The mark of quality in irrigation pipe.

FLINTITE asbestos-cement pipe is engineered for the job of transmitting water from source to fairways.

Easy to install, low in initial cost and maintenance, it is the pipe you can depend on for trouble-free performance over the years.

Combine this quality product with Orangeburg® SP® polyethylene pipe for tee and green lines, and Orangeburg Fibre pipe for drainage... and you have a complete irrigation package that can't be beat.
How to winterize your course

Now's the time for improvements. Ideas: build concrete drainage pans, repair machinery, paint equipment . . .

by Stanley Metsker
Superintendent, Boulder CC, Boulder, Colo.

If you want to get more done to improve your golf course in the off-season, the leaves turning color is a signal to plan your winter work.

The job of gathering leaves and trimming trees can keep a crew busy in mid-fall at many courses with large trees. But newer courses, like Boulder CC, have few large trees to worry about.

Many other jobs can and should be done before the frost sets in, however. The final few weeks after the grass stops growing can be filled with useful projects squeezed out of the summer schedule. Here are a few, including approximate cost and labor (man hours) required:

<table>
<thead>
<tr>
<th>Job</th>
<th>Hours</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repairing parking lot, roads</td>
<td>112</td>
<td>$246.40</td>
</tr>
<tr>
<td>and cart paths</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building fences</td>
<td>65</td>
<td>$354.00</td>
</tr>
<tr>
<td>Cleaning up gardens</td>
<td>40</td>
<td>$88.00</td>
</tr>
<tr>
<td>Dredging lake or stream channel</td>
<td>8</td>
<td>$72.00</td>
</tr>
<tr>
<td>Making water system changes</td>
<td>48</td>
<td>$205.60</td>
</tr>
<tr>
<td>Cleaning ditches or hazard area</td>
<td>53</td>
<td>$232.00</td>
</tr>
<tr>
<td>Stockpiling fertilizer</td>
<td>80</td>
<td>$255.00</td>
</tr>
<tr>
<td>Building new ice rink (at Boulder)</td>
<td>60</td>
<td>$132.00</td>
</tr>
<tr>
<td>Maintenance (4 weeks)</td>
<td>100</td>
<td>$220.00</td>
</tr>
<tr>
<td>Making drainage pans</td>
<td>90</td>
<td>$243.00</td>
</tr>
</tbody>
</table>

(Costs include a machinery charge and materials, except for first item.)

Last fall we built a new greenhouse. (It is used primarily to raise bedding plants for the clubhouse summer gardens.)

It took two men about a week to build, including preparation, selecting materials and cleanup. Materials cost approximately $150, with heating cables and electric heater. The lumber was rough cut, the roof is corrugated fiberglass and the walkway is cut into the ground so there is no need for side walls, benches or expensive construction. It has a thermostatically-controlled fan to assure even temperature.

After it was completed, we took geranium cuttings, rooted them, and when spring came we had 200 beautiful geraniums to plant.

Most of the seedings are started in February or March. Some of the easiest for us to grow have been allysium, dalia, marigold, linum and balsam (see photo). We find that petunias, begonias, coleus, and other fine seeded plants are harder to handle.

When the fall ends and snow flies, you should be ready with inside projects for your permanent crew. Here are examples of winter jobs Boulder plans: 
- Making Christmas decorations;
- Repairing machinery;
- Making concrete drainage pans;
- Painting equipment and furniture;
- Raising flowers for summer landscaping;
- Attending turf education meetings;
- Preparing next year's budget, maps and reports.

Continued on page 74
Unique. Powerful. Versatile. Bolens GK can solve your groundskeeping problems with the greatest maneuverability ever in a high-performance utility tractor. The GK’s versatility saves money on operating costs and equipment outlay by replacing as many as three units formerly needed to do the variety of jobs necessary for top-notch groundskeeping.

The secret to the GK’s superior brand of performance is a Bolens principle called Center Pivot Steering. With the GK’s maneuverability and outstanding flotation, you can mow in a tight 24” radius under almost any surface condition.

Designed and built primarily for large groundskeeping chores, the Bolens GK fills the gap between conventional tractors in the 14 to 30 hp range. Center Pivot Steering and the powerful 18 hp engine let the GK outwork many larger size tractors.

The GK. It’s the tractor designed for year-round grounds care for commercial, industrial and institutional use. It’s difference designed, with performance in mind.

Hitch up these year-round work savers

- Rotary mower with 6 ft. cutting width
- Reel mower cuts 10 ft. wide swath
- 54” snow/grade blade
- Two-stage snow caster, with 18” auger, clears 48” path
Here's how center pivot steering works

As the operator turns the steering wheel, the entire front and rear sections of the GK move together as a hinge, with the wheels forming an arc. Rear wheels track front wheels, exactly, so the operator working from the front module never needs to look back over his shoulder to see if he's missed something.

The GK also has hydraulically controlled power steering and two speed ranges for a total of six forward and two reverse speeds. Top forward speed is 10 mph.

FREE WORK TEST

See for yourself! Put one of your men on the GK. Your Bolens dealer will be happy to arrange a free work test. You will never want to go back to your conventional tractor again.
GROUNDS MAINTENANCE and TURF EQUIPMENT

TURF SWEEPER - 720
IN DUMPED POSITION
5 CUBIC YARD HOPPER
3 POINT HITCH - 5 FOOT WIDTH

AERATOR
#590
7' Swath
3-Point or Universal Hitch

SELF POWERED TURF SWEEPER
720E HL
HYDRAULIC LOADER
Lifts To 8½'
Dump Controlled For Truck Loading
Thatcher and Aerator Attachments are available for all Rogers Sweepers.

SWEEPER - 154
SELF PROPELLED
1 CUBIC YARD CAPACITY

POWER AERATOR - 580
PTO DRIVE
7' AERATING WIDTH

TRAILER - 70
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EASY LOAD - EASY UNLOAD LIGHTS, JACK, TILT BED STANDARD EQUIPMENT.

PTO DRIVE - 4' CUTTING WIDTH
REMOVE THATCH, AERATE, RENOVATE, TILL, PLANT, OR SPIKE.

POWER AERATOR - 580
PTO DRIVE
7' AERATING WIDTH

TRUCK - 12
1000 LB. CAP. - 12 HP
DIFFERENTIAL - TRANSMISSION SPEEDS: 0 TO 15 MPH

AERO-BLADE-509
DEEP SHATTER AERIFICATION VERTICAL CUTS - SPIKES

AERO-BLADE-548—WITH SEEDER

BLOWER - 40
250 MPH BLAST - OPERATOR CONTROLS BLOWER DIRECTION - 3 POINT HITCH

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OLATHE, KANSAS 66061

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913-782-0831
How to winterize your course  

Continued from page 72

One off-season activity of ours is tied in with our location.

The club is five miles from the city, surrounded by farms. We have taken advantage of this fact by buying, loading and hauling manure directly from farms to the golf course. This saves money. Commercial dealers charge about $5 a cubic yard, while we get it for 50 cents. We buy about 50 yards (cost: $25) and put it on badly-worn or still-undeveloped areas. The manure retains sunlight and heat to help sparse areas green up early in the spring, and stay active later in the fall.

Christmas is one time when we go all out to please our members. Each year we trek to the nearby mountains to cut a 13-foot evergreen tree for the clubhouse lobby. We flock it, set it up, decorate it, and one year even motorized it to rotate. The whole crew pitches in to make evergreen roping, wreaths, and cutouts of Santa and reindeer. We string lights around the clubhouse, on light poles, in the parking lot and to highlight displays. It takes about 40 man-hours, to achieve routine Christmas decorations. To construct extra cutouts and displays takes another 40 or more.

There is also no end to improvements you can make with concrete, during the winter season. Landscape or retainer walls with large blocks is one idea. One of the continuing projects at Boulder is making concrete drainage pans. We use a mixture of five parts sand, five parts ½-inch-rock and one part cement. A bit of calcium chloride is used to make them harden rapidly. We have our own molds, and pour 10 a day. (See photos). The pans measure about 1 by 2½ feet, with a slight furrow on top. Laid end to end, they are used to drain areas too flat for proper natural drainage, yet subject to heavy flow after rainstorms.

They are easy to install, don’t plug up and work superbly. We have about 800 feet of these drainage troughs installed, about half of which were made and installed last winter.

Probably the most common, yet important, winter job is equipment maintenance. Not every piece of machinery has to be overhauled or painted every year. But each should be checked thoroughly. Lubrication is very important. All blades should be sharpened. When spring comes, you’ll want everything in your shop ready to work.

In our area, there are periods even in mid-winter when golfers can get on the course. If it runs more than a few days, we might have to change flags and tee markers as usual. We keep three permanent cups in the greens, then rotate the flags. Watering in winter is not unusual, either. Cold, dry, exposed greens and mounds, especially, need moisture.

There is never enough time, to get everything done, even in winter. Such off-season projects take you right into the first days of spring. That’s the time for planting new trees, adding sand to traps, mixing topdressing and preparing new areas for seeding.

No one but you can plan exactly what should be done this winter that will most benefit your course next season. But plan now to use your time well and get a head start on the new year.
Renovates, removes thatch, sweeps and flail mows in one operation

The Ryan GROUNDS GROOMER attaches to a tractor equipped with a 3-point hitch and PTO. The operator can adjust blade height or depth, as well as empty the 5-cubic-yard hopper without leaving the tractor seat.

The hopper has a double steel door. At the top of the hopper is a wire screen to prevent stones, etc., from being thrown out.

Its 5-foot-swath reel is equipped with four rows of combination mowing and slicing blades. The reel can also be easily changed to all mowing blades, making it a "flail" mower.

Blade cutting ranges are from 2" into the ground for vertical slicing — to 3" above ground for rough mowing. All blades are "free-swinging" and rotate in reverse. This design creates air turbulence which blows leaves, thatch, clippings, etc., into the hopper.

Write for more information

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Manufacturers of the world’s finest turf-care equipment
The New Rondette Golf Shelter $295.00

Here is a permanent all-redwood exterior, high-quality, low cost, real rain protector, designed to blend in with the landscape. 250 sq. ft. of shelter for ten golfers and entrances for three carts, the Rondette Golf Shelter can be easily erected in four hours by casual labor. An outstanding value at $295.00. Larger sizes also available.

Offers a wide variety of Rondette designs. Shown below and at left is a Rondette 12 used as a Pro Shop. Other designs from larger shelters to complete vacation houses are also available.

Rondesics installations now operating at golf courses in 16 states east of the Mississippi river.

Write for free color brochure:
RONDIESICS, INC.
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Suite 304
Asheville, North Carolina 28801
Nearly 9,600 pounds--and not a mark on the turf!

"I could hardly believe it when they tested a loaded Champion Doo-All Trailer on our No. 11 fairway," said Steve Zappe, Greens Superintendent at the Springfield (Ohio) Country Club. "We had about 12 inches of rain in three weeks. The morning before the test, the course was closed because of standing water.

"I let them run the trailer only in the rough at first, then down the edge of the fairway and, finally, right down the middle. There was not a mark on the turf — you couldn't even tell where the Terra-Tires had passed. My shoe heels were actually doing more damage than the Doo-All loaded with two yards of sand."

Could you use this gentle work-saver on your course? Models in 3/4, 1, 1 1/2 and 2 cubic yard capacities, convertible to flatbeds, and all with Terra-Tires.

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THE CHAMPION COMPANY
Springfield, Ohio 45501

DOO-ALL TRAILERS—WHERE FINE TURF NEEDS EXTRA PROTECTION

For more information circle number 196 on card
Law suits and accident insurance claims have awakened private and public golf course officials to making long over-due surveys of hazardous situations on and adjacent to courses, in clubhouses and in other buildings on the grounds.

The safety committee is the valuable new development in golf business operations. At a public or fee course, the responsibility for noting and correcting conditions risky to players, caddies and other employees and to people in areas bordering the course is great. A person with the authority to take prompt action should be there. At the private club, with its committee operations, the safety inspection and recommendations probably are most effectively handled by members of the committee. The safety program is broken down so that the clubhouse, course and grounds, golf cars, roads, pool and other facilities and personnel are thoroughly considered. Findings are put in writing and various department heads are held accountable for making the changes required for safety.

The Institute for Safer Living of the American Mutual Liability Insurance Company checked 470 courses across the nation and came up with an estimate of 18,000 disabling injuries at golf courses during 1962. Increase of courses and play and other factors including neglect of elemental safety precautions make an estimate of 28,000 disabling golf injuries in 1968 a conservative figure. (Fire insurance inspectors, employee liability insurance regulations, and in some places, Board of Health regulations for pool construction and operation, usually account for almost all the safety surveys made at a golf establishment.)

Car manufacturers say the golf car situation has a parallel in industry where, some years ago, plant accidents involved heavy costs of lives and limbs lost, time lost, workmen's compensation payments, and law suits. Then, after attention of management was accented on accident prevention and safety education, production increased and accidents...
NEW Large capacity greens mower

Two widths of cut to suit your requirements

Tailor-made for North American conditions the new Auto-Certes will give a perfect cut to golf greens. Cuts at variable speeds to suit you and your greens—saves time* Light and maneuverable—saves operator fatigue. Replaceable engine parts—saves maintenance costs.

- Single point height-of-cut
  One single micro hand-wheel adjusts the height-of-cut from 1/8" to 3/4" at only 1/64" at a time!

- Long-life engine
  A perfectly balanced whisper-quiet 4-cycle gasoline engine. Starts first time—every time!

- Transport wheels
  Powered transport wheels, with built-in differential allow machine to be driven from site to site with effortless maneuverability.

- Outrigger rolls for undulating greens
  Fitted as optional extensions to normal front roll—helps stabilize mower on undulating greens.

- Brush & Comb set
  A nylon brush and steel comb are standard extras, fitted behind front roller for controlled turf grooming.

- Super strength cutting reel
  The ten knife reel is made of new super-strength impact-resistance steel. Stays razor-sharp—longer.

- Automatic clutches
  Operated from the handles, give complete control.

- Full width kick-stand
  A spring balanced kick-stand takes the mower's weight when transport wheels are being fitted. 20" and 18" width of cut models are available.

- Automatic clutches
  Operated from the handles, give complete control.

Tops in everything—except price

Demonstrations of this mower can be arranged by:

HEAD OFFICE
Warrens Turf Nursery
8400 West 111th Street, Palos Park, Illinois, U.S.A.
Importers for the U.S.A.

HEAD OFFICE
Duke Lawn Equipment
1184 Plains Road East, Burlington, Ontario
Importers for the Province of Ontario

HEAD OFFICE
Morin Equipment Inc.
2075 Branly (Centre Industrial STE-FOY), Quebec 10
Importers for the Province of Quebec
were sharply reduced. In commenting on that development an executive of one of the leading golf car manufacturing companies said:

"Industrial plants throughout the country appointed safety committees and safety chairmen. Today it is normal to have safety directors in large plants. "Country club directors when appointing committees should add safety committees. This innovation provides an opportunity to have more members active on committees and to remedy a serious error of omission in the club operating plan.

"Golf car manufacturers have the same problem automobile manufacturers face. They spend long hours and considerable money to develop safety devices and engineer their golf cars with safety very much in mind, but they can do very little about the car user who's driving thoughtlessly over the variegated terrain of a golf course.

"The American Golf Car Manufacturers' Association has spent many thousands of dollars on a nationwide safety program. If the safety committee chairman of a golf club or an official of a public or daily fee course in charge of a safety program will write the Association, (734 15th St., N.W., Washington, D.C., 20005) information will be provided regarding the many safety decals, posters, etc., that are available."

It might be very beneficial to a club to get a doctor, an insurance man, a lawyer, a man who travels and gets to many other courses and even a reformed drinker who has survived hazards of golf, to make surveys on safety of clubhouse and grounds. Each would see things in a light the other wouldn't. The club manager, the superintendent and the professional should then check these findings and evaluate them. Results should be discussed with appropriate people such as the life guards at the swimming pool and a county or state policeman who patrols the vicinity of the club, etc.

There's no need to detail the many perils to the pursuit of vision and in car traffic conditions.)

6. Practice swings at the first tee where it's usually crowded is a common occurrence.
7. Awaiting golfers and caddies are often located in a place where a bad shot might fly.
8. At some places ball washers, bags and tee benches are ahead of tee markers.
9. Steps or paths are sometimes in unsafe conditions.
10. Depressions from broken drain tiles may account for injuries.
11. There will be tree limbs that may hit car passengers.
12. Trap rakes in bad condition or carelessly tossed are invitations to accidents.
13. Sprinkler head and hose outlets, hose left coiled at unexpected spots and tee benches in bad repair are other dangers.
14. Caddies relaxed and unheeding while their players are driving are hit so often that it's considered an occupational hazard. Only because of luck are the kids seldom hurt.
15. Parallel fairways with traffic in opposite directions are scenes of many accidents. Bunkering or landscaping to eliminate this danger is a job that calls for expertise.
16. Lightning presents a danger also. In the Rules of Golf book of the USGA (pages 67, 68), information on "Protection of Persons Against Lightning on Golf Courses" might serve to prevent some of the deaths on golf courses.
17. Drinking water supply on golf courses often needs attention. Again, only luck is preventing trouble.
18. The habit of some golfers dropping a cigarette on a green then placing it back in the mouth can be dangerous if the green recently has been treated with poisonous material.
19. Golf club employees sometimes are exposed to injury from chemicals used in maintenance. Machine operation on course and in the equipment building generally is so obviously hazardous that the superintendent educates and supervises his