ticularly from a liability standpoint.

To be safe, an employer must know his or her responsibility, accountability and the communication process. Let's examine each of these terms and what it means to the landscape professional:

Responsibility

Many municipalities or businesses avoid even thinking about safety. Legally, however, it is becoming negligent to take this approach. Omission is as bad as commission in negligence.

Top level management, if not establishing a safety philosophy, must support the one proposed and assign its policy to implement.

Policies, tailored to the organization, define the goals and objectives of the "safety effort."

Accountability

Many municipalities or businesses don't know what is safe or what is unsafe, either for employees or for customers.

The organization must possess the following:

- A complete inventory of its property or plant, especially areas subject to public use. Standards for those areas must be identified.
- A complete schedule of its activities or functions that are subject to public use. Standards for such use must also be identified and associated with such public involvement.
- A complete record of all incident forms, accident reports, logs, inspection sheets, patrol reports, medical and insur-

THE SAFETY MANUAL

- 1) Specifications for safe practices associated with equipment the public may come in contact with, like vehicles, mowers, chippers, saws, etc.
- 2) Regulations, including rules and activities prohibited in public areas.
- 3) An outline of the sign system and how it conforms with ANSI standards, U.S. DOT standards and other criteria.
 - 4) Warning labels placed on any item

the public and employees may contact.

- 5) List of all protective devices in use and where they are kept.
- **6)** An outline of all emergency treatment that can be applied by staffers; emergency services and how they conform to ASTM F-30 standards and are approved by local authorities.
- 7) Search/rescue/recovery procedures.
- 8) A plan for disaster preparedness and readiness for emergencies such as terrorism, fire, storms, earthquakes, explosions, tornados, wrecks, sickness, toxic fumes, etc.

ance forms, safety audits, insurance memos and all other fact-reporting files.

- A file of outside agency reports and record forms so that police, ambulance, hospital and other records can be coordinated.
- A manual which contains the aforementioned items and minutes of the Safety Committee meetings, including action and implementation schedule for follow-up on concerns discussed. It should contain personnel information of the safety officers, guidelines for investigating accidents or other safety-related problems. It should also contain the various items specified in the accompanying chart.

Communication

The communication system must

include:

- Information: getting the awareness of safety to the public.
- Discussion: creating a means for feedback from the public.
- Negotiation: establishing win/win situations by responding, accommodating, attending to and following up on any type of incident or accident. Nothing is too small.

Having defined "safety," its relationship to liability and risk assumption will be covered in future issues.

—Dr. Mittelstaedt is board chairman of the Recreation Safety Institute, P.O. Box 392, Ronkonkoma, NY 11779. Phone number at the institute is (516) 563-4806.

"It would be analogous to someone sticking his or her hand under a running lawnmower to clear away grass," com-

ments Peter Gerstenberger, director of safety and education at the National

Gobble up tree limbs—not yours

Faster drum rollers on new chippers mean more danger for operators.
Follow these operator hints to safety.

■ Industry leaders are expressing alarm over the increasing numbers of operators who are improperly using disc-knife chippers—often with tragic results.

These machines are designed to gobble up large tree limbs—and large limbs only—yet operators insist on trying to ram brush through the device. Amputation or death can result.



Arborist Association.

"It was never a problem with the machine itself. It was a problem with the operators getting their hands in there," he says.

A disc-knife chipper is different from the older roller drum chipper model in that the faster roller drum relies on the knives to pull in the branches.

Because the disc-knife chipper is designed for larger limbs, it has infeed rollers close to the chute opening to pull in the heavier load.

"That means the operator can get his or her hands closer to the infeed rollers," Gerstenberger explains. "Once you're in there, the power of the thing will break your arm and drag you into it."

Some manufacturers have countered by offering chute extensions, but certain operators still aren't respecting the machine's design. "Now some people are leaning farther into the infeed chute," Gerstenberger laments.

A push stick will not work with the slower feed rate found on the disc-knife chipper: it is simply not designed for smaller twigs.

"It's clearly marked, yet people do it day after day," Gerstenberger says. "The temptation to get that last load of brush in there is always around."

If a disc-knife machine is on the job, policy should be that "all the fine-rakings are put in a garbage can and placed in back of the truck," he suggests. "Sure, disposal is a problem, but it's a much smaller problem than if you have an employee get caught in a disc chipper."

Exact casualty figures are not available, but Gerstenberger says the liability factor stemming from accidents has driven some disc-knife chipper manufacturers from the market.

Gerstenberger expresses hope in a newer design that's been on the marketplace for about a year. The pocketknife chipper has smaller knives on a larger drum. "They operate much like a drum chipper, and the hazard associated with disc-knife chippers is not there."

He says this device will grind just about "everything up to the primary branches and the trunk."

-Jim Guyette

—The author is former editor of "Lawn Care Industry" magazine. He is a freelance writer based in Cleveland, Ohio.

Estimating: Quantify your own job needs

If you don't have the time to prepare a comprehensive bid by bid date, then don't start it.

by Kent Miller

Preparing a comprehensive job estimate is a tedious and often ungratifying experience.

One shortcut that should never be taken is to use the vendor's or supplier's quantities and bid amount without thoroughly quantifying the work yourself. Without quantifying the work yourself, you'll be unable to identify their omissions.

If you receive a quote from a supplier, vendor, or subcontractor, thank them for it. Then compare the quantities to your own. If they've picked up something



Kent Miller: Do it yourself.

you've omitted, they've just done you a big favor while there is still time to correct it.

Many of our industry suppliers go to a great deal of expense to provide quotations based on their own quantity take-offs.

This is indeed a great service that would allow us, their customer, the opportunity of checking our take-offs for possible errors. They do not intend for the estimator to rely heavily on their quantities and clearly state a disclaimer on every quote.

We receive quotations from the take-off list we submit to suppliers and vendors prior to the bid date. Some vendors choose to submit their own quantities and unit prices based on their own take-off. Since no two take-offs are alike, you can imagine some of the errors and omissions you'll discover in making the comparisons.

Continued on page 24

MAJOR ELEMENTS OF LANDSCAPE & IRRIGATION PLANS

QTY. DESCRIPTION

Hydroseed

Hydro stolons

Sodded lawns

Rototill

Mulch 1"

Mulch 2"

Decomposed granite

Raked earth
River run stone
Boulders

Bark chips 1"
Steel edge

Cast concrete curb

Redwood edge

Tee stakes set Lodge pole set

Redwood set

Mounds topsoil

Mounds dirt fill Clean up

Removals

Haul debris Misc. rental

Misc. subcontract

Groundcovers
Shrubs installed

Trees installed

Spray pop-ups Lawn sprayers

Filters

Pressure regulators

End flushes

Emitters
Controller walls

Wires

Gate valves

Quick couplers

Misc. rentals
Misc. supplies

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