

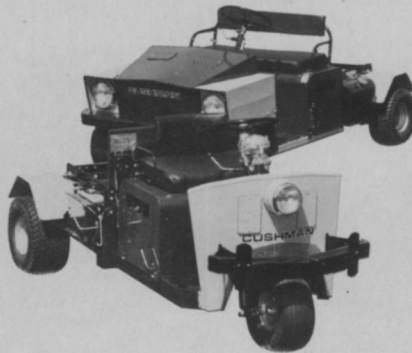
We put a lot into our Turf-Truckster.

One of the most dependable vehicles for moving your crew around is the 3- or 4-wheel Cushman® Turf-Truckster.® But it was also designed for more than just transportation.

Equipped with an optional PTO and hydraulic system, both models accept a wide range of special, add-on turf maintenance equipment. So with just one Turf-Truckster you can haul, dump, grade, seed, spray, spread, top dress, and aerate. Plus, we've increased the payload capacity of the Turf-Truckster to 1,500 pounds.* So you can carry more than ever before.

But there's more to a Turf-Truckster than versatility. There's a rugged 18-hp engine that's built to take on your turf. It comes with a standard 2 to 1 auxiliary transmission. A transmission built to allow a gear driven PTO to be attached directly to it. And common sense engineering makes the Turf-Truckster steer clear of the repair shop, too.

The 3-wheel model gives you the maneuverability of a tight 17' turning circle, while the 4-wheeler has seating



room for two. And it just takes minutes to add any of the Turf-Truckster's accessory pieces, thanks to Cushman's pin-disconnect system. No bolting, no hitching. Just snap two or three pull pins in place and you're ready to hit the turf.

If a good transportation/hauling vehicle is all you need, though, look at the Cushman Runabouts. There's an 18-hp two-seater, and a fuel-stingy 12-hp one-seater model. Both Runabouts are economical to own. And like any Cushman vehicle, they're built tough.

There's nothing like a Turf-Truckster or Runabout to get more work done, in less time and with less manpower. For a closer look at what goes into, or behind, a Cushman vehicle, return this coupon today.

81-CUT-4

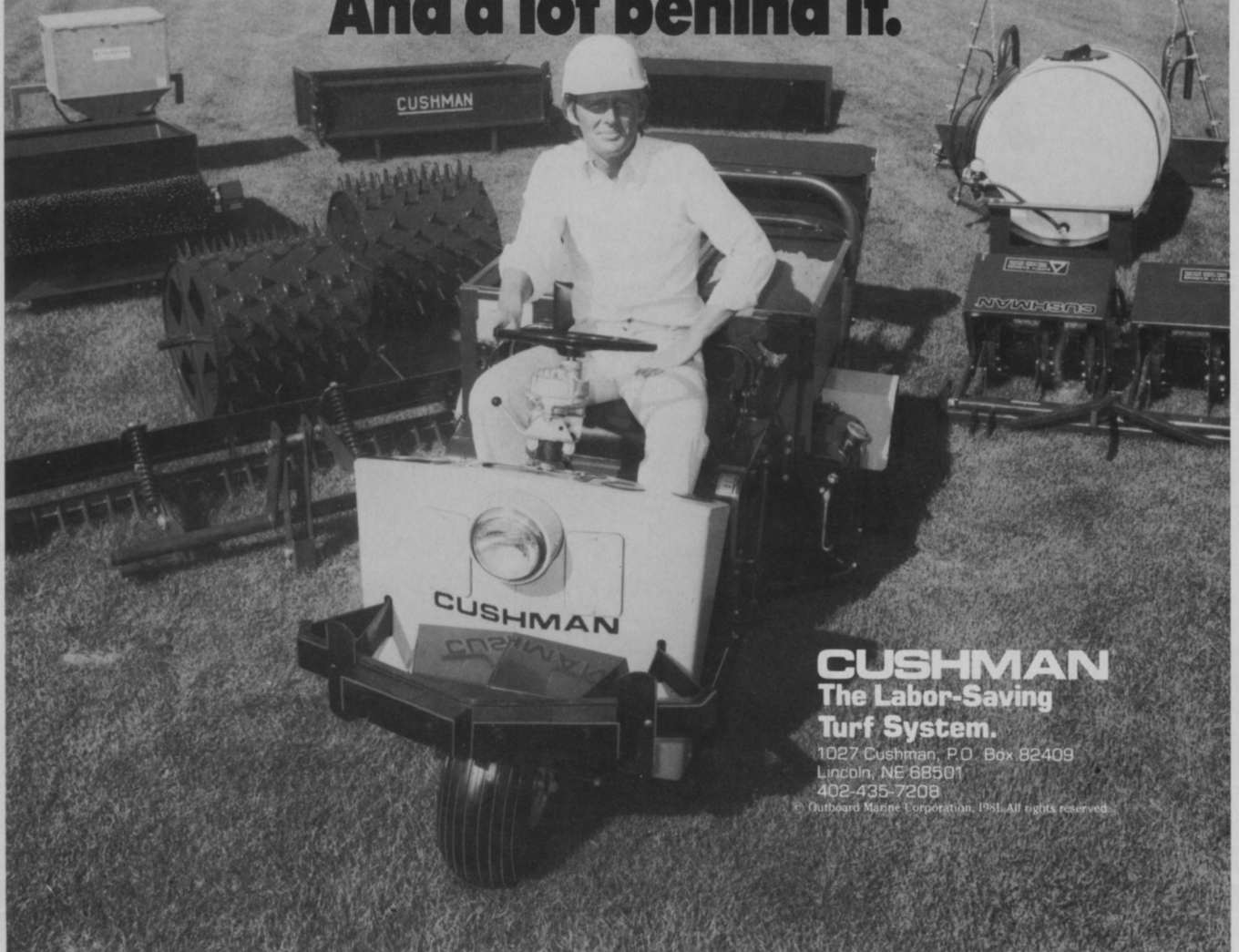
*Rating for vehicle equipped with 9.50-8 rear tires.

Show me what you put into a vehicle, Cushman.

- I'd like a demonstration of the Turf-Truckster (3-wheel or 4-wheel). (Circle One)
 - I'd like a demonstration of the Runabout (12-hp or 18-hp). (Circle One)
- I'm interested in seeing these Turf-Truckster attachments: Aerator; Sprayer; Top Dresser; Grader/Scarifier; Flatbed/Dump Box; Cyclone Seeder/Spreaders.
- Send me your new 1981 catalog.

Name _____
 Title _____
 Address _____
 City _____ State _____ Zip _____

And a lot behind it.



CUSHMAN The Labor-Saving Turf System.

1027 Cushman, P.O. Box 82409
 Lincoln, NE 68501
 402-435-7208

© Outboard Marine Corporation, 1981. All rights reserved.

ACCUTROL
Surfactant.

VEGATROL
DPD-AMINE

VEGATROL[®]
DPD-ESTER

BANVEL[®] **XG**
A 10% dry formulation for spot treatments.

BANVEL[®] **520**
Oil soluble combination of Banvel and 2,4-D
for dormant, basal and low-oil applications.

BANVEL[®] **720**
Water soluble formulation of Banvel and 2,4-D.
Aquatics clearance in some states.

BANVEL[®] **4-W.S.**
A 4-lb. dicamba formulation.

Banvel Industrial Herbicides...

Just what the Industrial Vegetation Control Specialists ordered.

Economy. Efficacy. Environmentally sound. That's what these industrial vegetation control specialists said they wanted in brush and broadleaf weed control herbicides. So we offered them a complete line of Banvel industrial products. Here's what they had to say...



Robert J. Gates, chief of field operations, Southwest Florida Water Management District.

Robert Gates and the Water Management District have been using Banvel Industrial Herbicides for over five years: "Alligator weed and pennywort are real problems in navigation work. We control 'em with Banvel 720. We also maintain our recharge areas, and it works beautifully there, too. Banvel 720 works on hardwoods and softwoods, where 2,4-D would only be effective on one species. The favorable ecological impact is another important reason for using Banvel 720. Without the Banvel, we would have some serious problems."



John (Jack) Bogle, President of the R. H. Bogle Company, Alexandria, Virginia.

The R. H. Bogle Company has been a pioneer in the control of brush along railroads: "We've been using Banvel products for the last six or seven years. Today, we're using Banvel 720 as a general brush killer. Also to spot treat woody plants, such as pines. Banvel 720 also has an aquatic label in eleven southern states. So it gives us the flexibility to spray along ditches. And it's at least as good, if not a little better on price with other herbicides. For mixed brush control, Banvel 720 is highly efficient."



M. L. Bugh, landscape architect, Indiana State Highway Commission, maintenance division.

M. L. Bugh has worked closely with Purdue University to develop a strong, affordable weed control program for Indiana highways. He's been specifying Banvel 720 and Banvel 4-W.S. since 1975: "Economy is a major factor when we consider a weed control program. But we look as much at performance as at cost. Banvel 720 combines the best of both. Two applications of Banvel look like four of 2,4-D. And, applied the right way, Banvel is as safe to the environment as any other chemical we've used."

These industrial vegetation control specialists get all they ask for with the Banvel line of products. Shouldn't you? Contact your Velsicol salesman and see how Banvel industrial herbicides can work for you.

For the salesman in your area, call or write:

Velsicol IVM
341 East Ohio Street
Chicago, Illinois 60611
312/670-4962

Velsicol reminds you, before using any pesticide, please read the label. *Banvel is Velsicol's brand name for dicamba.

VELSICOL®

Velsicol Chemical Corporation
World Headquarters • 341 East Ohio Street
Chicago, Illinois 60611
Velsicol is an operating company of Northwest Industries, Inc.

Write 168 on reader service card



LANDSCAPE STRUCTURES ARE PART OF A COMPLETE MANAGEMENT PLAN

By Ruth E. Messinger, Contributing Editor

The domain of today's landscape manager extends beyond the planting and care of living material. A landscape includes structures designed to blend with the plant material and serve a practical or recreational function.

It consequently becomes advantageous for the landscape manager to gain skill in selection and care of certain landscape structures. This skill need not be limited to landscape architects. In fact, since the landscape manager must maintain the structures, his practical experience is a valuable contribution to their selection.

Split-log picnic tables, self-weathering bridges, stone aggregate planters, and rustic park shelters are popular architectural structures designed to blend with the natural environment. In contrast are structures which have a purely contemporary look—benches and planters of heavy-duty fiberglass and clean-lined site lights with tapered steel shafts. There is an abundance of products for every taste and landscape need. Write numbers from 301 to 331 on reader card for more information.

Benches

All-heart California redwood is the material used in Rosenwach's (301) Sitecraft benches and matching planters and litter receptacles. The backless Parker bench is set on wood pedestals and made of border members dressed 1 $\frac{3}{4}$ " x 5 $\frac{1}{2}$ " and inner members nominal 2" x 4". A sculptured contour bench is set on a steel pedestal and comes in lengths to 84 inches. Planter benches are available also, in rectangular, square, and circular shapes. Standard rectangular and square benches are 18 inches wide and fastened by thru-bolted steel brackets.



Rosenwach's redwood round planter and circular planter-bench are available in custom sizes. The planter has two-inch-thick staves and galvanized steel hoops.

Algoma Net (302) has fashioned a line of benches for garden, terrace, paddock, or mall in southern yellow pine. The 42-inch garden bench is finished with an emerald-green, weather-resistant enamel paint and has a steel frame coated with satin-black enamel. The 60-inch mall bench, also suitable for playgrounds and patios, is equipped with well-spaced metal legs and finished in polyurethane.

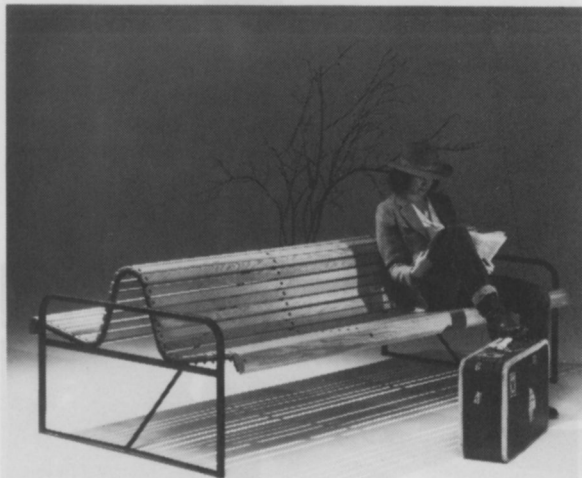
Landscape Forms (303) offers the Trestle Group of benches and tables of red oak, redwood, and purple-heart with fiberglass and steel components. Inspired by European intricate wrought-iron benches, they have been translated into simple curves and rectangles

Survey Reveals Trends Among Landscape Architects

A survey of 100 randomly selected landscape architectural firms in the United States in February 1981 by Infometrics, a division of Harcourt Brace Jovanovich Publications, revealed the following trends:

- One out of three projects involve public facilities, schools, and parks. This makes public agencies the largest user of landscape architectural services. Consultation and commercial construction projects each represented an average of 20 percent of landscape architectural business. Single residential and multiple residence (condominiums, apartments, etc.) each represent 15 percent of business performed.
- The highest dollar value of specified materials was for site details and construction, such as retaining walls, steps, roads, ramps, bridges, signs, etc. Sport and recreational materials represented the second largest dollar amount of specified material. Plant materials were only the third in value specified. Two-and-one-half times more money is directed toward site details than plant materials.

- Landscape architects generally recommend only four out of ten area landscape contracting firms to perform their plans. They exclude the other six for reasons of quality and reliability. They say two out of three jobs inspected are done correctly.
- 90 percent make maintenance recommendations to go with their plan to protect their work as the material matures.
- Architects have noticed increased competitive bidding among contractors in the last six months.
- Supplier product brochures with specifications and industry publications are the primary sources used by landscape architects for updating.
- Two thirds of the jobs performed by landscape architects are billed, including materials and fees, at more than \$20,000.
- Applicants for landscape architect positions are in adequate supply and reasonably skilled for the job. Nearly two thirds of the architects polled said they had no difficulty in finding good applicants.



A curved double bench trestle with back by Landscape Forms is constructed of 1 x 2 oak and welded steel.

for contemporary or traditional settings. A double bench with back measures 52"D x 96"W x 31"H and is constructed of 1 x 2 oak finished for outdoor use. This style also comes with a single back or without one. Matching trash receptacles and kiosks are available.

Also by Landscape Forms is the Shadowline 3.1, adaptable to any setting with a choice of bases and proportions. Made of solid 2 x 3 boards and matching spacers and framed by 2 x 6 face boards, it has steel splines and concealed rods for durability.

Victor Stanley (304) produces the Homestead Series of outdoor benches in backed and flat designs. A traditional park bench has seat and back members of 2 x 4 fir, redwood, or purpleheart slats stained in walnut.

This company also offers a line of highly styled Unislat benches with slats that fit individually to the frames on special brackets. And a geometric bench, designed to encircle a tree, flower bed, fountain, or sculpture, is crafted of redwood, fir, purpleheart, or cypress in hexagonal or octagonal shapes.

For a really rustic flavor, there is BigToys's (305) People Bench, which seats up to five adults—or Vandy-Craft's (306) high-backed split-cedar-log swing seat (#33-C) with an overall width of 120 inches.

Planters

Fiberglass, the newest material for planters and planter benches, withstands heavy outdoor use. Landscape Forms's Mansard style planter bench (2.4A) measures 84" square x 34" high; wood seats are also available in red oak or redwood. The company's free-standing planters come in a variety of shapes, textures, and colors.

Apollo fiberglass planters by Valley View (332) are easily repaired, and their bottoms won't crack, freeze, or drop off. Their glazed exteriors give them a hearty appearance.

Two planters by Fesco (307) are made of Gem-Rock, a break-resistant material that helps soil retain its moisture and protects roots from sun. A round contemporary model is available in 12-, 14-, and 20-inch sizes. An ornamental 17-inch urn comes in a classic marble design. Both planters have a swirl-tone pattern to give them a natural appearance.

Park Shelters

Poligon Division of W. H. Porter (308) offers prefabricated park shelters in six basic structures—three hexagon buildings from 36 feet in diameter to 60 feet,

Continues on page 26

Project Area	Total Sample Dollar Volume	Average Sample Dollar Volume	Volume Share	Rank Position
Site details and landscape construction — like retaining walls, steps, roads, ramps, bridges, signs, etc. BASE = 76	\$72,788,000	\$957,737	43%	1
Sport and recreational facilities — like parks, playgrounds, fencing, indoor/outdoor furniture, etc. BASE = 73	44,930,000	615,479	27%	2
Plant design and composition BASE = 78	21,758,000	341,697	13%	3
Utility design — like water systems, fountains, irrigation ponds, pools, etc. BASE = 63	16,316,000	258,984	10%	4
Outdoor electrical systems — like walkways, tennis courts, recreational areas, shopping centers, etc. BASE = 64	11,855,000	185,234	7%	5
TOTAL VOLUME =	\$167,647,000		100%	

Average value of plant materials specified in 1980 = \$341,697
 Average value of landscape structures specified in 1980 = \$830,991



A hexagonal park shelter by W. H. Porter may be partially enclosed for rest rooms and storage.

two rectangular models (20-foot and 30-foot widths), and a 16-foot square building for use as a rest room or for shade on a golf course. The free-span design of the 16-foot model gives it an open, unobstructed interior. The popular Hex 36, when enclosed and insulated, will adapt to passive solar heat. A single Hex 36 has enough room for complete rest-room facilities with enough space remaining for concessions or storage.

All the buildings combine wood with a tubular steel space frame. Steel members bolt together for easy erection, and wood beams drop into purlin pockets attached to steel beams.

R. J. Thomas's (309) Pilot Rock park shelters have rustic wood-shake roofs and clearly defined steel understructures. They come in rectangular, hexagonal, and A-frame configurations. The open web truss design of the columns and roof beams creates an open-air effect.

From GameTime (310) comes a selection of linear shelters in five sizes which can be fully or partially enclosed with a panel system to form a concession stand or restaurant. The support columns are of vandal-resistant steel tubing, and the roofs have brown asphalt shingles. Doors, windows, and concession or display windows are optional.

Another GameTime structure is the prefabricated park and picnic pavilion of southern yellow pine. Its tongue-and-grooved roof is anchored by massive supporting columns and rugged cross members. Sizes range from 22' x 27' to 29' x 116', and all roof boards are precut to size and marked for installation.

Still another design is a pine golf course or rest shelter, which covers an eight-foot-square ground space.

Lighting

Lighting products come in a choice of styles to enhance either a traditional or contemporary architectural setting. There is a broad selection of cast ornamental lighting posts, such as Spring City Electrical Mfg. Co.'s (311) line of historical designs. Borough Hall has a cast-iron pole that stands 8½ feet to 10 feet plus the height of the luminaire. Other pole heights range up to 20 feet, and multiple luminaires per pole may be ordered.

Western Lighting Standards (312) presents Turn of the Century lights in a variety of fixtures and finishes. The Victorian, with its tapered and fluted pole shaft



Borough Post is an ornamental cast-iron lighting pole by Spring City in the style of the 1890's.

and cast-aluminum base, is reminiscent of the royal palaces of the early Roman Empire. Lighting fixtures come single or in clusters of five and can be pendant-mounted or post top.

The clean, flowing lines of contemporary lighting are embodied in Millerbernd's (313) Future Square Series, designed for a variety of installations, from shopping malls to parks and boulevards. The tapered shaft of each Futura model is square, and the mast arm is mounted at a 90-degree angle. There is a choice of tenon, single, or twin arms in four- or six-foot lengths, and slip-on mountings accommodate a variety of luminaires. Mounting heights up to 50 feet allow wide-area illumination.

Millerbernd discourages vandalism, a serious threat to outdoor lighting, by concealing the mounting bolts and nuts. And the high base of each model prevents bumps and scrapes from maintenance equipment.

Another collection of contemporary outdoor lights comes from Lightolier (314). There is a multi-faceted sphere with a beacon effect made of two hemispheres framed by cast aluminum which can be mounted on a pole or wall. A faceted octagonal site light has a framed enclosure of 25 facets of weathered brass. Its clear acrylic panels are shatter-resistant. An unusual approach to site lighting is the I Beam Cluster, made with two rows of single-piece globes, molded of impact-resistant polyethylene, which are fitted on both sides of an extruded aluminum beam.

Litter Receptacles

Litter receptacles are designed to meet large-capacity requirements of municipalities, parks, shopping malls, and plazas. Howard Products Division of United Receptacle (315) has both pole-hung, vandal-resistant metal receptacles and free-standing units. The R38 standard model is functional in shape and made of 18-gauge galvanized steel with a baked-enamel, high-gloss finish. It has four 5 x 21³/₄" openings and rounded corners for safety. A "Pitch In" symbol is silk-screened on two sides. The R38 also comes with wood or stone aggregate panels to blend with a natural environment.

Stone aggregate appears also in Clean City Square's (316) Model P30 litter container, which has a duronatic bronze finish. This receptacle is available in three sizes and five colors. A 30-gallon model measures 24" x 24" x 36" and weighs 147 pounds.

A heavy-duty refuse container of commercial-quality plastic by Rubbermaid (317) is designed for parks, where it is generally chained to a tree or fence. Another park model, from BigToys, is a rustic log container built to store a regular 50-gallon garbage can.

Bridges

Bridges are manufactured for pedestrian, bicycle, equestrian, golf course, and vehicle use. Continental Custom Bridge (318) produces custom-built bridges that span distances from 10 feet to 200 feet. They are available in painted carbon steel tubing or fabricated from the self-weathering Cor-Ten steel tubing, which deepens in color with the passage of time.

Valley View offers rustic cedar-wood bridges with handrails of northern white cedar. These bridges are made in three sizes and may be stained, painted, or left to weather to a natural silver-grey.



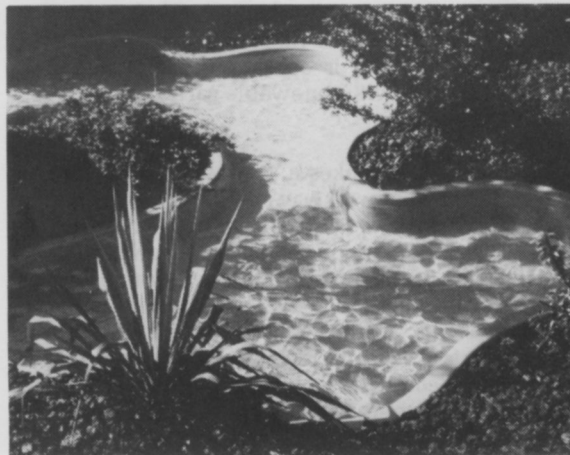
A rustic cedar wood bridge by Valley View of northern white cedar has rot-resistant handrails.

Fountains, Waterfalls, and Pools

Restfulness is a cool fountain, and Reno Studios (319) designs and manufactures various types that add beauty to a formal or natural setting. There are traditional cherub and goddess statuary fountains and a Piping Boy who sprays water from a reed instrument into a fluted basin. For a contemporary environment, a tropical fish spouts water into a petal shell. The sculptured figures, bases, and pedestals are assembled to order. Rebecca at the Well, No. 285, stands 52¹/₂ inches high and may be combined with a pump tier measuring 45 inches in diameter and set on a 17-inch base.

Hermitage Gardens (320) presents an assortment of rock/waterfall/pool fiberglass units designed by Russell Rielle. Each unit (assembled to order) comprises a rock coupled with a small basin of water which is set in a larger pool. Water is transported from the larger pool by a marine pump for dispersal at the top of the rock. Pool colors are brown or aqua.

Valley View has added a U-shaped free-form pool to its Starmist line. This pool is about 131" long x 86"

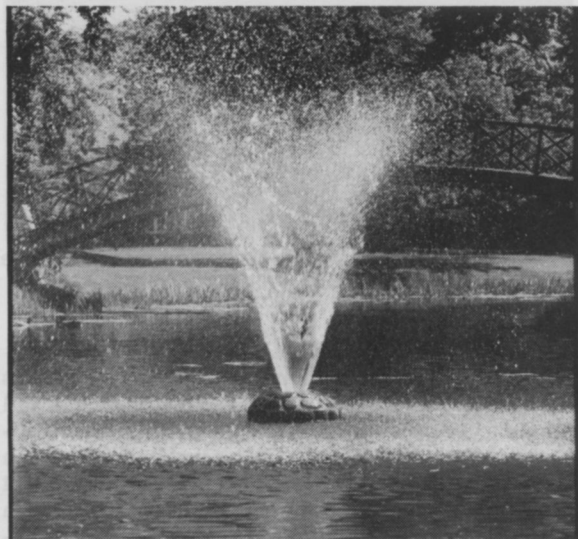


Valley View's garden pools come in 15 styles and sizes and four colors. This U-shaped free-form model is 131 inches long and holds 180 gallons.

Continues on page 28

wide x 8½" deep and has an 180-gallon capacity. Its smooth Gel-coat finish is weather-resistant. Patented top and bottom anchor fins eliminate frost-heave and imbalanced settling. Four colors are available: Raven Black, Sand Beige, Ultra Marine, and Earthtone Brown.

Fountains from Otterbine (321) enhance the natural beauty of ponds and lakes and improve water quality. By aerating and mixing the water, they help biodegrade organic wastes and reduce carbon dioxide and



This Otterbine fountain enhances the beauty of the lake and improves water quality.

other gases. Each one-, two-, three-, or five-horsepower model has an aluminum housing and floats in the water by means of a polyethylene flotation device. Electricity is supplied through a cable with an underwater connector that runs from the pond or lake to the power source, such as the pump house of a golf course. There is a choice of three spray patterns—standard, starburst (finer spray), and rocket (straight up).

Another kind of fountain is Western Drinking Fountain's (322) Model 35. This drinking fountain of 10-gauge rolled steel has a green or bronzetone scratch-resistant epoxy finish. For added protection, there is an access panel fitted with vandal-resistant screws. The fountain is operated by a push-button, self-closing valve with renewable cartridge.

Bleachers

Sturdisteel (323) makes a 10-row, 24-foot bleacher with elevated front walkway and aluminum seats and footboard. It may be ordered with wood seats and footboards, and in various lengths and row heights.

GameTime's galvanized steel angle-frame bleachers, also with aluminum seats and footrests, come in 8-foot or 15-foot sections, shipped knock-down. Each unit supports a load of 120 pounds per square foot. Frames are electrically welded into integral units and galvanized for rust-resistance.

Playgrounds

An abundance of modular wood playground systems have components that give every muscle a workout: climbers, crawlers, ladders, slides, parallel bars,



Playworld System's Tothouse combines a wood-and-steel ladder with a sheltered rest stop and slide.

whirls, buck-a-bouts and swings.

GameTime's Timb "R" Mod Play Systems can be customized for varying age groups. There are seven different base platforms, and more than 45 components are made to link platforms or connect to one platform only. These components are built of southern pine which is treated with a salt preservative. A spiral slide in brilliant yellow and rustic brown is available seven or ten feet high with a safety metal stairway and double handrails to provide maximum security. Other components are a suspension bridge, log-roll attachments, and swing links.

For an individualized playground unit that can be expanded as needed, GameTime offers the Mod "U" Log System of linkages and attachments. Many of its components are interchangeable with the Timb "R" Mod Play System.

An innovative concept by this manufacturer is the Atom Splitter swing. It features five swings encircling a suspended ball. The ground space is 30 feet in diameter, the overall height is 11 feet, and the weight, 188 pounds. Colorful climbers are available too, in a profusion of designs (Conestoga wagon, fire truck, railroad, etc.). They are made of galvanized pipe with no sharp angles or exposed bolts.

Action Products (324) offers play structures of 6" x 6" southern yellow pine timbers treated with Osmose K-33. Slides, trapezes, swings, and ladders are expandable to meet the physical requirements of any park or playground.

Two new construction climbers come from J. E. Burke (325)—the Burly Dumpster, a climber that looks like a dump truck (15'L x 6'4"H x 3'4"W), and "Front End Funster," a climber that resembles a front-end loader (10'5"L x 6'3"W x 6' 2"W).

Playworld Systems's (326) wood structures include the nine-foot Tire Swing Combo with chain-swing tire and a ladder and slide. The Tothouse (PW-280) is an imaginative unit that has a ladder leading up to a roof-covered platform, from which children slide down on the other side.

BigToys offers a unique chain network and log system called "Suspended Animation." The chains form

Continues on page 80

CHEVY'S BIG ON MEDIUMS

BIG ON DIESEL

It's a fact. More and more urban delivery truckers are going to diesel. Chevy responds by offering a choice of two rugged, mid-range diesel engines. They're designed for thousands of miles of service with minimal maintenance. Chevy Mighty Mediums with diesel power. A practical approach to the demands of the '80s and the demands of the industry.



DETROIT DIESEL

This high-powered Detroit Diesel "Fuel Pincher" 8.2 Liter (500 Cu. In.) V8 is available in two versions: turbocharged 193 net HP (205 gross HP) and naturally aspirated 153 net HP (165 gross HP).



CATERPILLAR 3208

Naturally aspirated. Offered in various power versions up to 199 net HP (210 gross HP). 10.4 Liter (636 Cu. In.) displacement. Some of the engines are not available in California. See your dealer for details. Kodiak cab option required.

BIG ON CHOICE

With all the different wheelbases, engines (both gas and diesel), transmissions, axles, springs, tires and available options, there are over 4,800 ways you can spec out one of Chevy's Mighty Mediums. There are 15 wheelbases to choose from and 25 available rear axles including single, dual-drive tandem and tag axles. See your Chevy dealer for details.



BUILT TO STAY TOUGH



GRASS ROOTS CANDIDATE!



To be competitive in the sod market, producers need a dark green, healthy product that can be harvested in a minimum amount of time. **Columbia** bluegrass was developed by **Turf-Seed, Inc.**, to work alone or in a blend to produce a dark green, quick spreading turf. We nominate **Columbia** as the grass roots candidate for this year and years to come.

Turf-Seed, Inc. developed **Columbia** bluegrass to be a quick rooting, rapid spreading bluegrass excellent for profitable sod production.

A good root system is important to get lawns through hot summer periods. **Columbia** has shown good resistance to Fusarium blight in California tests where Fusarium is a problem during dry summer periods.

Marketed by



P.O. Box 250, Hubbard, OR 97032
503/981-9571 TWX 510-590-0957
The Research, Production, Marketing Company