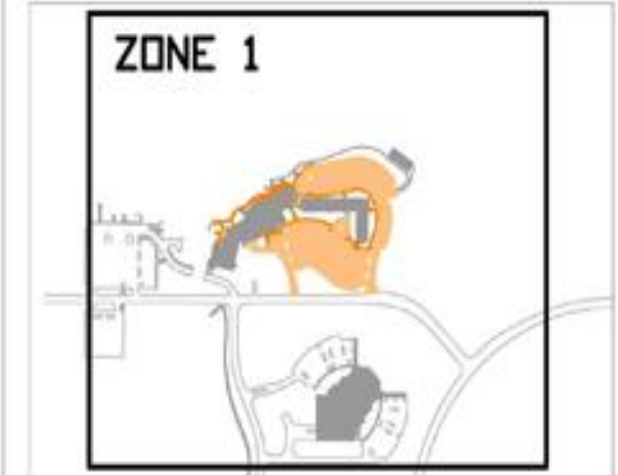
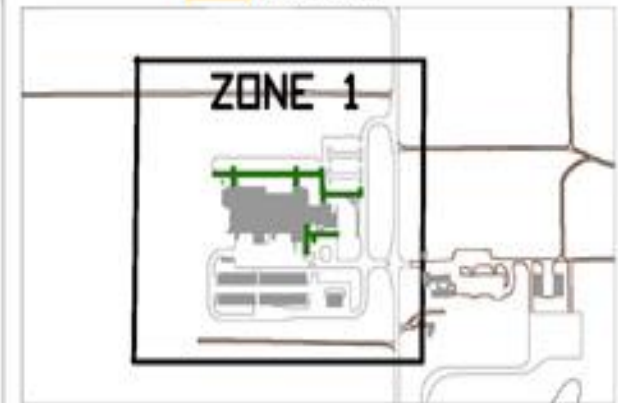
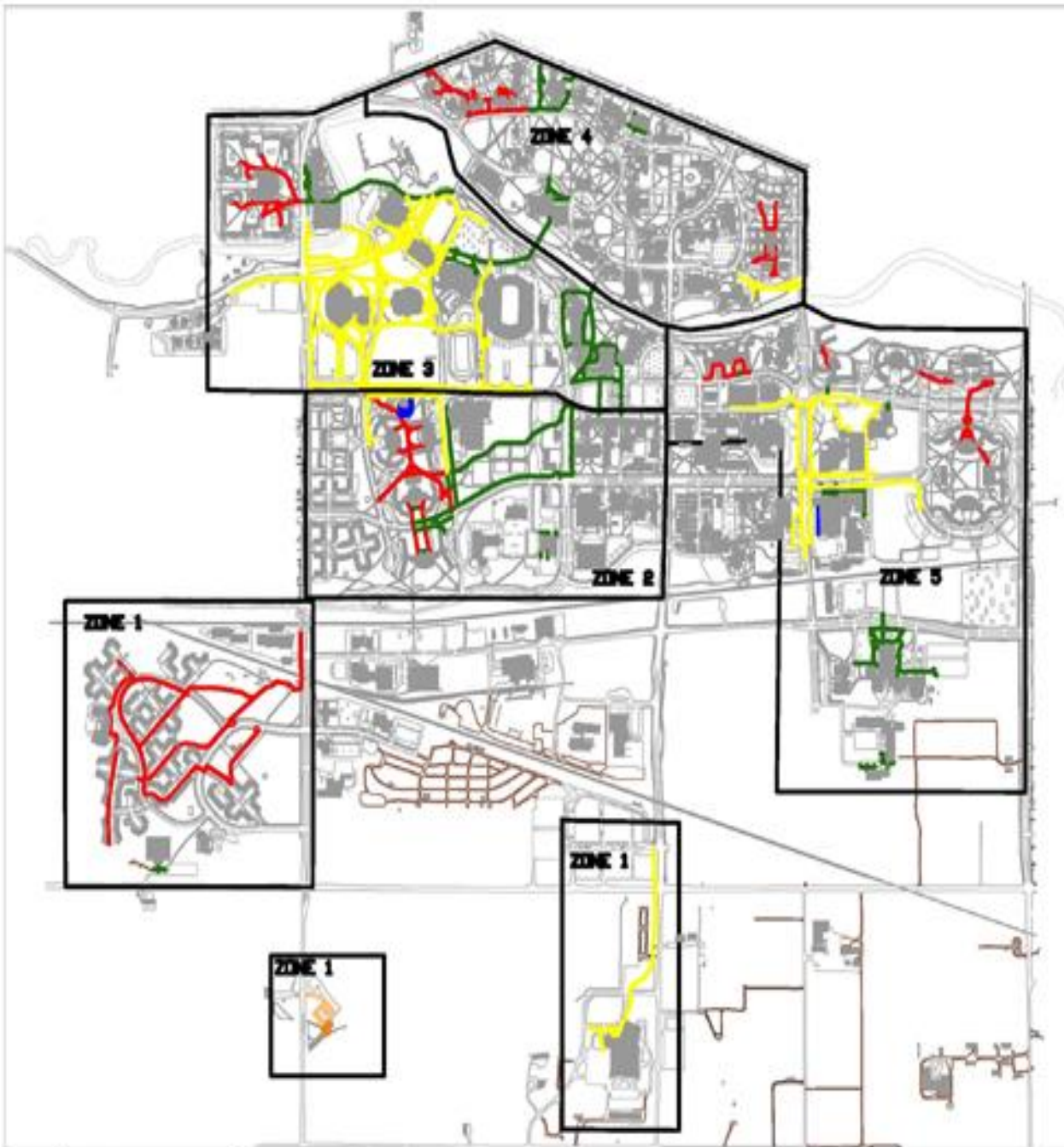




Secondary Snow Piles:
Only use if Necessary

SNOW PLAN Emergency Response Team

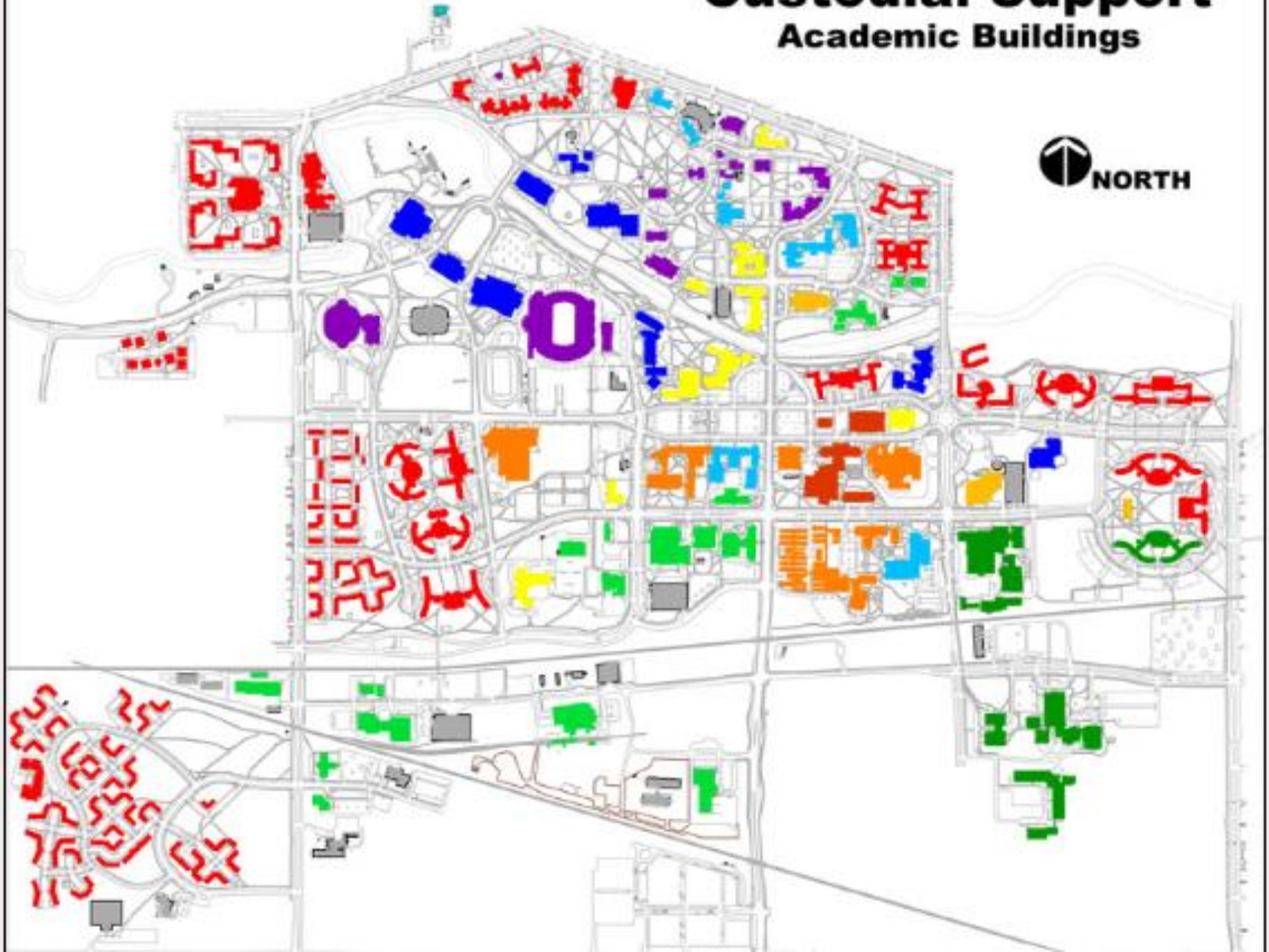
- Special Events
- Academic
- Housing
- Parking
- Contracts



SNOW PLAN

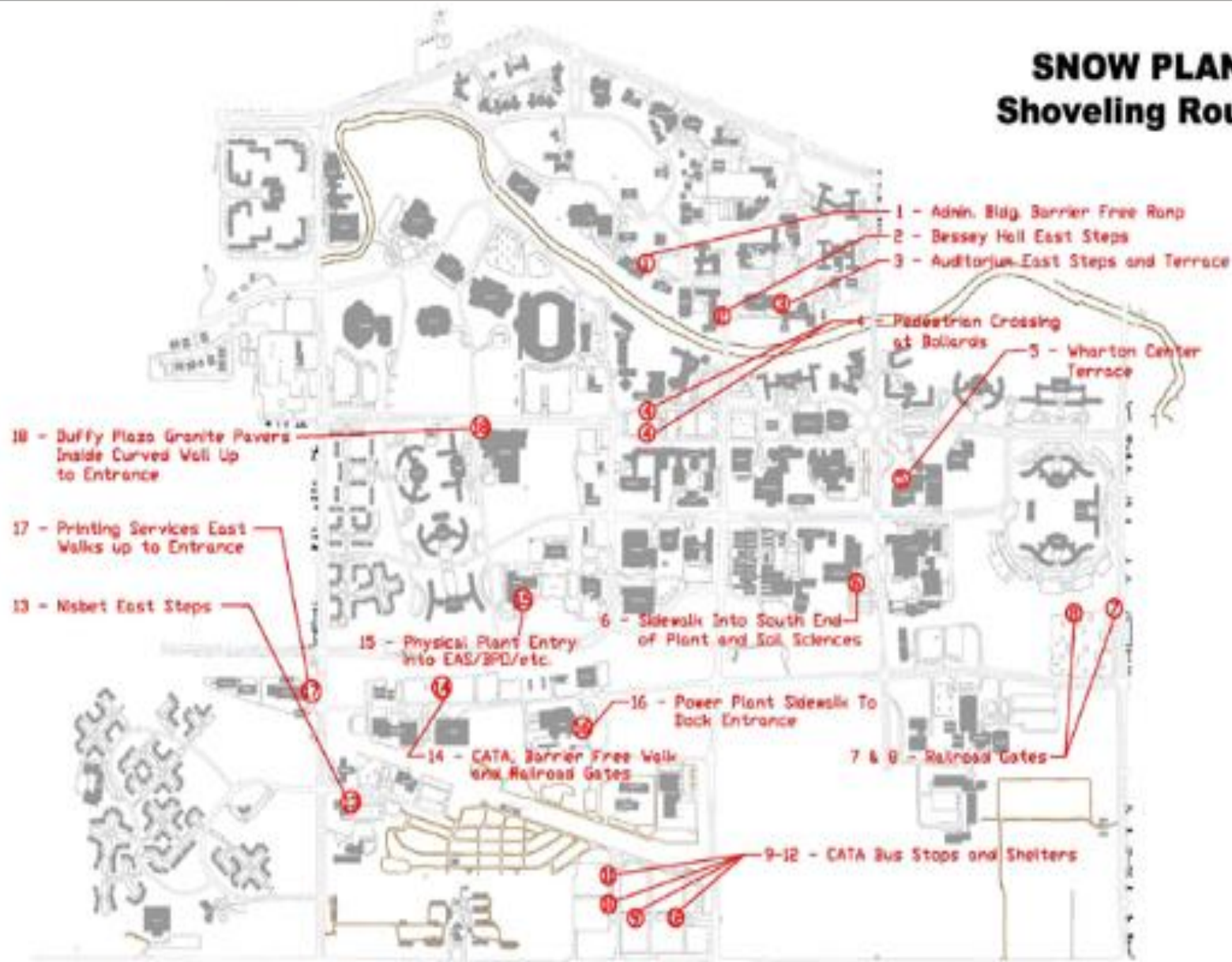
Custodial Support

Academic Buildings



Snow Plan UC1708 Route

SNOW PLAN Shoveling Route



Questions?



Cycle Time Rate + Expectations = Capacity Demand

Cycle time expectation

In order to choose the correct response strategy, you need to consider three things:

- **Cycle time rate:** Calculate the amount of time it takes to complete the work.
- **Client expectation:** Understand what the client expects to be completed and by when.
- **Capacity:** Types and amount of resources you have to complete the work.

Click on the blue boxes to learn more.

CYCLE TIME RATE



The amount of time (rate) it takes to complete work in a specific area (unit area) with a specific type and size resource (unit resource).

CLIENT EXPECTATIONS



Area(s) which a client requires to be clear of snow and ice by a certain time(s) of day.

CAPACITY DEMAND



The amount of resources it takes to meet client expectations. The capacity demand for each storm will change depending on the:

1. timing of the storm
2. amount of accumulation
3. snow's density

Cycle Time Rate + Expectations = Capacity Demand

Cycle time expectation mistake

A common mistake is to determine the cycle time based on your existing capacity. This excludes the client expectation which is an important step in the decision-making process. Click on the client expectation button to see how the process changes when you include the client.



Define Priority Areas

Store Entrance



Cycle Time Rate + Expectations = Capacity Demand

Determine cycle time expectation

Click on the boxes below to see the process of determining cycle time expectation for each client and site. Cycle time expectations will be discussed in greater detail with specific examples in the plow, sidewalk and ice management certificates.

CYCLE TIME RATE



How much work can be completed with a specific type and size resource?

1. Unit area example:
1 acre parking lot
2. Unit resource example:
standard 8-9 ft. plow
3. Rate/Unit area example:
2 in. or 5 cm/acre cleared in 1 hour

CLIENT EXPECTATION



When does the client want specific areas cleared?

1. Time: 7 a.m.
2. Area: 1 acre parking lot

CAPACITY DEMAND



What resources do you need to meet the demand?

1. Timing of the storm:
3 a.m.-5 a.m.
2. Amount of accumulation:
2 in./hour
3. Snow's density:
light, fluffy

Cycle Time Rate + Expectations = Capacity Demand

- Cycle time is simply the amount of time it takes you to meet your client's expectations. A typical expectation is to have primary lots and walks clear by 7 :00 a.m.
- **Example;** *A snow storm or squall begins at 3:00 a.m. and produces 2" of snow per hour for 2 hours (4" total). A 7:00 a.m. 'all clear' expectation in this example requires you (or your vendor) to have the proper capacity of equipment and man power to cycle through the entire parking areas and walkways in 2 hours.*
- If you expect to meet the 7:00 a.m. deadline, you have to clear all parking lots and walkways within 1 to 1.5 hours. This also means de-icing operations can only take you about approximately 15 minutes.

?#1: If this was a 4 acre lot - What capacity of resources would you need?

DO THE MATH

?#2: How could an anti- icing application help with this scenario?

Time check & Questions?

Priority Parking Lot

- ✓ Insurance
- ✓ Site Engineering
- ✓ Cycle Time Rate, Expectations and Capacity Demand

Communication & Documentation

Other 'Nuggets' if we have time

Communication, Documentation & Verification

- Documented verification process (Carbon copy site reports, Electronic reporting, GPS, etc.)
- Utilization of communication systems (Call Center, IVR, etc.)
- Documented organizational communication process flow (Phone Tree, Org. Chart)
- Storm response plan

Documentation

Download *SIMA Snow and Ice Site Documentation Report* from *Resources* link.

SIMA.

While you are managing a storm, it is important to keep accurate records of performed work. Your company and your client may require this documentation.

- Communication and verification of work completion;
- Estimating future costs for labor and materials usage;
- Provide compliance for licensing and to regulatory agencies; and
- Possible litigation and defending claims by proving due diligence of performing work.

Click the buttons to learn more. The Next button will become active after all buttons are checked.

WHAT

WHEN

WHERE

WHY

INCIDENTS

- ✓ Start & Stop Times (#1)
- ✓ Type of storm
- ✓ Duration of storm
- ✓ Conditions during and after the storm
- ✓ Incidents
- ✓ Verbal summary
- ❖ Why ?

Snow & Ice Site Documentation Report		Date:
Account Name:	Address:	Time arrived onsite: am pm
Operator(s):		Time exited site: am pm
Site conditions upon arrival: Accumulation: _____" snow moisture: [Dry/powder] [Moderate] [Wet/heavy] [Slush] [Just Plowed] Drifting Present: [Y] [N] Ice: [Y] [N] Traffic: [None] [Occasional] [Light] [Moderate] [Heavy] Obstructions to note: _____		Weather Conditions during service: Current Precipitation: [None] [Flurries] [Moderate Snow] [Rain] [Sleet] [Heavy Snow/whiteout] [Freezing rain] Conditions: [Calm] [Breezy] [Windy] Cloud cover: [Sunny/clear] [Cloudy] Other extreme/atypical weather notes: _____
SERVICES PERFORMED:		
<u>Plowing & Clearing</u> Roads & Lots <input type="checkbox"/> Plowing – All areas per contract <input type="checkbox"/> Plowing – Partial % _____ <input type="checkbox"/> Entrance / Exit <input type="checkbox"/> Handicap <input type="checkbox"/> Road & Roadways <input type="checkbox"/> [Front] [Rear] [Side] [Other] <input type="checkbox"/> Parking Areas <input type="checkbox"/> Loading Docks <input type="checkbox"/> Drive-Thru <input type="checkbox"/> Ramps <input type="checkbox"/> Delivery Area <input type="checkbox"/> Dumpsters/trash receptacles <input type="checkbox"/> _____ <u>Walks</u> <input type="checkbox"/> Clear Sidewalks – All areas per contract <input type="checkbox"/> Clear Sidewalks – Partial % _____ <input type="checkbox"/> Entrance door(s) <input type="checkbox"/> Service doors <input type="checkbox"/> Ramps <input type="checkbox"/> Steps <input type="checkbox"/> Private Walks <input type="checkbox"/> City Walks <input type="checkbox"/> _____ <u>Snow Removal and Hauling</u> Stacking on-site Hrs: _____ Removal Hrs: _____ Hauling Hrs: _____ Snow dumpsite: _____	<u>Ice Management</u> Roads & Lots <input type="checkbox"/> De-Ice – All areas per contract <input type="checkbox"/> De-Ice – Partial % _____ <input type="checkbox"/> Entrance / Exit <input type="checkbox"/> Handicap <input type="checkbox"/> Road & Roadways <input type="checkbox"/> [Front] [Rear] [Side] [Other] <input type="checkbox"/> Parking Spots / Areas <input type="checkbox"/> Loading Docks <input type="checkbox"/> Drive-Thru <input type="checkbox"/> Ramps <input type="checkbox"/> Delivery Area <input type="checkbox"/> Dumpsters/trash receptacles <input type="checkbox"/> _____ <u>Estimated Materials Used:</u> Salt: _____ bags or _____ lbs. Calcium: _____ bags or _____ lbs. <u>Walks</u> <input type="checkbox"/> De-Ice Sidewalks – All areas per contract <input type="checkbox"/> De-Ice Sidewalks – Partial % _____ <input type="checkbox"/> Entrance door(s) <input type="checkbox"/> Service doors <input type="checkbox"/> Ramps <input type="checkbox"/> Steps <input type="checkbox"/> Private Walks <input type="checkbox"/> City Walks <input type="checkbox"/> _____ <u>Estimated Materials Used:</u> Salt: _____ bags _____ lbs. Calcium: _____ bags _____ lbs. No Service Performed – Site Check Only <input type="checkbox"/> Charge <input type="checkbox"/> No Charge	

**Customer ABC
SNOW REMOVAL CONTACT LIST
AS OF**

Company XYZ

**** Snow Captain**

Office: (000) 000-0000
Home: (000) 000-0000
Mobile: (000) 000-0000

Other Leaders / Operators

Office: (000) 000-0000
Home: (000) 000-0000
Mobile: (000) 000-0000

Office: (000) 000-0000
Home: (000) 000-0000
Mobile: (000) 000-0000

Office: (000) 000-0000
Home: (000) 000-0000
Mobile: (000) 000-0000

Customer ABC

Office: (315)
Home: (315)
Mobile: (315)

Office: (315)
Home: (315)
Mobile: (315)

Office: (315)
Home: (315)
Mobile: (315)

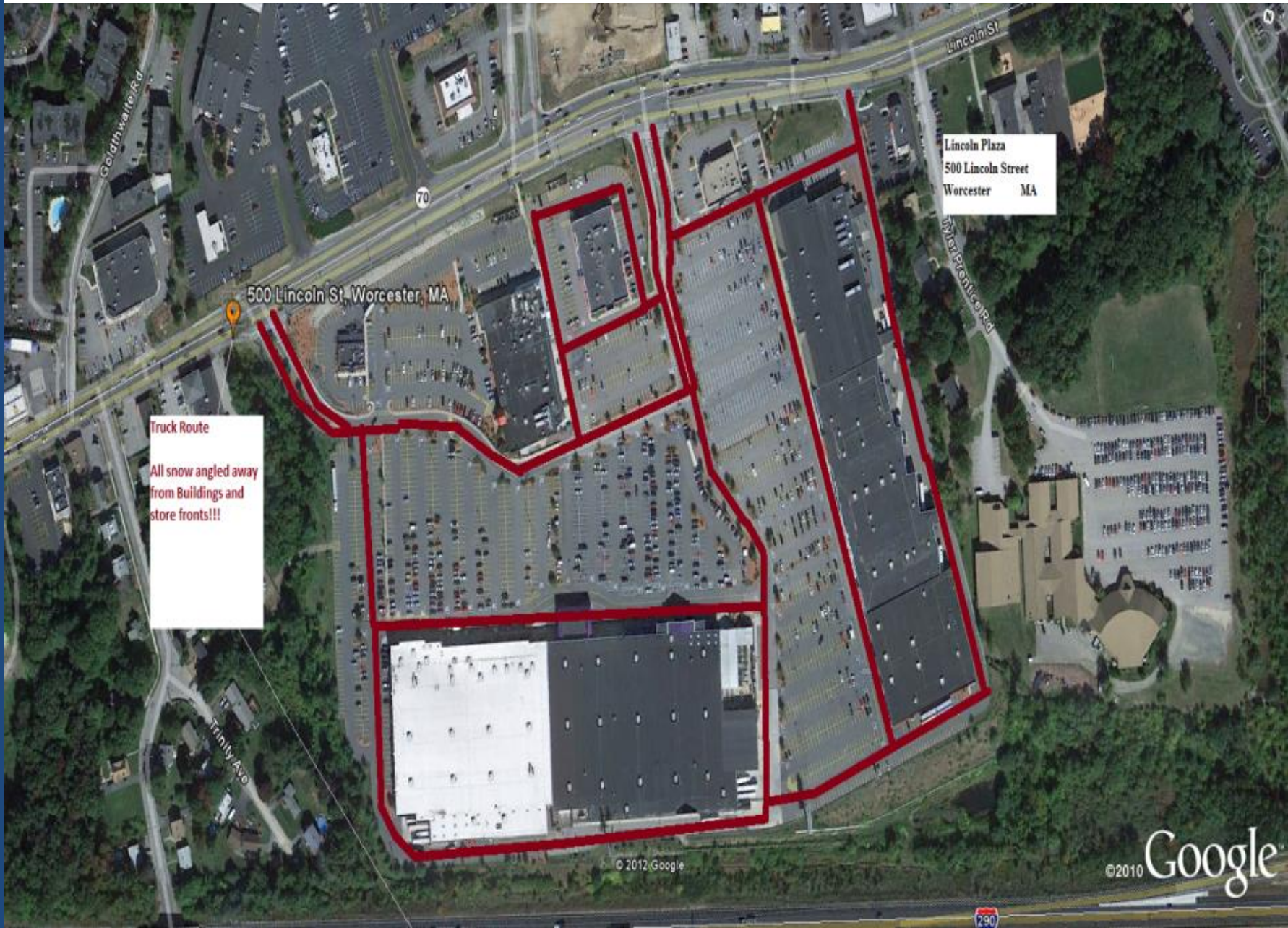
Why Have a Staking Process?



Staking Process – Color Coding



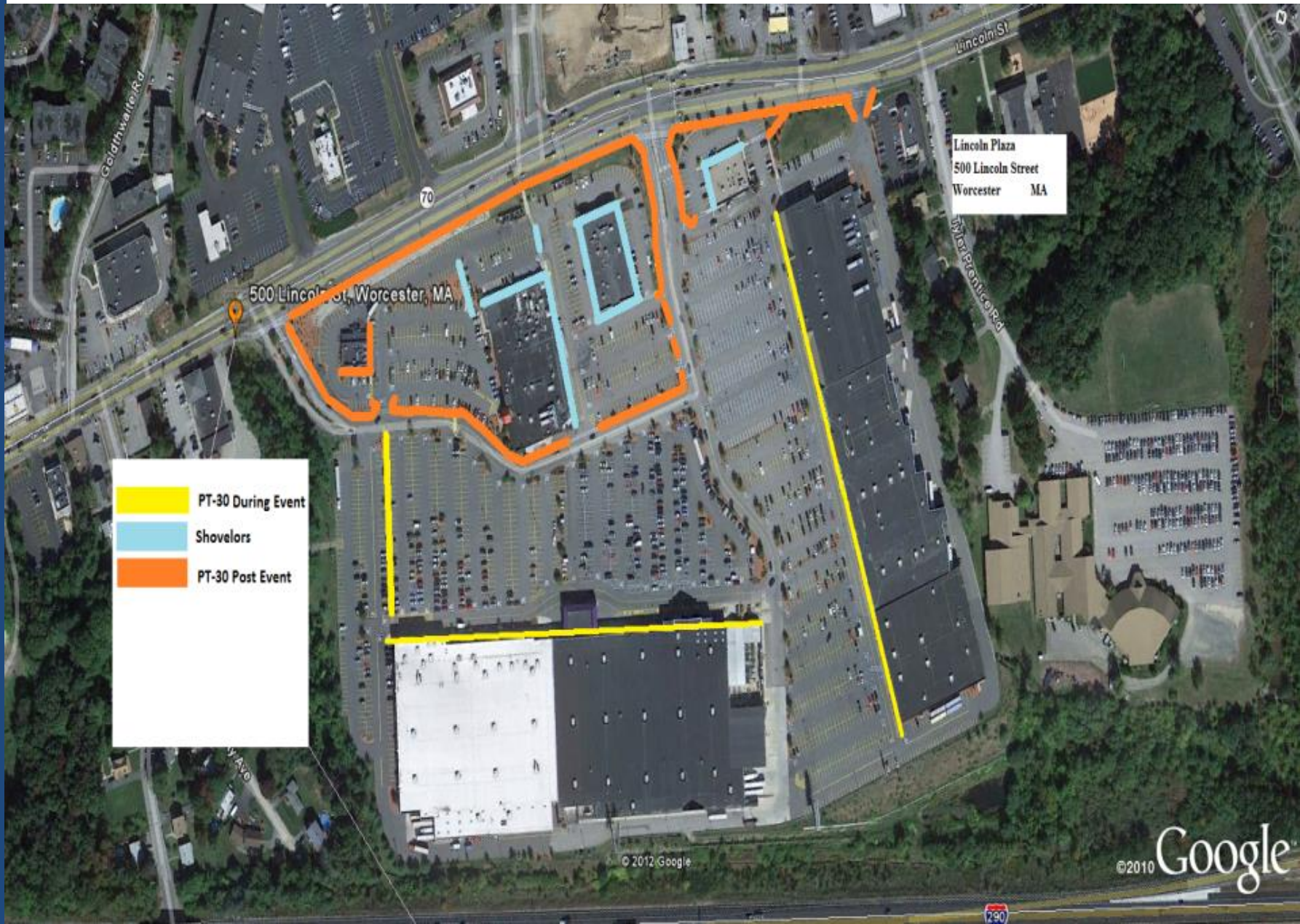
Truck Route



Truck Route
All snow angled away from Buildings and store fronts!!!

Lincoln Plaza
500 Lincoln Street
Worcester MA

Sidewalk Prioritization (Ops)



More questions & time for more 'nuggets' ?



Execution & Responsiveness

- ❑ Full season timeline (provide dates)
 - ✓ RFI / RFP's & **award 90 days prior to start of season**
 - ✓ Pre-season check completed
 - ✓ Equipment delivered to site (if necessary)
 - ✓ Marking/staking of property
 - ✓ First bill received
 - ✓ Site cleaned up and marking stakes removed

Execution & Responsiveness

- ❑ Documented snow site engineering plan to verify resource capacity
- ❑ Documented snow response planning ;***‘Double Double’ rule**
- ❑ Minimum inventory of required ice control product at all times – enough for 2 week average storm response (2-5 storms) for all types of temperature variables (NaCl, MgCl, CaCl)

Quality of Service

- Define client / site cycle time expectations
- Documented site engineering plan to verify necessary capacity to meet cycle time expectations (How much time do you have to meet minimum expectations?)
- Site inspection process with written results of expectations met or not met ('curb to curb')**
- Assurance that site management is consistent – Dedicated site / territory manager (POC)

Equipment

- ❑ Documentation of equipment; quantity, age and condition to be used on site
- ❑ **Backup equipment plan; quantity, age and condition – 10% minimum**
- ❑ Repair plans; Mechanic on staff, on call or sub-contracted



Licensing & Permits

- State and Local licensing & permits as required
- Local municipal regulations (e.g. noise, hours of operation)
- Local / State municipal compliance for salt storage required by Departments of Environmental Protection.**

Certification/Standards & Education

- ❑ **Advanced Snow Manager (ASM)**
[new offering]
- ❑ **Certified Snow Professional (CSP)**
- ❑ **Attendance and involvement in equipment and industry training**
- ❑ ***New Hampshire Salt Certification – voluntary certification***

- ✓ Differentiate your business with quality training
- ✓ Make your business more attractive to insurance providers
- ✓ Deliver better results to customers
- ✓ Improve safety and reward key performers

**CORE
PRINCIPLES**

**SIDEWALK
OPERATIONS**

**PLOWING
OPERATIONS**

**ICE
MANAGEMENT**

ADVANCED SNOW MANAGER

SERIOUS TRAINING

STRONGER PEOPLE

SAFER OPERATIONS

ASM 
ADVANCED SNOW MANAGER™

YOUR SOURCE FOR SNOW & ICE MANAGEMENT EDUCATION
www.sima.org



Thank You... Thank you very much!

Questions...

Where to find more information

www.sima.org

www.sima.org/resources

www.sima.org/bestpractices

www.goplow.com

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