Revolution On Virginia Highways

Virginia A. G. C. Review
For more than a half-century we have been growing while helping the Commonwealth grow. As in the past, our finest efforts for the future are pledged to help further the progress of Virginia through the roads and highways we are privileged to help build.

J. R. FORD COMPANY, INCORPORATED

In Our 54th Year

GENERAL CONTRACTORS AND PAVING ENGINEERS

Plants

LYNCHBURG  PORT ROYAL
WARRENTON  CULPEPER
FRANKLIN  CHESAPEAKE

P. O. Drawer 1179  Phone VI 7-4444

LYNCHBURG, VIRGINIA
Carolina-Virginia Co., Inc.

Highway Contractors

901 Catherine Street
Phone 644-5329
Stratford Hills Shopping Center
Phone 272-5828
RICHMOND, VIRGINIA

Wright Contracting Company

General Contractors

Highway and Airport Construction
Drainage, Draining, Sewage and
All Types of Paving

COLUMBUS, GEORGIA

GUY H. LEWIS & SON

Highway Contractors

McLEAN, VIRGINIA

MEMBER: VIRGINIA ROAD BUILDERS ASSOCIATION

Telephone services are TAILORED to your needs

Call your local telephone office today for custom telephone service in your office or residence.
You will enjoy the economical convenience of adequate telephone service.

VIRGINIA TELEPHONE & TELEGRAPH COMPANY
Virginia's Largest Independent Telephone Company
Headquarters Charlottesville, Virginia
CORSON & GRUMAN COMPANY
Highway Contractors
Telephone FEDERAL 3-3046
33rd & K STs., N.W.
WASHINGTON, D. C.

Robertson-Fowler Company, Inc.
Heavy and Highway Contractors
BUCHANAN, VIRGINIA

THE GENERAL CRUSHED STONE CO.
CRUSHED STONE — RAILROAD BALLAST — RIP RAP
Phone Gum Tree 227-3373
DOSWELL, VIRGINIA

CONTRACTORS BONDS
AND INSURANCE
"Your Security is in Insurance"
SECURITIES INSURANCE CORPORATION

Reginald M. Wood • Robert D. Saul • Earl W. Keys • William S. Trinkle
Boxley Building, S. Jefferson St. Roanoke, Virginia 342-3114
This Law Doesn't Apply to Me

During my salad days in New York, I lived on Tenth Street, in Greenwich Village, just around the corner from Joe di Pauli's eating and drinking emporium on Waverly Place. For the benefit of those who never saw a speakeasy of the twenties, it was not a furtive hole-in-the-wall where persons of low morals entered a grilled door guarded by a sinister-looking gangster. It was a fine old redbrick mansion, with dining rooms on the ground floor, or basement, and on the first of the upper floors; in the summertime, food was served at candlelit tables in a large walled garden. In an atmosphere of unpretentious elegance, superior food was served, including a choice of about forty appetizers on a movable cart. It was the custom of the initiates to nibble on sardines, tuna fish, anchovy, artichoke hearts and such delicacies while sipping a couple of cocktails before the main course was served. The dinner without steak cost $1.00, with steak $1.25.

As a neighbor I became acquainted with Joe di Pauli, a middle-aged, sedate Italian, and he explained to me the mechanics of his operation. The non-steak dinner cost him just over $1.00 to serve, and the steak dinner just under $1.25. Because his profits on cocktails, at 50 cents, and on a table wine, usually Chianti, selling for around $1.00 for a small bottle, were so high, he could afford to provide food at cost, and he specialized in desserts of fine cheeses—gorgonzola, bel paese, and such. Joe also occasionally got real imports of after-dinner liqueurs and, as he knew that (in those days) I had a taste for such cordials, he would always tell me when he had a good shipment.

One afternoon, when the restaurant was not open, he invited me in to sample a new Grand Marnier. He had no bar (few speakeasies did), but, as no customers were about, we stood at the service bar. Just as I was lifting a small glass, an enormous policeman barged in. At the sight of me, he halted and, his broad face scowling, fixed me with an accusing gaze. In my mind I had already envisioned my poor mother being grief-stricken at learning I was in jail, when Joe said in a casual voice to the policeman, "He's a customer who lives in the neighborhood. We're sampling a new cordial." Then he introduced us, we shook hands and Joe, excusing himself, went into his office with the law.

Some weeks later, I was walking home very late along Waverly Place, when I saw two policemen guarding a truck unloading crates of bootleg whiskey into Joe di Pauli's front door. When they gave me a sharp eye, I was no longer apprehensive. I offered a friendly greeting, without pausing, and they nodded.

It must be confessed that it never occurred to me that I was a lawbreaker, an uncaptured felon, who, furthermore, had connived with representatives of the law in breaking it. This did not occur to me because in New York neither the state nor the local officials were interested in enforcing the 18th amendment. It was not, as has been claimed, that this gave all violators of the 18th amendment a disrespect for all law. I just never thought of Prohibition as being a law that applied to me.

In other areas, other people simply do not think. (Continued on page 41)
A. G. PINKSTON & COMPANY

CONTRACTORS

Public Utilities

1805 County Street
PORTSMOUTH, VIRGINIA

MORE FOR YOUR TAXES IN VIRGINIA

THOMPSON-ARTHUR PAVING CO.
DANVILLE, VA.
MARTINSVILLE, VA.
GREENSBORO, N. C.

WITH NEW DEEP STRENGTH
ASPHALT PAVING
WIDER ROADS
FOR THE COST OF NARROW ONES

BUILDINGS • BRIDGES • BARGES

For over sixty years Steel has been our business and we are proud of our role in providing
SKYLINES WITH BUILDINGS
WATERWAYS WITH BARGES
HIGHWAYS WITH BRIDGES

If you are planning to do the job in steel contact us at our Richmond or Tidewater Offices—We make it a point to have

Everything in Steel for the Builder

RICHMOND STEEL COMPANY INC.

18th & Byrd Sts.
Richmond, Va.
Phone MI 3-1983

230 Salters Creek Rd.
Hampton, Va.
Phone 722-0782

AMERICAN ASPHALT PAVING, INC.

60 P Street, S.E.
Phone LINcoln 6-3810
WASHINGTON, D. C.
Like most revolutions, the one that’s going on on Virginia highways has been a long time in the planning, is costing billions of dollars and is producing results both immediate and far-reaching.

Unlike most revolutions, this one has the blessings of everyone from the governor to the farmer, from the trucker to the suburbanite for this earth-moving, era-spanning change means progress in the form of good roads, safe roads, travel-worthy roads.

Admittedly there are groups and individuals who have and will continue to dispute the location of a highway or bridge for economic or aesthetic reasons. But in the main, the motorist of today finds himself thinking more and more, “Man, what a quick way to get there” and less and less “Why don’t they do something about this blankety-blank road?”

If there’s less muttering about rutted, curved or inadequate roads, it can be traced to several sources—the Virginia Highway Department, the General Assembly, the Federal government, various special interest groups, the massive migration of people to urban areas and a staggering increase in traffic. Each has contributed either to the cause or the effect of Virginia’s increase in quality and quantity of roads.

Today’s motorist has more than 50,000 miles of Virginia highways at his disposal. He crosses rivers and streams on modern bridges or tunnels. In just about a year, he’ll drive the 17.5 miles from Norfolk to the Eastern Shore, traversing a series of bridges and tunnels that constitute an engineering miracle. He soon will zoom along more than a thousand miles of the most modern roads yet built when the Interstate Highway System is completed in Virginia. Can this be considered a revolution then? Yes—a long time in the coming but certainly a revolution when you realize that Virginia didn’t begin to really get out of the mud until the 1930’s.

A look into the past gives vivid examples of how major has been the highway revolution and sets the imagination whirling as to what the future holds.

One hundred years ago, Virginia roads still were controlled by private companies. They reverted to county control in the late 1800’s and in 1906 the first four-member State Highway Commission was created by the General Assembly. Road building and maintenance remained a function of the counties with the Highway Commissioner serving primarily as an advisor, approving distribution of certain state-aid funds and directing disposition of convict labor forces. By the time the Highway Commission was ten years old, there had been 4,500 miles of roads built and the General Assembly, seeing the necessity for some additional controls over road financing, had provided for increased road funds and required counties and magisterial districts to allot money for maintenance.

It wasn’t until 1918 that the state really went into the road building business and what eventually was to be known as the primary system (as opposed to the county-operated secondary system) came into being. At the outset, the primary network contained 4,002 miles of roads, expanding to 7,000 miles by 1930. In 1932, the state highway system entered yet another phase of its development when the state took over the secondary system. Highway Department officials, looking back to that year, recall that some of the county roads were in pretty good shape but that some frankly were a mess. Even with increased funds and central planning and supervision, the task at times must have seemed insurmountable.

The late 1930’s found the department getting itself geared to the job of improving secondary roads and planning for bettering primary highways. Then along came World War II and, while the average citizen couldn’t do much automobile traveling, the need for roads on which to move military personnel and civilian and military goods continued—accompanied by a scarcity of construction personnel and materials.

Virginia emerged from the war with a Highway Commission expanded to nine members and a tremendous backlog of road needs, plus inflation. The ensuing years have seen needs met but new ones arise—and at no decrease in the cost of building and maintaining highways.

What has been done on the roads in recent years often seems staggering. The secondary system, for instance, when taken over by the state in 1932, consisted of 35,900 miles of roads of which only
2,000 miles were hard-surfaced. Another 8,900 miles had been topped with gravel, soil or similar material and 8,600 miles had been graded. But a whopping 16,400 miles were completely unimproved. Small wonder there were days when children couldn't get to school, farmers couldn't get to market and a traveler lost time getting pulled out of the mud. Today, the picture is brighter. By the end of 1962, the secondary system contained 42,253 miles of which 21,912 were hard-surfaced; 11,425 miles had an all-weather surface; 8,086 miles had a light surface. But there still were a little over 830 miles of unsurfaced road—work for the future.

The primary system has undergone its share of changes too. In 1938, there were some 9,100 miles of highway in the system and most of them were still two-lane. That year, the Highway Department noted 23 miles of divided; 133 miles of four-lane; 315 miles of three-lane; and 8,594 miles of two-lane roads. By 1962, the primary had shrunk to about 7,700 miles (due to annexation or transfer to the secondary system) but the quantity of wider roads had grown—496 miles of four-lane divided, 204 miles of four-lane, 380 miles of three-lane and 5,261 miles of two-lane but even the lane-width of the latter was increasing.

While mileage was mounting, so were other figures—costs, population, tourist travel, industrialization and automobile registration. And each has played its part in bringing on the highway revolution that, from all appearances, can only continue into the future.

In 1937-38, the Highway Department operated on a budget of 26.6 million dollars of which 23.8 million was spent for construction, maintenance and improvement of the 46,663-mile road network. By 1962-63, the construction, maintenance and improvement budget had climbed to 197.3 million dollars for a system of more than 50,000 miles of roads. Administrative, supervisory and non-construction items were climbing too—from approximately two million dollars in 1937-38 to about eight million dollars for the current fiscal year. Adding to the non-construction costs were the increase in highway personnel from 7,400 in 1937-38 to more than 10,000 today. But more important was the addition of the Interstate Highway System in 1956 and the rising costs of building and maintaining roads. The average cost of constructing one mile of rural four-lane Interstate road is $750,000 with most urban sections costing many times in excess of this. And the primary system construction average is $250,000 a mile.

In an effort to meet rising costs, the Highway Department utilizes modern techniques and equipment and even these seem to become outdated in short order. The department now depends largely
on aerial photography to obtain planning information where once it was necessary to send many men into the field for periods of time. Electronic computers have simplified preparation and plans, especially where bridges are concerned. But here is a prime example of modern equipment supplanting modern equipment, according to D. B. Fugate, assistant chief engineer with the department. Two small computers now do eight times the work formerly turned out by one big, bulky machine. New techniques and equipment are making their contributions to safety as well as cost-cutting. Where once it was necessary to move dirt by the shovelful from road to truck, an expensive, time-consuming chore, dirt-moving machines now shove tons of earth out of the way. One immediate result is fewer up and down curves in roads, making for safer roads.

While the Highway Department is going about the task of trying to catch up, meet today's needs and plan for the future, people are making sure the engineers and planners will never run out of work. In 1938, Virginia's population was estimated to be 2,400,000. The most recent estimate, on July 1, 1962, showed the total had risen to 4,177,000 and State Chamber of Commerce estimates indicate a rise of 110-130,000 a year for the next several years.

As the population grows, so does the number of motor vehicles registered in Virginia. In 1938, there were 457,805 registered; last year the figure had climbed to 1,736,696. And a Department of Motor Vehicles spokesman figured that if the rate of increase continues at its present pace, there will be 6.5 million vehicles registered 25 years hence.

Virginia's not the only state witnessing this staggering increase in vehicle registrations, and every year more and more out-of-staters are finding their way to the Old Dominion to visit its tourist attractions and resorts or perhaps just pass through, en route to other states. In 1961-62, for instance, out-of-state passenger cars accounted for 18.06 per cent of the average daily vehicle miles tabulated in the state—and that didn't include mileage for interstate trucks and buses. State Chamber of Commerce figures indicate fairly consistent increases in tourist trade and it's doubtful, short of national emergency, that there will be a decrease. In fact, three of Virginia's attractions—Mt. Vernon, Colonial Williamsburg and the Luray Caverns—now rank among the top ten in the nation.

The state's industrial growth parallels that of the highways, too, and in recent years has been getting an indirect boost from the highway department. Since 1949, Virginia manufacturers have reported more than double in annual increases in value added (change in the value of raw materials by manufacturing processes) —$1,042,000,000 in 1949 (the first year for which figures are available) and
$2,548,000,000 in 1961 (the most recent report). Nor do economists and statisticians see any major decreases in the future. In fact, in 1962, 54 new factories were opened or announcements of their anticipated openings were made—an increase of six per cent over the previous year.

Probably contributing to some of this increase is the 1.5 million dollar industrial access road fund now available to build roads to company property lines when it's proven an industry will be an appreciable asset to community or state. Operators of hospitals, airports, armories or race tracks need not apply however. Public or semi-public facilities are not eligible, says H. Gordon Blundon, secondary roads engineer and industrial access roads chief.

Actually the access roads fund has more future than it has past. First provided for in 1956 with a one million dollar allocation, it was increased to 1.5 million dollars last year by the General Assembly. Previously, the county and the industry had to pay for the roads with the Highway Commissioner approving the project and the county's paying its share from its annual secondary road allocation. In certain cases, a county could get an increase in its funds for one year and make up the increase by getting decreased funds for the next three years.

Blundon feels that the great upswing in industrial development, with the desire for proper access, will create a demand for additional industrial access funds over and above those currently assigned. Some industries are locating in industrial parks where access roads already serve other factories. However, a great number are locating along existing roads which need improvements to handle the increased traffic. Another factor to be considered is the trend of industry to locate in less populated, non-metropolitan areas of the State. When this happens, an additional burden is placed upon road funds to furnish reasonable access.

Blundon points out that some industries don't even wait for access road funds before locating in the state. Such is the case with the 50 million dollar electric power facility located in Russell County. Plans for this were announced by the company's board of directors with no knowledge that access road funds were available. And the announcement came three years after a study showed the county's total assessed value to be only seven million dollars and mining, the major industry, to be on the wane. The problem now is not the access road; it's all the roads in the county which need to be updated to meet increased usage.

Russell's roads, like all secondary roads, get worked on on a need-use basis and the road that carries only three or four vehicles a week is not going to get priority over one which carries 20,000 cars a day, regardless of who lives down the lane. But like secondary roads in all counties, those in Russell which will receive first attention are the ones which the resident engineer, the board of supervisors and the Highway Commission feel need first priority in the fund allocation for the county.

The secondary roads of the present and future bear little resemblance to those of yesteryear. As recently as the early 1940's, Gen. J. A. Anderson, then...
We commend the Virginia Department of Highways for its efforts in construction, maintenance and beautification of the highways of the Old Dominion.

Laird's Nurseries
Specializing in Shade Trees
8900 West Broad St.
Phone AT 8-2857
Richmond, Virginia

Lanford Bros. Company
Contractors
Highway - Railroad
Phone 362-1728
P. O. Box 5127
Roanoke, Virginia

Clyde R. Royals, Inc.
Asphalt Surfacing
General Office
Rip Rap Road & Thomas Street
Hampton, Virginia
Telephone 722-2546

Plant Locations
Hampton, Tappahannock, Eastern Shore & Gloucester

To keep production up and costs down rely on equipment sold and serviced by Burress - Distributor in Virginia for

"Air Trac"® Drill Carrier
Gardner-Denver Compressors, Drills, Tools
Lima Shovels, Cranes, Draglines
H & L Teeth
Lima Madsden Asphalt Plants
Challenge Mixers
Stabilift Semi-Dump Trailers

Sales • Rentals • Service

Let our experienced salesmen help you select the equipment best suited to your needs. Call on us, too, at any time for immediate shipment of repair parts from our large inventory... and for fast, efficient shop or field service day or night by our skilled, factory-trained mechanics.

J. W. Burress, Inc.
1701 Shenandoah Ave., N.W.
Phone: Diamond 3-1507
Roanoke, Virginia

"Quarter Century of Dependable Service"
Highway Commissioner, made a comment that became a by-word to progress: "Not a school day lost because of mud." A massive stabilization program began that would enable school buses to reach the big consolidated schools that were replacing the old one-roomers scattered around the countryside.

War's end added more problems for the secondary system. The move to the suburbs reached astronomical heights. People had money to spend and they spent a hunk of it on cars. Farm families joined the move to urban areas. All this meant more traffic on secondary roads around towns and cities and less on the country lane. And it was up to Gordon Blundon's office to try to meet these needs because, except for Henrico and Arlington, all secondary roads located in counties are under state control. This means that whenever a new sub-division opens, the state has new roads to maintain. Residents of these suburbs share one thing with the farmer on the sparsely traveled road. "Everyone wants all-weather surface," Blundon says: but the average farmer doesn't mind a gravel surface, so long as he can get his produce to market. Not so the suburbanite; he wants urban features—hard-surfacing, curb and gutter, storm drains—and these cost money.

The fund situation is such that the secondary roads division must plan for the present, not the future. But some future thinking is going on. Given enough money in the next 12 years—an additional 13.7 million dollars a year—it might be possible to at least catch up and meet four major goals:

1. A hard surface of width and strength adequate for traffic volumes on all roads carrying 50 or more vehicles a day.
2. An all-weather stone or gravel surface on roads carrying 10 to 50 vehicles a day.
3. A light stone or gravel surface on all roads carrying less than 10 vehicles a day.
4. Bridges of less than 10-ton capacity should be brought up to standard.

Some secondary roads of the future have the characteristics of the more sophisticated primary or Interstate System highways—four lanes, divided, limited access. One such road, near Dulles International Airport at Chantilly, already is in use and another is planned in Chesterfield County. Whether they'll remain in the secondary system is open to question, though. They, like some other secondary roads of the past and future, may be incorporated into the primary system. Or the areas in which they are located...
may be annexed into cities or some form of metropolitan government be established in the locales, says D. B. Fugate. Then they'd become part of the urban system made up of the streets and highways located in communities of at least 3,500 persons and financed by city, state and Federal funds.

The four-lane divided limited access road is the road of today and tomorrow. The problem is to get an adequate number of miles of these roads. There probably always will be many miles of two-lane secondary roads but their number is diminishing in the primary system and slowly but surely the three-lane highway is passing out of existence. Whenever a highway carries as many as 4,000 vehicles a day, engineers begin thinking in terms of widening it to four-lanes and estimates put this conversion program at approximately 1,000 miles in the next 10 years.

In 1945, the Highway Department published a 20-year plan that has had one unexpected result—engineers are reluctant to do much planning, publicly, beyond 12 or so years. That 1945 study was outdated in just 12 years but not through faulty planning or engineering. Who could foresee that by 1957, automobile registrations and travel rates would have reached the peaks expected in 1965?

Thus, the department now is pushing ahead, trying to meet yesterday's backlog, and today's needs but with an eye on the future. And to help in the planning the department has prepared a 12-year need study that would call for an additional 44.6 million dollars a year to finance construction on primary roads (14.8 million dollars), secondary roads (13.7 million dollars) and urban roads (16.1 million dollars). These amounts, engineers believe, would at least enable the state to meet the demands anticipated by a population increase of 26 per cent, a motor vehicle registration rise of 51 per cent and a travel boost of 72 per cent by 1975.

At present, Virginia is pouring some 75 million dollars a year into the Interstate Highway System but highway department officials warn against thinking this is detracting from primary, secondary or urban construction. Long established formulae assure that the secondary system receives at least one-third of road funds a year and that one-fourth is channeled into the primary system. Indeed, says Fugate, "The Interstate System is providing more relief than it takes away from the normal improvement program. For instance, it's removing the necessity of rebuilding Routes 1 and 11."

Commissioner H. H. Harris asserts:

"Take a look at the old photos on the opposite page showing the erstwhile road construction techniques and compare them to the modern scenes of today on this page.

Now under construction, above, the Interchange of Interstate 81 with Route 11, one-half mile northeast of Route 636, southwest of Buchanan. Below, also under construction at present, near the Bote-tourt and Roanoke County line, Interstate 81 and Route 648 underpass."
W. W. Tuck–Son
Highway Construction
VIRGILINA, VA.

J. F. ALLEN COMPANY
Highway Construction
Phone 622-5351
109 Euclid Ave.
CLARKSBURG, W. VA.

L. R. SHULL & SON
Highway Contractors
St. Reg. #5588
Route #6 Phone 886-0327
STAUNTON, VIRGINIA

THE EMPIRE CONSTRUCTION CO.
Heavy Construction
Va. Reg. No. 262
31 South Calvert St.
BALTIMORE, MARYLAND

Helms Concrete Pipe Co., Inc.
Phone: 548-9300
3800 Jefferson Davis Highway
ALEXANDRIA, VIRGINIA

M. A. LAYMAN & SONS, INC.
GENERAL CONTRACTORS
Call Harrisonburg 434-3878
744 Massanutten St. Harrisonburg, Va.

Braddock Construction Company, Inc.
Highway • Public Utilities
Water & Sewer
FAIRFAX, VIRGINIA

MUNICIPAL PAVING CO., Inc.
Asphalt Paving & Grading — Surface Treatment
Parking Areas — Driveways — Subdivisions
Insured and Guaranteed
INDUSTRIAL — RESIDENTIAL
1514 E. Belt Blvd. Phone BE 2-2901
RICHMOND, VIRGINIA
When completed in 1972, the 1,053 mile Interstate System will have cost more than $1,000,000,000.

"We feel that the Interstate System will relieve the primary system of a great amount of traffic." When completed in 1972, the 1,053 mile system will have cost in excess of one billion dollars of 90 per cent Federal funds and 10 per cent State funds. But it is expected to carry 20 per cent of all the traffic in the state and on some sections, 50 to 75 per cent of the vehicles.

On completion of the system, much of the state money now allocated for Interstate work will be available for primary, secondary and urban systems. Some still will be needed for maintenance of the Interstate System because the Federal government has made no provisions for future upkeep. But, says Harris, "We'd rather the Federal government furnish money for construction than for maintenance."

While engineers don't believe the Interstate system will become antiquated in the foreseeable future, they are planning for growth. Extra wide median strips are provided, allowing for additional traffic lanes if required.

The growing tourist industry is being considered too. Plans are being made to have tourist information centers where the Interstate roads cross the state lines to give visitors information about lodgings, restaurant and tourist attractions. These will be needed because all the Interstate System will be limited access, a growing trend in super highway construction.

A corollary to the Interstate System will be a 1,600 mile arterial system of primary roads that will link most communities not directly served by the Interstate. About a third of this is completed and the remainder should be ready by 1972 at a cost of 15 million dollars. But, says Fugate, "Without the arterial system, the full value of the Interstate won't be known."

In one respect at least, Virginia is luckier than some states—not too much relocating of state roads is necessary to provide the quickest, straightest connection between localities. "Virginia is fortunate in that roads in the beginning were built in traffic corridors and now there's little need to find new locations, as is happening in many states," says J. P. Mills, Jr., Highway Department traffic and planning engineer. But the additional 44.6 million dollars a year sought by the department would at least help in bringing roads in existing corridors up to the present and near future needs. For instance, "Route 1 is badly outdated as far as traffic carried is concerned," Mills says. And even when Interstate Route 95 is completed and much of the Route 1 traffic switches over to that, work still will be needed on the older highway. And many sections of roads need to be made four-lane around cities.

Engineers are hopeful and confident that the new major highways and improvements of old roads will decrease the accident rate. Control of access on by-passes and the Interstate System means fewer intersections and fewer possibilities for accidents. Separations—intersections in which one road crosses over and another, under, at the meeting point—are known to save lives, time and gas, and are in use in some places, but their extreme cost makes them impractical for all locations. Built-in safety features—easy horizontal and vertical curves, wide shoulders, low grades, adequate pavement widths—are other tries at decreasing accidents. So is trying to
# READY-MIX CONCRETE

"Concrete for Permanence"

SAND, GRAVEL, CRUSHED STONE

LYNCHBURG READY-MIX CONCRETE CO., INC.

Langhorne Rd.

Dial Lynchburg 845-4504

LYNCHBURG, VA.

<table>
<thead>
<tr>
<th>TRANSIT-MIXED CONCRETE CORP. OF STAUNTON</th>
<th>BEDFORD READY-MIX CONCRETE COMPANY, INC.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone 886-8480</td>
<td>Phone 586-8380</td>
</tr>
<tr>
<td>Richmond Rd.</td>
<td>Railroad Ave.</td>
</tr>
<tr>
<td>STAUNTON, VA.</td>
<td>BEDFORD, VA.</td>
</tr>
</tbody>
</table>

# THE VIA COMPANY, INC.

AND

VIA PAVING COMPANY

RICHMOND, VIRGINIA

Dedicated to Building Better Highways for Virginia

# ADAMS CONSTRUCTION COMPANY

SPECIALIZING IN

ASPHALT SURFACING

FOR

HIGHWAYS • AIRPORTS
PARKING LOTS • DRIVEWAYS

DI 5-0404

2725 Roanoke Avenue

ROANOKE, VIRGINIA

# BISHOP & SETTLE CONSTRUCTION COMPANY

Grading Contractors

ALBERTA, VIRGINIA
anticipate traffic volume to build the type of highway needed — two-lane, four-lane or four-lane divided.

W. B. Shelton, Highway Department associate traffic engineer in charge of the Accident Study Section, keeps a constant check on location and nature of accidents and watches specifically for engineering defects. The human element is closely considered, too, in planning new or renewal projects. Studies have shown that the accident rate is decreasing, from 18.5 deaths per 100 million vehicle miles in 1938 to 5.3 deaths in 1961. But the death toll continues to climb as travel increases. Shelton believes 125 lives a year will be saved on the Interstate System but he's also convinced that highway obsolescence is the safety problem to be met, particularly on the secondary roads around cities. Obsolescence, he says, causes 25 to 30 per cent of the accidents.

Smooth-surfacing of all roads isn't the answer but smoothing out sharp curves, widening lanes and making intersections as simple as possible —good roads, in other words—may hold the key to accident prevention. A plus factor would be some re-education of the public to drive on today's and tomorrow's highways. It's been proven that there are fewer accidents and fewer deaths on the divided highways where median strips are sufficiently wide to prevent head-on crashes. But the accidents that occur usually take more lives, injure more people and do more property damage because high speed is involved.

What about the future? What's possible from the engineering drawing board after such things as the man-made miracle of tunnels and bridges spanning the 17.5 miles of Chesapeake Bay or triple-decker intersections or four, six or eight-lane highways that send the traveler skimming quickly from one place to another?

Nothing so imposing as the Bay project, says Highway Commissioner Harris, because there's no other body of water that wide to span. But there may be other bridge-tunnel projects and the 200 million dollar Bay complex being financed by bonds will revert to the state for maintenance in 30 years. The future will see the passing of the last big ferries, too. On completion of the Hopewell bridge, only one large ferry will be in operation and that at the Jamestown-Scotland Wharf. It, too, will be replaced by a bridge in the future.

In Southwest Virginia, there will be the state's first land tunnels, part of Interstate 77. One will go under Big

(Continued on page 39)
Wilkins Construction Co.

*General Contractor*

- Highway  
- Industrial Building  
- Sewer Work

Phone WH 6-6791  
Route 1  
AMHERST, VA.

EDWIN O’DELL COMPANY

*Highway Construction*

*SPECIALIZING IN BRIDGES & CULVERTS*

P. O. Box 1369  
Phone 4-1471  
PULASKI, VIRGINIA

SISSON & RYAN

*Highway Contractors*

LANDSCAPING — GRADING

Phone CO 8-2413  
P. O. Box 128  
SHAWSVILLE, VIRGINIA

CONTRACTORS PAVING COMPANY, INC.

101 Plaza Trail  
VIRGINIA BEACH, VIRGINIA

LEE HY PAVING

St. Clair Rd. & C & O Tracks  
Phone 643-7336  
RICHMOND, VIRGINIA

E. F. BLANKENSHIP COMPANY

*General Contractor*

SALEM, VIRGINIA
Conserving Historical Resources

Conservation of natural resources is today a fact of life. Now landowners are urged to conserve another resource they might find on their lands—evidence of past peoples and activities. This conservation requires only recognizing the evidence and trying not to destroy it. The evidence is usually slight—a low rise of ground marking an Indian burial mound; an old chimney or foundation; or a field yielding many Colonial or Indian relics. Yet the story told by such evidence is the raw material of history.

We know little about the Indians, and there are many gaps in Virginia's early history. Since there is little chance of filling these gaps from written records, we must rely on archaeologists to read unwritten records. Too often, though, the evidence has been destroyed by construction work, floods, or relic-hunters. The historian needs the archaeologist to find and interpret such evidence, and both need the help of the landowner.

A landowner with an archaeological site on his land is a steward of history. He can preserve the site for proper study and thus be a worthy steward, or he can permit the site to be destroyed without being studied. Preserving a site intact is the best stewardship. But if a site must be destroyed, the landowner should notify someone who can examine it, excavate, preserve the evidence, and publish his findings so that future generations can know the site and its story. And this is the type of stewardship we need.

The Virginia State Library is currently making an inventory of archaeological remains in Virginia. If a site must be destroyed, the Library's archaeologist will try to save some of its information. If you or your employees dig a ditch or foundation, set fence posts, plow, or do anything which opens the soil, be alert for evidence of former human activity. If you find bones, broken dishes, bricks, or other relics, please notify the Virginia State Library, Richmond 19, Virginia. Your site might be the one to fill an important gap in our knowledge.

—Howard A. MacCord, Sr. Archeologist, Va. State Library
Official results have been published on pavement performance in the 27-million dollar National Road Test sponsored by the American Association of State Highway Officials.

On 5 traffic loops, under 10 different load and axle arrangements, concrete and asphalt were studied side by side. Constructed in sections, the test pavements were representative of a range of designs.

Results of the test confirm concrete's ability to deliver long-term driving comfort.

Surviving test sections of concrete performed significantly better than asphalt on the four major traffic loops in retaining riding quality as rated by the serviceability index specially developed for the National Road Test.

After two years of traffic and the impact of 1,114,000 loads, most of the surviving concrete still rated "very good" or "good." None of the surviving asphalt rated "very good" and relatively few sections rated "good."

Over a year was given to analyzing the millions of instrument measurements made of the performance of both pavements.

Analysis of final figures leaves no doubt. Concrete gives superior riding performance for pavements of all classes—city streets, roads and Interstate highways.

Write for your free copy of "Pavement Performance in the National Road Test." (U.S. and Canada only.)

Portland Cement Association
1401 State Planters Bldg., Richmond 19, Va.
A national organization to improve and extend the uses of concrete
How the surviving test pavements of the 4 major traffic loops were rated for riding quality by the serviceability index

<table>
<thead>
<tr>
<th>PAVEMENT</th>
<th>LOOP</th>
<th>VERY GOOD</th>
<th>GOOD</th>
<th>FAIR</th>
<th>POOR*</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONCRETE</td>
<td>3</td>
<td>28</td>
<td>6</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>27</td>
<td>9</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>35</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>40</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>ASPHALT</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>0</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>0</td>
<td>3</td>
<td>6</td>
<td>2</td>
</tr>
</tbody>
</table>

All data apply to main experiments. There were 56 concrete sections and 60 asphalt sections in the main experiments on Loops 3, 4, 5 and 6. Serviceability index rated pavements on scale from 0 to 5; 0 to 1—very poor, 1 to 2—poor, 2 to 3—fair, 3 to 4—good, 4 to 5—very good. *Poor category above includes only sections above 1.5 at end of test. When sections reached 1.5 they were removed from test.
JOHN TESTER & SON, INC.
General Contractors

ENGLISH CONSTRUCTION COMPANY, INC.
General Contractors

BOWERS CONSTRUCTION COMPANY
RALEIGH, NORTH CAROLINA
"Builders of Bridges"

BARNHILL CONTRACTING CO., INC.
TARBORO, NORTH CAROLINA
Highway Contractors
Presenting:

ANNUAL ELECTION 
OF OFFICERS
FALL CROPS
Are Finest of the Year

Many vegetables difficult for the gardener to grow in the spring are easy in the fall. In some cases, this is because of Nature's provision that in the fall they do not go to seed. Try your luck this fall. Follow the chart below.

TESTED LATE PLANTING CHART
The following dates have been taken from actual field tests, made by ourselves here in Richmond:

<table>
<thead>
<tr>
<th>Latest Safe Planting Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>String Beans, All Varieties</td>
</tr>
<tr>
<td>Beets, All Varieties</td>
</tr>
<tr>
<td>Swiss Chard</td>
</tr>
<tr>
<td>Collards</td>
</tr>
<tr>
<td>Smooth Kale</td>
</tr>
<tr>
<td>Curled Kale</td>
</tr>
<tr>
<td>Lettuce, Wood's Gabbage (head)</td>
</tr>
<tr>
<td>Lettuce, Grand Rapids (leaf)</td>
</tr>
<tr>
<td>Mustard, So. Giant Curled</td>
</tr>
<tr>
<td>Mustard Spinach</td>
</tr>
<tr>
<td>Radish, Winter</td>
</tr>
<tr>
<td>Radish, Early</td>
</tr>
<tr>
<td>Spinach, New Zealand</td>
</tr>
<tr>
<td>Spinach, Bloomsdale</td>
</tr>
<tr>
<td>Turnip, Imp. Purple Top White Glove</td>
</tr>
<tr>
<td>Turnip, Yellow Aberdeen</td>
</tr>
<tr>
<td>Turnip, Seven Top</td>
</tr>
<tr>
<td>Chinese Pelssai or Celery Cabbage</td>
</tr>
</tbody>
</table>

Fifth and Marshall Streets.....Dial MIlton 3-3479
11 South 14th Street..........Dial MIlton 3-2715
George R. Martin, President of Martin Bros. Contractors, Inc. of Roanoke, will assume the Presidency of the Virginia Branch, Associated General Contractors of America, Inc., on July 1, 1963. Martin was elevated from the position of Vice-President to President-elect at the Association's Annual Convention in February. Prior to this year, the Virginia Branch Officers and Directors assumed office during the annual convention; however, the 240-member association amended its By-Laws in 1962 so that new Officers and Directors would take office on July 1st of each year.

The new Vice-President will be Fred L. Showalter, Jr. of F. L. Showalter, Inc., Lynchburg, and the Secretary-Treasurer will be Joseph G. Howe, Jr. of Ivy Construction Corporation, Charlottesville.

New Directors scheduled to take office on July

The new President, a native of Roanoke, was graduated from Jefferson County High School, Roanoke, and received his B.S. Degree in Mechanical Engineering from Virginia Polytechnic Institute, Blacksburg. He first joined Martin Bros. Contractors, Inc., a building construction firm, in 1947 and became President in 1956. He is married to the former Miss Mary Elizabeth Brown of Roanoke. They have two children, George R., Jr., now attending Fork Union Military Academy, and Kay, who is attending Roanoke Public School. Martin is a member of the South Roanoke Methodist Church. He is also a member of the Rotary Club, Elks Club, Masons and Shrine, American Legion, Virginia State Chamber of Commerce, and Hidden Valley Country Club.

Fred L. Showalter, Jr. is a native of Lynchburg and received his Bachelor of Science and Master of Science Degrees in Architecture from Virginia Polytechnic Institute, Blacksburg. He is Secretary of F. L. Showalter, Inc., a heavy municipal and utility contracting firm. Showalter is a veteran of World War II and served in the European Theater as a Captain in the 29th Infantry Division. He is on the Board of Directors of the Lynchburg Kiwanis Club. He is married to the former Miss Jane...
Martin and they have three children.

The new Secretary-Treasurer, a native of Wilmington, N. C., was graduated from New Hanover High School, Wilmington, and received his Bachelor of Science Degree in Civil Engineering from The Citadel, Charleston, S. C., in 1949, and his Master of Science Degree in Civil Engineering from the University of Virginia, Charlottesville, in 1952. He is Vice-President of Ivy Construction Corporation, a general building contracting firm, and Treasurer of Ivy Development Corporation of Florida. He is married to the former Miss Margaret Ann Knapp of West Point, and they have three children. He is a member of Christ Episcopal Church of Charlottesville, and a veteran of World War II where he served in the European Theater of Operation. He is a member of the Charlottesville Kiwanis Club, Farmington Country Club, Co-Chairman of the Building Trades Division Community Chest, and on the Board of Directors of the Bellair Association of Charlottesville.

HOWARD W. SPEAKS
COMPANY

Asphalt Paving Contractor
HIGHWAY

LEESBURG, VIRGINIA

M. & L. DISTRIBUTORS, INC.

Transporters of Petroleum Products

Phone 4271

WAKEFIELD, VIRGINIA
Thompson-Arthur Paving Co., which maintains offices in Greensboro and High Point, N. C. and Danville, Martinsville and South Boston, Va., has just been awarded the National Safety Council’s Award of Merit for 1962—climaxing a three-year period during which the firm has received 15 different awards for its outstanding safety record.

And the T & A Trucking Co. of Greensboro, a three-year-old firm in which the owners of Thompson-Arthur maintain an interest, has received five awards for its safety record to date, culminated by the recent announcement that it won over-all first place in its division in the National Safety Council’s 1962 employee safety contest.

The methods these firms use to promote safety, according to Charles H. Shaw, Jr., company industrial relations director, can be applied to practically any industry.

"In the first place," he said, "safety awards aren’t ‘won.’ They are earned. And they are earned only when the firm, from the janitor to the president, is firmly instilled with a desire to work safely."

At Thompson-Arthur safety begins with a big sign at the front gate of the company’s executive offices in Greensboro. A green light normally burns on that sign, but it immediately turns red when an accident occurs. This is one of many safety devices which have helped the company compile an impressive number of safety awards.

Thompson-Arthur is a member of the National Safety Council, and of Carolinas Branch, the Associated General Contractors of America, which maintains an active safety program. Shaw is chairman of the association’s N. C. Accident Prevention Committee, and also is a member of the North Carolina Safety Advisory Board.
J. A. WALDER, INC.
Industrial, Commercial
and
Highway Construction
2501 Grenoble Road
Phone 282-5164
RICHMOND, VIRGINIA

T. A. LOVING & COMPANY
GOLDSBORO, NORTH CAROLINA
General Contractors
Member: Carolinas Branch
Member: Virginia Road Builders Association

JOHN R. BARB
&
DON W. SHUMAKER,
INC.
Paving Contractors
BRISTOL, VIRGINIA

S. O. JENNINGS
CONSTRUCTION CORP.
Contractors
Public Utilities — Water & Sewer
FAIRFAX, VIRGINIA

ROANOKE CONCRETE PRODUCTS CO., INC.
Concrete Pipe, All Standard Specifications;
Concrete Pipe, Long Length with Rubber Joints;
Right of Way Monuments
P. O. Box 1975
ROANOKE, VIRGINIA

OMAN CONSTRUCTION COMPANY
INCORPORATED
General Contractors
P. O. Box 146
NASHVILLE 2, TENN.
Phone AM 9-5601
industry "performs magnificently the vital task of supplying our citizens with the many forms of one of their most basic foods."

Governor Harrison cited the efforts of the dairy industry in improving its products to "protect the health of our people" and stated that these continuing efforts have made the industry a "model of cleanliness and efficiency."

• The State Highway Department has set up a new section to undertake federal highway surveys and inventories of the interstate system under the direction of Donald Lee Eure.

The surveys will permit the Department to evaluate the quality of service and physical characteristics of the interstate system. The section will also compile inventories and prepare studies pertaining to the interstate network.

The services of the new section are now required by the Bureau of Public Roads.

Eure, who eventually will have a staff of eight, was promoted from traffic engineer to associate planning engineer in the Department's Traffic and Planning Division. He joined the Department in 1956 as a traffic technician.

NAMES IN THE NEWS . . . Stuart M. Pearman, manager of the Roanoke District of the Eastern Region of Humble Oil & Refining Co., has joined the Virginia-West Virginia staff with headquarters in Richmond, and assumed the sales responsibilities formerly handled by Graham Pembroke, manager for Esso in Virginia and West Virginia. Pearman is succeeded by Walton L. Huff . . . Moreland H. Smith, formerly president of Peoples Bank of Mount Jackson, has been named executive vice president of the newly formed Colonial National Bank of Alexandria . . . Charles R. Cash has been appointed director and executive vice president of Peoples Bank . . . William R. Frost has been elected assistant cashier of Wythe County National Bank, succeeding Raymond Dodson, who recently accepted a bank position at Richlands.
ENOUGH TO KEEP A BYRD ALIVE

By
Dorothy Ulrich Troubetzkoy

• Neat’s tongue, boiled chine, cold gammon, stag’s head, oysters and cider, pork griskins, souse, lamb’s head, cold mutton, broiled shoat or squirrel with asparagus, were some of the dishes which might have been served to anyone who took pot luck at “Westover” while William Byrd II, “Virginia’s most polished and ornamental gentleman,” was the host.

To his diary, kept in cipher, Byrd confided not only the squabbles and reconciliations with his wife, Lucy, the books he read, his business and political transactions, his losses at cards and temptation by tavern maids, but also day-by-day the things he ate.

Byrd had many fads and fancies about foods which made him exceptionally abstemious for his time. His addiction to milk, hot, cold, boiled or “warm from the cow,” was not typical of his contemporaries. For quite a long time he confined himself to a single dish at a meal and usually did not eat as the others at the table. On April 6, 1711 he notes, for instance: “Notwithstanding there were several other dishes I ate nothing but fish for dinner and a little asparagus.”

It is a marvel indeed that this versatile, vigorous and ingenious man ever
got time to record the intimate details of daily living on a Tidewater plantation at the beginning of the 18th century. Prince of tobacco planters, member of the House of Burgesses and of the Council of State, Agent of the Colony in London, Colonel of the militia of Charles City and Henrico counties, nimble in politics, a devourer of literature in many languages, a student of law, mathematics and geometry, an 18th century Rationalist with a streak of superstition, he revealed his private life without reticence in a cipher which was strictly the record. But Byrd was probably not the type to blush over its deciphering either. Apparently it served as a sort of psychological therapy and he studiously included all the passes he made at chambermaids and the times he cheated his wife at cards.

One cannot help sympathize with the sometimes hysterical Lucy, daughter of a celebrated rake, Daniel Parke, Governor of the Leeward Isles. She had good reason for her temper fits. William Byrd was a thoroughly exasperating as well as fascinating man.

Diet was a favorite theme of speculation among doctors in London in the early 18th century and Byrd apparently absorbed many of the current theories as he made the rounds of the coffee-houses there. Back in Virginia, at his plantation on the James, he could experiment as much as he liked. Incidentally, Dr. George Cheyne's "Cheyne on Health" was one of the books in the splendid library at "Westover."

Few people would find Byrd's breakfast an exhilarating meal, for he "usually ate milk for breakfast, but the rest of the company ate meat." A typical entry, of February 7, 1709, describes this ascetic repast:

I rose at 5 o'clock this morning and read a chapter in Hebrew and 200 verses in Homer's Odyssey. I ate milk for breakfast. I said my prayers. Jenny and Eugene were whipped. I danced my dance. I read law in the morning and Italian in the afternoon. I ate tough chicken for dinner. There are, however, variations, though
Boiling Spring Lakes
ON THE CAROLINA COAST

"The South's Leading Retirement and Recreational Development"

Pictured above is one end of three-mile long Boiling Spring Lake showing the huge dam that was built by the developers during construction of the lake. In all, more than 50 lakes dot the 14,000 acre development. To the right is an aerial view of the championship golf course and country club overlooking the lake on South Shore Drive.

AMERICA'S GREATEST REAL ESTATE VALUE!

STAR CHECK THESE FEATURES! STAR

- 50 crystal clear fresh water lakes for fishing, swimming, boating and water skiing
- 8,000 acres for the finest hunting of all kinds of game
- Championship Golf Course • Ultra-modern Country Club
- Resort Motel • Shopping Center • 47 miles of roads • Paved boat ramp
- Community water system and fire hydrants in current building area
- All utilities, including electricity and telephones
- Only 7 minutes from Southport, and the finest salt water fishing on the coast

OUR GOLDEN GUARANTEE

1. All land guaranteed to be high, dry and suitable for home building.
2. Ninety-day inspection money-back guarantee.
3. Life of contract exchange privilege.

Picture all of this in a setting where the best swimming, fishing (fresh or salt water), boating, and hunting on the Atlantic Coast are yours to enjoy. Mild... near the ocean, yet out of storm danger ... quiet, uncrowded, and yet within commuting distance of metropolitan Wilmington.

All this sound too good to be true? Drive down and see Boiling Spring Lakes for yourself this weekend, or send the coupon below.

1/4 ACRE HOMESITES ONLY . . . $395

Down Month

10% DISCOUNT FOR CASH

(A Division of Reeves Broadcasting and Development Corp.—Listed on the American Stock Exchange)
many are but single entries and they include rice milk, a “dish” or two of tea, occasionally coffee and more often chocolate, hominy, plum cake, fritters, chicken broth, mulled wine, boiled milk with rhubarb, cranberry tart, baked pears, and our own everyday bacon

Anyone who has wondered what kept that dynamic individual going strong for seventy years can have an answer—a high protein diet. When Byrd was limiting himself to one dish at dinner, it was nearly always meat or fish—boiled beef most often, but also roast, broiled, “hashed” and dried, hot or cold mutton and lamb, roast or minced veal, pigeon, venison pasty, roast chicken, boiled turkey and oysters, roast rabbit, tripe, red herring, blue wing, partridge, salt crab. . . . Vegetables get far less attention than the meats, but asparagus seems to have been his favorite if frequency of consumption is the criterion. Green peas, artichokes, rhubarb, and “French beans” are others mentioned. On one occasion he wrote that he was “angry with Moll for neglecting to boil some artichokes.”

“I ate only four eggs” he boasted on April Fools’ Day 1740. The ways he liked his eggs were stewed, battered and poached.

The coffee break certainly goes back to Byrd’s time, though with him it did not always mean coffee, but the coffee-house. “I ate some milk and pears,” he wrote in Williamsburg July 27, 1711, “and then wrote more letters and some accounts. Then I sealed up my letters and I went to the coffeehouse and made my second breakfast of tea and bread and butter.”

Among Byrd’s diet projects was that of eating only fruit or berries or something else very light for supper during the summer. Sometimes it was just milk, like breakfast, or milk with strawberries, raspberries, apples or cherries, perhaps “nothing but sallet” or he might report that he “ate some watermelon and two nectarines and drank some canary after them.” Muskmelon was another fruit he enjoyed.

The wildness of 18th century Virginia we realize from the variety and frequency of game which was served at “Westover,” including blue wing, snipe, sheldrake, venison, wild turkey, squirrel, rabbit, pigeon.

Byrd ate relatively little fried food and that, principally, fritters, bacon and sausage.

That quality and preparation of food sometimes left a good deal to be desired we know from various disgusted confidences in his diary. On July 28, 1709, he complained: “I ate no good dinner because our mutton was spoiled; however I ate some of it.” On March 20, 1711, he grumbled: “I made an indifferent dinner this day because Moll had not boiled the bacon half enough” and, again, “Moll spoiled a good plum pudding for which I chastised her.”

Down in Williamsburg, Byrd ate roast goose with the Burgesses and “Virginia wine that was tolerable” at Marot’s, ate Scotch collops at Wetherburn’s, shared roast beef with Commissary Blair, drank coffee with the Governor and dined on tongue and udder, boiled goose with onion sauce, cod sounds (the swimming bladder of the cod), and on roast beef which “had been basted with vinegar to make it tender and good.”

Apparently what one ate, like manners and conversation, might give away one’s social status. “The boatwright,” Byrd noticed, was afflicted that I gave him pone instead of English bread for breakfast and took his horse and rode away without saying anything.” Perhaps because he was more secure in his position, Byrd did not scorn the lowbrow fare of indolent elegance in early Virginia and shows us an era of candlelight vigor and dyspepsia.
HIGHWAY BRIEFS

• Stanley V. Munsey, maintenance engineer for the state's 50,000-mile road system, will retire on July 1 after 42 years of service with the State Highway Department. W. S. G. Britton, assistant maintenance engineer since 1951, will succeed Munsey in the top position. John M. Wray, Jr., former associate engineer in the secondary roads division here and now assistant district engineer for the Salem highway district, will be promoted to assistant maintenance engineer. Munsey came to the central highway office as maintenance engineer in 1954 from Lynchburg, where he had been district engineer for six years. He has served in various areas and positions with the road agency since his first job as a rodman on a survey party in 1920, when the newly formed state road system consisted of 4,002 miles of the principal highways in the state. Britton, 50, joined the Department in 1935 after graduating from Virginia Polytechnic Institute in 1934 with a B. S. degree in mechanical engineering. He served as construction inspector, soils engineer and assistant resident engineer in several highway districts and in 1949 was made resident engineer at Bowling Green for the three-county area. He will now be charged with the maintenance of the 42,347-mile secondary system, the 8,475-mile primary system and the completed portions of the 1,053-mile interstate system, and with supervision over urban streets that receive highway funds for maintenance.

• Highway officials from 17 Latin American countries viewed roads in northern Virginia and visited scenic Skyline Drive last month as one of the highlights of the current Ninth Pan American Highway Congress. Engineers from the Virginia Department of Highways served as tour guides aboard buses that carried more than 300 delegates from convention headquarters in Washington to Big Meadows on Skyline Drive. Enroute, the delegates inspected portions of Virginia's new interstate system and stopped for a one-hour tour of Dulles International Airport near Chantilly. The tour was one of several sightseeing trips arranged for the delegates by the several cooperating government agencies. Future trips will include an inspection of road building equipment at the Army Engineer School, Fort Belvoir. As part of the Congress the Virginia Highway Department furnished an exhibit for display at the Department of Commerce. Pan American Congresses are conducted every three years and are held under the auspices of the Organization of American States.

• An analysis of accidents on US Route 11 between Bristol and Abingdon, just completed by the State Highway Department, reveals a sharp decrease in accident severity since special pavement markings were put down in the fall of 1961. Although traffic increased 1.6 per cent in the following year fatalities dropped 91 per cent, from 11 to one; injuries were down 35 per cent, from 49 to 32, and property damage decreased 36 per cent, from $61,980 to $39,412. The total number of accidents decreased from 96 in the 12 months prior to the marking to 81 in the 12 months subsequent. The most severe accidents showed the biggest decrease. The rear end and angle type accidents took a sharp jump, however, as predicted. Concern on the part of the Highway Department and local citizens about the frequency of severe accidents on the three-lane highway spurred the marking project. Traffic engineers said they had been looking for a solution for some time, pending the completion of nearby four-lane, divided Interstate 81. A unique method for marking the heavily built-up areas was developed. Bristol District Engineer Howard M. Morecock said the center lane of the three-lane highway was reserved for left turns at intersections and at entrances to establishments.

BOYD & GOFORTH, INC.
Va. St. Reg. #504

General Contractors

P. O. Box 10436
CHARLOTTE, N. C.

BIRCH CONSTRUCTION CORP.
Highway Contractors—Grade and Concrete Work

ASPHALT & CONCRETE PAVING

Phone 627-0401
Westminster Ave. & Virginian Rwy. P. O. Box 6026—Milan Station
NORFOLK, VA.

HANNA GARDEN CENTER

Complete Garden & Lawn Maintenance

HIGHWAY SEEDING
By Hydroseeding Method Using
TURFIBER

3172 Azalea Garden Rd. Phone UL 5-4331
NORFOLK, VIRGINIA

McDowall & Wood

Road & Bridge Construction

PHONE DU 9-5504
SALEM 1308 WEST MAIN STREET
VIRGINIA

JUNE 1963 PAGE THIRTY-FIVE
Virginia Academy of Science Awards

- Reports on research concerning topics ranging from oak trees to nematodes to an unidentified poison that can kill a fish in a matter of seconds were heard by the Virginia Academy of Science during its annual meeting in Roanoke on May 1 to 4.

But the report that received the greatest attention concerned statistics and it won for its author the coveted J. Shelton Horsley Research Award, the highest honor the academy can bestow for original research.

The winner is Dr. H. A. David, professor of statistics at Virginia Polytechnic Institute, and his paper was entitled “The Method of Paired Comparisons.” This is a subject which even laymen can understand.

In the method, “objects” are compared two at a time, much the same as a person would compare teams in a round robin tournament. The method has interested not only statisticians, but also psychologists, mathematicians and economists.

For instance, if you were a taste tester, or were employed to decide which of several razors would be best to use, your judgment might be affected by your mood, or the perfume used by the lady to your left. Dr. David’s method of paired comparisons is designed to take most of the error out of such subjective judgment. The method has infinite application—in personnel rating, in choosing the best garb for soldiers to wear in the south seas, in making any sort of judgment where human fallibility is concerned.

Hundreds of papers were presented before the academy during its session. They were given in ten sections, set up according to the field of science concerned.

The paper on the unidentified poison was delivered by Dr. William S. Woolcott and Dr. Wilton R. Tenney, both of the University of Richmond. Both are biologists.

They made their discovery after visiting a state fish hatchery and learning that fish lifted from one particular spillway died rapidly. They soon discovered that the wall of the spillway was inhabited by Lophopodella carteri, which emits poison when crushed. The workmen’s nets were crushing the microscopic organism in removing the fish.

The biologists plan to continue their investigations and hope to identify and isolate the toxin. This, according to Dr. Tenney, “could eventually be of importance in medical research.”

(Continued on page 38)
KENTUCKY VIRGINIA STONE COMPANY
Crushed Stone

GIBSON STATION, VIRGINIA

Waynesboro Nurseries
Plant Material for Highway, Community and Home Plantings
Quantity Discounts and Discounts to Contractors
LANDSCAPE CONTRACTING
56-page Planting Guide Catalog in color on request
Phone WHitchall 2-8267
WAYNESBORO — VIRGINIA

Belmont Trap Rock Company, Inc.
PRODUCERS OF CRUSHED STONE
TU 6-2633
Staunton, Virginia

SNOW, JR. AND KING, INC.
Masonry Contractors

2415 Church Street
Phone 627-8621
NORFOLK 4, VA.

LOCKWOOD BROTHERS INC.
Steel Erection Contractors
HEAVY HAULING · RIGGING CRANE SERVICE
St. Reg. No. 4958
Riprap Road
HAMPTON, VIRGINIA
PArk 2-1946

H. A. NUNN Contractor

to tell the Virginia Story JUNE 1963
The report concerning oak trees was delivered by William S. Hooks, assistant professor of biology at Randolph-Macon Woman's College, and Alice Racer, a biology major. The gist of their report: destroy a forest with a few oak trees and you'll probably get a forest of all oak trees in its place. And the change will be rapid and not in a normal sequence. The project leads to a way of predicting the crop of timber in a disturbed area by applying principles which control the root-shoot development.

Nematodes were the subject of two Virginia Polytechnic Institute scientists. They are Paul L. Duke and Lawrence I. Miller. Their report is the first to show knotweed cyst nematode infecting an economic crop (buckwheat).

Although the two scientists have not yet determined whether the nematode will actually reduce field yields of buckwheat, their discovery is expected to touch off an alert of scientists throughout the United States who are concerned with this area. Heretofore, researchers assumed this particular nematode to attack knotweed or smartweed.

Virginia Academy
(Continued from page 36)

PAGE THIRTY-EIGHT

W. W. SANDERS
WARRENTON, VIRGINIA
Telephone 347-2234

SANDERS QUARRY, INC.
Telephone 347-3641

CRUSHED STONE FOR ROADWAYS, DRIVEWAYS
CONCRETE AGGREGATE
READY-MIX CONCRETE

PAGE THIRTY-NINE

Virginia Record
Founded 1878
The Highway Department is trying to catch up with situations such as this and either replace the old one lane bridges with a two lane bridge or build a second one lane bridge which with the old and the new will dualize the traffic.

Walkers Mountain and the other, a joint Virginia-West Virginia project, will tunnel under the East River Mountain.

There will be greater emphasis placed on primary, secondary and urban roads in the future, too, says Commissioner Harris.

But probably the most striking projects will be in the urban areas where the density of traffic is showing such marked increases. There, special lanes for buses to move suburbanites to and from the city may be built and the median strip may be reserved for rail transportation for commuters. Traffic monitoring systems may be utilized, especially in the Washington and Norfolk areas, with perhaps TV cameras aimed at the roads, constantly checking congested areas so that lanes may be opened or closed as needed. Freeways in urban areas may be a part of the city scene in years to come but Harris would be opposed to marring the beauty of the area with stacked roads. Far better to build two sets of parallel roads, he feels, than to have double-decker highways.

There may be a mass transportation system to meet urban travel demands of the future and more miles of the Interstate Highway System or additional lanes on parts of that to be completed in 1972.

Travelers soon can see how part of the traffic jam of the future may be handled by driving at peak morning and afternoon periods over sections of the Shirley Highway. There, from Springfield to the Potomac River, reversible lanes will be in use—five lanes out from and three into Washington in the late afternoon and five lanes in and three out in the morning. The project of widening the existing four-lanes to eight as expected to be complete in 1966.

The ultimate aim of the Highway Department, as outlined by Commissioner Harris, would provide a road Utopia: "To build on all systems adequate highways, and that means safe from an engineering standpoint, to carry the traffic and meet the traffic needs."

And when will that goal be met? Says Harris, "I don't think it will ever come about." And so the revolution continues.

When the old Downing bridge to the left was built in 1927 at a cost of $440,000.00, it was acclaimed as an engineering feat. Expected to be suitable until 1943, it has done extra duty for 20 years for lack of funds. The new bridge, also to be named after the late congressman Thomas Downing, with total construction coming to $2,530,000 (including $60,000 to dismantle the old bridge) will be of a wider, stronger high level design. With no lift or draw, there will be no road traffic delay due to water traffic below. The old bridge was the first bridge across the Rappahannock River to the Northern Neck. The new one will be completed in May of next year.
Drive Carefully and
Save a Child's Life

E. A. BEVILLE
GARAGE

Stony Creek, Virginia
Telephone 2346

SANFORD CONSTRUCTION CO.
BRIDGE CONSTRUCTION
Highway Structures

Phone 775-2225
210 Sycamore St.
SANFORD, NORTH CAROLINA

Service Rental & Construction, Inc.
HIGHWAY — PUBLIC UTILITIES
WATER & SEWER

FAIRFAX, VIRGINIA

PAINTER & MUNDY, INC.
Highway Contractors
PAVING
Plants Located: Elkton and Broadway, Va.

R. F. D. #2
Phone 298-2012
ELKTON, VIRGINIA

GENERAL PAVING CORP.
Highway Contractors
ASPHALT — PAVING

P. O. Box 1120
Fairfax, Virginia
certain laws apply to them, and the most general of these today is the law that governs the driving of automotive vehicles in the cities and on the highways. There is really no reason why persons with a tendency to speed or commit other violations should feel that the laws apply to them.

The great automotive industry spends incalculable sums on designing, producing and distributing machines whose speed potential takes into no account whatsoever the existing laws or the common sense rules of safety, and in the front seat of large cars at eighty miles an hour one has no sensation of going at a dangerous pace. Nor is it practical to patrol the highways or the streets with sufficient troopers or policemen to run down every malefactor. Finally, as the Richmond Times-Dispatch pointed out with the most disheartening statistics, the courts have no interest in either enforcing the laws or in punishing offenders. What you have is a condition similar to Prohibition in New York.

Every day in every part of the state those violators unlucky enough to be caught show outrage instead of guilt and use every strategem to avoid paying the penalty of what, after all, is a crime. A former chief of police in a Virginia city told me he had given up having men give tickets to speeders and reckless drivers because persons of influence demoralized his force by having the tickets nullified. Every newspaper in Virginia could carry frightening statistics daily, the highway patrol force could be doubled and put to an intensified campaign, individual judges could crack down in their courts—and the results would be infinitesimal. All the efforts would operate against the public attitude.

All psychological studies show that the automotive vehicle strongly affects the individual who operates this machine. Nothing can change this. To drive downtown in any city or twenty-five miles on any highway is to encounter every variety of the character motivation that causes the individual to act on the principle that the law does not apply to him: there is the arrogance of the privileged, the aggressiveness of the underprivileged, the sheer stupid inability to consider consequences of those who want to “get away with it”—whether speeding, passing school buses, not stopping at intersections, or whatever impulse seized the car-operator.

Even when not driving the vehicle, every day after every day there is the
car-operator who leaves his car parked in a no-parking lane of a main thoroughfare, causing time-consuming tie-ups and the time of policemen who have to be specifically allotted to this form of law-breaker. And great is the outrage of those who do not get away with it. "Why, I was only gone five minutes and when I came back my car had been towed away."

People who drive when drinking, not necessarily when drunk, provide an additional hazard, but it is totally without point to single them out, and even to use drunken-driving as another reason for prohibiting the sale of alcoholic beverages before meals in public places.

The drunken driver has not taken two cocktails before a good meal in a downtown hotel or restaurant. He has drunk from a bottle, or where liquor is poured lavishly at parties. At a dollar a drink before meals, the glow just comes too high; nor does a heavy dinner on top of a few ounces of alcohol stir the blood for feats of wild driving across the countryside.

The association of drinking and dangerous driving is an example of prohibitionists following their own crusade. Poor judgment and impaired reflexes come from many other causes besides the intake of alcohol, and, while that can not be minimized in relation to driving (not in relation to alcohol in public places), the guilty element is the machine itself—and the attitude it promotes in its owners.

Drivers will never assume personal responsibility for their acts with an automotive vehicle. Nor will committees ever come up with any answer.

The only course is a complete change of the law, making punishment mandatory for criminal offenses committed with an automobile. Any deliberate infraction should carry not only a convincing fine, but make the infractor a first offender in a legal code which carries one year's loss of license for a second offense; with this, driving after a revoked license should constitute a felony for which the offender serves time. A third offense would mean permanent loss of license. When some public official has the imperviousness to political consequences to do this, accompanied by a network of radar traps all over the state, people will respect the law because they fear it.

Until some authority possesses the cold courage to enact a legislation of this type, everything is just skirting on the surface of the problem of a slaughter on the highways. For nothing except fear of the law will affect the attitude of people who feel that laws of driving do not apply to them.
S. J. GROVES & SONS COMPANY

Contractors and Engineers

MINNEAPOLIS, MINN. WOODBRIDGE, N. J.

It has been our pleasure to help in the building of VIRGINIA'S FINE HIGHWAY SYSTEM and we look to the future as we help build the ROADS OF TOMORROW—TODAY!

SAM FINLEY, INC.

Contractors

All Types of Asphalt Paving

Virginia State Registration No. 896

ROANOKE, VIRGINIA
ATLANTA, GEORGIA
Asphalt pavements increase the road-building tax dollars collected by your state and help them to go further!

For the state and county road-builder, modern DEEP-STRENGTH Asphalt pavements offer two important financial advantages.

First, because Asphalt construction can cut original pavement costs as much as 50%, they help to stretch road-building tax dollars—allow more miles of wider, safer roads to be built for the same amount of money. And Asphalt pavement's lower annual cost, including maintenance, means additional dollars saved which can be applied to road construction and improvement as well.

Second, Asphalt pavements help to increase the number of road-building tax dollars collected, without increasing taxes. More paved road miles, built better and faster with Asphalt, will mean more motorists traveling more miles a year. And every extra gallon of gasoline they consume means more tax revenue collected for your annual road-building budget.

In addition, modern DEEP-STRENGTH Asphalt pavements have other advantages for the highway engineer. Asphalt bases are stronger—up to twice as effective as cement-treated bases, according to the recently completed AASHO Road Test. Asphalt pavements are water- and frost-resistant, and are not harmed by de-icing chemicals. Asphalt surfaces are also quieter and smoother-riding, with higher skid resistance. And traffic stripes are more visible, day or night, rain or shine, to give you greater road safety.

All in all, the facts add up to this: inch-for-inch and dollar-for-dollar, DEEP-STRENGTH Asphalt pavements are your soundest road investment.

THE ASPHALT INSTITUTE
1901 Pennsylvania Avenue, Washington, D. C.