[1963?]

File

Billboards

Senator --

Here is a whole file of stuff sent on by Charlie Burkhardt --

all directed to having you take on Maurine Neuberger in a frontal attack

on the Senate floor. I would strongly advise against your doing it, for the following reasons:

1. You would be tagged as the #1 billboard apologist.
2. You would alienate the entire conservation movement on this issue.
3. Haven't we got enough fights going now?

I have looked through the material Burkhardt sent. The one piece of ammunition they really have is the McMonagle report -- which was undertaken with the cooperation of the Bureau of Public Roads -- which concluded (in 1955) "no significant relationship shown between outdoor advertising signs and highway accidents." Other "analyses" of the NY study are the kind that you can probably go out and buy.

If you feel you have to do soemthing, I suggest that we get a letter from Bob Naegle (constituent) making the kind of points that Burkhardt wants to have made, and that you insert it in the record with a comment something along these lines: "Without getting into the question of the aesthetics of billboard advertising, which is a perfectly proper question to consider, I feel it only fair to see to it that my constituent, Robert Naegle, who is in the outdoor advertising business, has an opportunity to comment publicly on the question of the relationship of highway safety and billboards . . .etc."

If Charlie wants a hatchet job done on Maurine Neuberger, I suggest he get himself a Republican. My own suggestion is that you tell him that you will be glad to insert a Naegle letter in the record, without taking a position that will get you publicly tagged as Mr. Billboard of 1963. And even inserting the letter, I think you might well indicate that you have sympathy with the regulation of the billboards so as to provide the maximum natural beauty for the American motorist. In some areas billboards are probably a relief from dreary scenery. But in many areas they are without a doubt the most exasperating creatures that ever ruined a good view.

[1963?]

7.00

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
WASHINGTON 25, D. C.

OFFICE OF THE DIRECTOR

Memorandum

To: Bill Connell or John Stewart

From: Chuck Stoddard

Subject: Senator's position on billboard control

The Executive Committee Chairman of the Pennsylvania Roadside Council (with over 1,000,000 in membership), Mrs. Cyril Fox of Media, Pennsylvania, is energetically supporting the GOP opposition by word and deed because of the alleged position taken some time ago by the Senator pro-billboards! The membership of this Council is scattered all over the country since it (the PRC) is the central and founding group of the now-defunct National Roadside Council. Mrs. Fox is the prime mover in the organization. Clipping from the Pittsburgh Post-Gazette gives you some background on the matter.

One of her co-workers, Mrs. J. Lewis Scott of Pittsburgh, who is an active though informal "Conservationist for Johnson" (though Republican), expressed great concern over Mrs. Fox's effectiveness in turning votes unless Mrs. Fox could be given a clear statement as to the Senator's real position in the matter. She felt very sure, in view of the Senator's outstanding conservation record, that he was somehow being misquoted on the subject.

If you think the attached statement is OK, or something like it, the Senator should send it to Mrs. Fox who is attending a meeting at the Mayflower this week (National Council of State Garden Clubs, Central Atlantic Region) through Thursday, or it should be sent to Mrs. Fox through Senator Neuberger (a close friend of hers) before the end of the week.

Encl.

Charles H. Stoddard

STATEMENT RE BILLBOARDS, LITTER OF HIGHWAYS, SCENIC BEAUTY

As original sponsor of the first wilderness bill and co-sponsor and consistent strong supporter of subsequent wilderness legislation and other essential conservation measures, I believe that my position for ecologically-based management and control of our nation's natural resources and landscape is beyond question.

I understand that there is some misconception as to my position with respect to the control of billboards. I have always been concerned that ~~our national highway system~~ the natural beauty of our national highway system be preserved. I do not condone or approve of unrestricted advertising on these interstate highways. ~~I state categorically that I hold billboards to be a hazard to safe driving, a form of litter on the highways -"visual litter" if you will - which cannot be condoned for so-called economic purposes, and an assault upon the highway user who is in fact a captive, unwilling audience". In addition they desecrate the beauty of landscape and environs of the highways and prevent the highway user from free viewing of such landscape and environs. I do not condone the use of any postings on the highways beyond the absolute minimum of directional and service advice. I wholeheartedly subscribe to the sentiments expressed in the attached editorial of the Pittsburgh Post-Gazette of April 28, 1964.~~ And as you know, I have supported the bonus for states which prohibit advertis[ing]

I entirely agree with the President who has so clearly stated one of this country's major problems when he said "A few years ago we were greatly concerned about the Ugly American. Today we must act to prevent an Ugly America . ." ~~I entirely agree with each of the following statements of the President, selected from various speeches he has made on the subject:~~

--"More of our people are crowding into cities and cutting themselves off from nature. Access to beauty is denied and ancient values are destroyed. Conservation must move from nature's wilderness to the man-made wilderness of our cities . ."

--"Conservation's concern is not with nature alone, but with the total relations between man and the world around him. Its object is not just man's welfare, but the dignity of his spirit . . . Above all, we must maintain the chance for contact with beauty. When that chance dies, a light dies in all of us. Thoreau said, 'A town is saved not more by the righteous men in it than by the woods -- that surround it.' And Emerson taught, 'There is no police so effective as a good hill and wide pasture.' --We are the creation of our environment. If it becomes filthy and sordid, then dignity of the spirit and the deepest of our values immediately are in danger."

--"In the development of a new conservation I intend to press ahead on five fronts: . . . Second, we must control the waste products of technology . . . The skeleton of discarded cars, old junk cars, litter our countryside . . . I intend to work with local government and industry to develop a national policy for the control and disposal of technological and industrial waste. I will work with them to carry out that kind of policy. Only in this way, I think, can we rescue the oldest of our treasures from the newest of our enemies . . ."

--"Fourth, we must prevent urbanization and growth from ravaging the land.

I will suggest, in cooperation with local government and private industry, policies for such prevention. Thier goal will be to insure that suburban building, highway construction, industrial spread, are conducted with reverence and with the proper regard for the values of nature . . ."

As you know, the President has established a Task Force on Natural Beauty. I feel the matter of billboards should be included on the agenda of that Task Force and will urge that billboard control be given a high priority in the discussions of that group.

I am grateful that this matter has been called to my attention by Mrs. J. Lewis Scott (of Pittsburgh) so that an opportunity has been afforded me to set the record straight.

Oct. 1, 1964

Petition Signed by 100,000 Asks Action

Shafer Vows Billboard Ban

Roadside Council Meets Here, Marks Silver Anniversary

Billboards were the avowed evil of hosts and guests alike last night at the silver anniversary dinner of the Pennsylvania Roadside Council in the Hilton Hotel.

Lt. Gov. Raymond P. Shafer, the principal speaker, pledged that the 1965 General Assembly will be asked to pass legislation banning signs within 660 feet of the rights of way of limited-access highways.

With nearly 150 dinner guests looking on, the Council presented Shafer a petition bearing 100,000 signatures asking such action.

Shafer explained that the 1963 effort to secure such a ban failed because the measure was introduced only two weeks before the end of the session. But next year, he said, the bill will be reintroduced early and with the full support of Gov. William W. Scranton's administration.

If enacted, the lieutenant governor continued, the new bill would eliminate loopholes in the 1961 act by including all limited-access roads—not just interstates—and by including rights of way acquired prior to 1956.

This last provision would ban billboards along the Pennsylvania Turnpike.

The keynoter for the dinner meeting was David Lewis, Andrew Mellon professor of architecture and urban planning at Carnegie Institute of Technology.

Likening billboards to clamorous hawkers whose babbe confuses rather than communicates, he drew applause when he said offensive signs should be banished from the American countryside altogether.

Lewis blamed public apathy for what he termed the huge-scale irrelevancies that use the heritage of our landscape only as a backdrop for shrill vulgarity.

Mentioning the European-born practice of surrounding communities with greenbelts, Lewis said billboards extend the city into the countryside, affording travelers no relief from urban intensity. At the same time, he said, in-city signs should be redesigned so they inform without offense to aesthetics.

Before the speeches began, standing ovation were given to the Council's president, Mrs. Ernest N. Calhoun, 211 Lingrove Place, Homesteead, and to its founder, Mrs. Cyril Fox of Media, Pa.

Among the guests were State Highways Secretary Henry Harrell, State Secretary of Woods and Waters Maurice Goddard and Miss Genevieve Blatt, the Democratic nominee for the U. S. Senate.

—Post-Gazette Photo

Mrs. Cyril Fox shows Lt. Gov. Raymond P. Shafer petition asking billboard ban on limited-access roads.

Tex. Car Thief Gets Youth Center Term

Hotel Strike

tions. Supplies were ordered but subject to last-minute

THE PENNSYLVANIA ROADSIDE COUNCIL INC.

cordially invites all those who are concerned about the beauty and protection of our highways to be present at their

TWENTY-FIFTH ANNIVERSARY DINNER

to be held in the Pittsburgh Hilton Hotel, Wednesday, September Thirtieth

Speakers:
Lt. Governor Raymond P. Shafer
David Lewis, ARIBA

Six-thirty
Ballroom 3
Dress optional

HONORARY COMMITTEE

Mrs. E. Page Allinson
Mrs. William Howard Benson
Hon. Genevieve Blatt
Mr. William Block
Hon. Joseph S. Clark
Mr. Walter D. Fuller
Hon. Maurice K. Goddard
Mr. Charles J. Graham
Hon. Henry D. Harral
Mrs. Clifford S. Heinz
Mr. David G. Hill
Hon. David L. Lawrence
Mrs. John W. Lawrence
Mr. Frank L. Magee
Mr. Robert B. McKee
Mr. Francis A. Pitkin
Dr. I. S. Ravdin
Mrs. Lessing Rosenwald
Hon. Harold D. Saylor
Hon. Hugh Scott
Mr. Adolph W. Schmidt
Mrs. William W. Scranton
Hon. Sara M. Soffel
Hon. John K. Tabor

DINNER COMMITTEE

Mr. Ralph W. Abele
Mrs. David R. Demaree
Mrs. Thomas I. George
Mr. Maurice Goldstein
Mrs. George Ketchum
Mrs. Lee R. Layman
Dr. Roger M. Latham
Mr. Gilbert Love
Mr. Lewis W. McIntyre
Dr. M. Graham Netting
Mr. Watson S. Ross
Mr. Edward H. Schoyer
Mrs. J. Lewis Scott
Mrs. Harold H. Wilson
Mrs. Ernest N. Calhoun
Chairman

PA. ROADSIDE COUNCIL OFFICERS

Mrs. Ernest N. Calhoun
President
Mrs. George M. Dallas
Mrs. Maxwell W. Steel
Mrs. Robert L. Waln
Vice-Presidents
Mrs. Anna Dymond
Secretary
Mrs. Charles R. Roether
Treasurer
Mrs. William E. Lappin
Corresponding Secretary
Mrs. Cyril G. Fox
Executive Committee Chairman

The PENNSYLVANIA ROADSIDE COUNCIL
Inc.
Media, Pa.

OUR TWENTY-FIFTH ANNIVERSARY

COOPERATING ORGANIZATIONS

A.A.A. of Philadelphia
Allegheny Co. Conference on Community Development
Allegheny County Planning Commission
Allegheny Co. League of Women Voters
American Association of Nurserymen
American Association of University Women
American Planning & Civic Association
Audubon Society of Western Pennsylvania
Brandywine Valley Association
Bucks County Park Board
Citizens' Council on City Planning for Philadelphia
Citizens' Council for Bucks County Planning
Citizens' Council of Delaware County
Civic Club of Allegheny County
Civic Club of Harrisburg
Community Health & Civic Association
Conservation Council of Pennsylvania
Crawford County Pomona Grange
Delaware Valley Protective Association
Garden Club of America
Garden Club Federation of Pennsylvania
Girl Scouts of Philadelphia
Greater Philadelphia-South Jersey Council
Historical Society of Pennsylvania, The
Junior Chamber of Commerce of Philadelphia
Keystone Automobile Club
Leechburg Area Civic Development Association
Men's Garden Club of America
Minute Men and Women of Pennsylvania
National Association of Gardeners
National Council of State Garden Clubs, Inc.
Pennsylvania Chapter American Society of Landscape Architects
Pennsylvania Council of Republican Women
Pennsylvania Department of Commerce
Pennsylvania Department of Forests & Waters
Pennsylvania Department of Highways
Pennsylvania Division Izaac Walton League of America
Pennsylvania Farm Bureau Federation
Pennsylvania Federation of Business and Professional Women
Pennsylvania Federation of Democratic Women
Pennsylvania Federation of Labor-CIO
Pennsylvania Federation of Sportsmen's Clubs
Pennsylvania Federation of Women's Clubs
Pennsylvania Forestry Association
Pennsylvania Horticultural Society
Pennsylvania Junior Chamber of Commerce
Pennsylvania Motor Federation
Pennsylvania Nurserymen's Association
Pennsylvania Planning Association
Pennsylvania Society of Architects
Pennsylvania State Grange Home Economics Committee
Pennsylvania State Planning Board
Pennsylvania Turnpike Commission
Philadelphia Federation of Women's Clubs & Allied Organizations
Pittsburgh Motor Club
Pittsburgh Regional Planning Association
Shenango Valley Regional Planning Commission
Valley Forge Park Commission
Western Pennsylvania Conservancy
Women's Farm & Garden Association, Inc., Pa. Division

PITTSBURGH POST-GAZETTE, TUESDAY, APRIL 23, 1963

As Others See Us

WHAT FEATURE of the American landscape first captures the attention of a European architect visiting in this country? Is it the imposing skylines of our major cities, the networks of awesome expressways, the endless tide of automobiles?

No, it is none of those, if we may accept the word of David Lewis, who came to Carnegie Tech from England last summer as Mellon professor in the Department of Architecture.

The first thing, according to Mr. Lewis, is "the anachronism of this wealth of design and performance [buildings, highways, automobiles] being destroyed by the insensitivity of that anarchy of advertising graphics with which you impregnate and surround your cities.

"I am staggered not only by the fact of visual litter on such a gigantic scale but by your general insensitivity to what it is and what it means . . ."

* * *

Mr. Lewis pointed out to a conference sponsored by the Southwestern Pennsylvania Regional Planning Commission that Western Pennsylvania has "magnificent landscape, capable of superb dialogues between grandeur and intimacy." But then we permit it to be marred by a forest of billboards more dangerously distracting to the motorist than Mr. Lewis has seen anywhere else in the world.

There is much merit in what the visitor says. We are pleased to inform him, however, that the insensitivity is not so general as he supposes. Many civic agencies have for years labored, and with some success, to prohibit billboards from the highways, particularly the new expressways.

But as the visual evidence so sadly attests, much remains to be done. Mr. Lewis does us a service by pointing a professionally competent finger at a major American eyesore. His criticism should encourage greater efforts to beautify rather than commercialize and desecrate the landscape.

Wini –

I'd if we can locate the PC pins last year on billboards – We had a big scrap with this Mrs. Fox, ~~[illegible]~~ I believe –

We ought to tell what we said then –

John

FRED G. HUSSEY
WASHINGTON REPRESENTATIVE

OUTDOOR ADVERTISING ASSOCIATION OF AMERICA INC.

200 C STREET, S. E. · WASHINGTON 3, D. C. · LINCOLN 6-6030

[1963?]

OUTDOOR ADVERTISING AND TRAFFIC SAFETY

Mr. President:

The subject of traffic safety concerns one of the most serious problems in the United States. Any attempt to attribute traffic accidents to spurious causes, while at the same time ignoring available data of various road and roadside features, known to be major factors contributing to accidents, is a distinct disservice to the cause of traffic safety. Likewise, any improper or inadequate analyses of data which might tend to arrive at statistically unsound conclusions should not be permitted to inferentially attribute a cause and effect relationship where no such relationship exists.

About February 19, 1963, the New York Thruway Authority released a report by Madigan-Hyland, Inc., a firm of consulting engineers, which purported to be "an analysis of accident statistics and records of the New York State Thruway for the years 1961-1962, to determine the relationship, if any, between the number of accidents and the existence of advertising devices along the route of the expressway." This report appears on pages 4578-4579 of the CONGRESSIONAL RECORD for March 15, 1963.

This report has been challenged by outstanding leaders in the field of investigation of accident causation. It is the consensus of their opinions that the analysis of data made by Madigan-Hyland was inadequate; that the conclusions were invalid, statistically unsound, completely without foundation and unsupportable under any professionally statistical standards.

It is also noted that while the New York Thruway report attempts to include outdoor advertising with all "inattention" accidents that the term "inattention" is frequently used as a "catchall" and not one which can be confined, or perhaps even used, in connection with "advertising devices" "visible" along the New York Thruway.

Analyses of the New York Thruway Report appear by the following authorities in the order in which they are listed, with the biography of each such authority following his report:

Exhibit A: By Dr. Ernest E. Blanche
Ernest E. Blanche & Associates

Exhibit B: By Dr. Leon Brody
New York University

Exhibit C: Dr. Bruce Greenshields
University of Michigan

Exhibit D: Professor J. Carl McMonagle
Michigan State University

Comments and Condensed Analysis
by Dr. Ernest E. Blanche
Regarding the Report made by Madigan-Hyland, Inc.
to the New York State Thruway Authority
Concerning the
Relationship of Outdoor Advertising and Traffic Accidents

The conclusion of the Madigan-Hyland Report to the Chairman of the New York State Thruway Authority (that in 1961 and 1962 there were three times as many "driver inattention" accidents per mile on the Thruway where signs were visible as against Thruway where signs were not visible) is erroneous, misleading, and statistically unsound.

The reason Madigan-Hyland obtained this false result is that Madigan-Hyland limited itself to relating the "driver inattention" accidents to only one variable (advertising signs) and ignored many other variables which were available.

Madigan-Hyland did not consider such other variables as traffic volume, either in the form of number of vehicles traveling past specific points or number of vehicle miles, road characteristics such as "on" and "off" ramps, bridges over water or depressions, overhead bridges supporting roads crossing the Thruway, usually at right angles, service areas, parking areas, and many other road features which are known to be major factors contributing to accidents.

Madigan-Hyland simply divided the New York Thruway into two classifications of roadway based on some arbitrary unit of measure which Madigan-Hyland has not indicated, namely: (1) sections of roadway from which signs were visible without regard to the size, shape or type of sign, location, or the distance from the Thruway right-of-way; (2) sections of roadway from which signs were not visible. Without indicating whether they were using sections of length of one mile or half-a-mile or one-tenth of a mile, Madigan-Hyland then

added all these sections to obtain a total of road miles for each of the two classes. Then Madigan-Hyland tallied the number of "driver inattention" accidents for each of the two types of roadway and then divided the number of accidents for each type by the number of miles in that type, thereby obtaining results which are entirely false and without statistical validity of any kind.

It was as though Madigan-Hyland had picked 200 men -- 100 with light hair and 100 with dark hair, then weighed all the men and discovered the 100 men with light hair weighed 17,500 pounds, while the 100 men with dark hair weighed 18,000 pounds -- as though they next averaged the weights per man (175 pounds for the light haird men and 180 pounds for the dark haired men) and published the statement that the average dark haired man weighs 180 pounds while the average light haired man weighs 175 pounds. The mathematics involved are correct, but the conclusion is wrong. We know from many scientific studies, made previously, that weight is related to height, waist measurement, chest measurement, bone structure, etc., but it is <u>not</u> related to the color of hair. In the above example the study was limited to one variable (hair) which has no relationship to weight, and ignored other variables which previous studies have shown <u>do</u> have a relationship.

To evaluate the true relationship between accidents and the many variables involved, the following activities were undertaken: "Inattention accident" records were obtained, with their exact locations on the Thruway, as used by Madigan-Hyland, for the year 1961; however, it was not possible to obtain similar records for 1962. (Authorities agree that records for one entire year are a very adequate sample.)

Limited to the "driver inattention" accidents occurring in 1961, a preliminary analysis showed that more than half of all "driver inattention" accidents occurred within forty-five miles of the beginning of the Thruway at Yonkers and on the twenty-one miles of Thruway going through Buffalo up to Niagara Falls. Because more than half of these accidents occurred on only

66 miles of high traffic segments of the 559-mile Thruway, a detailed study was made of all road features, road characteristics, and advertising signs on these two portions. An inventory was made of these, locating them by the tenths-of-a-mile markers which are the official highway distance indicators during an auto trip north and south on the first 45 miles of the Thruway beginning at Yonkers and ending at Harriman, New York (a total of 90 road miles). A similar inventory of these items was made on the 21 miles of Thruway beginning just east of the city line of Buffalo, traveling through the city to the downtown area and then turning north along the river to Niagara Falls (42 miles).

These locations were then plotted to a tenth-of-a-mile on chart paper on which the 1961 "driver inattention" accidents had previously been indicated. Without going into any mathematical analysis, it was apparent from the chart that there were some unusual road characteristics at which accidents were clustered, namely: (1) approximately one out of every seven accidents on the Yonkers-Harriman portion occurred on the three-mile-long Tappan Zee Bridge crossing the Hudson River, where no advertising devices were visible; (2) in the 90 miles of roadway from Yonkers to Harriman and return, there were 62 ramps of exit or entry, an average of one ramp every mile and a half; (3) for the 42 miles of Thruway in Buffalo and north of Buffalo, there was an on or off ramp occuring on the average every two-thirds of a mile; (4) for the remainder of the Thruway, totaling over a thousand road miles, the on or off ramps averaged one every six miles; (5) approximately 72 percent of the accidents occurring on the first 45 miles of Thruway (Yonkers to Harriman) occurred at locations which were within two-tenths of a mile (about 1,050 feet) of an on ramp, an off ramp, a bridge, an overhead bridge, a service area, or a toll area; (6) there was a peaking of accident locations where on and off ramps were close together, introducing traffic friction as cars entered and left the main stream of traffic.

Because the detailed motor vehicle reports filled out by the investigating officers were not available to us, the "driver inattention" accidents could not be classified as to whether they were two-vehicle collisions, a car running into a bridge rail, a car running into the support of an overhead bridge, a car failing to stay on the roadway, accidents occurring on roadway covered with ice, snow, or rain, and other conditions which would have been noted by the investigating officer.

Since more than half of the 1961 driver inattention accidents occurred on less than 12 percent of the road miles on the entire New York Thruway, a detailed correlation analysis was conducted for the 90 road miles from Yonkers to Harriman and return, and separately for the 42 miles of roadway from Buffalo to Niagara Falls and return.

The results of the correlation analysis showed that the partial correlation coefficient between accidents and advertising signs on the Yonkers-Harriman portion was approximately zero while that between accidents and road features as identified above was 0.45, indicating a direct positive relationship between accidents and road characteristics but absolutely no relationship between accidents and advertising signs.

For the Buffalo-Niagara Falls section, the partial corelation coefficient between accidents and advertising signs was also approximately zero, while that between accidents and road characteristics was 0.42.

This means that there is a direct positive relationship between accidents and road characteristics, and that if these road characteristics are not considered in any study (such as the Madigan-Hyland Report), then any cause-and-effect relationship between accidents and road characteristics would be erroneously attributed to advertising signs seen from the roadway, even though such signs might not actually be located near the road right-of-way.

It is important to report that the partial correlation coefficients obtained separately for the two metropolitan segments of the New York Thruway are very close to the results obtained by the State Highway Department of Michigan for accidents occurring on 120 miles of highway for the three year period from 1947 to 1949. The Michigan Highway Department study included a correlation analysis of about ten variables and determined that the partial correlation coefficient between accidents and advertising signs was approximately zero while the partial correlations between accidents and road and roadside features were high.

As far as I know, this correlation analysis with the limited data indicated for the New York Thruway is the first indication that the results for a limited access highway approximate those for a conventional type highway with intersections.

In conclusion, I would like to point out that the Madigan-Hyland Report, in my opinion, is an immature attempt to support a general conclusion that was indicated or desired. The Madigan-Hyland results are invalid, completely without foundation, and unsupportable under any professional statistical standards.

EEB:JB
4/24/63

Biographical Notes
Dr. Ernest E. Blanche, Chief Research Scientist
Ernest E. Blanche & Associates, Inc.
10335 Kensington Parkway
Kensington, Maryland

Dr. Ernest E. Blanche has served government, industrial and university organizations for over 22 years in the fields of research, analysis, evaluation, data processing and management studies. For seven years he was Chief Statistician for the logistical element of the Army General Staff, Washington, D. C.

Before coming to Washington in 1944 as Principal Statistician for the Foreign Economic Administration, he served two years with the Curtiss-Wright Corporation, Airplane Division, as Assistant to the Director of Engineering and later as Head of Mathematics and Statistics in the C-W Research Laboratory (now known as Cornell University Aeronautical Research Laboratory) at Buffalo, New York.

In 1945 shortly after V-E Day, Dr. Blanche was called by the Department of the Army to help establish the Army University Training Center at Florence, Italy, as part of the Army's Education Program for troops in Europe.

Returning to this country at the end of 1945, he was assigned to the Control Division, Army Service Forces, as Principal Analyst for Generals Brehon Somervell and Clinton F. Robinson. After dissolution of ASF, he became Chief Statistician for the Research and Development Division, Army General Staff, and upon consolidation of this division with the Logistics Division in 1947, was appointed to head the combined statistical office, where he remained until January 1, 1954.

After almost ten years of Federal service, he resigned to become Vice-President and Senior Research Scientist of the Frederick Research Corporation, Bethesda, Maryland, where he remained until August 1, 1955. During this time he also served as a consultant to the Department of the Army.

In August 1955 he established the firm of Ernest E. Blanche & Associates in order to specialize in market and operations research, mathematical and statistical analysis, data processing and computing. On July 1, 1962, the firm moved into its new three-story office building. The firm now has 105 employees and 42 IBM machines, including an IBM 1401 Computer with four magnetic tapes.

Before World War II, Dr. Blanche devoted his time to teaching, first at the University of Illinois, Urbana, Illinois, and then at Michigan State College, East Lansing, Michigan. In 1942, he joined the Curtiss-Wright Corporation, but also taught in the Evening Division of the University of Buffalo from 1942 to 1944. After coming to Washington, he joined the faculty of The American University, Washington, D. C. in 1946, and is at present Adjunct Professor of Mathematics and Statistics in the Evening Division.

Dr. Blanche is a graduate of Bucknell University (magna cum laude) February 1938, and completed graduate work at the University of Michigan and Bucknell for the M. A. degree in August 1938. He continued his graduate studies while teaching at the University of Illinois, and in 1941 was awarded a Ph. D. degree in Mathematics and Statistics (minors Economics and Physics).

He is a member of the following honorary societies: Phi Beta Kappa (scholastic); Sigma Xi (scientific); Pi Mu Epsilon (mathematics); and Delta Phi Alpha (language).

Dr. Blanche belongs to the following professional societies: American Mathematical Society, Institute of Mathematical Statistics, Mathematical Association of America, American Statistical Association, Washington Statistical Society (he is now serving as President 1962-63), and the Biometrics Society.

He is listed in "Who's Who In the East", "American Men of Science", and "Who Knows - And What".

During his work for government and industry, he has produced a large number of articles and research papers in statistics, probability, analysis of scientific data, guided missile flight testing, quality control, operations research, logistical feasibility, work simplification, work measurement, use of high-speed computers, systems design, weapon analysis, traffic and highway computations, market research and associated problems.

As a hobby, he analyzes gambling games and is well known for his popular articles and books, the best known of which are "Off to the Races", "You Can't Win", and "The Mathematics of Gambling". He lectures extensively on gambling to civic and scholastic organizations, and to military hospital patients under the program conducted by the Theatre Wing, American Red Cross.

Dr. Blanche resides with his wife and two children at 14818 Carrollton Road, Rockville 13, Maryland.

NEW YORK UNIVERSITY
DIVISION OF GENERAL EDUCATION
CENTER FOR SAFETY EDUCATION
WASHINGTON SQUARE, NEW YORK 3, N.Y.

WALTER A. CUTTER
Director of the Center

April 29, 1963

Mr. Frank Blake
Director of Public Relations
Outdoor Advertising Association of America
24 West Erie Street
Chicago 10, Illinois

Dear Mr. Blake:

With reference to your letter of April 16, asking me to comment on a report concerning the New York Thruway, made by Madigan-Hyland, Inc., the following remarks are based entirely on the information contained in the copy you sent me. Moreover, I have not referred to the comments of other reviewers, so that I might be free of any "halo effect."

The Madigan-Hyland report presents the findings of an investigation "to determine the relationships, if any, between the number of accidents and the existence of advertising devices along the route of the expressway." This statement appears in the opening paragraph. A little further in the introductory remarks (paragraph four), the statement is made "that advertising devices are a factor in accidents principally because they distract the motorists' attention." This tends to nullify the reasonably scientific qualification in the phrase, "if any", previously mentioned. Indeed a cause-and-effect explanation is suggested (paragraph four) even before a relationship (if any) has been ascertained. It is on this questionable basis that the design of the study is formulated and carried out. Such procedure is not ordinarily regarded as compatible with valid scientific research.

Review of the entire report prompts questions and remarks such as the following:

1. What is meant by "visible"? Does visibility refer to advertising message details, to the sign as a whole? In either case, what evidence is there regarding driver perception -- the essential criterion of visibility for the purposes of this study?

2. How is driver "inattention" defined? It is recognized by many experts that this term -- or its positive counterpart, attention, is a broad and elusive psychological phenomenon. Thus, inattention may be internally or externally occasioned for many possible reasons. If externally derived, this might be the result of advertising signs or of countless other distractions (or attractions), natural or man-made, to be found in any area of travel. These may range from scenic qualities to homes along the highway, and even to traffic density or the behavior of other drivers. The prevalence of these possibilities is undetermined in the subject study. Moreover, as is well known by traffic safety experts, accident reports freely use such categories as inattention and careless driving to cover many different things -- i.e., as a catchall.

3. The statements and data relating to traffic density are cause for concern. To begin with, the criteria of "heavy density" and "medium density", for the purposes of this study, are not specified. Therefore, the reader can not be sure of the coverage. More important, however, is this fact: Since traffic volume may reasonably be hypothesized to contribute to driver attractions or distractions, study of a "light density" area might well provide a "purer" test of the distractive effect, if any, of external stimuli such as advertising messages. The report provides no data on a "light density" area. Indeed, the given accident rates drop drastically from 2.9 and 2.0 per mile in the heavy density area to .40 and .26 for the medium density area, suggesting that traffic density may be the principal variable responsible for the obtained results.

4. If "advertising devices" contribute to the latter at all, one would expect the obtained data to be subjected to statistical tests of significance. No such tests are reported. Consequently we may in any case have data that lack any significance.

5. Apart from traffic density and the presence or absence of advertising devices, other variables need to be controlled for a definitive study. These range from "destination psychology" factors in the areas studied to the geography and topography of the roadway segments involved. To put this point in positive terms, a definitive study of roadway risk potential in relation to X would necessarily include a controlled experiment in which a given stretch of roadway were studied when advertising devices are present and when they are absent. This would tend to keep many "influential" factors constant except, primarily, the one "under the microscope" - i.e., advertising messages. (Of course, the experiment would have to be repeated at different locations to permit any generalizations.)

We consider it a professional responsibility to call attention to both valid and questionable research relating to traffic safety. Consequently there is no fee for my evaluation of the subject study which, as reported, appears to me to fall in a highly questionable category.

Sincerely,

Leon Brody
Director of Research

LB:bp

Leon Brody

Director of Research and Publications, Center for Safey Education, New York University, Washington Square, New York, New York, since January 1952; Adjunct Professor of Education, New York University.

Member:

American Psychological Association

Research Committee of the Advisory Council, President's Committee for Traffic Safety

Program Committee, President's Conference on Occupational Safety

Committee on Highway Safety Research and Committee on Road User Characteristics, Highway Research Board, National Research Council

Research Advisory Committee, National Safety Council

American Association for the Advancement of Science

American Society of Safety Engineers

Formerly
(principal positions):

Industrial Relations Department, Great Atlantic and Pacific Tea Company, 1946-1951

Senior Training Technician, War Department, 1941-1945

Research Associate, Center for Safety Education, New York University, 1939-1941

Research Assistant, American Association for Adult Education, 1937-1939

Ph.D (in psychology), Duke University, 1937
M.S., B.A., College of the City of New York, 1933, 1931

Author (or co-author) of books and articles on traffic and industrial safety and other subjects in the fields of psychology and education.

THE UNIVERSITY OF MICHIGAN
ANN ARBOR

TRANSPORTATION INSTITUTE

March 25, 1963

Mr. Frank Blake
Outdoor Advertising Association
of America, Inc.
24 West Erie Street
Chicago, Illinois

Dear Mr. Blake:

In accordance with your request at our conference on Friday, March 22, I am glad to give you my evaluation of the Madigan-Hyland report to the New York State Thruway Authority on the "Relationship Between Accidents and the Presence of Advertising Signs."

I think this report is misleading. That it is statistically unsound is shown by the analysis of the report by Dr. Ernest E. Blanche, Ernest E. Blanche and Associates, Inc., and by comparison with a study of road signs and accidents by Dr. A. R. Lauer and J. Carl McMonagle ("Do Road Signs Affect Accidents?" A. R. Lauer and J. Carl McMonagle, Traffic Quarterly, July, 1955, pp. 322-29).

There are several assumptions in the Midigan-Hyland report that are open to question. For example, the statement: "....it was recognized that advertising devices are a factor in accidents principally because they distract the motorists attention."

The implication seems to be that the motorists attention is "distracted" to the advertising sign and away from the driving task. It is perhaps more logical to assume that a certain amount of "distraction" is necessary to keep the motorist awake and alert. In fact, the study by Lauer and McMonagle mentions that: "Designers of the New York Thruway recognized the need for variety of raodside stimuili by designing otherwise unnecessary curves in that highway."

The difficulty of getting unbiased opinions and of pinning down visual attention is illustrated by an incident related in "Statistics with Applications to Highway Traffic Analysis," Bruce D. Greenshields and Frank M. Weida, published

by the Eno Foundation, 1952. On page 8 of this 238 page monograph, there is related in part a study of "no-passing" zones. I quote:

> "... It was decided to try road signs worded to warn drivers that they were entering a "no-passing" zone. It was doubted that a large percentage of the motorists would see the signs, but surprisingly enough, over 98 percent of them stated they had seen the signs. This was so unexpected that it was questionable, and a way of checking these answers was sought.
>
> The means of checking was revealed through consideration of the purpose of the sign. Signs aside from those whose shape conveys a message, must be read. A sign much larger than the "no-passing" sign was prominently displayed to warn the drivers that they were entering a "test-zone". This might have been guessed from the fact that they had seen 3 or 4 different types of marking within a mile or so, but, over one-third when questioned said they did not know they were in a "test-zone". The conclusion reached was that at least one-third and probably more did not see the "no-passing" signs in spite of the fact that 98 percent said they had."

The Madigan-Hyland report establishes a correlation between the presence of advertising signs and the occurrence of traffic-accidents judged by the State Trooper reporting, to be due to "inattention". In evaluating the finding of the Madigan-Hyland report it must be remembered that a correlation coefficient does not necessarily show the existence of a cause and effect relationship. There could be other causes for the accidents.

The highway factors that lead to accidents are numerous and fall into three general categories: (1) those relating to the geometry of the highway; (2) those relating to the appearence of the highway and environment; and, (3) those relating to the flow of traffic. If these many variables that can cause accidents are omitted from the accident analysis, the analysis is statistically unsound.

This fact is shown by Dr. Ernest E. Blanche's analysis of the Madigan-Hyland report. Dr. Blanche makes "an inventory of all road features" for the pertinent part of the Thruway and then analyses the data to obtain a proper evaluation of the effect of the advertising signs which obviously constitute a small part of the visual highway environment.

Dr. Blanche obtains a simple correlation coefficient between accidents and road features of 0.46. (It may be noted the "determining coefficient" is the square of the correlation coefficient. Thus, the raodside features could be expected to account for only about 21% of the accidents.)

Dr. Blanche then computed a multiple correlation coefficient between accidents and road features and advertising signs and found it to be 0.47 which is almost identical to the simple correlation (0.46) between accidents and road features.

A partial correlation coefficient between accidents and advertising (removing the influence of road features) computed by Dr. Blanche, was found to be 0.05.

The analysis by Dr. Blanche is the same as that followed in the Lauer and McMonagle study conducted in Michigan. This indicates the correctness of the method.

The Michigan Study included nine variables: vehicle miles, private drives, restaurants, taverns, gas stations, stores, other establishments, design features, and advertising.

It is significant that in the Michigan Study the partial correlation (eliminating the effects of other variables) between accidents and roadside signs of — 0.066 for roadways with no intersections and 0.002 for roadways with intersections shows practically no relationship between roadside advertising and accidents.

The Michigan Study included a laboratory study in which factors could be controlled. The conclusion of the authors of the Michigan Study, as stated is: "The studies (laboratory and field) each confirm that there is no significant relationship shown between outdoor advertising signs and highway accidents. The evidence, if any, is slightly in favor of having something along the highway to arouse the motorists and keep him alerted as far as efficient driving is concerned."

It is my opinion that the Madigan-Hyland report is erroneous in that it fails to take into consideration the many highway variables other than outdoor advertising signs that can cause accidents. This opinion is confirmed by the findings and statistical procedures followed by Dr. Blanche and by Dr. Lauer and Professor McMonagle.

Sincerely yours,

Bruce D. Greenshields

Bruce D. Greenshields
Assistant Director

Enclosure

BDG:bsm

BIOGRAPHICAL SKETCH

Greenshields, Bruce D., Assistant Director, Transportation Institute, and Lecturer in Transportation Engineering, Department of Civil Engineering, University of Michigan.

Education:

Ph.D. (Civil Engineering: Transportation), Univ. of Mich., 1934.
M.S. University of Michigan, 1932.
C.E. Oklahoma University, 1927.
B.S. in C.E. Oklahoma University, 1920.

Licensed Engineer: New York, Maryland, District of Columbia.

Teaching Experience:

Lecturer, Engineering Mechanics, University of Michigan, Feb., 1957 to 1961; Civil Engineering, Sept. 1958 to present.
Professor of Civil Engineering, (Executive Officer, 1948-52) The George Washington Univ. (On leave fall term 1954, Bureau of Highway Traffic, Yale Univ.).
Associate Professor, The George Washington Univ., 1945-48.
Adjunct Professor of Transportation, New York Univ. (part-time position), 1945-46.
Associate Professor of Civil Engineering, The College of the City of New York, 1937-40.
Professor of Engineering Science, Denison Univ., Granville, Ohio, 1926-37.
Assistant Professor, Civil Engineering, Virginia Polytechnic Inst., 1923-26.
Instructor, Civil Engineering, Marquette Univ., 1922-23.

Professional Experience:

Assistant Director, Transportation Institute, Univ. of Mich., July, 1958-present.
Traffic Engineer, Transportation Institute, Univ. of Mich., 1956-58.
Chief, Highway Systems Branch, Office of Chief of Transportation, Dept. of the Army, Jan., 1946-Feb., 1956 part-time, Feb., 1956-Aug. 1956.
Research Engineer, Yale Univ., fall-1954 and summer-1955.
Materials Engineer and Expert, Planning Branch, Military, Wash. D.C., Supply and Procurement, Office of the Chief of Engineers, June, 1951-March, 1952.

Professional Experience: (continued)

Research Engineer, Bureau of Highway Traffic, Yale Univ. 1944-46.
Supervisor, Building Materials Research, Brooklyn Polytechnic Inst., 1940-44.
Research Engineer, Traffic Bureau, Ohio State Highway Dept., Columbus, Ohio, 1934, 1936-39. (part-time)
Rodman, Santa Fe Railway Co., 9 mos. 1922.

Publications (partial list):

"The Photographic Method of Studying Traffic Behavior," 1933, Proceedings of the Highway Research Board.
"Studies of Traffic Capacity," 1934, Proceedings of the Highway Research Board.
Traffic Performance at Urban Street Intersections, (Senior author in charge of project), 152 pages; Published 1947 by Yale Bureau of Highway Traffic.
Statistics with Applications to Highway Traffic Analysis, (Senior author), 248 pages; Published 1952 by the Eno Foundation, Saugatuck, Conn.
"Quality of Traffic Flow and Highway Accidents," Proceedings Highway Research Board, 1958.
"Attitudes Emotions and Accidents," Traffic Quarterly, April, 1959, Eno Foundation, Saugatuck, Conn.
"Quality of Traffic Flow," Quality and Theory of Traffic Flow. A symposium published by Bureau of Highway Traffic, 1961.
"Driving Behavior and Traffic Accidents," 1962 International Road Safety Congress, Salzburg, Austria.
"Driving Behavior and Related Problems," Annual Meeting Highway Research Board, Washington, D. C., Jan., 1963.

Patents:

Asphalt Mixing Process, 1949.
Highway Characteristics Recorder, patent pending.
Drivometer and Traffic Events and/or Highway Events Recorder, patent pending.

STATEMENT OF J. CARL McMONAGLE

on reports made by

Madigan-Hyland, Inc.
Consulting Engineers, New York City

and by

Dr. Ernest E. Blanche
Ernest E. Blanche & Associates, Inc.
Kensington, Maryland

on the
relationship between accidents and outdoor advertising devices
on the New York State Thruway

I have very carefully examined the reports made by Madigan-Hyland, Inc. and Dr. Ernest E. Blanche to determine the statistical soundness of each report. I cannot agree with the report made by Madigan-Hyland, Inc. because of several factors. First, they did not consider any of the other roadside features on the highway and confined their report entirely to outdoor advertising signs. I believe it is a well established fact that in order to get a sound statistical analysis of accidents on any highway that all roadside features should be considered and correlation made between them. Second, the accident reports they studied only covered those accidents on which the investigating officers indicated "driver inattention". I believe all traffic safety experts agree that driver inattention can be caused by many things, and not just outdoor advertising signs or any one individual roadside feature. The soundness of this item on the accident report can be questioned because it is the investigating officer's opinion. I believe that if Madigan-Hyland, Inc. had made a complete study of roadside features and made a correlating analysis of these features, both simple and multiple, that they would have come up with quite a different answer.

In my review of Dr. Ernest E. Blanche's report, the condition is quite different. Dr. Blanche considered all roadside features and other factors along the highway in making his correlation analysis, as was done in the Michigan study conducted some years ago. I have carefully studied his analysis and am in complete concurrence with his findings.

It is not my intention in any way to discredit or criticise the integrity or ability of the Madigan-Hyland firm in their study because I firmly believe that if their assignment from the New York State Thruway Authority had been broad enough that they would have come up with the same answer as the Michigan study, the study conducted by Dr. Ernest E. Blanche and the laboratory study by Dr. A. R. Lauer of Iowa State College, all three of which quite emphatically indicated that outdoor advertising signs had no relationship to accidents on any highway.

March 27, 1963

J. CARL McMONAGLE

Biographical Data

B.S. Degree in Civil Engineering, University of Michigan

Present position: Professor of Continuing Education
Institute for Community Development
Michigan State University

Specialist in Street and Highway Planning and Transportation, and Traffic Engineering

Campus Engineer at Michigan State University

From 1942 to 1956, Director of Planning and Traffic
Michigan State Highway Department

Member of: National Safety Council Traffic Conference
American Association of State Highway Officials
American Society of Planning Officials
Michigan Engineering Society
National Defense Executive Reserve
(One of 39 engineers in the United States appointed to this Reserve)
Department of Public Instruction
Committee on Safety Education and Civil Defense
Governor's Transportation Study Commission
Board of Consultants
Eno Foundation for Highway Traffic Control

Technical Advisor to Legislative Highway Committee, Michigan State Legislature

Chairman, Highway Advisory Board, Michigan State Highway Department

Chairman, Transportation Advisory Committee, Tri-County Regional Planning Commission

Traffic Engineer and Consultant, City of East Lansing, Michigan

Former Chairman of five traffic engineering committees of the National Highway Research Board

Has appeared as guest lecturer at Northwestern University, Yale University, University of Michigan, University of Detroit and Michigan State University

Resident of East Lansing, Michigan

Assist: Outdoor Advertising Asn. of Am.

COPY

February 13, 1963

MEMORANDUM

For: Gene Foley
From: Senator Humphrey

Calling to your attention a copy of a letter that I received from Charles B. Burkhart, President of the Outdoor Advertising Association of America.

What, if anything, have you been able to do following our discussions with these people. I would appreciate your advice and comment.

COPY

February 13, 1963

Charles B. Burkhart, President
Outdoor Advertising Association of America, Inc.
24 West Erie Street
Chicago 10, Illinois

Dear Charles:

Thank you for your letter of February 8th. It was, indeed, a pleasure to meet with you and Bob Naegele, George Knapp, and Curt Carlson.

I have been in touch with Gene Foley, and I have a feeling that we are going to make some progress on the items that we discussed.

Do keep in touch with me. We will also keep in contact with Fred Hussey.

My very best wishes. And thanks again. It was good to see you.

Sincerely,

Hubert H. Humphrey

OUTDOOR ADVERTISING ASSOCIATION OF AMERICA INC.

24 WEST ERIE STREET • CHICAGO 10, ILLINOIS • SUPERIOR 7-1692

CHARLES B. BURKHART
PRESIDENT

February 8, 1963

Senator Hubert H. Humphrey
Senate Office Building
Washington, D. C.

Dear Senator Humphrey:

We recognize that you are one of the busiest men in Washington. We appreciate your taking the time to sit down with Bob Naegele, George Knapp, Curt Carlson and myself to discuss the problems that our industry has with the Federal Billboard Standards.

We met with Gene Foley last Wednesday evening and went over the material which we showed to you. We will continue to work with Gene, but will also contact you from time to time to keep you up to date. If there is any information you may need from us, you can obtain it from Fred Hussey, our Washington representative who is located at 2929 Macomb Street, N. W., Washington or from me at our headquarters, 24 West Erie Street, Chicago 10, Illinois.

Kind regards.

Cordially,

Charles B. Burkhart

CBB:eb
cc: Messrs. Robert O. Naegele
Curtis Carlson

OUTDOOR ADVERTISING ASSOCIATION OF AMERICA INC.

24 WEST ERIE STREET · CHICAGO 10, ILLINOIS · SUPERIOR 7-1692

CHARLES B. BURKHART
PRESIDENT

April 1, 1963

The Hon. Hubert H. Humphrey,
United States Senate,
Washington 25, D. C.

Dear Senator Humphrey:

I am sorry that we were fouled up by the hotel in Chicago. I tried to call you at about two minute intervals starting at 7:30 on Saturday morning and, receiving no answer at the room number that was given me (2640-42), I finally went to the hotel but was still unable to make connections. I very much appreciate your calling me from the airport.

Attached is a copy of a suggested statement for the Federal Register, along with supporting documents and data that will provide you with background information concerning the New York State Thruway Authority report on advertising devices and traffic accidents. Whoever introduces this statement into the Record will probably want to revise some of this into his own words; however, this is the gist of what needs to be said.

On a number of previous occasions studies of this type have attempted to develop a relationship between outdoor advertising and traffic accidents. One such study was conducted in the state of Minnesota. (Reference: "In The Court Of Appeals Of The Third Appellate Judicial District of Ohio, Allen County", Page 59.) All have been thoroughly discredited. They all make the common mistake of attempting to arrive at a conclusion on the basis of a set of premises that are not necessarily related. The illustration of the strength of the Republicans in New York City used in the attached statement is typical of the false philosophy involved in such research.

If you have any questions concerning this material, I would be happy to discuss it with you further. You can reach me at my office - SUperior 7-1692, or at my home - 943-8923.

I will also look forward to hearing from you further concerning

your suggestions on our approach to the amendment of the Federal standards, either by administrative or legislative procedure. The statement by Senator Neuberger that she and Senator Cooper have been discussing the continuance of the provision for billboard controls indicates that she may be ready to introduce legislation for this purpose.

I plan to be in Washington sometime during the next two or three weeks and I hope we will have an opportunity to discuss this matter in more depth at that time.

Your continued interest is sincerely appreciated.

Cordially,

Charles B. Burkhart, President
Outdoor Adv. Ass'n of America, Inc.

CBB:D
Enclosures

CLASS OF SERVICE
This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION
TELEGRAM

W. P. MARSHALL, PRESIDENT

SF-1201 (4-60)

SYMBOLS
DL = Day Letter
NL = Night Letter
LT = International Letter Telegram

The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME at point of destination

1963 JUN 19 PM 2 18

NFE026 CTC092

CT CA205 PD FAX CHICAGO ILL 19 1216P CDT

WM J CONNELL, ADM ASSIST TO SEN HUBERT HUMPHREY

UNITED STATES SENATE WASHINGTON DC 4313

DAVID GOODER AND I WILL MEET WITH UNDER SECRETARY MARTIN AT 4.15 PM TOMORROW, THURSDAY, AS PER YOUR ARRANGEMENTS

C B BURKHART OUTDOOR ADV ASSN OF AMERICA

(50).

Assist: Maggie Robert

file

XXX

OFFICIAL

SENATOR HUBERT H. HUMPHREY

WASHINGTON, D. C.
JUNE 18, 1963

ROBERT NAEGELE
NAEGELE OUTDOOR ADVERTISING COMPANY
3338 UNIVERSITY AVE., SE
MINNEAPOLIS, MINN.

MEETING CONFIRMED WITH UNDERSECRETARY DAN MARTIN 4:15 P.M.

THURSDAY, JUNE 20, ROOM 5838 COMMERCE.

HUBERT H. HUMPHREY
UNITED STATES SENATOR

cc: Fred Hussey

Assist: Nagle

file

Thursday

Memo to Senator
(cc: Bill)
From John

Re: Outdoor Advertising matters

Since Bob Nagley may try to reach you in Minneapolis this weekend about the outdoor advertising problems, I want to bring you up to date.

1. Insertion of material in Record by McGee: Senator McGee is not too eager to insert the material in the Record. Specifically, he wants to speak with you personally first before he does it to determine whether you really want him to do so. McGee is currently in Wyoming but is expected back this weekend. Hence you could talk on Tuesday.

Charley Burkehart is putting alot of pressure on to get this material inserted as quickly as possible. I told him that we could not do it ourselves. The most likely solution appears to be if (1) I called McGee's AA and told him to have his boss see you on Tuesday; and (2) you urged McGee to insert the material after the critical remarks about Maurine Neuberger were deleted.

2. Amendments to the Highway Act. I talked with Gene Foley on this longer-range problem. Foley says the Department is prepared to modify some of the restrictions as to size of billboards, density, etc. in exchange for some assistance from the trade association to obtain an extension of the bonus that expires on June 30, 1963. Fred Hussey, the local lobbyist, is sufficiently stupid not to comprehend the possibilities of cooperation. Gener recommends that you tell Bob Nagley that he might consider dealing directly with Foley (rather than through Hussey) and might even consider getting another Washington representative.

In short, we are concerned about Bob Nagley and other Minneapolis firms, not the entire association represented by Burkehart and Hussey. Therefore, the more we can deal directly with Nagley, the better our interests will be served.

OUTDOOR ADVERTISING ASSOCIATION OF AMERICA INC.

24 WEST ERIE STREET · CHICAGO 10, ILLINOIS · SUPERIOR 7-1692

File with billboard material

June 19, 1963

JUN 20 1963
RECEIVED

The Honorable Luther H. Hodges,
Secretary of Commerce,
U. S. Department of Commerce,
Washington 25, D. C.

My dear Mr. Secretary:

On June 14, 1963, a release was issued from the Department of Commerce by the Bureau of Public Roads announcing that New Hampshire had become the 18th state to enter into an agreement with the Department of Commerce to control outdoor advertising adjacent to the Interstate Highway System. The release is No. BPR 63-32.

Knowing of your interest in the importance of advertising to our free enterprise system, I would like to request that you review this release in the light of the many fine statements that you have made in behalf of your beliefs.

I am sure you will agree with me that it will be possible for the Department of Commerce to make announcements of this nature without issuing such a sweeping condemnation of an important segment of the advertising industry. A specifically refer you to such statements as:

> "A policy aimed at keeping the 41,000-mile Interstate network free of unsightly and often hazardous advertising signs was set up by Congress in 1958. It was the intention of Congress to prevent the new superhighway system from deteriorating into a billboard jungle, as has happened on many of the nation's highways."

"It is a fact that automobile driving for pleasure heads the list of all outdoor activities in which Americans participate. We should not allow billboards to interfere with this pleasure."

As a branch of the Federal Government charged with the responsibilities of promoting business, this type of public pronouncement is completely out of character with the high aims of the Department and is entirely unfair to an important industry.

On behalf of more than 700 members of the Outdoor Advertising Association of America, Inc., operating in over 15,000 communities throughout this country, I wish to register a protest against the Department of Commerce using public funds and the time of Federal employees to deliver attacks against this private segment of the economy. I am confident that news concerning the activities of the Bureau of Public Roads can be effectively disseminated without resorting to these unwarranted attacks.

Your cooperation in bringing about a discontinuance of these practices is earnestly requested.

Cordially,

Charles Burkhart

Charles B. Burkhart, President
Outdoor Advertising Association
of America, Inc.

CBB:dsm

BCC: Senator Hubert Humphrey

BCC: Washington Committee Members

THE SECRETARY OF COMMERCE
WASHINGTON 25, D. C.

JUN 13 1963

Bill Williams

Honorable Lyndon B. Johnson
President of the Senate
United States Senate
Washington 25, D. C.

and

Honorable John W. McCormack
Speaker of the House
of Representatives
Washington 25, D. C.

Dear Mr. President:

Dear Mr. Speaker:

The Department of Commerce has prepared and submits herewith as a part of its legislative program for the 88th Congress, 1st Session, a draft of a proposed bill:

> "To amend section 131 of title 23, United States Code, relating to the control of outdoor advertising along the National System of Interstate and Defense Highways."

Section 131 embodies the policy adopted by the Congress concerning the control of outdoor advertising in areas adjacent to the Interstate System. That policy is based upon a recognition of the need to control the erection and maintenance of outdoor advertising signs in areas adjacent to Interstate highways in order to promote the safety, convenience, and enjoyment of public travel and to protect the vast public investment in the Interstate System. To encourage and assist the States to implement the national policy, the Congress provided that any State highway department which enters into an agreement with the Secretary of Commerce prior to July 1, 1963, whereby it agrees to control outdoor advertising in accordance with national standards, shall be entitled to a payment of one-half of one percent of the total cost of Interstate projects to which the national policy and the agreement apply.

Certain provisions of section 131, however, cause difficult problems of administration not only to the Federal Government but to the States as well, and have discouraged some States from enacting appropriate legislation to implement the national policy. The proposed bill would not only solve many burdensome administrative problems, but would provide added incentive to States to take action to protect areas adjacent to the Interstate System.

One of the principal administrative problems stems from the fact that segments of the Interstate System constructed upon rights-of-way, any part of which was acquired on or before July 1, 1956, are excluded from advertising control, and the incentive payments provided for in subsection 131(c) cannot be paid with respect to such areas even though a State

controls them. Exclusion of such areas will cause difficulty in computing the amount of bonus payments, particularly in urban areas where the Interstate System intersects streets and highways constructed on rights-of-way acquired on or before July 1, 1956. Such excluded areas will pose a difficult task to the Bureau of Public Roads, as well as the States, in determining whether signs are located within controlled or excluded areas.

Section (a) of the proposed bill would amend subsection 131(a) so as to require areas adjacent to the Interstate System to be controlled irrespective of the date on which the rights-of-way were acquired. The proposed amendment would remove the obstacles mentioned above.

Subsection 131(b) presently excludes from advertising control adjacent commercial or industrial areas within the September 21, 1959 boundaries of incorporated municipalities, wherein the land use is subject to municipal regulation, and the bonus is not payable with respect to such areas. Rezoning of an area within the boundaries of incorporated municipalities as commercial or industrial requires the State to return the amount of the bonus payment attributable to such rezoned area even though the State may retain effective control of billboard advertising in such an area.

Section (b) of the bill would overcome this inequity by providing that commercial or industrial areas within incorporated municipalities would be excluded from control only upon agreement between the State and the Secretary of Commerce. Section (b) of the bill also would require control in commercial or industrial areas outside the boundaries of incorporated municipalities, thereby simplifying administration of the act and enabling States to receive the bonus payments for controlling such areas which are now excluded from the agreements between the States and the Secretary. We believe that the elimination of this exclusion will encourage more uniform control of billboard advertising adjacent to the Interstate System and will enhance the safety and enjoyment of travel in rural areas.

Section (c) of the proposed bill would extend until June 30, 1971 the time limit for entering into agreements with the Secretary, permit payment of the one-half of one percent bonus in areas adjacent to toll facilities designated as part of the Interstate System, and provide additional incentive to the States to enter into agreements by decreasing by 1% the Federal share of projects included in programs approved after June 30, 1965 unless an agreement had been entered into at the time of program approval.

Experience to date clearly demonstrates that these additional incentives are necessary if the policy of the Congress to control advertising along the Interstate System is to be effectuated in all the States. The proposed decrease in the Federal share payable for projects programmed after June 30, 1965 in States which have not entered into control agreements, will provide a clear incentive to the States to take such action promptly.

It should be noted that the 1% decrease in Federal share for any project could not be restored in the event an agreement is later entered into. However, projects to which this decrease applied would be included in calculating the one-half of one percent bonus payable in the event an agreement was later entered into by the State. In view of the new concept of a non-recoverable decrease in Federal share, it appears desirable to permit the States to enter into agreements at any time prior to July 1, 1971 and thereby both qualify for the bonus and avoid the decrease for remaining years of the Interstate program.

The Department of Commerce recommends the enclosed draft bill for the favorable consideration of the Congress.

The information on estimated maximum additional costs and civilian employment required to be submitted pursuant to the Act of July 25, 1956, 70 Stat. 652 (5 U.S.C. 642a) is as follows: At the present time 17 states have entered into agreements under existing law and 4 more states are expected to enter into agreements on or before June 30, 1963, the expiration date of the existing law. It is estimated that the maximum additional expenditure for bonus payments under the proposed legislation would be approximately $57 million by June 30, 1971. This estimate is on the assumption that all states entering into agreements under the existing law will extend those agreements to cover all additional eligible mileage and that all states not having agreements under the existing law will enter into agreements under the proposed legislation which cover all eligible mileage.

The proposed legislation will not require any significant increase in Department employment or expenditures for personal services since the processing and auditing of bonus payments would be handled as part of the regular processing and auditing of claims by the States.

The Bureau of the Budget advised there would be no objection to the submission of this proposed legislatioh to the Congress and further that its enactment would be consistent with the Administration's objectives.

Sincerely yours,

(sgd.) Luther H. Hodges

Luther H. Hodges
Secretary of Commerce

Enclosures

A B I L L

To amend section 131 of title 23, United States Code, relating to the control of outdoor advertising along the National System of Interstate and Defense Highways.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That subsection (a) of section 131 of title 23, United States Code, is hereby amended by deleting from the second sentence thereof the following:

"constructed upon any part of right-of-way, the entire width of which is acquired subsequent to July 1, 1956,".

(b) Subsection (b) of section 131, title 23, United States Code, is hereby amended to read as follows:

"(b) The Secretary of Commerce is authorized to enter into agreements with State highway departments (including such supplementary agreements as may be necessary) to carry out the national policy set forth in subsection (a) of this section with respect to the Interstate System within the State. Any such agreement shall include provisions for regulation and control of the erection and maintenance of advertising signs, displays, and other advertising devices in conformity with the standards established in accordance with subsection (a)

of this section and may include, among other things, provisions for preservation of natural beauty, prevention of erosion, landscaping, reforestation, development of viewpoints for scenic attractions that are accessible to the public without charge, and the erection of markers, signs, or plaques, and development of areas in appreciation of sites of historical significance. Agreements entered into between the Secretary of Commerce and State highway departments under this section may provide for excluding any area zoned industrial or commercial which is adjacent to and adjoins a segment of the Interstate System within the boundaries of incorporated municipalities. Any segment of the Interstate System adjacent to and adjoining any area excluded pursuant to such agreements shall not be considered in computing the payments provided in subsection (c) of this section."

(c) Subsection (c) of section 131 of title 23, United States Code, is hereby amended to read as follows:

"(c) If an agreement pursuant to this section is entered into with any State highway department prior to July 1, 1971, the State shall be paid one-half of one percent of the total cost of construction, not including any additional cost that may be incurred in the carrying out of the agreement, of those segments of the Interstate System adjoining areas in which the State agrees to control outdoor advertising in accordance

with its agreement with the Secretary of Commerce. Such payments shall be made out of appropriations from moneys in the Treasury not otherwise appropriated, which such appropriations are hereby authorized.

"Notwithstanding any other provision of law, the Federal share payable under section 121(c) of this title, on account of any proposed project on the Interstate System included in a program approved after June 30, 1965, under section 105 of this title, shall be 1 per centum less than that provided under section 120(c), unless at the time of such program approval the State in which the proposed project is located has entered into an agreement with the Secretary under this section."

Exhibit "A"

Analysis of the proposed bill of the Department of Commerce, to amend Section 131 of Title 23 U.S. Code, as submitted simultaneously to both Houses of Congress, by the Secretary of Commerce by letter of transmittal, dated June 13, 1963.

* * * * * *

Subsection (a)

The new bill proposes to eliminate from this subsection the so-called "Cotton Amendment."

Comment This new proposal would require that:

> "The erection and maintenance of outdoor advertising signs, displays or devices within 660 feet of the edge of the right-of-way and visible from the main traveled way of all portions of the Interstate System should be regulated."

There would no longer be any exemption for those areas where any portion of the right-of-way was acquired previous to July 1, 1956. Old right-of-way and new right-of-way would be treated the same -- it all would be regulated.

Subsection (b)

The new bill would eliminate the so-called "Kerr-Wright Amendment" which is now a part of this subsection.

Comment Under this proposal of the Secretary of Commerce:

> "Agreements entered into between the Secretary of Commerce and State Highway Departments....may provide for excluding any area zoned industrial or commercial which is adjacent to and adjoins a segment of the Interstate System within the boundaries of incorporated municipalities."

Under this proposal exclusion of industrial or commercial areas within the boundaries of municipalities is only permissive. It will be noted that such exclusion does not extend to other areas where the land use is clearly established by law as industrial or commercial.

Under the Kerr-Wright Amendment, commercial or industrial areas within municipalities were automatically exempt from regulation, provided that the use of real property was subject to municipal regulation or control, and in other areas where the land use was clearly established by state law as industrial or commercial.

This new proposal is even more drastic than the original law because under the original statement of this section, before the enactment of the Kerr-Wright Amendment, the state could apply and the Secretary of Commerce had discretion to eliminate from the application of the National Standards all areas within incorporated municipalities provided they are subject to municipal regulation or control. This applied to all types of property - commercial, industrial or residential.

Summarizing Subsection (b):

i. The original law by agreement could permit the exclusion of all areas within a city from the application of the Standards.

ii. The Kerr-Wright Amendment made it mandatory to exclude all commercial and industrial areas within municipalities provided they were municipally regulated and extended this restriction to other areas where the land use was clearly established by state law as industrial or commercial.

iii. The new proposal would permit only exclusion from the Standards, areas zoned industrial or commercial within the boundaries of municipalities provided an agreement was entered into between the Secretary of Commerce and the State Highway Departments to this effect.

Subsection (c)

The new bill provides for extending the time for states to enter into an agreement for compliance with the Federal Standards to July 1, 1971.

Comment The time presently expires July 1, 1963.

Subsection (c) further provides that the bonus of one-half of one per cent shall be paid on the total cost of construction.

Comment The law as it presently exists provides:

> "Thatthe Federal share payable on account of any project, shall be increased by one-half of one per cent."

Note Under the new provision, the total cost of construction is the determining factor upon which the bonus of one-half of one per cent is based -- not the federal share, as is now the case.

Under this new provision, provided a highway meets the construction standards of the Interstate System, and provided that it is designated as a part of the Interstate System, it is eligible for the bonus on the basis of the full cost of its construction regardless of when it was built or whether it is a toll highway or not.

It will be seen that under this new provision the payment of the federal bonus now becomes a reward for controlling outdoor advertising whether the Federal Government had contributed any money to the construction of the highway or not.

The new bill proposes a new paragraph to add to subsection (c). This new paragraph provides that unless a state has entered into an agreement with the Department of Commerce for compliance with the federal standards by June 30, 1965, that the federal share for any project approved after June 30, 1965, shall be one per cent less than if the state had agreed to control billboards within the time provided.

Comment Thus, if a state has not voluntarily entered into an agreement to control billboards by June 30, 1965, it will be penalized one per cent of its federal funds after that date and, of course, in addition, it will lose the one-half of one per cent bonus until such time as it signs an agreement to control billboards.

* * *

Copies of the Department of Commerce proposed bill and the letter of transmittal from the Secretary of Commerce are available from the Association.

6-19-63

From... Stewart

LAWRENCE C. MERTHAN

Dear Bill:

Fred Hussey of the Billboard Group - outdoor advertising - asked me to pass this along to you — Larry

JUL 3 1963

Exhibit "B"

FACT SHEET

1. The so-called "bonus" bill is Section 131 of Title 23, U.S. Code (Highways).

2. It provides for the payment of a bonus of one-half of one percent per project, to any state which will agree to restrict, in accord with the federal standards, the display of outdoor advertising from private land within 660 feet from the outer edges of the right-of-way on both sides of the Interstate Highway System.

3. The original law provided that states would have until July 1, 1961, to qualify for the "bonus." At that date, however, only 16 states had passed laws to so qualify. For that reason, the time was extended to July 1, 1963.

4. Since July 1, 1961, only two additional states have qualified for the bonus and two other states have enacted new laws which make them eligible to apply. The count to date, therefore, is eighteen states have entered into a contract and two additional states are eligible to enter into such a contract.

5. We believe that it is unnecessary to extend the time for applying for the bonus for an additional two years -- or any other time beyond July 1, 1963 -- because the respective states have had five years and several sessions of their legislative bodies to consider such action.

6. The Bonus Bill was always bad legislation from its inception, in that it actually constituted a bribe to induce states to pass laws which the federal government itself was not empowered to pass. This law should be allowed to expire.

7. To date, not one state has received any money whatsoever by way of a "bonus" payment.

8. It is an illusion to believe that the individual states will receive millions of dollars each. The fact is that up to the present time only two million dollars has been appropriated for the entire nation to provide for the payment of this bonus, and only three million dollars in addition has even been included in the budget for the period ending with fiscal 1964.

9. The law is unpopular with the states, which is proven by the fact that all of them have had several legislative sessions since its enactment and only eighteen states have qualified, including Hawaii, which has no Interstate System; and two others may qualify. Idaho, Montana, Nevada, Utah and Wyoming have not even considered such legislation, nor has Alaska, which, like Hawaii, has no Interstate System. Thus it is that thirty states have refused either to consider or to pass this legislation -- some of them on several occasions. (As a matter of fact, a total of 115 "bonus compliance bills" have been defeated by the various state legislatures since 1957.) The states which have qualified, of course, will always remain eligible for the money. Why, then, extend the time further?

10. The law is unpopular because it is an invasion of state rights and because it proposes to induce the states to deprive the owners of private land of the full use of their land, without payment for the taking.

11. The law and the federal standards have been proved impractical in those states where they have been applied and have created extreme hardships for owners of business and great inconvenience for the traveling public.

12. The standards prescribed by the Department of Commerce go far beyond the intent of Congress, and it is very doubtful that the acceptance of these standards as a part of application for the bonus will ever become any more palatable to the states, regardless of how many years the law may be extended.

6-19-63

COPY FOR YOUR INFORMATION

Charles Buckhout

July 8, 1963

The Honorable Luther H. Hodges,
Secretary of Commerce,
U. S. Department of Commerce,
Washington 25, D. C.

My dear Mr. Secretary:

Thank you for taking the time out of your busy schedule to acknowledge my letter commenting upon the Bureau of Public Roads' announcement concerning New Hampshire becoming eligible for the bonus under the Billboard Control law.

Based on your letter, I'm afraid I did not make myself very clear. My objection was not to the fact that the Federal Government is attempting to exercise control over outdoor advertising on the Interstate Highway System.

While I do not agree with the principle of the Federal Government using the taxpayers' money to entice a state to pass legislation on local business, I was not voicing an objection against the proposal that outdoor advertising should be reasonably regulated on the Interstate Highway System.

The Outdoor Advertising Association of America is composed of over 700 companies who represent the outdoor advertising medium. This includes standard outdoor advertising located principally within the confines of business areas in some 15,000 communities throughout the country.

My protest was against the language used by the Bureau of Public Roads which implied that all billboards were unsightly

and indiscriminate. To the general public this includes the standard medium of outdoor advertising which, I am sure, was not the intent.

Once again, I am sure that the language of these announcements could be so drafted as to not cause hardships to a legitimate business such as ours.

Thank you for your consideration.

Sincerely,

Charles B. Burkhart, President
Outdoor Advtg Ass'n of America, Inc.

CBB:dsm

THE SECRETARY OF COMMERCE
WASHINGTON 25, D. C.

JULY 3, 1963

Mr. Charles B. Burkhart, President
Outdoor Advertising Association
of America, Incorporated
24 West Erie Street
Chicago 10, Illinois

Dear Mr. Burkhart:

I appreciate receiving your letter of June 19, commenting on the release of the Bureau of Public Roads announcing that New Hampshire had become the eighteenth State to enter into an agreement to control outdoor advertising along the Interstate Highway System.

You are quite right in saying that I fully recognize the importance of the advertising media as a stimulus to our economy and as a part of our free enterprise system.

However, I believe that the control of advertising on the Interstate System involves a special situation and that such control is in the interest of the public. I indicated this in my testimony on March 14, 1961, at the Hearings of the Committee on Ways and Means of the House of Representatives. I commented then about our deplorable lack of concern in the past with regard to the situation along our roadsides; and suggested penalties or direct Federal standards if the bonus plan did not solve the problem.

President Kennedy has also staunchly supported billboard control on the Interstate System, and devoted a specific section to that subject in his message to Congress of February 28, 1961, on the highway program.

Sincerely yours,

Luther H. Hodges
Secretary of Commerce

Enclosures

EXCERPT FROM TESTIMONY OF SECRETARY OF COMMERCE LUTHER H. HODGES AT HEARINGS BEFORE THE COMMITTEE ON WAYS AND MEANS, HOUSE OF REPRESENTATIVES, MAY 14, 1961.

"Third, I hope very much that you will make proper and adequate legislative provision for billboard control. It is needed. I think we in America have through our deplorable lack of concern in the past permitted ourselves to be victimized by a situation that has just accumulated topsy-turvy fashion---and we have permitted our roadsides and our countryside to be desecrated heedlessly and needlessly.

"Instead of giving the States a modest---and apparently not inspiration enough---bonus to do what they ought to do anyway, we probably ought to provide very positive and effective monetary penalties, or perhaps more to the point, direct Federal standards for the control of billboard advertising which would apply if higher bonuses will not solve the problem."

EXCERPT FROM PRESIDENT KENNEDY'S MESSAGE TO CONGRESS ON THE FEDERAL-AID HIGHWAY PROGRAM
H. Doc. 96, 87th Cong.
February 28, 1961

V. BILLBOARD CONTROL

"The Interstate Highway System was intended, among other purposes, to enable more Americans to more easily see more of their country. It is a beautiful country. The system was not intended to provide a large and unreimbursed measure of benefits to the billboard industry, whose structures tend to detract from both the beauty and the safety of the routes they line. Their messages are not, as so often claimed, primarily for the convenience of the motorist whose view they block. Some two-thirds of such advertising is for national products, and is dominated by a handful of large advertisers to whom the Interstate System has provided a great windfall."

CONTENTS

BILLBOARDS AND THE HIGH ACCIDENT RATES

Mrs. NEUBERGER. Mr. President, the vehicular accident rate is three times greater per mile in areas having advertising devices such as billboards than in areas without advertising.

This is the report of a study prepared for the New York State Thruway Authority by Consulting Engineers Madigan-Hyland, Inc. of Long Island City, N.Y. Consideration of a certain sentence in the report is vital as we proceed to deal with the subject of billboards and their effect upon accidents. I quote that sentence from the report:

> It was recognized that advertising devices are a factor in accidents, principally because they distract the motorists' attention.

The New York authority requested an analysis or accident statistics and records of the New York State Thruway for the past 2 years, 1961–62, to determine the relationship, if any, between the number of accidents and the existence of advertising devices along the route of the expressway.

A copy of this study was released on February 19, 1963, and has been sent to me by the Honorable R. Burdell Bixby, chairman and secretary of the New York State Thruway Authority.

It is significant that the study showed that almost one-third of the accidents attributed to driver inattention on the thruway mainline occurred on the one-eighth of thruway mileage upon which motorists were exposed to advertising devices.

Thus there is now scientific evidence to refute what some billboard apologists have often stated, which is that billboards and roadside advertising help maintain driver attention and reduce accident rates.

Because this coming June 30 is the expiration date for States to elect to participate in the billboard control program in the Federal Interstate and Defense Highway System this study is of tremendous value. I know that many State legislatures at this time are currently considering legislation to allow their States to participate in the billboard control program and receive a bonus of one-half of 1 percent of the highway costs in their jurisdictions. Seventeen States to date have elected to participate in the program including Oregon and New York. The States soon will be receiving the first of Federal payments under the billboard control legislation.

The Senator from Kentucky [Mr. COOPER] and I have been consulting about plans to reintroduce the proposed legislation to continue that provision. The Senator from Kentucky has long been a great advocate of the control of signboards, in line with the amendment to the Federal Interstate and Defense Highway Act. I think that he and I both feel that this statistical and impartial study bolsters our plans for further signboard control.

Mr. President, I ask unanimous consent to include at this point in my remarks the engineers study which clearly shows the relationship between accidents and advertising devices on the New York State Thruway.

There being no objection, the study was ordered to be printed in the RECORD, as follows:

FEBRUARY 19, 1963.

Mr. R. BURDELL BIXBY,
Chairman, New York State Thruway Authority, Albany, N.Y.

DEAR MR. BIXBY: You have requested that we analyze the accident statistics and records of the New York State Thruway for the past 2 years (1961–62) to determine the relationship, if any, between the number of accidents and the existence of advertising devices along the route of the expressway.

As you know, authority personnel on the basis of onsite inspections determined the exact locations where signs and other similar devices could be seen by motorists. After examining the authority's detailed records of all accidents occurring on the thruway, we noted that the records indicate, among other things, the type of accident, the location of the accident, and the probable cause. These data are punched into tabulating cards and can therefore easily be summarized.

By correlating the information describing the locations of the advertising devices with the accident records for the past 2 years, it was possible to determine the number of accidents that occurred where the motorist was exposed to these advertising devices and the number that occurred where there was no such exposure.

In preparing the analysis set forth below, however, it was recognized that advertising devices are a factor in accidents principally because they distract the motorists' attention. It was therefore considered essential to endeavor to eliminate all accidents caused by factors other than driver inattention. The New York State police, at the on-the-scene investigation, classify each accident by probable cause and this information is coded on the authority's tabulating cards. It was therefore possible to exclude from the analysis all accidents except those in which the investigating State trooper reported the probable cause of the mishap as driver inattention.

In order to further restrict the analysis to data that are pertinent, all factors that might influence the pattern of these accidents due to inattention, other than the distracting effect of the advertising devices, should be eliminated from the statistics, so far as possible.

About one-quarter of the accidents due to driver inattention occurred at thruways toll barriers and interchanges. These areas are more likely to have a proportionately greater number of advertising signs and similar distractions situated in relatively close proximity because of their advantageous locations. Accidents occurring at most of these areas therefore are included in the category "accidents that take place where advertising devices were visible. However, there are other factors that increase the likelihood of accidents due to driver inattention at these same locations, such as the need to locate money for toll payment.

We therefore eliminated from the statistics all accidents that occurred at these sites on the ground that the factors noted above might unrealistically increase the accident ratio in such areas of exposure.

In order to evaluate this information about "driver inattention" accidents properly, it also was necessary to relate the accident statistics to the one-way miles of roadway involved.

Drivers were exposed to advertising devices on approximately one-eighth (13.1 percent) of the thruway's 1,118 miles of one-way roadway.

Our analysis of the data for the last 2 years showed, however, that almost one-third (32.6 percent) of the 1,550 accidents attributed to driver inattention on the thruway mainline occurred on the one-eighth of the thruway mileage upon which motorists were exposed to advertising devices.

There was an annual average of 1.7 accidents per mile due to driver inattention on the portions of the thruway mainline wheer advertising devices were visible, and only 0.5 of an accident per mile for this cause on the stretches where advertising devices were not visible.

The relative number of such accidents per mile in areas with advertising devices, therefore, was three times greater.

Another factor that was considered in our analysis was the effect of traffic densities on accident frequency. Areas of greater traffic volumes are likely to have a greater accident frequency. Such areas also tend to have more advertising devices. Pursuing this evaluation, accident-per-mile data were developed for the New York division of the thruway, which includes high density traffic along virtually its entire length. Separate figures were developed for the Buffalo division, which features a combination of high density traffic in the Buffalo area and moderate traffic volumes in other areas such as the Erie section. A third set of figures was developed for the Albany and Syracuse divisions, which do not have substantial stretches of high density traffic. The results of these studies are shown below in terms of annual accidents per mile of mainline roadway due to driver inattention:

Heavy density area (New York division): Areas where advertising devices were visible, 2.9 accidents per mile; areas where no advertising devices were visible, 2 accidents per mile.

Combination heavy density and medium density area (Buffalo division): Areas where advertising devices were visible, 2.5 accidents per mile; areas where no advertising devices were visible, 0.30 accident per mile.

Medium-density area (Albany and Syracuse divisions): Areas where advertising devices were visible, 0.40 accident per mile; areas where no advertising devices were visible, 0.26 accident per mile.

As expected, the areas of heavy density showed a much higher number of accidents per mile.

However, in all cases (heavy density areas, combination areas, and medium density areas) there were proportionately more accidents per mile where drivers were exposed to advertising devices than in areas where no such exposure existed.

Even in the areas of medium density, where the effect of heavy traffic is minimized, accidents caused by driver inattention were still 1½ times more frequent along thruway stretches where advertising devices were visible as in other areas.

Our analysis of thruway accident records for 1961 and 1962 clearly demonstrated a pattern of substantially more "driver inattention" accidents in all areas where motorists were exposed to advertising devices than in the areas where no such devices existed.

Very truly yours,

MADIGAN-HYLAND, INC.
DANIEL W. GREENBAUM.

11

SUGGESTED
CONGRESSIONAL RECORD STATEMENT

Mr. President: As we all know, New York has two Republican Senators and a Republican Governor. We also know that New York City is our largest city. Therefore, all large cities are Republican.

This is the type of reasoning used in the so-called "study" entered into the Congressional Record of March 25 by Senator Neuberger. The study, conducted by the firm of Madigan-Hyland of Long Island City, New York, for the New York State Thruway Authority, solemnly proclaimed that there were substantially more "driver inattention" accidents in all areas where motorists were exposed to advertising devices than in the areas where no such devices existed.

The report is notable for what is missing from it and we would like the Record to show these important facts.

The solving of traffic safety problems is one of the most important facing this country today. No one in his right mind would support measures that clearly work against the solution of this problem.

However, the subject of the safety of our citizens travelling the new Interstate Highway System is far too important to allow the record to be clouded by erroneous and incomplete studies.

(more)

Traffic Safety is a highly technical and complex subject. It would be a disservice to the Congress and to the American people to allow the statements by the Senator from Oregon and the study she introduced into the Record to go unchallenged.

To put this subject in its proper perspective, I should like to quote from what noted and responsible authorities have to say about the Madigan-Hyland study.

Dr. Ernest E. Blanche, eminent and nationally known statistician said: "Based on the data available to me concerning 'driver inattention' accidents on the New York Thruway in 1961, the locations of advertising signs visible from the road, and the locations of road features, I can say there is absolutely no relationship between such accidents and advertising signs.

"Furthermore, I can say that the Madigan-Hyland Report presents an erroneous conclusion because the analysis ignored other variables and was limited to a simple relationship which indeed was generated by other variables."

Dr. Bruce D. Greenshields, Assistant Director, Transportation Institute, Department of Civil Engineering of the University of Michigan, said: "The highway factors that lead to accidents are numerous and fall into three general categories: (1) those relating to the geometry of the highway; (2) those relating to the appearance of the highway and environment; and, (3) those relating to the flow of traffic. If these many variables that can cause accidents are omitted from the accident analysis, the analysis is statistically unsound...It is my opinion that the Madigan-Hyland report is erroneous in that it fails to take into

consideration the many highway variables..."

J. Carl McMonagle, Assistant Director of the Highway Traffic Safety Center at Michigan State University, said: "...it is a well established fact that in order to get a sound statistical analysis of accidents on any highway that all roadside features should be considered and correlation made between them...the accident reports they studied only covered those accidents on which the investigating officers indicated 'driver inattention' ...all traffic safety experts agree that driver inattention can be caused by many things...if Madigan-Hyland had made a complete study of roadside features and made a correlating analysis of these features, both simple and multiple, that they would have come up with quite a different answer.

"It is not my intention to in any way discredit or criticize the integrity or ability of the Madigan-Hyland firm in their study because I firmly believe that if their assignment from the New York State Thruway Authority had been broad enough that they would have come up with the same answer as the Michigan study, the study conducted by Dr. Ernest E. Blanche and the laboratory study by Dr. A. R. Lauer of Iowa State College, all three of which quite emphatically indicated that outdoor advertising signs had practically no relationship to accidents on any highway."

Exhaustive testimony on the subject of outdoor advertising and traffic safety was given in a recent hearing in the Court of Appeals of the Third Appellate Judicial District of Ohio, Allen County. After thorough and careful study, Judge John H. Davison said: "These studies (introduced into the evidence)

conclusively establish that there is no relationship between signs and accidents; and that, if anything, signs contribute to traffic safety in that they act as a stimulus upon motorists to keep them alerted. The State has introduced no evidence which in any way contradicts or detracts from the findings and conclusions of these studies."

Mr. President, in the interest of keeping the record straight, we ask unanimous consent to enter Dr. Blanche's analysis of the Madigan-Hyland study into the record.

# # # #

III PAGES 1 AND 8

A N A L Y S I S O F R E P O R T

Made By

MADIGAN-HYLAND, INC.

to the

NEW YORK STATE THRUWAY AUTHORITY

By

DR. ERNEST E. BLANCHE
Ernest E. Blanche & Associates, Inc.
Kensington, Maryland

(Specialists in Statistical Analysis and Data Processing)

I have read the Madigan-Hyland, Inc. letter to R. Burdall Bixby, chairman of the New York State Thruway Authority, dated February 19, 1963, and signed by Daniel W. Greenbaum, (the letter sometimes referred to as the Madigan-Hyland Report).

I read it for the first time on the morning of March 8, 1963, although I had some days before read the Press Release, dated February 24, 1963, issued by F. William Davidson, Director Public Information, New York State Thruway Authority, which contained much of the material in the four-page letter.

On March 8, 1963, after analyzing the Madigan-Hyland Report, I began collecting data for my personal examination, analysis, and evaluation. In the short amount of time available from March 8, 1963, I obtained a list of the accidents classified as "driver inattention" which occurred on the New York Thruway during the year 1961, one of the two years covered by the Madigan-Hyland Report. This list gave me exact locations to the tenth of a mile, as indicated by official tenth-of-mile markers on the New York Thruway.

I also obtained an inventory of all advertising signs along the Thruway which were visible from the Thruway.

I also made an inventory of all road and roadside features and characteristics on both sides of the Thruway for a distance of 45 miles from the Thruway start at Yonkers, N. Y.

I have analyzed these data, as well as the Madigan-Hyland Report. Based on my analysis, I can say that the conclusions of the Madigan-Hyland Report are erroneous, that the Madigan-Hyland Report is statistically unsound because it limited itself to only one variable when data on many other variables were available, and that there is no relationship between accidents and advertising signs.

/

First, I would like to point out that the New York Thruway referred to in the Madigan-Hyland Report as 1118 miles both directions (559 miles each way) actually consists of four segments, the longest one being 495 miles (one direction) from Yonkers to Buffalo, to the New York State line at Ripley, N. Y. The other three segments total 64 miles and consist of roadway from Buffalo to Niagara Falls, a segment going to the Massachusetts State line, and a segment not connected to the Yonkers-Buffalo roadway, going to Connecticut.

Although I have collected data on all four segments as to accident locations, sign locations, and some road features, I have had to limit my analysis and coverage herein to the 495 mile Yonkers-Ripley Thruway which totals 990 road miles (88½% of the 1118 miles in the Madigan-Hyland Report).

The Madigan-Hyland Report states that there are three times as many accidents per road mile on the portion of the New York Thruway where advertising signs are visible than on those portions where advertising signs are not visible. The report does not mention or consider any other variables such as number of vehicles traveling past specific locations, vehicle-miles covered, road characteristics such as "on" and "off" ramps, bridges, overhead bridges, service areas and many roadside features which are known from studies on other highways to be the major factors contributing to accidents.

For that reason, after examining the Madigan-Hyland Report, I decided to make an inventory of all road features on the New York Thruway for a distance of 45 miles from the start of the Thruway at Yonkers, going north to Harriman, and then coming back on the Southbound lane.

Since official markers had been posted every tenth of a mile, I had no difficulty marking the exact location of the major roadside features which included each "on" ramp, each "off" ramp, each bridge, each overhead bridge, each service area, and each toll barrier.

I made the inventory as a passenger in a passenger car on Friday, March 8th, starting at approximately 3:30 in the afternoon and returning to New York City at about 7 o'clock in the evening. Time did not permit a longer trip.

I used the map issued by the New York State Thruway Authority as a general guide. I also obtained a copy of the published report "Accident Facts 1961" issued by the New York State Department of Motor Vehicles, a copy of the Form TA 6215 used by the Motor Vehicle Department of the State of New York for the reporting of accidents by police and other officials, and a list of the accidents which occurred during 1961 on the New York Thruway.

I plotted the locations of all road characteristics and roadside features on the New York Thruway for the 45 miles from Yonkers to Harriman going north and also for the 45 miles going south from Harriman to Yonkers, on graph paper, using increments of 1/10 of a mile which correspond to the official markers on the Thruway. I plotted on the same chart the exact locations of the accidents classified as "driver inattention" occuring in 1961, as reported by the New York Thruway personnel. This is attached as Exhibit A (five pages).

It was immediately apparent to me as a professional statistician, that there was a close relationship between the locations of the reported accidents and the roadside features and road characteristics which I had recorded on my inventory.

I thereupon performed an analysis of the basic accident data and obtained the following preliminary results:

1. Almost half (44%) of all accidents reported as "driver inattention" accidents occurring on the New York Thruway during 1961 occurred on the first 45 miles (both directions) of the 495-mile Thruway from Yonkers to Buffalo to the State Line at Ripley, N. Y.

2. Approximately one out of every seven such accidents occurred on the three-mile Tappanzee Bridge crossing the Hudson River.

3. Going north from Yonkers there are 29 ramps for exit or entry in a distance of 45 miles; going south from Harriman to Yonkers, there are 33 ramps at which drivers can get on or off, a total of 62 ramps in 90 miles of roadway, an average of one ramp every mile and a half. In contrast, based on the Thruway Map, there is an on or off ramp once every five miles, on the average, over the remaining 900 miles of roadway to the State line.

4. Since the frequency ratio is three to one for places of entry or exit on the first 45 miles in both directions as compared to the rest of the Thruway, the amount of traffic friction generated as cars come onto the highway or start slowing down to leave the highway is considerably higher on the 45-mile portion. From other studies these on and off ramps are known to have direct cause-and-effect relationship to accidents.

5. Based on the graph of accidents and road characteristics which I personally plotted (Exhibit A), approximately 72% of all accidents occurring on the first 45 miles of the Thruway (both directions) are located within two-tenths of a mile (about 1050 feet) of an "on" ramp, an "off" ramp, an overhead bridge, a regular bridge, a service area, or a toll area.

Although the Madigan-Hyland Report states that accidents on interchanges and toll barriers were eliminated from the study, the list of accidents recorded by the New York Thruway Authority with exact locations shows that there are some accidents in the immediate vicinity of a toll barrier (some as close as 500 feet).

I obtained from Mr. Thomas Merrill, a representative of the Outdoor Advertising Association of America, the inventory of all signs which are visible from the Thruway as recorded by Mr. Merrill. I used the sign locations over the first 45 miles of the Thruway (both directions) for my detailed analysis. From this inventory I extracted the exact location of the sign by tenth of a mile, and the indication as to whether it was on the premises owned or leased by a business enterprize, or an off-premise sign.

I plotted the locations of the signs on the graph identified as Exhibit A, using the letter S with a circle around it to indicate an on-premise sign which means that the sign belongs to the business which owns or leases the property and using a plain letter S for off-premise signs.

This plotting showed immediately that there were many signs within the first three miles of the Thruway in both directions. On the north bound side of the Thruway there were no signs between the 2½-mile point and the 16-mile point. There were some sign locations from the 16-mile point to the 18-mile point but no sign locations from the 18-mile point north until after the 31-mile point. There were sign locations from the 31-mile point to the 33-mile point (vicinity of service area), and then no sign locations to the end of the 45-mile portion of the Thruway.

On the southbound lane, after the first three miles in the Yonkers area, there was a sign location at 4.1 miles, then no signs at all until the 20.7 mile mark, another sign location at the 23-mile mark. Thereafter there were no sign locations between the 23-mile mark and the 31-mile mark. Between the 31-mile mark and the 33-mile mark which is close to the service area, there were a number of sign locations. However, after the 33-mile mark there were no sign locations to the end of the 45 mile portion.

Having obtained the exact location data for the roadside features and characteristics and also for the location of signs visible from the Thruway, I conducted a correlation analysis of the exact data to determine the degree of mathematical relationship of accidents to road features and also to advertising signs. I must mention that there are many other variables which should be considered in such an analysis, but no data were available to me within the short time available.

I first performed a simple correlation analysis, to obtain a measure of the mathematical relationship, a numeric index of any possible relationship.

This index, called a simple correlation coefficient, does not necessarily mean a cause-and-effect relationship, but it does indicate a mathematical index of the relation of the numerical data. The simple correlation coefficient can be a value between 0 and 1 to indicate a direct positive relationship, meaning that as one variable increases the other variable increases. The figure 1 means perfect relationship, (as the points on a straight line) while the figure 0 means absolutely no relationship. Any value in the vicinity of 0 means insignificant degree of relationship.

The results of the simple correlation coefficient analysis showed:

1. Correlation coefficient between accidents and road features 0.46.
2. Correlation coefficient between accidents and advertising signs 0.15.
3. Correlation coefficient between advertising signs and road features 0.40.

I then computed a Multiple Correlation Coefficient which is the relationship of accidents to both variables, that is, road features and advertising signs at the same time. This means that their numeric values were being considered simultaneously. The resulting Multiple Correlation Coefficient between accidents and road features and advertising signs together was 0.47, which is almost identical to the value of the simple correlation coefficient listed above as the numeric relationship between accidents and road features.

In order to isolate the effect of a specific individual variable when it is considered in combination with one or more other variables, it is necessary to compute what is known as the Partial Correlation Coefficient. I computed the Partial Correlation Coefficient to determine the relationship between accidents and road features when the effect of the interaction between road features and advertising signs was removed. The Partial Correlation Coefficient between accidents and road features was 0.45, indicating that the introduction of the data concerning advertising signs to the "accident-road features" relation did not make any significant change to the simple correlation coefficient between accidents and road features, obtained originally as 0.46.

I then computed the Partial Correlation Coefficient between accidents and advertising signs, removing the influence of road features. This Partial Correlation Coefficient between accidents and advertising signs (with the inter-relationship of signs and road features being eliminated) was -0.05.

This correlation coefficient is so close to zero that it means that there is no mathematical relationship between accidents and advertising signs, and that the mathematical index from the data on the first 45 miles (90 miles both directions) of the New York Thruway where 44% of the accidents occurred shows an insignificant value.

The negative sign means that the mathematical relationship is negative, that is, as the one variable increases, the other variable decreases. As an illustration, if I put this in terms of accident data, it would be equivalent to saying that if there were an increase in signs, there would be a very slight decrease in accidents.

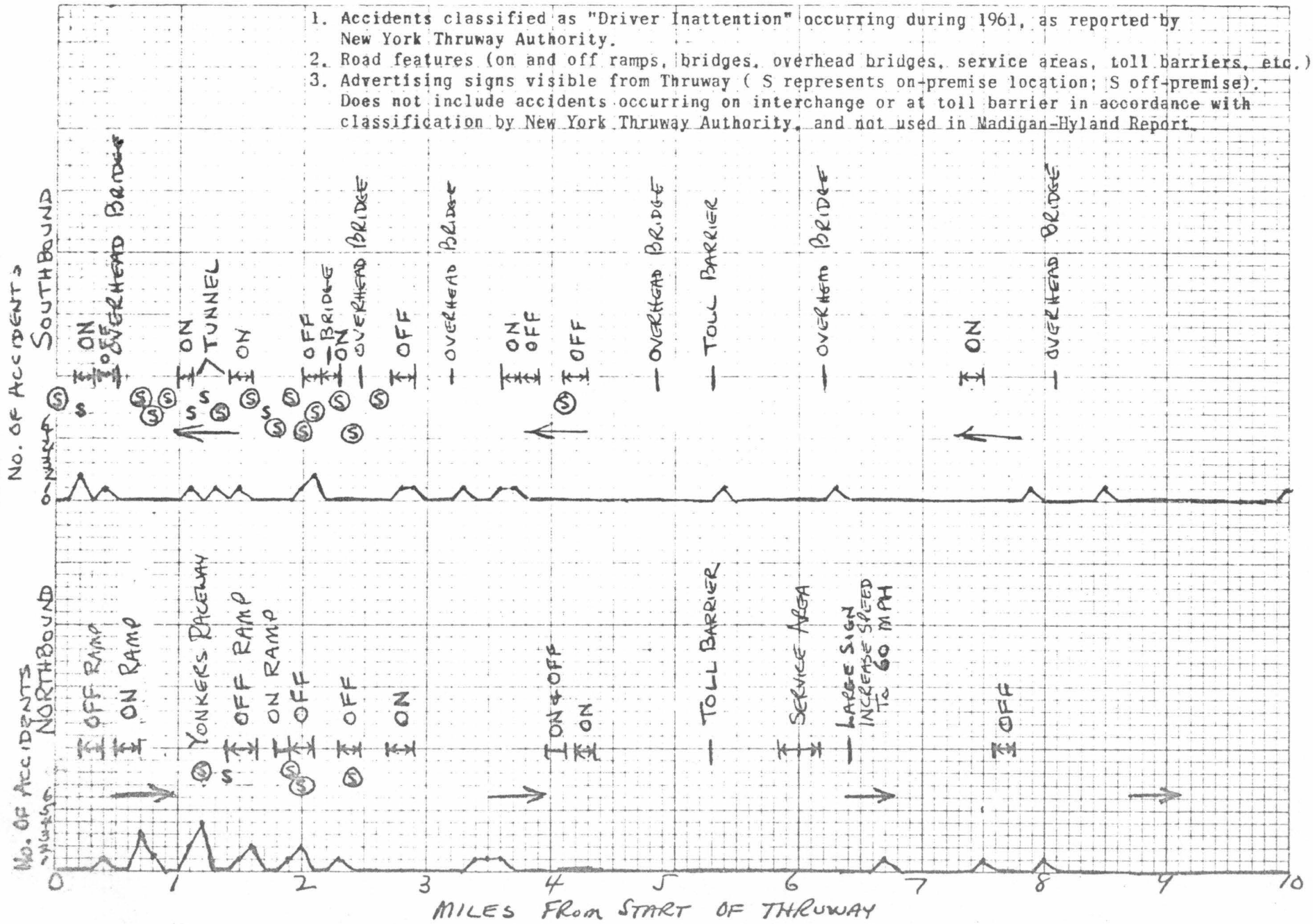
These results are very similar to those obtained in the study of accidents in Michigan by the State of Michigan Highway Department, where the correlation analysis included simple correlation, multiple correlation, and partial correlation. The Michigan Study had nine variables, and when the advertising signs were selected for partial correlation with the mathematical effects of all other variables being isolated from the interrelationship between them and advertising signs, the Partial Correlation Coefficient was -0.066 for roadway with no intersections, and 0.002 for roadway with intersections.

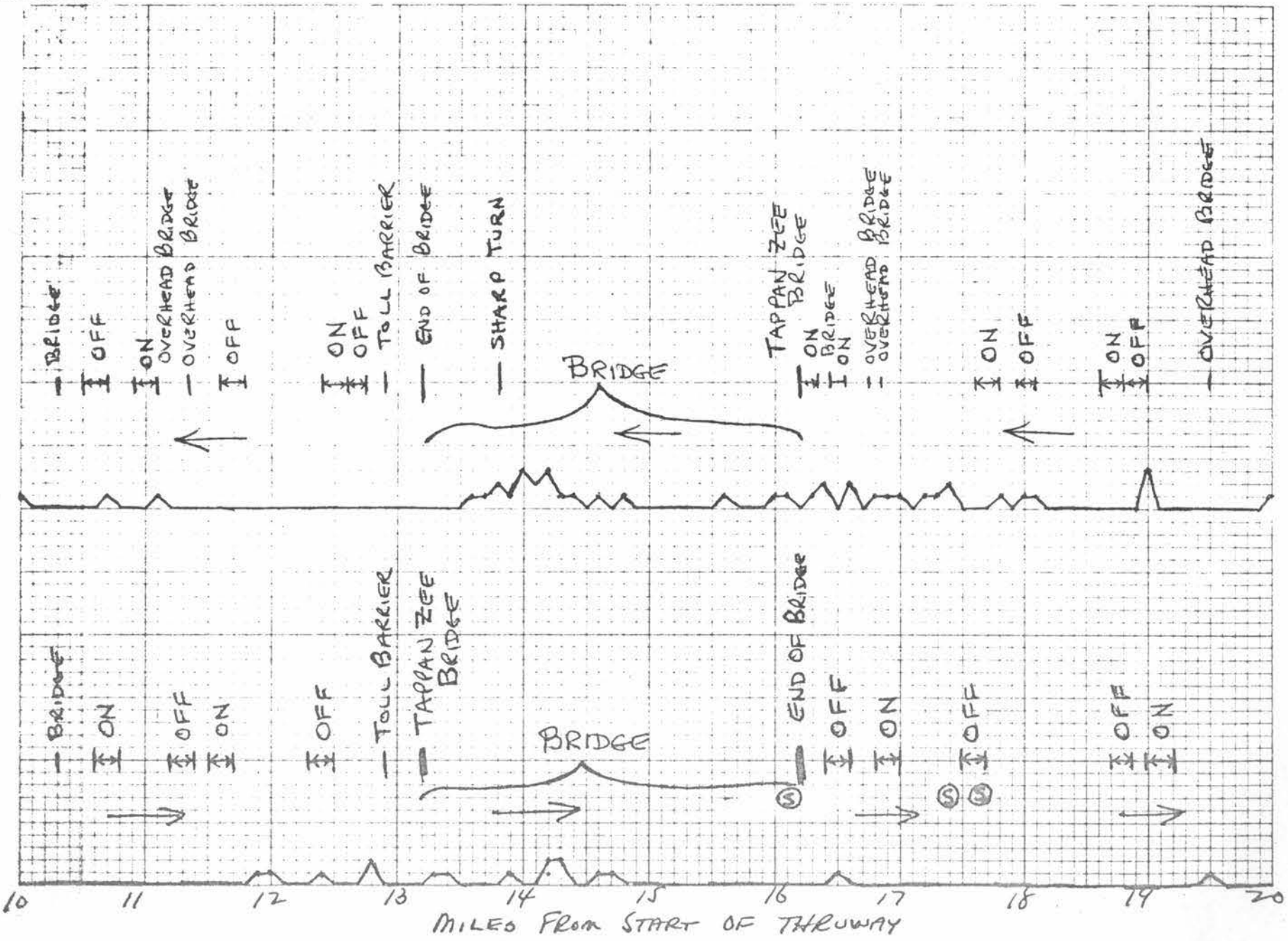
Based on the data available to me concerning "driver inattention" accidents on the New York Thruway in 1961, the locations of advertising signs visible from the road, and the locations of road features, I can say there is absolutely no relationship between such accidents and advertising signs.

Furthermore, I can say that the Madigan-Hyland Report presents an erroneous conclusion because the analysis ignored other variables and was limited to a simple relationship which indeed was generated by other variables.

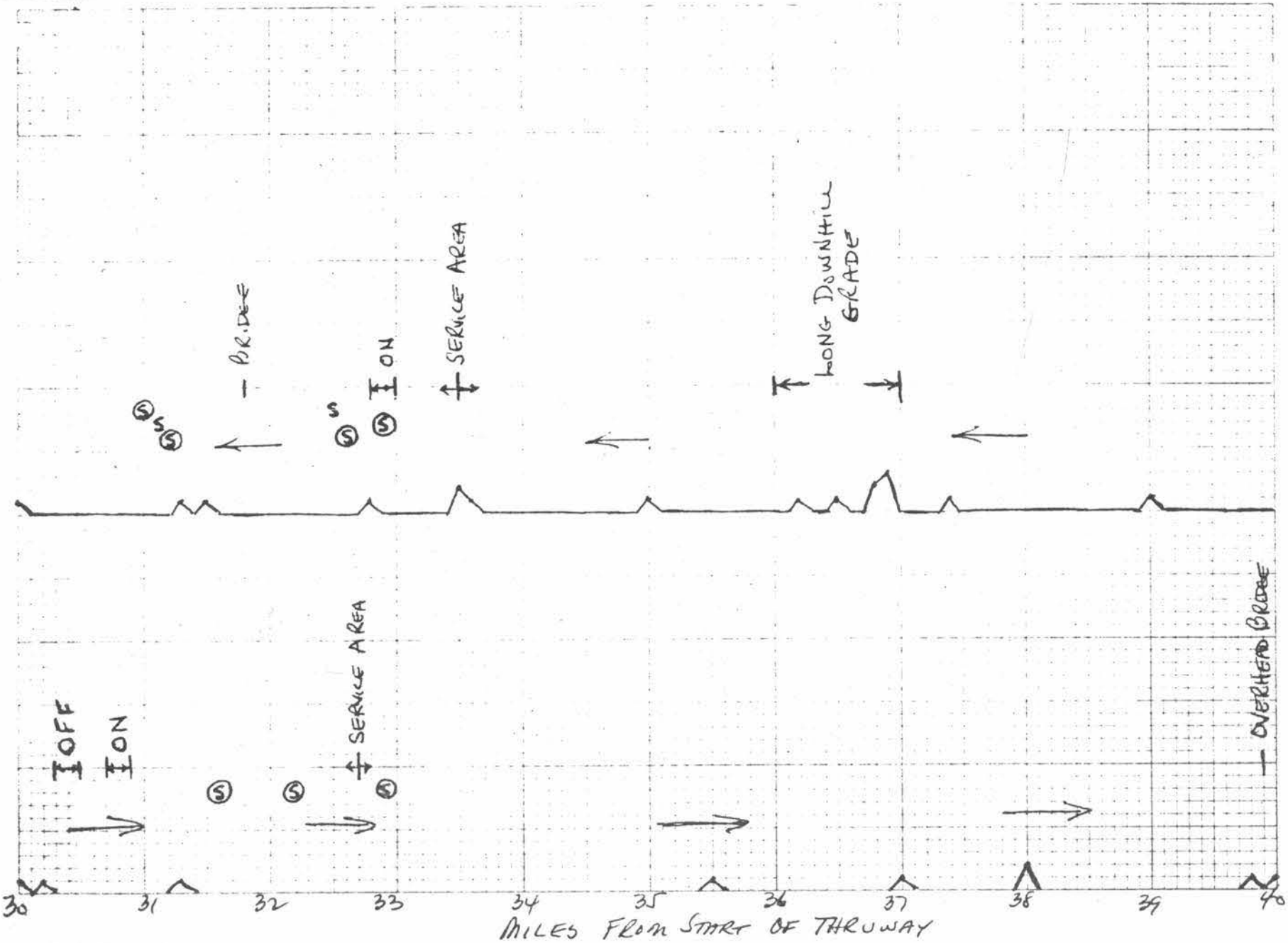
EXHIBIT A -- Five-page chart of locations in tenths-of-mile on New York Thruway from start at Yonkers going 45 miles in both directions of the following:

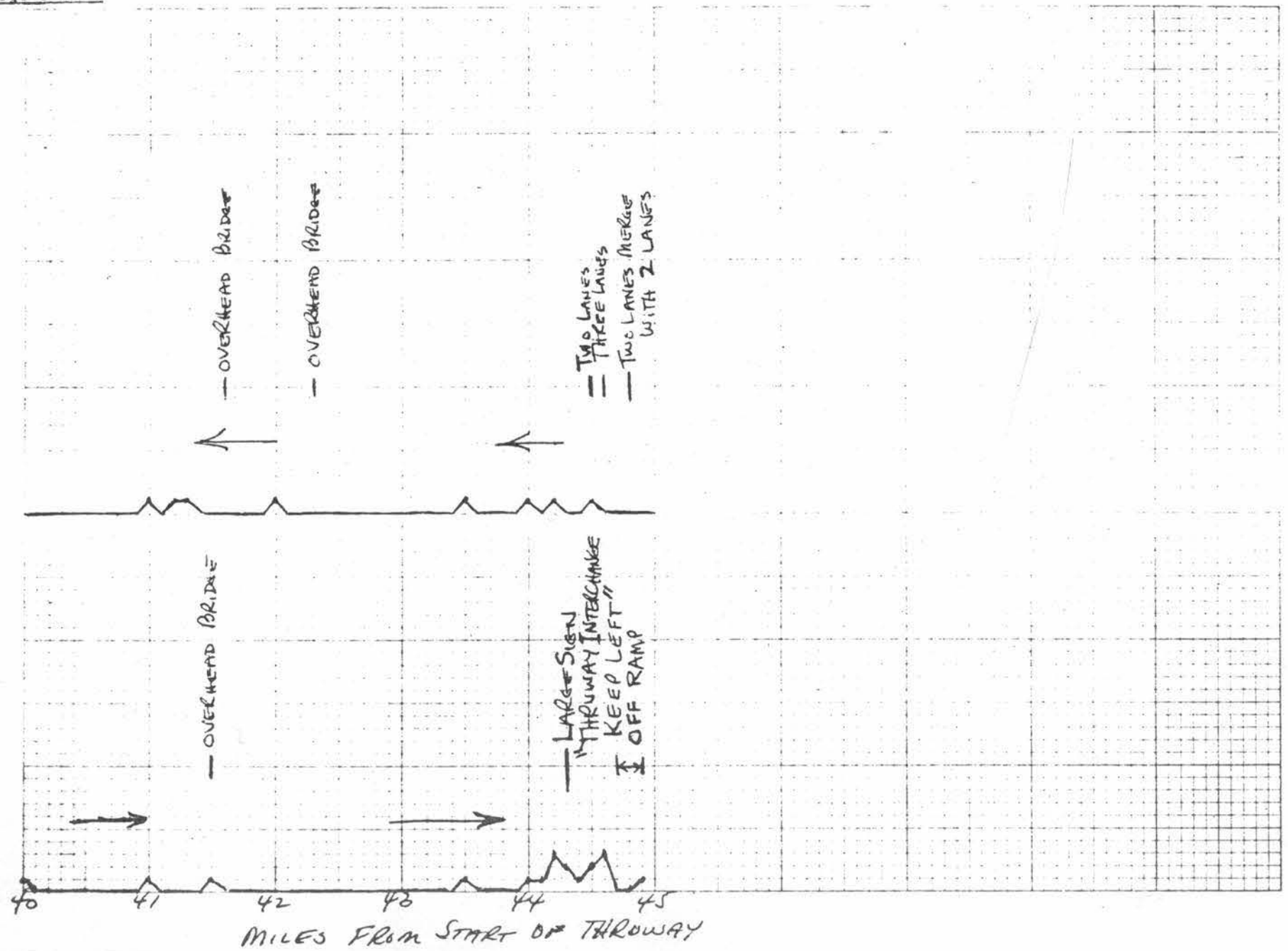
1. Accidents classified as "Driver Inattention" occurring during 1961, as reported by New York Thruway Authority.
2. Road features (on and off ramps, bridges, overhead bridges, service areas, toll barriers, etc.)
3. Advertising signs visible from Thruway (S represents on-premise location; S off-premise). Does not include accidents occurring on interchange or at toll barrier in accordance with classification by New York Thruway Authority, and not used in Madigan-Hyland Report.





S ON
OFF
ON
OFF
OFF
ON
OFF
S ON
OFF
ON
ON
OFF
TOLL BARRIER
OVERHEAD BRIDGE
BRIDGE
OVERHEAD BRIDGE
OVERHEAD BRIDGE
OVERHEAD BRIDGE
OVERHEAD BRIDGE
OFF
ON
OFF
ON
OFF
TOLL BARRIER
OVERHEAD BRIDGE
OVERHEAD BRIDGE
OVERHEAD BRIDGE
OFF
20
21
22
23
24
25
26
27
28
29
30
MILES FROM START OF THRUWAY


BR. DEE
ON
SERVICE AREA
LONG DOWNHILL GRADE
OFF
ON
SERVICE AREA
OVERHEAD BRIDGE
30
31
32
33
34
35
36
37
38
39
40
MILES FROM START OF THRUWAY


OVERHEAD BRIDGE
OVERHEAD BRIDGE
TWO LANES
THREE LANES
TWO LANES MERGE WITH 2 LANES
OVERHEAD BRIDGE
LARGE SIGN
"THRUWAY INTERCHANGE
KEEP LEFT"
OFF RAMP
40
41
42
43
44
45
MILES FROM START OF THRUWAY

OUTDOOR ADVERTISING ASSOCIATION OF AMERICA INC.

24 WEST ERIE STREET • CHICAGO 10, ILLINOIS • SUPERIOR 7-1692

March 19, 1963

MEMBERS OF THE OUTDOOR
ADVERTISING INDUSTRY

Gentlemen:

Enclosed is the report of Dr. Ernest Blanche, wherein he analyzes the data available for determination of the correlation between accidents and road features and advertising signs. As a part of this report he also points out the defects in the Madigan-Hyland report, copy of which you have previously received. In his report, Dr. Blanche states that the conclusions of the Madigan-Hyland report are erroneous and statistically unsound.

The enclosed report is highly technical and at times is couched in technical statistical terminology; however, to sum up Dr. Blanche's report, he finds that:

1. The design for the Madigan-Hyland study did not include sufficient variables from which to make a proper analysis -- it included only accidents and advertising signs and ignored all other available variables, such as the number of vehicles passing specific locations; number of vehicle miles covered; road characteristics, including on-and-off ramps, bridges, overhead structures and service areas, and many other road features which are known from studies on other highways to be major factors contributing to accidents.

2. The Madigan-Hyland report simply divided the Thruway into two classifications: a) Sections where signs were visible; b) Sections where signs were not visible.

   They then counted the number of accidents in each classification and divided the number of accidents by the number of miles. In this manner they obtained the result they reported -- that there were "three times as many accidents per mile on the Thruway where signs were visible, as there were on the Thruway where signs were not visible."

3. The conclusions of the Madigan-Hyland report are erroneous and statistically unsound.

4. The results of a correlation analysis of accidents with outdoor advertising, as well as with the other variables and road features listed in paragraph one above, establishes that the partial correlation coefficient between accidents and advertising signs was approximately zero, while that between accident and road features was 0.45.

5. This analysis verifies the findings of the survey conducted under the auspices of the United States Bureau of Public Roads, by Mr. J. Carl McMonagle, formerly of the Michigan State Highway Department and now at Michigan State University. This survey was commenced in 1947 and completed in 1952. In this survey it was determined that the relationship of outdoor advertising to traffic accidents was practically zero.

Dr. A. R. Lauer, of the Driving Institute at Iowa State University, had conducted similar tests in his laboratory and these tests verified the findings of the Michigan Survey, and were so stated in a joint report published in TRAFFIC QUARTERLY Magazine in July, 1955. (Copies of this report have been reprinted and are still available.)

Dr. Blanche's conclusion, therefore, is that there is no relation between outdoor advertising and highway accidents on the New York Thruway, and that this conclusion is practically identical with the conclusions reached concerning conventional highways by the Lauer-McMonagle Study referred to above.

On Friday of this week, we are meeting with a group of authorities in the traffic safety field, at the University of Michigan, to have them examine the results of Dr. Blanche's findings and his conclusions concerning the Madigan-Hyland report.

We will inform you later of the results of this meeting.

Sincerely,

Frank Blake

FRANK BLAKE
Director of Public Relations

FB-ic
Enclosure

IV

DR. ERNEST E. BLANCHE

Dr. Ernest E. Blanche has served government, industrial and university organizations for over 17 years in the fields of research, analysis, evaluation, data processing, management studies, and technical writing. For seven years he was Chief Statistician for the logistical element of the Army General Staff, Washington, D. C.

Before coming to Washington, D. C. in 1944 as Principal Statistician for the Foreign Economic Administration, he served two years with the Curtiss-Wright Corporation, Airplane Division, as Assistant to the Director of Engineering and later as Head of Mathematics and Statistics in the C-W Research Laboratory (now known as Cornell University Aeronautical Research Laboratory) at Buffalo, New York.

In 1945 shortly after V-E Day, Dr. Blanche was called by the Department of the Army to help establish the Army University Training Center at Florence, Italy, as part of the Army's Education Program.

Returning to this country at the end of 1945, he was assigned to the Control Division, Army Service Forces, as Principal Analyst for Generals Brehon Somervell and Clinton F. Robinson. After dissolution of ASF, he became Chief Statistician for the Research and Development Division, Army General Staff, and upon consolidation of this division with the Logistics Division in 1947, was appointed to head the combined statistical office, where he remained until January 1, 1954.

After almost ten years of Federal service, he resigned to become Vice President and Senior Research Scientist of the Frederick Research Corporation, Bethesda, Maryland, where he remained until August 1, 1955. During this time he served as a consultant to the Department of the Army.

Before World War II, Dr. Blanche devoted his time to teaching, first at the University of Illinois, Urbana, Illinois, and then at Michigan State College, East Lansing, Michigan. In 1942, he joined the Curtiss-Wright Corporation, but also taught in the Evening Division of the University of Buffalo from 1942 to 1944. After coming to Washington, he joined the faculty of The American University, Washington, D. C. in 1946, and is at present Adjunct Professor of Mathematics and Statistics in the Evening Division.

Dr. Blanche is a graduate of Bucknell University (magna cum laude) February 1938, and completed graduate work at the University of Michigan and Bucknell for the M.A. degree in August 1938. He continued his graduate studies while teaching at the University of Illinois, and was awarded a Ph. D. degree in Mathematics and Statistics (minors - Economics and Physics) in 1941.

He is a member of the following honorary societies: Phi Beta Kappa (scholastic); Sigma Xi (scientific); Pi Mu Epsilon (mathematics); and Delta Phi Alpha (language).

Dr. Blanche belongs to the following professional societies: American Mathematical Society, Institute of Mathematical Statistics, Mathematical Association of America, American Statistical Association, The Biometrics Society, the American Academy of Political and Social Science, and the Professional Engineers Club of Washington, D.C. He is listed in "American Men of Science" and "Who Knows - And What".

(more)

During his work for government and industry, he has produced a large number of articles and research papers in statistics, probability, analysis of scientific data, guided missile flight testing, quality control, operations research, logistical feasibility, work simplification, work measurement, use of high-speed computers, systems design, weapon systems analysis, and associated military problems.

As a hobby, he analyzes gambling games and is well known for his popular articles and books, the best known of which are "Off to the Races," "You Can't Win," and the "Mathematics of Gambling." He lectures extensively on gambling to civic and scholastic organizations, and to military hospital patients under the program conducted by the Theatre Wing, American Red Cross.

Dr. Blanche resides with his wife and two children at 14818 Carrollton Road, Rockville 13, Maryland.

K

BIOGRAPHICAL SKETCH

Greenshields, Bruce D., Assistant Director, Transportation Institute, and Lecturer in Transportation Engineering, Department of Civil Engineering, University of Michigan.

Education:

Ph.D. (Civil Engineering: Transportation), Univ. of Mich., 1934.
M.S. University of Michigan, 1932.
C.E. Oklahoma University, 1927.
B.S. in C.E. Oklahoma University, 1920.

Licensed Engineer: New York, Maryland, District of Columbia.

Teaching Experience:

Lecturer, Engineering Mechanics, University of Michigan, Feb., 1957 to 1961; Civil Engineering, Sept. 1958 to present.
Professor of Civil Engineering, (Executive Officer, 1948-52) The George Washington Univ. (On leave fall term 1954, Bureau of Highway Traffic, Yale Univ.).
Associate Professor, The George Washington Univ., 1945-48.
Adjunct Professor of Transportation, New York Univ. (part-time position), 1945-46.
Associate Professor of Civil Engineering, The College of the City of New York, 1937-40.
Professor of Engineering Science, Denison Univ., Granville, Ohio, 1926-37.
Assistant Professor, Civil Engineering, Virginia Polytechnic Inst., 1923-26.
Instructor, Civil Engineering, Marquette Univ., 1922-23.

Professional Experience:

Assistant Director, Transportation Institute, Univ. of Mich., July, 1958-present.
Traffic Engineer, Transportation Institute, Univ. of Mich., 1956-58.
Chief, Highway Systems Branch, Office of Chief of Transportation, Dept. of the Army, Jan., 1946-Feb., 1956 part-time, Feb., 1956-Aug. 1956.
Research Engineer, Yale Univ., fall-1954 and summer-1955.
Materials Engineer and Expert, Planning Branch, Military, Wash. D.C., Supply and Procurement, Office of the Chief of Engineers, June, 1951-March, 1952.

Professional Experience: (continued)

Research Engineer, Bureau of Highway Traffic, Yale Univ. 1944-46.
Supervisor, Building Materials Research, Brooklyn Polytechnic Inst., 1940-44.
Research Engineer, Traffic Bureau, Ohio State Highway Dept., Columbus, Ohio, 1934, 1936-39. (part-time)
Rodman, Santa Fe Railway Co., 9 mos. 1922.

Publications (partial list):

"The Photographic Method of Studying Traffic Behavior," 1933, Proceedings of the Highway Research Board.
"Studies of Traffic Capacity," 1934, Proceedings of the Highway Research Board.
Traffic Performance at Urban Street Intersections, (Senior author in charge of project), 152 pages; Published 1947 by Yale Bureau of Highway Traffic.
Statistics with Applications to Highway Traffic Analysis, (Senior author), 248 pages; Published 1952 by the Eno Foundation, Saugatuck, Conn.
"Quality of Traffic Flow and Highway Accidents," Proceedings Highway Research Board, 1958.
"Attitudes Emotions and Accidents," Traffic Quarterly, April, 1959, Eno Foundation, Saugatuck, Conn.
"Quality of Traffic Flow," Quality and Theory of Traffic Flow. A symposium published by Bureau of Highway Traffic, 1961.
"Driving Behavior and Traffic Accidents," 1962 International Road Safety Congress, Salzburg, Austria.
"Driving Behavior and Related Problems," Annual Meeting Highway Research Board, Washington, D. C., Jan., 1963.

Patents:

Asphalt Mixing Process, 1949.
Highway Characteristics Recorder, patent pending.
Drivometer and Traffic Events and/or Highway Events Recorder, patent pending.

BIOGRAPHICAL DATA:

J. Carl McMonagle, President, Institute of Traffic Engineers.

Graduate of Univ. of Michigan with B.S. in civil engineering, 1932.

Employed as engineer on staff of U.S. Public Health Dept.; later as project engineer for St. Clair County (Mich.) Road Commission.

Joined staff of Michigan State Highway Dept. in 1935; named assistant director of highway planning, 1936; named Director of Planning and Traffic, 1942.

Resigned from Michigan State Highway Dept., in 1956 to accept position as professor at Michigan State University and assistant director, Highway Traffic Center, MSU, which coordinates all phases of traffic and highway safety, including college courses to train personnel, conferences and workshops for those in this field, field services to communities, research projects and information service.

Previously vice president of the Institute of Traffic Engineers, McMonagle was elected president in 1956.

Is chairman of five traffic engineering committees of the National Highway Research Board, and a member of the American Association of State Highway Officials, the American Society of Planning Officials, Michigan Engineering Society and of the Traffic and Transportation Conference of the National Safety Council.

Has appeared as guest lecturer at Northwestern university, Yale, University of Michigan, University of Detroit and MSU.

Resident of East Lansing, Mich.

# # # #

INSIDE OUTDOOR

Silly Syllogism!

That's what humorists call false logic that takes a major premise, relates it to an unrelated or partially related minor premise and thereby arrives at a totally erroneous conclusion.

Here's an example:

Major premise - A man lives to be 107 years old.

Minor premise - This man started drinking and smoking at the age of 14.

Conclusion - If you start to drink and smoke at the age of 14 you'll live to be 107.

Obviously the conclusion is so false as to be silly and this qualifies it as a certain type of humor.

The New York State Thruway Authority has recently circulated a report by the engineering firm of Madigan-Hyland that indulges in silly syllogistic logic. Unfortunately there is nothing humorous about it. Their major premise is that there are three times as many accidents due to driver inattention on certain stretches of the New York State Thruway than occur on other stretches. Their minor premise is that "advertising devices" are visible along the mileage where the high incidence of accidents occur.

(more)

Their conclusion, although they don't actually state it, is that the presence of advertising devices accounts for the accidents.

Nothing could be sillier.

To put this study in its proper perspective, it was necessary to survey the mileage of the New York State Thruway involved and record all of the road and roadside features present. These include such things as the number of vehicles passing specific locations, number of vehicle miles covered, on-and-off ramps, bridges, overhead structures, service areas and other road features that are known from studies on other highways to be major factors contributing to accidents.

This survey report, along with the Madigan-Hyland report, were submitted to exhaustive analysis by Dr. Ernest Blanche, an eminent specialist in the field of statistical analysis. His findings:

"Based on data available to me concerning "driver inattention" accidents on the New York State Thruway in 1961, the locations of advertising signs visible from the road and the locations of road features, I can say there is absolutely no relationship between such accidents and advertising signs.

"Furthermore I can say that the Madigan-Hyland report presents an erroneous conclusion because the analysis ignored other variables and was limited to a relationship which indeed was generated by other variables."

In short...a silly syllogism.

CHARLES B. BURKHART

VIII

GENERAL OFFICE, 310 SOUTH MICHIGAN AVENUE, CHICAGO 4, ILLINOIS

CASUALTY FIRE AND SURETY CLAIM DEPARTMENT

CASUALTY CLAIMS
P. E. MATHEWS, SUPERINTENDENT

January 28, 1959

Mr. A. C. Petry
Outdoor Advertising Association
of America, Inc.
24 West Erie Street
Chicago 10, Illinois

Dear Mr. Petry:

This letter is in answer to your inquiry about any possible connection that outdoor advertising signs might have had with automobile accidents. I have discussed this with our Home Office claim supervisors, and none of them have any recollection that such signs or structures have been a cause of accidents reported to this Company. Of course, all accidents are not directly supervised in this office, but we are reasonably satisfied that such signs have not been a factor in automobile accidents handled by this Company.

Yours very truly,

P. E. Mathews

P. E. Mathews

pem:jm

EMPLOYERS MUTUAL LIABILITY INSURANCE COMPANY OF WISCONSIN
EMPLOYERS MUTUAL FIRE INSURANCE COMPANY
WAUSAU, WISCONSIN

ROBERT W. GUNDERSON
ADVERTISING MANAGER

January 27, 1959

Mr. Richard A. Ruddy, Counsel
Outdoor Adv. Assn. of America, Inc.
24 West Erie Street
Chicago 10, Illinois

Dear Mr. Ruddy:

We find no indication in our accident record files to cause us to consider billboards a contributing factor to traffic accidents.

On the other hand, the idea of using highway billboards to sell a safety message seems a most logical one. This is the "Point of Purchase." If a driver is ever going to "buy" a safe driving message, he is most certainly wide open for such a "sale" at the time he is driving his car.

Sincerely yours,

Robert W. Gunderson

RWGunderson

HARTFORD ACCIDENT AND INDEMNITY COMPANY
HOME OFFICE — HARTFORD 15, CONNECTICUT

March 3, 1959.

Outdoor Advertising Association of America, Inc.,
24 West Erie Street,
Chicago 10, Illinois.

Gentlemen:

We were asked to advise you whether or not we have encountered any automobile claims wherein the presence of nearby billboard advertising appeared to be a causal factor.

None of us can recall any such cases.

Yours very truly,

E. A. Cowie,
Vice-President.

EAC/j

C-99—3-4-58—15M

PENNSYLVANIA MANUFACTURERS' ASSOCIATION CASUALTY INSURANCE COMPANY

Home Office.... FINANCE BUILDING *Philadelphia, Pa.*

TELEPHONE RITTENHOUSE 6-0900

Manufacturing is the Keystone of the Keystone State

PHILADELPHIA 2, PA.

February 20, 1959

Outdoor Advertising Association of America, Inc.
24 W. Erie Street
Chicago 10, Ill.

Gentlemen:

We have been asked whether automobile accidents reported to us which occurred on rural highways were in any cases caused by billboards or advertising structures.

Of the many highway accidents reported to us it has been our experience that in no single accident was it ever claimed that the accident was caused by such billboards either blocking the view of the road or distracting the attention of the motorist.

Certainly from our records and experience we do not believe these outdoor billboards constitute an accident hazard.

Very truly yours,

CHMcC:HIII

CLAIMS MANAGER

The Travelers

The Travelers Insurance Company
The Travelers Indemnity Company

PUBLIC INFORMATION AND
ADVERTISING DEPARTMENT
HARRY BARSANTEE, Manager

February 16, 1959

Outdoor Advertising Association of America
24 West Erie Street
Chicago, Illinois

Gentlemen:

As you know, The Travelers Insurance Companies were one of the first commercial organizations to conduct a campaign in an attempt to arouse public opinion to the needlessness of most automobile accidents. Since 1930, we have published and distributed more than 45,000,000 copies of safety booklets, accident analyses, and other literature in which we have pointed out the causes of accidents and the methods of their prevention.

At no time have we ever seen enough evidence that signboards or poster panels are an accident hazard, to even mention it. Neither in the accident reports which we obtain from the various states, nor in our own claim files do we find any cases where accidents were actually caused because signboards or poster panels blocked the view of the road, or distracted the attention of the motorists.

I have personal knowledge of the considerable assistance which the billboard industry has given to local safety campaigns in many communities, and it would seem that this praiseworthy civic help would certainly more than balance out any slight inconvenience - if there is such - which the billboards might cause to the motoring public.

Very truly yours

Harry Barsantee

Harry Barsantee, Manager
Public Information and
Advertising Department

HB:MHC

Frankly Speaking . . .

PENDING LEGISLATION, both nationally and at local levels, has focused attention in recent weeks on the question of roadside advertising or billboards. Proponents as well as opponents of outdoor advertising have attempted to identify a relationship between accidents and bilboards, and the traffic engineer has been asked to take sides—on the basis of the safety aspects of the problem.

Fortunately most traffic engineers have been able to stay out of the argument. Facts are notably few and far between, but those that do exist indicate no significant relationship between outdoor advertising and the occurrence of traffic accidents. This conclusion was reported in a Michigan Highway Department study some years ago, and has been widely quoted by engineers who express an opinion on the subject.

No one denies that a billboard located at an intersection or a curve so as to obstruct the view, or a sign which confuses a driver by its message, color or illumination is a hazard. On the other hand, there are no facts which show any hazard resulting from advertising signs in general. Attempts by opponents of outdoor advertising to assume such a relationship are unfair and are not condoned by engineers, who will insist on seeing evidence of any such relationship.

This does not mean that traffic engineers favor outdoor advertising. Undoubtedly some do—but certainly many do not. Their reasons for opposing billboards, if this is their position, are those of aesthetics or personal opinion, however, not because there are facts about accidents.

It is unfortunate that the billboard arguments have been identified in so many minds as ones which can be resolved on the basis of traffic safety. In effect, the opponents of billboards have tied their case to the coat-tails of safety. This misleading identification has been confusing to the general public, which is not aware of the facts of the case.

Let's take every opportunity to explain the situation. Let's spike the attempts to blame accidents on billboards and to promote anti-billboard legislation *on the basis of its effect on safety*. Let's be for or against billboards as we will—but let's admit that it is on the basis of our own likes and dislikes, our own opinions and interests. As engineers who preach a factual approach to all our problems we can adopt no other attitude toward this one.

DAVID M. BALDWIN,
Executive Secretary
Institute of Traffic Engineers

329

Do Road Signs Affect Accidents?

A. R. LAUER AND J. CARL McMONAGLE

 Published quarterly by the Eno Foundation at Saugatuck, Conn., issue for July, 1955. Printed in U.S.A. Library of Congress catalog card: 50–1781.

Reprinted with permission from the July 1955 issue of Traffic Quarterly

Do Road Signs Affect Accidents?

A. R. LAUER AND J. CARL McMONAGLE

Dr. Lauer is Professor of Psychology and Director of the Driving Laboratory at Iowa State College at Ames, Iowa. During the winter quarter of the academic year of 1936–37, he was associated with the Bureau of Public Roads in Washington, D.C. on leave from Iowa State College. He is a co-author of "The Motor Vehicle Driver" and the author of several monographs and articles on highway signs and highway safety.

Mr. McMonagle is Director of the Planning and Traffic Division of the Michigan State Highway Department. Previously he was assistant director and before that was in charge of the Traffic Section of the Highway Planning Survey. Altogether he has been with the Michigan State Highway Department for the last nineteen years. He is a member of the Institute of Traffic Engineers; the Michigan Society of Planning Officials; the Michigan Engineering Association of State Highway Officials; the Highway Research Board, and of the President's Highway Safety Conference.

THE science of highway safety is in its infancy. Many opinions are expressed regarding the causes of traffic accidents, and many notions about highway safety are unfounded. Quiet, easy-riding cars, smooth curveless roads, policed highways and similar improvements have not eliminated accidents entirely. Too much depends upon the human factor. More needs to be known about optimal conditions for efficient driving before the best results in safety on the highway may be obtained.

The problem of driving safety has interested the Driving Research Laboratory of Iowa State College for many years. Knowing this, the Outdoor Advertising Association of America in 1950 asked the laboratory to undertake a project designed to evaluate the various angles of vision in front and at the side of the driver with respect to the efficiency of signs. At the same time it was proposed that an

Editor's Note: For years, those concerned with traffic accidents have wondered whether any relationship exists between advertising road signs and traffic accidents. The studies reported here give a clear picture. One study, made in the Driving Research Laboratory of Iowa State College, is reported by Dr. Lauer. The other study, made in the field by the Michigan State Highway Department in cooperation with the United States Bureau of Public Roads, is reported by Mr. McMonagle. Correlation between the two studies was made by Dr. Lauer.

attempt be made to establish some relationship between placement of signs and the possible "distraction" of the driver. As the project developed it appeared that a driver rarely keeps his eyes on the road directly ahead. He must do some observing about him to enjoy driving, to keep awake, and to follow normal habit patterns in use of the eyes developed since childhood. Therefore, it seemed conceivable that an optimal level of stimulation would have a beneficial effect upon driver efficiency. An experiment was set up to test this hypothesis.

Apparatus Used and Method of Approach

Since resources were limited some of the apparatus used at Iowa State College (described in References 2 and 3) was adapted for these purposes and redesigned to fit such an experiment. Advertising signs were placed at various angles from 0 to 45 degrees to each side of the roadway and subjects were run on the apparatus to determine what statistically significant difference, if any, existed between efficient observation of a landscape covered with signs and that of a landscape with no signs at all. All other features were the same. Fifty subjects were first run using reaction time as the criterion of possible "differential efficiency effects." No significant differences were found in this study which was considered as a pilot run to the main research. This was against expectation.

Subsequently 120 more subjects were run, four groups of thirty matched subjects each. One group was used as a control in a preliminary run. The second part of the study consisted of ninety subjects, thirty in a group, run under three conditions of the landscape as described below.

In one condition the landscape was entirely clear of signs. In the two other conditions signs were placed at different angles to the side to evaluate any differences which might be noted if the signs were close to the road or were placed farther away from the road and the line of vision. Other features such as a radio tower, fields, shrubs, trees, farm buildings, roads, bridges, animals and even an electric train, all in miniature, were kept on the landscape for all three conditions. These are shown in Figures 1, 2 and 3. To summarize, the three conditions varied were: (a) no signs, (b) signs placed 15–30 degrees to the side, and (c) signs placed 15–45 degrees at the side.

Tests Favor Signs

Briefly summarized, the laboratory results showed that numerous signs in the driver's field of vision in no way influenced efficiency at the wheel adversely, and in fact seemed slightly beneficial. The difference was about 10 percent in favor of conditions with signs.

It was also noteworthy that the driver would notice as many or more other objects and features of the landscape when the signs were present as when they were absent. In other words, the theory that various signs along the highway will detract from the natural beauty does not seem to hold. A person will observe and keep in mind what appears to him as the most interesting stimuli along the highway regardless of the frequency and density of distribution within the limits studied.

Michigan Studied 100-Mile Highway

The Michigan State Highway Department, in cooperation with the U. S. Bureau of Public Roads, made a study of accidents and their relation to design and roadside features along a selected trunkline highway. The selected study section was a 100-mile stretch of highway on US24 from the Ohio State line to the intersection with M58 just south of Pontiac, and on M58 from that intersection to its junction with US10 northwest of the city.

Carefully considered measures, including a comprehensive inventory of all design and roadside features, were taken to obtain accurate data concerning types and location of both features and accidents. The 3,025 accidents on this road reported in 1947, 1948 and 1949 were used in all phases of the study except those involving correlation where only the 1,968 accidents reported in 1947 and 1948 were used.

From data recorded and tabulated by IBM, one card was prepared for each accident, and one card for each of the 119 *intersection* and 144 *non-intersection sections* into which the study road was divided. Almost all of the analysis work was done for the *intersection* and *non-intersection sections* separately.

While the study itself treated design features, roadside establishments, private drives and advertising signs with near-equal concern, attention here will be centered on advertising signs.

The problem was approached by several methods. The first of these was to compute the rate of accident-occurrence per large and prominent advertising sign, at each of five 100-foot increments of distance of the accident from such sign. The second method was accident and sign density. In each section the total number of accidents in 1947 and 1948 was divided by the section length in hundreds of feet. Then the relationship between accidents and advertising signs was again evaluated by calculation of correlation coefficients—both simple and multiple.

These three methods gave no conclusive results because they did not take into account the relationship between advertising signs and roadside features, design features or private drives. Correlation coefficients among these various factors show them to be highly inter-related.

To determine the extent to which each of the factors, including advertising signs, was related to accidents in its own right and independent of other factors, partial correlation coefficients were computed. Nine different factors were each correlated with accidents by means of eighth order partial correlation coefficients. This was done for *intersection* and *non-intersection sections* separately. The nine factors together with the partial and the zero order correlation coefficients are shown in the following table:

Table 1

PARTIAL AND TOTAL CORRELATION COEFFICIENTS OF ACCIDENTS WITH EACH OF FIVE TYPES OF ROADSIDE FEATURES: PRIVATE DRIVES, DESIGN FEATURES, ADVERTISING SIGNS AND VEHICLE MILES FOR NON-INTERSECTION AND INTERSECTION SECTIONS

Features Correlated with Accidents	Non-Intersection Sections		Intersection Sections	
	Total	Partial	Total	Partial
Taverns	.313	.332	.698	.460
Gas Stations and Commercial Garages	.442	.144	.666	.365
Stores	.321	−.047	.526	.166
Restaurants	.438	.212	.651	−.026
Other Establishments	.443	.302	.720	.131
Private Drives	.513	.265	.264	−.132
Design Features[1]	.303	.226	.285	.122
Advertising Signs	.557	−.066	.712	.002
Vehicle Miles	.680	.444	.720	.256

[1] Except grade separations, piers and abutments.

In this table the advertising signs as well as the other factors are shown much nearer their true relationship with accidents. An inspection of the partial correlation columns of Table 1 makes it clear that advertising signs make no significant contribution to accidents along the highway included in this study. The great difference between the zero order and partial coefficients for advertising signs is a good indication of the extent to which signs and other features are inter-related. This point should be kept in mind in future studies.

By the same type of approach, accidents were correlated with total roadside features: private drives, design features, advertising signs and vehicle miles by fourth order partials. The results again showed no relationship between accidents and advertising signs.

Any correlation coefficient does not necessarily show the existence of a cause and effect relationship between variables considered. In the present instance it appears that advertising signs have no relationship to accidents on the route under study.

Other Evidence

The effect of properly placed design and roadside features in breaking the monotony of driving is recognized. The experience of drivers on today's turnpikes is evidence of this. Designers of the New York Thruway recognized the need for variety of roadside stimuli by designing otherwise unnecessary curves in that highway. This phenomenon of driving monotony is undoubtedly related to the Minnesota Highway Department's findings that sharp curves or turns at the end of *long* tangents were much more hazardous than at the end of *short* tangents.

The Michigan study shows that the accident problem on the route studied is not one of driver-attention diverted by advertising signs, but is probably a matter of roadside friction from uncontrolled access and egress to certain types of business establishments and private drives. There is also the problem of exposure and traffic volume represented by vehicle miles in this study.

With two types of approach the general conclusion was that little, if any, relationship exists between advertising signs and accidents. However, the whole set of correlations had not been thrown into a multiple R as is frequently done in studies of this type. The Driving

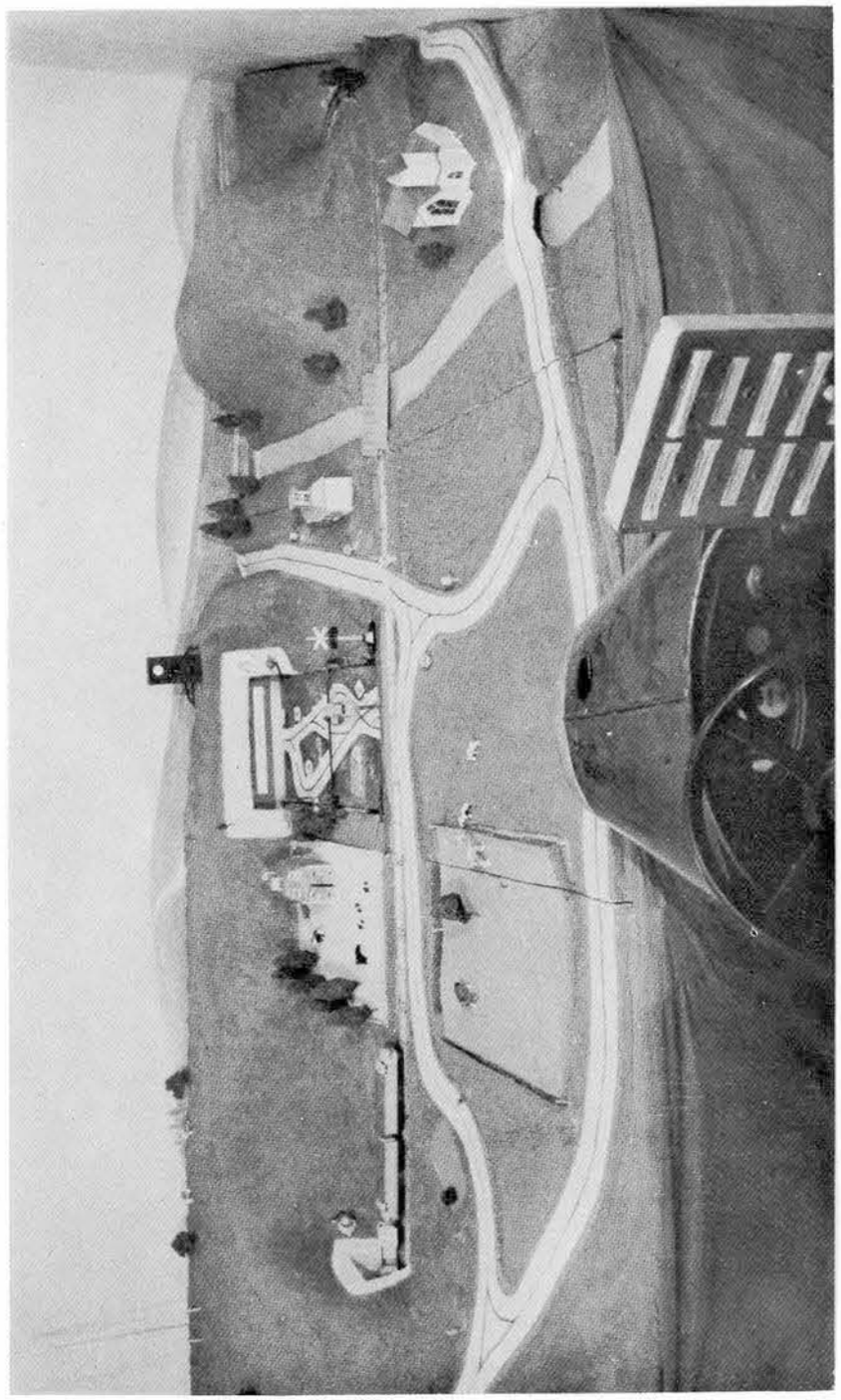


FIGURE 1. Landscape without signs of any kind. This was used as a control condition.

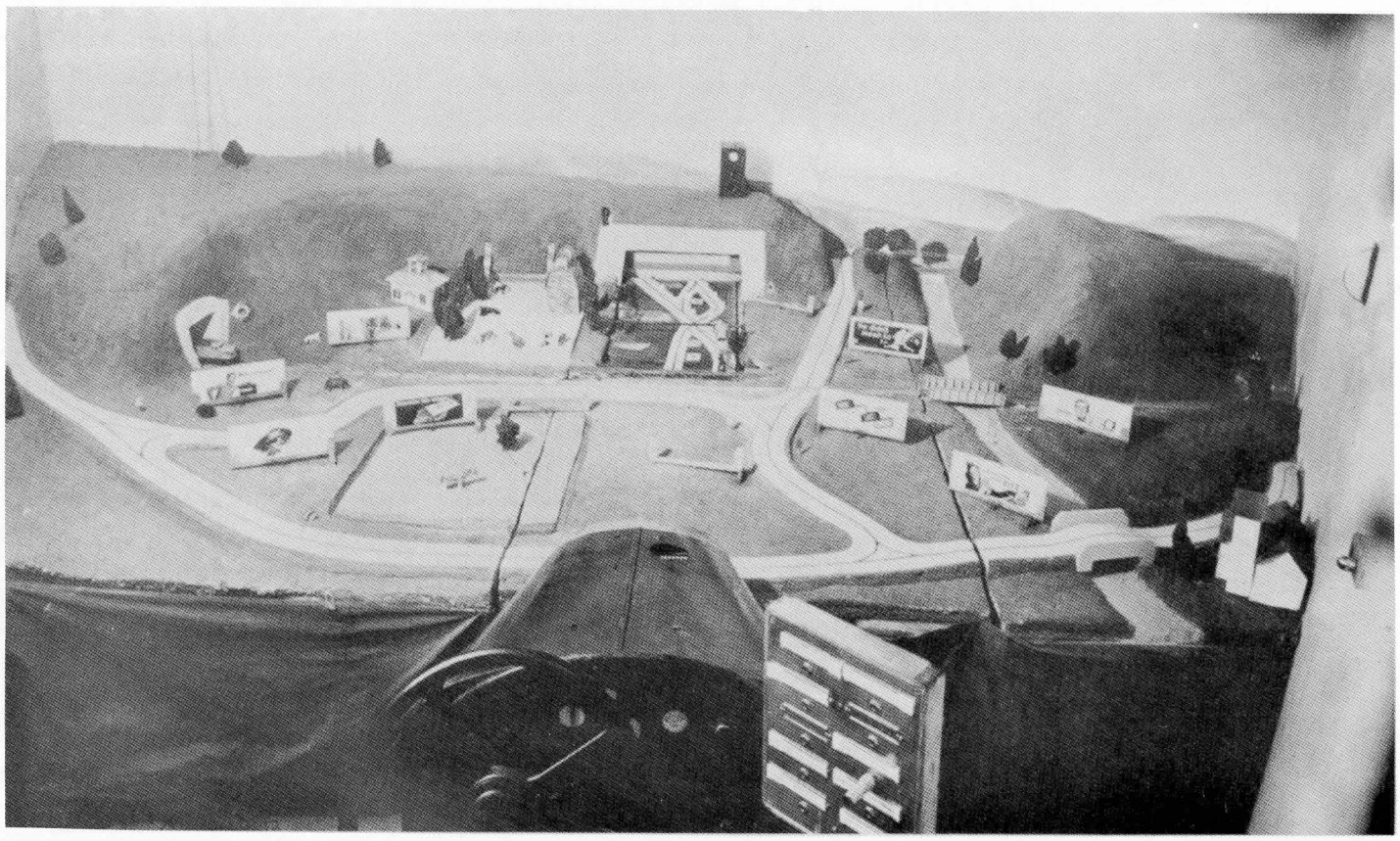


FIGURE 2. Landscape with signs shown within the limits of 15–30 degrees.

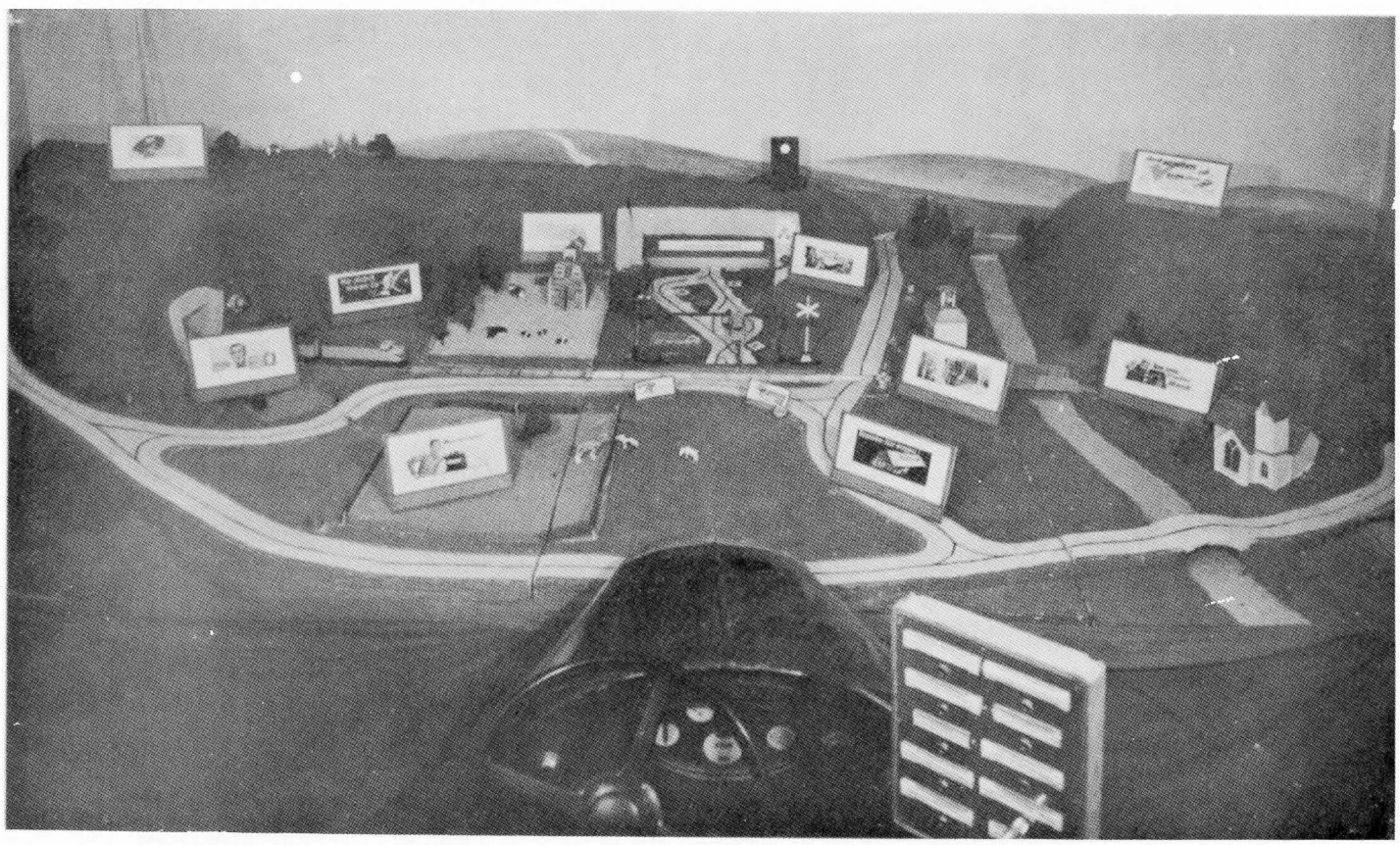


FIGURE 3. Landscape with signs placed from 15–45 degrees at the side.

Research Laboratory of Iowa State College was able to cooperate with the Michigan Highway Department by securing the zero order correlations and putting all variables together to compute multiple correlations for *intersection sections* and *non-intersection sections* by the Doolittle method. This is a special mathematical process whereby a set of normal equations is solved to determine the degree of relationship existing between each of the variables put into the equation and the criterion which in the present case was accidents.

Using the Michigan State Highway Department data, an analysis was made of the two conditions which had been isolated, namely, *non-intersection sections* and *intersection sections* as related to accident occurrence.

Results Shown by the Michigan Study

While a number of multiple correlations were computed by the Michigan Highway Department it is known that the best method of determining relations is to use all variables in the equation and calculate their respective components or betas. Here will be named only the variables in the order of their contribution. The possible significant items will be indicated.

Table 2

MICHIGAN STUDY—FACTORS RELATED TO ACCIDENTS
(INTERSECTION SECTIONS)

Multiple R = .8748 — Factors Measured = 76+%

Variable	Order of Importance	beta	r	Coefficient
Taverns	1	.3368	.6983	.23518744
Vehicle miles	2	.2947	.7200	.21218400
Gas stations	3	.2877	.6662	.19166574
Other establishments	4	.1184	.7198	.08522432
Stores	5	.1095	.5261	.05760795
Design features	6†	.0642	.2851	.01830342
Advertising signs	7†	.0024	.7123	.00170952
Restaurants	8†	−.0209	.6511	−.01360799
Private drives	9†	−.0869	.2639	−.02293291

† Contribution not significant.

In order of importance with respect to *intersection sections*—that is, that part of the highway the Michigan Highway Department had

designated as intersections—the relationships found were in the following descending order of importance: Rank one shows the closest relationship to accidents, and rank nine, the least association to accidents.

It is noteworthy, however, that 7, 8 and 9 (advertising signs, restaurants and private drives) were either negative, showing a beneficial effect, or were not significant at all because of their extremely small betas, the accepted index of separate relationship.

As to the *non-intersection sections*—that is, the stretches of highway between crossroads and accident occurrence at or near signs as described by the Michigan Highway Department—the variables studied assumed the following descending order of relationships. (Order interpreted as above.)

Table 3

MICHIGAN STUDY—FACTORS RELATED TO ACCIDENTS
(NON-INTERSECTION SECTIONS)

Multiple R = .8155 Factors Measured = 67%

Variable	Order of Importance	beta	r	Coefficient
Vehicle miles	1	.4216	.6796	.28651936
Private drives	2	.1932	.5133	.09916956
Other establishments	3	.2035	.4425	.09004875
Restaurants	4	.1796	.4381	.07868276
Taverns	5	.2127	.3126	.06649002
Gas stations	6†	.1040	.4420	.04596800
Design features	7†	.1465	.3026	.04433090
Stores	8‡	−.0330	.3211	−.01059630
Advertising signs	9‡	−.0639	.5575	−.03562425

† Scarcely significant.
‡ Non-significant. Actually negative or beneficial if anything.

Many times zero order correlations, when considered separately, will seem to indicate a relationship. If the amount of overlapping is partialled out the betas may be extremely low, insignificant, or even in the opposite direction. Note the last four variables under the beta column and coefficient of both Table 2 and Table 3.

The reason for a wide fluctuation in relative values for a variable such as private drives may be that they are rarely found at *intersection sections*.

Here again items 8 and 9 (stores and advertising signs) were slightly negative and therefore found to be slightly beneficial, if showing any relationship at all, in reducing accidents.

Thus a laboratory study under simulated highway conditions in which various factors could be controlled agrees almost perfectly with the outdoor studies of 100 miles selected as a typical highway in which the degree of relationship, if it existed, might be shown between accidents and advertising signs and other roadway and roadside features. The studies each confirm that there is no significant relationship shown between outdoor advertising signs and highway accidents. The evidence, if any, is slightly in favor of having something along the highway to arouse the motorist and keep him alerted as far as efficient driving is concerned. These results fit in very well with what is known about efficiency of performance in many other areas from various psychological experiments. A certain amount of "distraction" would seem necessary, if it may be so designated, to keep the driver or performer alert and at his highest level of efficiency. See references (1) and (4).

Vehicle miles travelled was one of the highest relationships as one might expect. Design features and advertising signs showed little or no relationship on this particular highway and in these studies. The fundamental point is that if enough drivers who are susceptible to accidents pass over a given highway some are going to get into trouble. The problem is to keep those likely to get into trouble at a high state of alertness to danger.

REFERENCES

1. Courts, F. A., Relations between experimentally induced muscular tension and memorization. J. Exper. Psychol., 1939, *25*, 235–256.
2. Lauer, A. R. and Johnson, La Verne, Effects of manual and inherent handicaps on motor performance of a complex nature. Jour. of Applied Psychol., 1937, *21*, 1, 85–93.
3. Lauer, A. R. and Allgaier, Earl, A preliminary analysis of the psychophysical correlates of automotive manipulation. Amer. Jour. of Optometry, 1941, *18*, 2, 49–52.
4. Morgan, J. J. B., The overcoming of distraction and other resistances. Arch. of Psychol., 1916, No. 35.
5. Planning and Traffic Division, Michigan State Highway Department, Accident experience in relation to road and roadside features. 1952, p. 35.
6. Planning and Traffic Division, Michigan State Highway Department, How roadside features affect traffic accident experience. 1951, p. 29.

Minnesota
Historical Society

www.mnhs.org