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METHODOLOGICAL CONSIDERATIONS IN CONDUCTING AND EVALUATING ROADSIDE RESEARCH SURVEYS

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Contract No. FH-11-7543
February 1971
Final Report

PREPARED FOR:

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
WASHINGTON, D.C. 20590

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with technical assistance of

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Submitted February 25, 1971

by: Vermont Department of Mental Health

to: U. S. Department of Transportation

National Highway Traffic Safety Bureau

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METHODOLOGICAL CONSIDERATIONS IN CONDUCTING AND EVALUATING ROADSIDE RESEARCH SURVEYS

PREFATORY NOTE

The contents of this guide have resulted from several years of concrete experience in conducting roadside research surveys as part of Project ABETS at the University of Vermont. We started from scratch, since we had no previous experience with such surveys and no manual was available to guide us in planning and conducting them. Therefore, we have prepared this manual in the hope that it will help other investigators avoid (or at least, minimize) the trial-and-error learning we endured. Although some of the joy and challenge of discovery will necessarily be lost by having this manual to aid in planning and conducting roadside research surveys, this "loss" should be compensated by being able to devote more thought and energy to getting on with the task more efficiently and painlessly.

It should be noted at this point that since many of the procedures and ploys described in this guide were developed for our particular purposes, they may be overly specific to our needs and may therefore not be directly transferable to a different situation without thoughtful modification. Accordingly, extreme caution is urged in any attempt to follow this manual slavishly as a cookbook or bible; it is meant to be a thought-provoking guide, not a stultifying dictator.

A few words concerning the background from which this guide stems might aid in understanding both its strengths and limitations. Project ABETS (Aspects Behavioral and Environmental in Traffic Safety) was formed at the University of Vermont in July 1967 to investigate the role of alcohol in highway safety with funds provided by the National Highway Safety Bureau, U.S. Department of Transportation under contracts FH-11-6609 and FH-11-6899. An interdisciplinary team was assembled comprising psychologists, pathologists, epidemiologists, sociologists, and mathematicians, as well as field interviewers, laboratory technicians, and a special investigator from the state police (Mr. Irvin W. Maranville). Dr. M.W. Perrine of the Psychology Department at the University of Vermont has served as director since the very inception of Project ABETS.

The project was charged with determining "the extent to which drinking and driving problems involve alcoholics and other abnormal drinkers, and the ways by which these individuals can be identified." As one part of this multi-faceted investigation, 200 roadside research surveys (formerly known as "roadblocks") were conducted throughout the state of Vermont at the same sites and corresponding times as previous fatal or serious injury crashes. A total of approximately 1200 motorists provided breath samples, as well as answers to questions concerning their biographical background, including driving history and drinking patterns. The "roadblock" procedures had the explicit prior approval of the Vermont Governor's Office, Attorney General, State's Attorneys, and State Police. The procedural details and results are beyond the scope of this brief note, but they have been presented elsewhere (Perrine, Waller, & Harris, 1970). The interested reader is also referred to five earlier attempts to use roadside research surveys with

varying degrees of success (Holcomb, 1938; Lucas, Kalow, McCall, Griffith, & Smith, 1955; McCarroll & Haddon, 1962; Vamosi, 1963; Borkenstein, Crowther, Shumate, Ziel, & Zylman, 1964).

A very special word of thanks is due the Vermont State Police, from the Commissioner and Administrative Officers to the many troopers (as well as municipal police officers) who actually halted the motorists for us at the sites of the 200 roadside research surveys. It is an appropriate tribute to their training and skill that no "unfortunate incidents" occurred during the many months of field operations in the widest variety of circumstances and conditions. Indeed, it was especially encouraging to have their proficient presence (and capability of radio contact with civilization) under the more extreme conditions of rain and mud or snow and very subzero temperatures.

This manual is therefore dedicated with gratitude to the individual police officers who assisted at our roadside research surveys which would not really have been possible without their cooperation and help.

1. BASIC RATIONALE AND OBJECTIVES OF RESEARCH-ORIENTED ROADSIDE SURVEYS

1.1 NEED

The need for roadside research surveys cannot be understood and appreciated unless they are related directly to the problem which has provided the impetus for developing this technique as one method to be used in working toward an eventual solution. Defined in its most basic elements, the problem consists of losses which result from highway crashes, that is, human losses, property losses, economic losses, time losses, etc. Of these, the most compelling losses are, of course, those which involve serious or fatal injury to human beings.

Since alcohol is now recognized as being an important component in approximately half of the fatal injury crashes, it is understandable that societal agencies have specifically focused upon alcohol involvement in highway crashes in an attempt to achieve solutions for some portions of the basic problem. Thus, public interest and governmental pressure are providing a mandate and a social imperative to study this problem and to use whatever methods are necessary in terms of achieving the greater good for the greater number despite possible inconvenience for the citizens involved. The roadside research survey is one of the most promising and most highly regarded, yet least used methods available for studying selected aspects of this problem.

It should be noted at the outset that the use of roadside research surveys involves competition between individuals who have differing needs and assumptions which are sometimes mutually exclusive; for example, (1) the perceived need of the driver to continue without unexpected interruption to wherever he is going for whatever reasons; (2) the

assigned needs of the police to maximize highway safety, yet to facilitate traffic flow; (3) the research needs of the scientist and evaluator to obtain reliable and valid data, and (4) the traditional needs of the program administrator to produce rapid results. It should also be noted that, for each of these individuals, new behaviors and constraints are probably required by involvement with the surveys; for example, (1) the citizen-motorist being asked to cooperate in what is clearly an important survey, but which just as probably represents an inconvenience to him at the moment; (2) the police officer being placed in a new role, one which is not aimed at the usual enforcement-and-apprehension dimension or the crisis-intervention-and-assistance dimension of his typical activities; and (3) the scientist-evaluator being confronted with the necessity of achieving the delicate balance necessary between acceptable accuracy for research purposes, on the one hand, and maximal rapid rapport with the motorists-subjects in this real-world survey, on the other hand. The differing needs, interests, and assumptions of these potential factions must be kept clearly in mind during the planning and the conducting of roadside research surveys.

1.2 RATIONALE

Since it is morally impossible to create or replicate severe injury highway crashes for research purposes, relevant data must be obtained in some other way. Although systematic field observation would be the traditional alternative for gathering data, it is not feasible to monitor the natural occurrance of crashes because they are statistically such a rare event that systematic observation would be logistically impossible. Consequently, even though the roadside survey approach is less direct and

involves several additional levels of inference, it may nevertheless be the only effective investigative means which is appropriate and feasible.

The basic problem comprises individuals who personally come to the attention of medical and/or enforcement agencies as a result of involvement in a fatal or serious injury crash. Since these cases are tangible and identified, it is relatively simple to obtain extensive demographic and biographical data concerning these individuals involved. However, no amount of extensive detailing of their individual data provides any reliable insight into the characteristics and composition of the population from which they were sampled. Until we have determined the prevalence of a particular parameter (for example, a characteristic such as a blood alcohol concentration) in the population from which the individual is sampled (the so-called "population-at-risk"), there is no logical or practical way of evaluating the contribution of this particular parameter to the core problem (i.e., alcohol-involved highway crashes). In other words, one approach to understanding and solving the core problem is through identifying those aspects which co-exist or are at equal exposure but which are <u>not</u> an immediate part of the manifest problem, that is, do not become involved in highway crashes. This approach is based upon understanding the normal or adaptive segments of the population in order to gain perspective and insight into the causes for the maladaptive segments of the same population, namely, those who get into trouble on the highway. Unless corresponding data from the properly functioning segment of the population are obtained for comparison purposes, even the most intensified study of persons from the improperly functioning segment would not very likely provide an understanding of the reasons for

their failure, that is, for their having become part of the core problem.

Given these conditions, it becomes necessary to select a sample plan for each set of roadside interviews that will facilitate the collection of the data which are appropriate to the investigation being undertaken. These plans might be based on: (1) hourly traffic densities, (2) times and places of fatal alcohol involved crashes, (3) times and places of serious injury alcohol involved crashes, (4) times and places of all fatal crashes, (5) times and places of all serious injury crashes, (6) police enforcement patterns, (7) randomization.

Furthermore, even though a particular motorist happens to be selected on a pre-arranged random basis and accordingly stopped at a specified point in space-time for the survey, there is no effective means of obtaining the desired information short of actually asking the motorist. Therefore, it is especially important that he be convincingly informed of this need of the scientists and evaluators in order to encourage him to place it high enough in his own hierarchy of needs so that he will in fact cooperate and provide the requested information at the moment.

1.3 FUNCTIONS OF ROADSIDE RESEARCH SURVEYS

The two primary functions of the surveys are: (1) to provide data for describing the basic problem in terms of identification and specification of assumedly relevant parameters, and (2) to provide data for evaluating the results of any changes in circumstances surrounding the basic problem, whether they are the result of unplanned natural events, on the one hand, or controlled premeditated countermeasures, on the other. For the first function, it is necessary to obtain data to describe the core problem as accurately as possible in terms of those parameters which are assumed in advance to be of relevance for both the prevalence and the incidence of the problem (in this case, serious injury highway crashes involving alcohol). Although the roadside survey provides a significant supplement to data from public records, it also represents a means of obtaining certain types of data which probably cannot be duplicated or achieved in any other manner. Furthermore in those programs in which an attempt is made to reduce the magnitude of the basic problem through appropriate actions or countermeasures, it is necessary to specify in advance which parameters will provide a basis for evaluating the relative success of the premeditated actions. In other words, an adequate initial description of the problem and its parameters is a necessary pre-condition for being able to specify and collect the necessary baseline data before the implementation phase of a countermeasure program is actually started. Therefore, the first function must of necessity preceed the second function.

Regarding the second function of these roadside surveys, there are at least three time periods at which they are necessary in order to

achieve a proper basis for adequate evaluation: before, during, and after the countermeasure program. It is important to emphasize at this point that the roadside research surveys can at best provide only intermediate measures of relevance for the basic problem, that is, the surveys cannot provide direct measures of the problem itself which consists of fatal and serious injury crashes involving alcohol.

One of the primary functions of the roadside research surveys is to obtain alcohol information which is assumedly related to the incidence of the basic problem. Thus, no inferences about the impact of the countermeasures can be made unless baseline measures were obtained on the specified parameters prior to starting the countermeasure program since the very implementation of the program is likely to contaminate and/or confound the situation being studied, to such an extent that subsequent separation and analysis of the confounded variables is impossible. These baseline data are of crucial immediate importance to the scientist-evaluator, but they are very likely to be minimized or denigrated by inadequately informed administrators, police officials, and even the citizen motorist (if he is involved prior to the public announcement of the actual program). However, the importance of the baseline data absolutely cannot be overemphasized if subsequent developments in the program are to be meaningfully evaluated.

The second time period for the use of roadside surveys in evaluation consists of the actual implementation phase of the countermeasure program, during which time it may seem relatively more important for the program administrator than for the scientist to obtain relevant intermediate measures on the basis of which to track the assumed impact

of the countermeasures and to catch a provisional preview of emergent trends. Furthermore, if the countermeasure program is focused on the problem of alcohol and highway safety, a subtle additional consideration during this implementation phase concerns evaluation of the influence of the evaluation method itself, namely, the potential influence or intrusion of the roadside research surveys on the very subject which is being studied: driving after drinking. The very knowledge that such surveys are being conducted may well influence the motorists in the area to modify their driving behavior vis-a-vis alcohol. However, there is probably no effective means of either evaluating or obviating this probable intrusion. Suffice it to say that if the intrusive impact of the roadside surveys is sufficient to reduce driving after drinking, then the surveys themselves should be considered as a potential countermeasure.

The last and most obvious time period for use of roadside surveys in evaluation comes at some point after termination of the countermeasure program. It is clearly important at the end of any program to ask whether or not it has been effective; however, a more subtle and frequently unasked question concerns the persistence of the assumed effects over an extended period of time following termination of the program itself. The scientist is more likely to be interested in obtaining post-program data-points for a longer period of time than is the program administrator who is more likely to be pressed by other problems, including limited funds.

Finally, an additional possible function should not be obscured by use of the term "roadside research survey." More specifically, the potential use of the survey occasion for public education purposes should

not be overlooked. It is safe to assume that the citizen-motorist will be more atuned to statements from the roadside research survey personnel and police officers than he would to the same messages presented passively in the mass media. Therefore, in addition to selected written and graphic handouts, the roadside personnel can also deliver key messages at various points throughout the survey; and they should be able to do so very effectively. For example, they can impress upon the motorists the magnitude of the problem of severe crashes involving alcohol, as well as the fact that (1) research is conducted only in those areas which the public feels to be important, and (2) the research program can be no more effective than the support which the public gives it. In conclusion, the interviewer should be able to leave the motorists with the feeling that the responsible public had demanded that he be out there investigating the problem and that, by his very being there, he is able to provide the motorists with the opportunity for cooperating with a program effort which the public themselves had in fact originally instigated and created.

2. PRELIMINARY PLANNING

2.1 INTRODUCTION

To be successful, a survey of any magnitude needs the active cooperation and assistance of a number of agencies and individuals. First of all, the ASAP staff should establish contact and rapport with the highest elected official within its operating jurisdiction, e.g., the governor or the mayor, etc. An invitation to participate in the preliminary planning should be extended to all relevant official agencies (state and local police, Department of Motor Vehicles, Public Safety Commission, State or District Attorney's Association), as well as key members of the legislature, the judiciary, city councilmen, aldermen, selectmen, local press editor, radio and television executives, civic groups, and so on. (If the ASAP administrators wish to withold public announcement of the program until some later date, this fact should be emphasized, particularly to the mass media representatives.) Everyone whose function or interests might be even remotely related to the roadside survey program should be invited initially.

At each step of the preliminary planning, the ASAP coordinator of the roadside research activity should be introduced. It is obviously important to emphasize that the program is supported by ASAP, and that local funding will not be solicited. Demands on the time of departmental or agency personnel will be limited. Furthermore, arrangements should be made for subcontract funding to pay for any time that would not normally be expended in line of duty.

The initially approached official should be asked to designate the individual(s) with whom to establish next contact, if other than himself. Official delegation of responsibility is paramount. This same official will probably be most helpful in suggesting who should be included at the next meeting--an "Invitational Briefing."

2.2 THE "INVITATIONAL BRIEFING"

Once the proposed program has the sanction of the pertinent authorities, an "Invitational Briefing" should be scheduled for those who will be actively involved to acquaint them with the purposes and needs of the project. Material to be covered at this meeting might be presented along the outline below:

2.2.1 Discussion of the local ASAP:

1. In general: Alcohol as a social problem, and how it relates to official responsibility.
2. Brief description of the local ASAP.
3. Roadside surveys in particular.
   - .1 Basic rationale and objectives.
   - .2 General criteria for site selection (e.g., time and place of fatal or serious injury crash, etc.)
   - .3 Financial sponsorship and manpower needs.
   - .4 Logistical considerations.
   - .5 Prototype Roadside Survey: an on-the-spot demonstration. Set date for the actual happening, and schedule preparatory meetings.

Perhaps the most important point on which understanding has to be reached is that the "roadblocks" are being conducted for research

purposes, not for enforcement.[1] Thus, special provisions and contingency arrangements must be planned to accommodate the occasional driver who might not pass the usual visual inspection for "sobriety." It is essential that arrangements be made to insure the immunity of stopped drivers from subsequent prosecution related to the interview, which should include safeguards against subpoena of pertinent ASAP records, questionnaires, etc. This assurance can be included effectively in a letter of introduction (preferably over the signature of an established authority, such as the governor), which will be presented to each driver stopped for interviewing at roadside surveys.

2.2.2 Demonstrations and promotional material. Supplemental techniques to enhance interest at the briefing might include handing out materials on ASAP, the dangers of alcohol-impaired driving, figures or scales on the relation of beverage alcohol and body weight to blood alcohol concentration, etc., as well as demonstrating a working model of the breath sampling apparatus to be used during the survey. Proposed news releases on the briefing and planned use of roadside research surveys would be both welcome and politically expedient. The Prototype Roadside Survey itself will probably provide the next convenient opportunity to acquaint the public with the program, and will furnish meaningful props for effective, imaginative news and television coverage.

2.3 THE PROTOTYPE ROADSIDE SURVEY

It is strongly recommended that at least one roadside survey be scheduled initially to serve both as a dress rehearsal for the ASAP staff and the police and as an opportunity for selected

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[1] Special notes for each section are presented in the Appendix.

officials and mass media representatives to observe the actual operations involved. It is also recommended that special care be given to selecting a rather ideal time and place for the prototype survey, such as a (sunny) Sunday afternoon at a low to medium traffic-flow location which offers clear visibility in both directions and generous off-the-road parking space. A rain date should also be specified in advance.

Since the data obtained at this interview would undoubtedly be contaminated by the attendant publicity, they should not be included in the overall statistics. However, some of the non-personal information obtained could be used in a debriefing and critique after the conclusion of the prototype survey. Such a critique is highly desirable as a source of do's and don'ts to be considered for the future roadside operations. Individual impressions and suggestions should be actively encouraged.

2.4 EQUIPMENT CONSIDERATIONS

2.4.1 Interview vehicle. The ideal type of interview vehicle would be one which allows the interviewer and the respondent to sit facing one another with the recorder sitting either off to the side of the respondent or some place out of his direct line of vision. A suitably equipped utility van lends itself very well to this arrangement, although its high entrance may pose an additional inconvenience for older or infirm persons. However, this limitation can be reduced by using a portable supplementary step which can make the van even easier to get in and out of than

most modern sedans. Furthermore, the typical sedan is not designed to facilitate the recorder's task, and since the lighting is often at or below waist level, it is very difficult at nighttime to read the questions or to have adequate eye contact with the person being interviewed.

A standard van purchased and custom equipped to accommodate the specific requirements of roadside interviewing would probably cost less and be more satisfactory in terms of space arrangements than a factory-equipped camping van or bus. However, the possibility of obtaining one of the latter as a courtesy vehicle from a local distributor is worth investigating.

The use of any official vehicle, such as a state police or local police cruiser, is not recommended for many reasons[1,2], the most obvious being the connotation of intimate association with an enforcement agency. If at all avoidable, a car with official license plates or out-of-state license plates should not be used in order to maximize the impression that the survey is a local undertaking by local people. If the license plates in the state are regionally coded, then an effort should be made to obtain the code letters from that immediate area.

2.4.2 Breath testing equipment. A wide variety of breath sampling and analyzing devices are commercially available. While no attempt will be made here to provide details on specific testing techniques, several different types of systems are available and should be investigated before committing the major financial outlay necessary for purchase. These include: (1) devices which collect samples for later analysis either by the ASAP or a commercial laboratory. These

may be obtained with a built-in screening device for a preliminary BAC estimate on-site, (2) devices which produce acceptably accurate BAC readings on-site, (3) screening tests (e.g., balloons) which require a manual interpolation of BAC, usually from color changes.

Screening tests are unacceptable because of their lack of accuracy. A choice between devices which produce immediate readings and those which merely collect samples must be made on the basis of: (1) relative cost -- both purchase and operation -- for the number of samples contemplated, (2) ease of operation for the ASAP staff, (3) ease of use by the public, (4) legal considerations. The last feature might come into play in several ways. For example, if samples are collected for later analysis, it may be more difficult for someone to hold the ASAP liable for allowing an intoxicated subject to continue driving. The ASAP might (this point should be carefully verified with local legal authorities) be able to claim that it had no way of knowing the subject was legally impaired since it did not receive its BAC test results until, say, the day after the interview was conducted. Also, if a state has a list of "approved" breath testing devices and it does not include a particular make, that make might be a good choice for the ASAP roadside interviews. As long as its results were sufficiently accurate, it would be acceptable to the ASAP, but since it was not "approved," its test would not be admissible as evidence. Hence, there would be little likelihood of ASAP roadside survey data being subpoenaed and an even stronger case for cooperation could be made to prospective interviewees.

3. SELECTION AND TRAINING OF ROADSIDE SURVEY PERSONNEL

3.1 INTRODUCTION

Experience with previous roadside survey projects indicates that many of the surveys are likely to take place during the evening and on weekends, especially if the criteria for site selection are previous fatal and serious injury crashes. These times must be considered in establishing a pool from which to select individual teams for each occasion. Usually, there are enough interested and qualified persons involved or associated to some extent with the project who will volunteer, such as professors, students, school-teachers, shopkeepers, pollsters, wives, etc.

3.2 SELECTION CRITERIA

3.2.1. The interview team. It is desirable to use individuals who have either done some interviewing previously or have at least had experience in dealing with the general public. One advantage of having a large pool of paid volunteers (as opposed to full-time staff interviewers) is that those who do not adapt to the roadside survey situation as well as others need not be called upon again as regularly or at all. Natural enthusiasm is a decided advantage; therefore, avoid using "pressed-into-service" interviewers. Advertise for experienced people if necessary. Extremes of personality and appearance should be absolutely avoided.

Good interviewers and good recorders require different personality characteristics. For example, the interviewer should be mature, stable, and able to establish rapport with the subject who may be apprehensive, belligerent, or garrulous; whereas the recorder needs to be quick, precise, and able to refrain from "entering into the conversation." One

particularly important facility for a recorder is being able to garner information from a long involved response to one question which may actually contain information applicable to several other questions (which then need not be asked).

Both members of the team, but particularly the interviewer, need to have a well-developed sensitivity to people and interpersonal situations. The ability to establish a congenial relationship and rapid rapport cannot be emphasized too strongly. Thus, different roles will need to be played to accommodate varying temperaments; e.g., a period of "courtship and reassurance" would be in order for the reluctant or apprehensive person, whereas a "no-nonsence, let's get on with it" approach is more appropriate for a businessman or someone with limited time.

Wherever possible, interviewers and recorders should be trained and kept together as a pair. (However, it has been found that husband-wife combinations do not usually work out well.) Ideally, one member of each team should have had some relevant previous experience.

3.2.2 The coordinator. One person should be designated who will master-mind the administrative details of the entire roadside survey operation. He will be the liaison between ASAP personnel and the government, police, civic, and social agencies associated with the survey program, as well as the news media. He must be thoroughly knowledgeable concerning the operational aspects of roadside survey interviewing and scheduling. His function might be more aptly defined as "Survey Director."

The coordinator has a major area of responsibility, and the success of the roadside program depends upon him to a very large extent,

not only for his technical know-how, but more importantly for his skill and sensitivity in dealing with the motoring public and with the unexpected.[3,4,5] In the roadside operation itself, he functions as the primary ASAP contact with the motorists (see paragraph 5.6.2). Another function will be missionary work with the police officers, an important activity in that, once briefed, the officers should become ASAP ambassadors in their particular districts (see paragraph 5.4.1).

3.2.3 The police officer. Although the officer's contact with the motorist is limited, it is recommended that considerable discretion be exercised to select experienced officers who can be expected to cope adequately with unpredictable situations which will arise, such as an argumentative[6] or "impaired" driver[7] (see Section 6). It is important to establish an early understanding on this point with whomever is responsible for assigning officers to individual roadside surveys.

3.3 TRAINING

A detailed explanation of ASAP is of primary importance and should include a discussion of alcohol problems in general, starting with the societal and federal level, as well as local involvement and specifically the roadside survey itself.

Both interviewers and recorders should be thoroughly familiar with the interview form, and what results are expected from the data recorded. A brief orientation on data processing technique and practice in actual coding (using a completed interview form) would be most practical. The importance of accuracy and completeness cannot be overemphasized; e.g., if the age is missing, the blood alcohol concentration is of no value in cross-tabulation. A good exercise is

to allow the interviewer to code his own interview a few times (see Section 5, paragraph 5.5.1).

Whatever breath sampling equipment is used should be thoroughly demonstrated, understood, and actually operated under supervision (see Appendix). Since the blood alcohol concentration data is a key factor in the entire operation, obtaining it as smoothly as possible is an important consideration. In all probability, the sampling apparatus will be in full view of the respondent during the survey and the interviewer and/or recorder should be prepared to answer any questions concerning its vital statistics, much as would a factory trained representative delivering an enthusiastic sales pitch.

The coordinator should be actively involved in training the interview teams. He should also be prepared to orient the police officer(s assigned to a particular roadside survey.

4. SCHEDULING

4.1 GENERAL CONSIDERATIONS

To minimize errors and increase efficiency, the responsibility for scheduling the actual roadside surveys should be vested in one person only. The coordinator is of course the most logical candidate for the scheduling job, but if it is assigned to him, he will need good secretarial assistance because of his many field duties.

At least a week before a planned operation, the local police agency responsible for officer assignment should be notified in writing by the master scheduler.(8) If the locations of previous crashes are being used as the criteria for determining survey sites, it is desirable for the coordinator to have a copy of the criterion accident report immediately at hand for reference when requesting an officer assignment for a specific site. (He should also take the report with him later to review details of the crash at the pre-survey briefing.) It is also a good idea to follow up with a telephone call the day before the survey, both as a reminder and to specify more exact details for meeting at an assembly point just before moving on location for the survey(9) (see paragraph 5.4).

4.2 DETERMINATION OF SURVEY STARTING TIME

Ideally, the complete quota for a given site should be obtained instantaneously at the exact moment set by the sampling criterion, e.g., the exact time that a crash had occurred at that site previously. Since this ideal cannot realistically be achieved (unless traffic flow is high and the staff is large -- or the quota is only one driver), the time at which each driver is sampled can only be a more or less close approximation of the time of the criterion crash

itself.

A procedure has been developed which aids in obtaining a consistent distribution of these time approximations at each survey site and also standardizes the criteria for obtaining these distributions across all sites in the program. Thus, the time dictated by the sampling scheme is evenly bracketed by using its clock hour as the midpoint of the time interval allocated for the particular roadside survey. Accordingly, the scheduled starting time for any given roadside research survey can be determined in clock hours as follows:

(a) multiply the target number or quota of respondents for that site by

(b) the length of the average interview (including questionnaire and breath sample) in minutes

(c) divide this total product by 2, and then

(d) subtract the result (in minutes) from the clock-hour time at which the original criterion crash occurred.

It should be noted that this procedure is more appropriate for locations with low traffic flow than with high flow. That is, in the latter case, the full quota might be sampled before or by the desired sampling time if several interview teams were being used. However, this occasional bias is probably worth the savings in the overall ease of scheduling and consistency across all sites which result from use of the suggested procedure for determining survey starting time.

In any event, an adequate buffer must be built into the schedule to allow sufficient time at each site to set up materials, equipment, etc., before the specified beginning of the actual sampling period (see paragraph 5.4).

4.3 SITE SELECTION

The general location of a particular roadside survey site is determined well in advance on the basis of the local ASAP and the criteria for sampling. The latter may involve, for example, (1) a random saturation sample to establish norms or baselines for the area, (2) a highly focused sample specific to places where a large percent of alcohol-impaired drivers are expected and/or have been found in the past, (3) a completely pre-determined sampling criterion based on the time and place of a previous fatal or serious injury crash, or (4) areas in which countermeasures are being implemented.

The specific location of the various survey functions will however be determined at the site. Accordingly, the choice of the actual point at which motorists are initially halted and the place where the vehicles are parked for the survey must be left to the discretion of the officers responsible for the safety of the entire on-highway operation. The final decision on site location may also be influenced by weather and road conditions, traffic flow, visibility, etc. The site -- and especially the initial halting point -- should also be located to minimize availability of "escape routes" which could affect the falidity of the sampling. (10)

4.4. SECURITY

It is very important that as few persons as possible be informed in advance of the times and the exact locations of the sampling sites.

Thus, all information concerning the specific times or places should be confined to those key persons absolutely necessary for the actual planning who can be counted on not to allow unauthorized advance knowledge to become available. Otherwise, the sample could easily become contaminated by the addition of curiosity-seekers or by the omission of persons who would normally have been driving by the site of the particular roadside survey.

5. CONDUCTING THE ROADSIDE RESEARCH SURVEY

5.1 METHODOLOGICAL CONSIDERATIONS

Before initiating the sequence of on-site roadside surveys, several important decisions must be made concerning certain methodological criteria. All personnel involved in conducting the roadside surveys must be thoroughly briefed on the results of these decisions.

5.1.1 Number to be sampled. The number of interviews to be obtained at each site will be constrained by such factors as: (1) availability of personnel and funds, (2) the time period allotted for the field survey phase, (3) the minimum expected rate of traffic flow, (4) the length of the questionnaire, (5) the time required to obtain a breath sample, and (6) statistical considerations. The field time required for the questionnaire and breath sample can be estimated by having several trial runs on which ASAP personnel interview volunteer respondents or each other. The resulting estimates can then be used to determine the maximum number of respondents that one team can interview per unit time, e.g., per hour (assuming sufficient traffic flow to keep the team well-stocked with driver-respondents). Once determined, this rate (the number of respondents per team per hour) can be entered into the master calculation of the number to be sampled, along with the other constraints noted above.

5.1.2 Criteria for admission or exclusion. Categorical exemptions from being stopped should be established in advance for certain types of vehicles (such as buses, interstate trucks, farm tractors, etc.). For each site, an advance decision must be made specifying whether vehicles

will be stopped in both traffic directions or not; and if not, then which direction is the one to be sampled. If the criterion for site selection is a previous crash, then the vehicles should be stopped for the survey traveling in the same direction as the crash vehicle had been. The amount of traffic flow during the period of actual sampling is a useful statistic; if it is to be recorded, then an advance decision must be made whether to count vehicles coming in both directions or just one, and whether to include exempted vehicles in the tally. The stopping officer (or whoever does the traffic count) must be clearly instructed on these points (and he should also be issued a hand-held mechanical counter to help minimize errors).

5.1.3 Criteria for replacement. Having determined the specific quota to be sampled at every site, standard procedure should be developed for processing and/or replacing stopped motorists who do not completely meet any or all the established interview conditions. Motorists for whom replacements must be obtained are those who are selected for stopping, but who then refuse to be interviewed. Motorists for whom replacements should be obtained, but who can nevertheless be processed in part would include: (1) those who are willing to be interviewed, but only have time for a few questions (using a so-called "short-form questionnaire") and breath sample, (2) those who for one reason or another start, but do not complete the interview (e.g., the respondent refuses to answer whole groups of questions, or to give a breath sample), (3) the rare situation in which the stopped driver is not only too impaired by alcohol to drive,but also too impaired to provide meaningful responses to questions and to provide a breath sample

(see Section 6 for detailed procedures for coping with the alcohol-impaired driver). Motorists for whom replacements are not necessary and who should be processed in part are those who have been interviewed in a previous ASAP survey and who have their "participant identification card" with them; for these really rare cases, it is sufficient to record the code number from the previous interview, pertinent information about the current trip, and any driving incidents (crashes or citations) which may have occurred during the interim, as well as to obtain a breath sample.

5.1.4 Determining a coded number for each respondent. There are at least two reasons for assigning a specific code number to each respondent. For the purposes of statistical analysis, it is important to be able to locate and identify the data from each case in the survey. However, for ethical and legal reasons, it may also be imperative to be able to guarantee anonymity and thereby immunity from possible prosecution. Therefore, two levels of numbering may be necessary, one for each need. For the first purpose, it should be adequate to develop a simple nominal code consisting of three or four digits to label the individual for data collection and initial processing (the so-called "roadside identification number"). For the second purpose, it may be necessary to generate a "file number" for each respondent which would include his roadside identification number plus additional digits to specify other characteristics or to obscure his identity completely by means of a scrambled cryptographic code.

Each ASAP group will undoubtably have certain sampling criteria on the basis of which an informative, coded, file number could be constructed for each respondent. For example, the numerical system which was developed

for the particular requirements of Project ABETS specified: (1) the contract year of the interview, (2) the type of sampling criteria (whether for a fatal or for a serious injury crash), (3) the code number of that criterion crash, (4) the interviewing team's number, and (5) the serial order of the respondent for that team at that site. Thus, the file number 2-6-135-2-3 would indicate that this particular interview was obtained in the second year; was matched for a fatal crash (code group 6), which was number 135 in our series; was conducted and recorded by team 2; and was their third respondent at that site.

NOTE: Each respondent's roadside indentification number should appear on each page of his interview form, as well as on his breath test information if the sample is not analyzed at the site.

5.1.5 Pre-coded vs. uncoded interview forms. The most obvious advantage of a pre-coded interview schedule is that subsequent coder time is reduced. However, when this method is used, the availability of data in raw form is sacrificed. In the case of age, for example, there is no way to retrieve the exact age as given to the interviewer once it has been cast in a class interval or code category, which he would have done at the time of the interview if a pre-coded form had been used. See Appendix for sample of an interview schedule which incorporates both pre-coded (#11-12) and uncoded (#17-18 or #20-24) items.

5.2 PUBLIC SAFETY

5.2.1 General. Safety measures protecting the public, as well as interview vehicles and personnel, are primarily the responsibility

of the assigned officer(s). Both public safety and sampling criteria must be considered in reaching the final decision on the exact spot at which motorists will be stopped and the placement of the interview vehicles themselves. While the general location of the roadside survey site will be specified by the ASAP coordinator, the assigned officer should determine the actual stopping point and parking area in consultation with the coordinator.

5.2.2 Authority for cancelling an operation. The officer should have the authority to cancel a particular survey for safety reasons, due to such factors as weather or road conditions at the time; whereas the coordinator should be able to cancel a survey at any time if certain minimal criteria conditions are not met, such as: an unsuitable site, the wrong time, a pre-survey information leak, etc.

5.2.3 Responsibility for handling alcohol-impaired motorists. The assigned officer and the interview team should develop a system of signals to advise one another when a presumably impaired motorist has bee stopped. (See Section 6 for detailed procedures.) Under no circumstances should an impaired driver be allowed to continue freely on his way. (See Appendix for discussion of legal questions.)

5.3 PRE-DEPARTURE PROCEDURE

A complete set of the roadside survey materials should be assembled in a small carrying case, one for each interview team. Each kit should include a generous supply of interview forms, instructions to interviewer introductory letters, participant ID cards for the respondents, informati handouts, pencils, a mechanical counter, etc. (See Appendix for examples of some of these materials.) Once the specific needs have been establish

and the contents of the kits standardized, a checklist should be placed in each case to simplify rapid inventory.

Each interview vehicle to be used should be equipped with a kit, ample operating supplies, and suitable breath sampling device(s). The operating condition of these devices and any auxillary equipment required should be thoroughly checked before leaving.[11] A sufficient supply of "hospitality items" -- appropriate for the time of year and the weather -- should be suitably packed and should include such items as coffee, cream, sugar, soda, and, most important, LOLLIPOPS (the psychological advantage of the latter cannot be overstressed). It is very desirable to obtain a set of reflectorize signs to be used at the survey site for project identification during the day and, additionally,for safety at night.

Before leaving for the survey site, adequate time should be allowed for updating procedural and rendezvous information, for emergency replacement of an absent team member, etc. A cushion of about half an hour, in addition to the estimated travel time, makes for a more relaxed beginning.

Immediately prior to departure, coordinating contact should be made with the police agency responsible for supplying the officer in order to verify the appointment, to obtain the particular officer's name, and to specify clearly the exact time and place of meeting. A police radio will be extremely useful for fine coordination during the final stages of assembling all components of the survey team at the near-site meeting place, especially in low population-density areas.[8,9]

5.4 ASSEMBLY-POINT CONSIDERATIONS

The near-site assembly point furnishes a time and place for pre-survey briefing on the particular operation, especially for the assigned officer who may have little conception of how he is expected to function. It also affords an opportunity for the officer to evaluate traffic conditions at the site and to request additional help if he deems it necessary.

5.4.1 Officer briefing. The coordinator is responsible for briefing the officer, who should first be given a copy of (1) an instruction sheet which details his areas of responsibility and the suggested stopping prodecure, and (2) a brief statement of ASAP's "reason for being" (see Appendix for sample). The coordinator should then briefly review the local project in terms of its purposes and underlying philosophy, its mechanics, logistics, etc., and should actively encourage questions.

The officer should be provided with a mechanical counter and asked to keep a tally of the total number of vehicles passing the site during the time between stopping the first and the last car. (See paragraph 5.1.2 for the relevant methodological considerations.)

The most important points to emphasize during the briefing are:

.1 The roadside survey is a research or evaluation operation, dedicated to getting interviews and breath samples, rather than an opportunity for possible apprehension and enforcement.[1] Communicating this point is extremely important because it represents an approach which is thoroughly alien to an officer's entire background of professional training and practice.

.2 Even in contact with the rare alcohol-impaired

driver during a roadside research operation, getting an interview and breath sample is the first consideration, whereas the safety and well-being of the impaired driver (as well as of the rest of the general public) is a second consideration, and his possible arrest is a third consideration. Since the latter is not the reason for conducting the roadside survey, great pains should be taken: (1) to impress upon the officer that he happens to be at this particular location at this particular time to aid ASAP in collecting research data, not to catch and arrest alcohol-impaired drivers, and (2) to avoid the necessity of arresting such a driver (see Section 6 for a discussion of other available options). It should be re-emphasized that really incapacitated drivers are rare at most survey locations. Nevertheless, the suggested options for coping with such drivers should be well-reviewed with the officer during the briefing.

.3 The less verbal contact between the officer and the stopped motorist, the better.[12] Immediate referral of the motorist to the coordinator (or interview team) serves several purposes: (1) it quickly removes the stopped vehicle from the line of traffic, thus minimizing the risk of a rear-end collision; (2) it reduces motorist refusal rate; (3) a potential source of deviation from standard procedure is eliminated; and (4) the total time for each sampling is kept to a minimum, which is sometimes a crucial consideration in being able to obtain and complete the prescribed number of interviews at a given location.

.4 It is highly desirable for ASAP personnel to have contact with the stopped motorist even though he is not fully interviewed.

In the very rare case of an extremely antagonistic person or of a serious emergency, the officer should use a pre-arranged signal to indicate this situation to the coordinator who should at least attempt to converse briefly with the motorist even though the latter is still out in the highway at the stopping point.

5.4.2 Interview team briefing. The coordinator should: (1) advise the teams on the exact placement of the interview vehicles, (2) review the assignments (such as: each team's number; which team will receive the first motorist; as well as a tongue-in-cheek review of who will interview and who will record), and (3) reiterate the importance of completeness in filling out the forms. The teams should then been reminded to arrange the contents of the kits for use, to activate the breath sampling apparatus (if appropriate), and to set up the hospitality items.

5.5 INITIATING THE STOPPING SEQUENCE

As soon as the interview teams are ready, the officer is directed to stop the first motorist(s) proceeding in the appropriate direction. (The number stopped initially will vary directly with the number of teams present.) The officer should then start his traffic-flow tally on the mechanical counter and continue until he has stopped the last motorist in the sample. To minimize confusion and errors, the interviewed drivers should not be included in this count since they can be added in later by ASAP staff.

5.6 ESTABLISHING RAPPORT WITH THE MOTORIST

5.6.1 At the stopping point. After quickly reassuring the motorist that he has not been stopped for a violation, the officer briefly explains that a roadside survey is being conducted in conjunction with a traffic

safety research program. No rehearsed statement need be adhered to in this initial contact with the motorist, but such loaded words as "alcohol", "drinking-and-driving", etc., should be avoided. The officer should then pleasantly but firmly request the motorist to pull over to the coordinator who is to give him further details.

Since the immediate objective is to induce the motorist to proceed over to the interview site, the officer should feel free to supplement his request with non-verbal aids, such as eye and body movements to cue the driver on the anticipated cooperation. For example, as the officer is saying, "Please pull over to that man...," he can shift his gaze toward the coordinator; and when he finishes the statement, "...who will give you further details," he can then look back down the road toward the on-coming traffic. At this point, he can also stand erect and then step back as though it were quite clear that the motorist would now pull over to the coordinator.

However, if the motorist asks, "Do I really have to?", the answer must of course be that participation is voluntary. In such a case, the officer should avoid any further explanation and should signal the coordinator to take over the discussion quickly. If it is absolutely impossible to effect a meeting between the motorist and the coordinator, it is important that the officer at least get the motorist's reason for refusal, which should then be noted by the coordinator.(13,14)

5.6.2 At the interview site. The most crucial turning point in the whole operation is without doubt the interaction between the motorist and the coordinator. It represents the motorist's first contact with ASAP research staff and therefore can set the stage for meaningful participation or for argumentative refusal. At the point of this first contact

with the coordinator, most motorists are probably still feeling very relieved that they have not been stopped for a violation--real or imagined--and are therefore more favorably disposed to cooperate then they might otherwise be. It is up to the coordinator to channel this relief into meaningful participation in the survey. Thus, the coordinator must be some combination of dedicated apostle, congenial salesman, and skillful lifeman without giving the impression of being a slick huckster or a flip pitchman.

The following ploys and gambits have been selectively sampled from those developed during the roadblock experience of Project ABETS. The length of this subsection reflects the importance of this one crucial aspect of the whole roadside operation.

5.6.2.1 Openers. The initial period of grace, during which the average motorist will probably listen attentively before becoming restless or overtly impatient, is relatively short. Therefore, it is necessary to make a few basic points quickly and convincingly. The chances of actually communicating these messages to the motorist will be increased if they are presented more or less simultaneously in two ways: written and spoken. The coordinator should hand a copy of the governor's letter (or similar document) to the motorist and tell him that this letter explains exactly who *you are*, *what you are* doing out here, and what the general research needs of the survey team are. The motorist is encouraged to keep the letter while the coordinator goes through it briefly to summarize the main points aloud:

.1 We are part of a highway safety research team currently studying crashes throughout the area (mention the state or county, etc. that is actually involved).

.2 This research team is here -- at this particular time and place -- to obtain a comparison group consisting of motorists who are not involved in a crash arrest, or other incident. Although extensive data are available on those drivers who have, for example, been in crashes, this comparison group is necessary because little or nothing is known about those motorists who had essentially the same opportunity to be involved in a crash, but were not. In other words, the comparison group consists of the same drivers using the same roads at the same time of day and the same day of the week. Thus, this new approach to the problem of highway safety needs information from motorists who have not had accidents in order to determine what differences there may be between them and those who did.

5.6.2.2 Coping with questions and resistance. Some of the more frequently raised questions and stated reasons for reluctance to participate are presented here, along with a sketch of the responses and ploys developed by the coordinator to deal with them.

.1 "Can't you take someone else?" Frequently a motorist will show reluctance to participate by suggesting that you ask someone else, such as the driver of the next car to come along. This motorist is in favor of the basic points that you have just reviewed for him and is a cooperative person, but like most of

us has some reason for not wishing to take the time to participate at this particular moment. An effective rebuttal can be developed along the following lines: if the motorist's suggestion were followed, all the information assembled would come only from persons who were not important enough to have any place to go or any particular time to be there. It is taken for granted that everyone being stopped is on his way somewhere and that most of them are either late or just barely on time, so that it is more or less inconvenient for anyone to stop. It is also an inescapable fact that there is no other feasible method for obtaining the desired information while still maintaining the necessary conditions of random selection. Furthermore, in previous surveys, all sorts of persons actually did inconvenience themselves and participated because they considered this highway safety program to be important enough to warrant their time and support (perhaps cite a few plausible instances such as physicians, veterinarians, mailmen, route salesmen, etc.).

As tangible evidence that we feel the motorists and the survey to be very important, point out the fact that many arrangements have been made to reduce the possible inconvenience of participating.[15] These arrangements might include: (1) having a supply of "courtesy gasoline" on hand in case a participant's supply is too low (especially important during cold weather when the respondent may wish to leave his motor running to provide heater use for his waiting passengers); (2) use of the police communication network to advise some designated person that the participant will be a little late (e.g., for an appointment, for dinner, etc.); (3) the wallet-sized card given to each person

interviewed, which verifies his participation by time and date and which could be used to convince his employer, supervisor, spouse, parents, or any other person who might be inclined to doubt his otherwise unsupported statements about his reasons for being late.

Continuing the main theme, but channeling the conversation toward concrete and positive aspects of the interview itself: since the best way to get accurate information about anyone is to ask him directly and to ask him in a manner which is as efficient and rapid as possible for everyone concerned, the interview is conducted by a team of two specialists, one of whom asks questions while the other records the answers on a printed form. In this way, the interview can move along very quickly indeed.

.2 "How long will it take?" Many drivers will ask how many minutes they will have to be there. Avoid giving a specific committing answer that might prove embarassing later. Rather, give a few examples of the type of straight-forward questions which will be asked ("How old were you when you started driving? How many cars have you owned in the last five years?" etc.) Point out that if he is very quick with his answers, the interview team can be just as quick with the questions. On the other hand, if he indulges in lengthy memory searches for information, if he digresses in hi answers or goes off on tangents, or if he starts visiting, then the interview can take much longer. Make it perfectly clear tha the actual time required for the interview is really more dependent on the individual respondent then it is on the questionnair itself.

.3 "Do I have to?" At any point during contact with the motoris, he may question whether or not his participation is mandatory. He should be answered with a very straight-forward, clear-eyed, sincere, "absolutely not, this is entirely voluntary; however, it's an opportunity for responsible, concerned citizens to do something constructive in the area of highway safety."

.4 "What happens if I don't?" The answer to this question has to be, "Nothing." But, if possible, inform him that he would only be the second person out of 300 to do so, or would be the first one since the project started three months ago, etc.

5.6.2.3 Tricks and treats. It is not recommended that the "patter" be memorized; rather, the basic material to be covered should be uniform, but the emphasis, order of presentation, and type of delivery might well differ for each individual.

It is a relatively safe bet that once the driver is encouraged to pull over out of the stream of traffic and is persuaded to listen to the coordinator for a few minutes so that his journey is in fact already quite interrupted, the probability of his subsequent refusal is appreciably lowered. Furthermore, if as the coordinator is explaining the "governor's letter," he speaks in a low voice so that it is necessary for the driver to shut off his motor in order to hear, he is less likely to restart it again at this point after once having shut it off; and the probability of his subsequent refusal is thereby reduced even further.

If there are passengers in the car who might become restless, state that we realize it is harder to sit waiting in the car where nothing is going on than it is to be interviewed ("which is actually very interes-

ting"), and that therefore some modest provisions have been made for the passengers: hot coffee or soft drinks for the adults, and soft drinks or lollipops for the children. If there are actually children in the car, the lollipops never fail; as soon as they are offered, the driver is really hooked.(16)

NOTE: This point in the interaction is an opportune time to distribute ASAP informational handouts to the adult passengers in the car. The local ASAP group should develop and/or solicit some appropriate material on highway safety, etc., for roadside distribution (see the last paragraph of Section 1.3). However, this material must be coordinated with the local ASAP's public education element, if there is one.

The coordinator's invitation soliciting the motorist's participation might conclude with a standardized ending such as, "So all we really need from you is a few minutes of your time spent with the research team in tl interview vehicle." While saying this, the coordinator should step back from the door expectantly (but not too far) to allow the motorist to open it. Under no circumstances should the coordinator actually open the door unless he is specifically and verbally requested to do so by th motorist himself. In nearly every case, nothing further will be necessary, and the motorist will follow nicely to the interview vehicle.

5.6.3 In the interview vehicle. Special care should be taken to assure that the interior of the interview vehicle appears as inviting as possible; for example, at night it should be well-illuminated and should encourage entering; if the weather is cold, the interior should appear warm and cozy; if hot, it should seem cool or should even be air

conditioned; etc., etc. Thus, the perspective respondent would have a clearly visible opportunity to improve his immediate physical status and would thereby be further encouraged to enter and participate. Also, seats and work surfaces should not be unduly cluttered.

As a general rule, the interviewer should be the active dominant person in all interaction with the respondent. After initial introduction and exchange of plesantries, the recorder should become "passive" and fade psychologically into the background.

5.6.3.1 Physical arrangement. Ideally, the interviewer should be seated opposite the respondent in order to maintain eye contact and to pick up other cues. The respondent should be offered the option of having a blank copy of the interview schedule to read or to follow as he might wish. By contrast, the recorder should be seated such that the respondent cannot view the recorded responses, since some individuals have a tendency to protest or argue when one of their eloquent and elaborate responses is condensed into a few oversimplified terms, especially on precoded forms.

5.6.3.2 Cautions concerning beverages and smoking. Some breath testing equipment can be unduly influenced by such factors as tobacco smoke and/or abnormally cold mouths. Therefore, in making hospitality beverages available to the respondent, it must be emphasized that under no circumstances may he drink a cold beverage within the five-minute period prior to providing a breath sample, since the coldness itself, not the contents of the beverage, apparently produces a seriously low breath alochol reading on some testing equipment. Also, a respondent may start to light a cigarette, pipe, or cigar at the beginning or during the course of the interview. He will have to be courteously but firmly

requested to wait a few minutes because the smoke may influence the breath sample which he will be asked to furnish a little bit later. This situation is potentially quite delicate because the breath sample is usually not mentioned until later in the interview, for good reason. However, if at least five minutes have elapsed without the respondent's having smoked or had a cold drink, the breath test may be offered at this point. Most individuals will respond favorably to this suggestion, especially if they are thirsty or are anxious to smoke.

5.7 THE INTERVIEW

It should be clear to all concerned by now that the interviewer is responsible for asking the questions and the recorder is responsible for interpreting the answers and making the appropriate notations on the interview form. Although the interviewer should try to pace the whole questioning process as efficiently as is tolerable and congenial, he must also be aware of the progress and possible predicaments of the recorder because: (1) it is undesirable for the recorder to interrupt the procedure to slow down the interviewer, since (2) it may lead to a tendency for the recorder to ask the respondent questions directly, which (3) might cause the respondent to feel as though he were being interrograted or badgered, thus (4) perhaps reducing the reliability of his answers. If absolutely necessary for the recorder to enter into the interview situation, great care should be taken that the interviewer and the recorder are not both speaking at the same time. Thus, with the

exception of very unusual situations, all conversation should originate from the interviewer during the actual questioning period.

A skilled interview team will of course be able to communicate many important messages and nuances by unobtrusive non-verbal means. Furthermore, both interviewer and recorder must be prepared to be consistently clinical with the respondent, that is, neutral and non-reactive to any response -- however deviant, and to any smell, behavior, or invective -- however deviant, which the respondent may happen to produce. The interviewer especially must be neutral in a non-directive sense and restrain himself from responding to inflammatory or argumentative bait offered during the course of the questioning. However, for the genuinely interested respondent, the interviewer should be prepared to entertain his questions courteously and knowledgeably and to deviate from the interview procedure as much as necessary in order to establish and maintain precious rapport.

Before proceeding with the questioning, the respondent should first be reminded once again of the guaranteed confidentiality and anonymity of his responses. Regarding the interview itself, an attempt should be made to start with the more neutral, more innocuous questions and then build gradually toward the potentially more threatening or more probing questions; for example, going from simple trip-related questions to age, residence, personal data questions, and driving history questions, then to alcohol-related questions, and finally, to the build-up for obtaining the breath sample itself. (See Appendix for example of interview schedule.)

The interviewer must be especially sensitive to questions which are

threatening to the respondent who may indicate his discomfort by suddenly becoming restless and mentioning time pressures or other reasons why he wishes to leave. The skillful interviewer will quickly drop such hot areas and proceed matter-of-factly with the rest of the interview until the respondent has settled down again. At the end of the questioning, the recorder might re-introduce any such omitted topics by simply stating that she did not understand the initial response and might perhaps get the information in this way. In any case, it is much better to obtain a partial interview with breath sample than to allow the interview to be terminated prematurely because the respondent actively wishes to avoid one particular hot area.

A few respondents may object to some of the questions which do not seem directly relevant to highway safety, such as those concerned with one's childhood or family background, and may become annoyed at what they consider a perversion of the purpose for which they consented to be interviewed. One method of de-fusing and reassuring such respondents is by de-personalizing the thrust of the question. For example, appear to side with them slightly by saying that you as an interviewer don't really understand why that particular item is related to highway safety either, but that you have been told the responses of hundreds or thousands of motorists to this question can help build up a large pool of information from which useful interpretations can be made statistically with the aid of computers.

Toward the end of the interview, sufficient rapport should have been developed between the team and the respondent so that he will not be unduly tempted to balk at providing the breath sample when requested. Nevertheless, it is desirable and effective to reassure him again of the

confidential nature of all the data, including the results of the breath test. This step is especially important for the respondent who has been drinking alcoholic beverages prior to being stopped for the survey. It is considered advantageous to have the breath sampling device readily visible to the respondent throughout the entire course of the interview, thereby allowing him to become accustomed to the possibility of providing a breath sample and to prepare himself for the eventual request.

5.8 TERMINATING THE INTERVIEW

At the end of questioning, the interviewer should ask the recorder if she has missed any answers. If so, it is psychologically prudent for her to refer to such blanks by page and question number rather than by question content, since the omission may have occurred in a "hot" area.

The respondent is then given his "Participant Identification Card" to use as verification for the time that he has been detained, to present in case he is stopped at a subsequent ASAP survey site, or simply to use as a status symbol or conversation piece. His roadside identification number, rather than his name, should be entered on the card. Furthermore, appropriate for the particular local ASAP, the motorist can be asked at this time if he would be willing to be contacted again for further participation in the program. If he is agreeable, his name, address, and telephone number should be noted separately from his interview form to preserve the anonymity of the information he has already given.

The interviewer can then thank the respondent for his time and cooperation, escort him back to his vehicle, and proffer any further assistance which might be appropriate and welcomed. As the car is guided back into traffic, the interviewer can signal the coordinator or officer

that he is ready for the next motorist. In the meantime, the recorder has an opportunity to tidy up and stow the used material, set up fresh interview materials, and prepare the breath sampling device (recycling the apparatus if appropriate)for the next respondent.

6. SUGGESTED PROCEDURES FOR COPING WITH THE ALCOHOL-IMPAIRED DRIVER

6.1 INTRODUCTION

Although the probability of encountering an impaired driver at the normative roadside survey is relatively small, it does happen. Since a driver who is actually impaired at that particular time and place represents an especially significant subject for the survey, every effort should be made to elicit his full participation. The suggestions which follow have been developed from the "roadblock" experiences of Project ABETS and do not pretend to be comprehensive. Moreover, the "care-and-feeding" of any person impaired by alcohol is likely to present a unique situation which must accordingly be dealt with on an individual basis. A variety of roles can be played by the officer, the coordinator, and the members of the interview team, each within his own area of responsibility.

6.2 THE POLICE OFFICER'S ROLE

The officer will have the first (although admittedly limited) opportunity to observe and evaluate a driver in terms of his possible alcohol level; and if he feels that a driver is sufficiently impaired to warrant particularly careful observation or even detention after the interview, he should signal this fact in some prearranged fashion to the coordinator or interview team member. The officer will also have a second opportunity to observe this driver if he leaves his car for the interview vehicle. However, in the event that such a motorist starts to pull away from the interview site without participating, the officer should be aware of this deviation and take appropriate measures to stop him.

6.3 THE COORDINATOR'S ROLE

Because of the brief exposure to the stopped motorists, the officer may not have detected that a particular driver had been drinking, and consequently, either the coordinator or interviewer may find himself with a participant who he feels should not be driving. In such a situation, the driver should perhaps be made aware of the fact (1) that he was somehow fortunate enough to get past the officer without giving the impression of alcohol impairment, (2) that there is a pre-arranged umbrella of immunity for persons participating in the roadside research project (if there is), and (3) that his best interests can now be served by full participation in this particular survey.

The coordinator can also point out to a wary or reluctant driver (who has assumedly been drinking) that prior arrangements have been made with the police not to arrest anyone actively participating in this program. However, if the motorist should choose to leave without participating, he should be made aware of the fact that he is, of course,on his own (as would have been the case had the research team not been there at all).

On the other hand, the motorist should be made to realize that if he participates routinely in the survey, the only special action that might be needed would be arranging to have him transported safely to the destination of his choice after the interview. It could also be pointed out that since the police have agreed not to be unduly concerned with cooperating individuals, his status as a participant in this research survey would protect him from being arrested even though the officer might not allow him to drive away in his own car afterward. But if he elects not to be interviewed, then (1) he is not

part of the survey, (2) is therefore the same as anyone else on the road, and (3) may accordingly merit closer scrutiny by the police officer. The extent to which the driver will be able to understand these para-legal niceties will probably be limited by his level of alcohol impairment. Sometimes it may be possible, however, to enlist the help of a passenger to convince the driver that cooperation in the survey is his best option.

6.4 THE INTERVIEWER'S ROLE

In the case of an interview with an impaired driver who has cooperated up to the point of the chemical test and then balks at giving the breath sample, the situation is reduced to one of basic trust. (16,17,18) The interviewer must establish: (1) that he can be trusted, (2) that indeed the "sanctuary of research" exists (whereupon, he can produce a copy of the Governor's letter again as visible proof), and (3) that the sample can be given without jeopardy in any way. Indeed, it would be more prudent or even safer for him to provide the breath sample now, thereby continuing his immunity status intact, than to change his mind at this crucial point and to lose the protection of the research sanctuary.

6.5 DISPOSITION CONSIDERATIONS

As long as a driver has the status of a "research-survey participant, he should be eligible for whatever special arrangements have been made to assure interim immunity. Exactly how the impaired driver will be treated -- either as a "participant" or as a "refusal" -- should be clearly specified well in advance and thoroughly understood by all concerned.

There are several obvious temporary countermeasures for neutralizing an otherwise potentially dangerous, impaired driver. First, if a passenger in the car is legally and physically capable of driving, he could be requested to do so by the impaired driver himself. Second, a transportation option of the driver's choice (private citizen or taxi) can be contacted on his behalf to come and fetch him. (In ASAP areas, a hot-line service for this contingency may already be available.) Third, he can be requested to remain at the site until the roadside survey is terminated, and then be transported by ASAP personnel either to his home or to some neutral ground such as commercial lodging (discretionary funds should be available for the latter). Fourth, he can be transported by the police, if they are willing to assume responsibility for him without necessarily bringing a formal charge against him. Fifth, special drivers such as volunteers from a local civic group may be used to drive the impaired individual home.

Some of the primary legal considerations involved in such cases are discussed in the Appendix.

Finally, if all else fails and the driver is too uncooperative, he can be treated in the traditional manner, arrested, and taken into custody by the police.

7. TERMINATING THE ROADSIDE OPERATION

The procedures and suggestions detailed in this section should all be considered BEFORE LEAVING THE ACTUAL INTERVIEW SITE. It is a great temptation, particularly in the cold dark early morning hours, simply to stow all loose materials and then vanish.

7.1 ON-SITE DEBRIEFING

A short debriefing meeting of all roadside personnel, including the officer, is in order at the end of each operation. It provides an opportunity: (1) to exchange ideas or suggestions to be incorporated in future operations, (2) to answer questions which may have arisen, and (3), most importantly, to insure that the roadside personnel (many of whom are probably volunteers) do not depart with the feeling that their individual roles or opinions have been minimized.

NOTE: The interviewers and recorders should be cautioned that, while the officer is present, they are to avoid any discussion of, or reference to the individuals who have participated or specific information in the interview schedules. One reason for this rule is that the officer may be personally acquainted with persons in the area and such indiscretion could be an inadvertent breach of security--with highly undesirable results.

7.1.1 Debriefing the officer. Usually, the officer will not wish to remain at the interview site any longer than is necessary. However, his comments and questions should be actively solicited, especially since the survey represents a fine opportunity to launch a local ASAP ambassador. A well-informed officer will usually pass

relevant information on to other officers in that particular area, thereby increasing the chances of having an officer who has some idea of what is expected of him assigned to the next roadside survey in that area.

7.1.2 Debriefing the interview team. After the officer has left, the coordinator and the teams should review the interview forms. At this point, any answers which have been missed can perhaps be recaptured while the material is still fresh. The next day or even after a few hours, it will probably be too late to fill in blanks, other than by sheer guessing.

7.2 FINAL CHECKS

The interview teams can police the area for litter and secure all equipment, interview materials, etc., while the coordinator double checks the interview forms for completeness and prepares a summary report of the operation. This report should include any specific points to consider for future operations, unusual situations which may have developed and how they were handled, etc. It has been found that these detailed records and impressions of individual roadside operations provide a rich file of valuable information for later use.

A tape recorder can be a great time and energy saving convenience for collecting the coordinator's on-the-spot observations. However, it is not recommended that the tape be substituted for a subsequently typed report.

After being double checked for completeness, the original and carbon copies of each respondent's interview schedule should be physically separated and transported back to ASAP headquarters in different vehicles.

8. DATA SECURITY, PRIVACY, AND QUALITY CONTROL

Accumulation of useful data is the end product of roadside interviews, whether before, during, or after the implementation of countermeasures. Strict standards for security, privacy, and quality control must be established and maintained at each stage, namely, during the actual collection, the processing, and finally the storage of the data.

8.1 DURING COLLECTION

8.1.1 Physical security. Perhaps the most expedient, the most economical, and the easiest means to minimize the loss of irreplaceable interview information is to have the questionnaire forms filled out in duplicate (e.g., carbon copy). After the coordinator's final check for completeness, the copies should be separated from the originals and each placed in separate vehicles for conveyance to separate interim holding areas.

8.1.2 Privacy. The necessity and provisions for respondent immunity and anonymity have been discussed in preceding sections. Survey personnel cannot be cautioned too frequently concerning the necessity for keeping all information strictly private. Perhaps the most obvious opportunity for "information leak" is during the de-briefing session following the survey. Avoid the temptation to swap anecdotes -- particularly as long as the officer is present.

8.1.3 Quality control. The importance of interview-schedule completeness has been discussed in the sections on training, on operation and on de-briefing. The necessity for completeness cannot be stressed too strongly. However, for the rare case in which information is absent,

admissable categories must be specified for coding these null cases. For example, "no information" can be sub coded as:

(1) ____Respondent doesn't know (or no opinion)

(2) ____Refused to answer

(3) ____Question not asked

(4) ____Not applicable

Establish a code designation for each of these possibilities and have it noted in the margin opposite the blank for which no answer was recorded.

Special care should be exercised to assure that the subject identification number appears on each sheet of the interview schedule, and on the corresponding breath sample record (if any). If a different numbering system is used for the breath sample, this number should also be recorded on the interview form for cross-reference. (See paragraph 5.1.5 for discussion concerning assignment of identification number.)

8.2 DURING DATA PROCESSING

8.2.1 Physical security.

.1 Keep the original and carbon copy of the interview forms in separate places.

.2 After key punching and verification, duplicate decks of the data cards should be generated.

.3 After entering data in the computer, duplicate tapes or discs should be generated.

8.2.2 Privacy.

.1 Control the access to the completed interview forms in both holding locations.

.2 Always use the respondent's identifying code number,

rather than his name, to safeguard identity and anonymity.

.3 Knowledge of the key for determining the roadside identification number should be restricted to ASAP personnel who have a need to know.

.4 If necessary, a file number can be generated for each respondent which would include his roadside identification number plus additional digits to specify other characteristics or to obscure his identity completely by means of a scrambled cryptographic code.

8.2.3 Quality control.

.1 Each respondent's file should be checked for completeness: e.g., the interview form, chemical test results, official record check information.

.2 Each roadside survey's file should be checked for completeness: e.g., the coordinator's summary, roadside survey scheduling form, identification numbers for all respondents interviewed at that site, etc.

.3 Coding. Several strategies are available for quality control of the coding. For example, the coded data can be randomly sampled or spot-checked for accuracy, and the number and percent of errors per items checked can then be determined. A more systematic -- and usually more time consuming -- approach consists of having a given percent of the material coded independently a second time, and then having the results compared with the original to determine the

number and percent of the items on which the two versions do not agree. Analyze errors by question number and individual coder. The coder's name should be on his own work sheets for obvious reasons.

With either strategy, the criterion for acceptance or rejection, in terms of tolerable percent error, should be determined before the quality control is done. This criterion will be greatly constrained by the amount of time and money available.

.4 Key punching. 100% verification is strongly recommended as being well worth the time and effort because the probability of finding errors beyond this point in data processing is exceedingly remote. Accordingly, the coded data should be key punched on cards twice, preferably by a different operator each time. Any differences in results are then reconciled.

.5 At each stage of processing (whether cards, decks, tapes, discs, or print-out), the data must be unambiguously identified and clearly labeled in terms of what it is, when it was done, and by whom.

8.3 DURING STORAGE

8.3.1 Physical security. The same general considerations obtain here as in data processing, except for the additional problem resulting from a tendency to discard raw and intermediate forms of data once the

final form has been reached and the data have been analyzed. It is recommended that at least one set of data in raw (i.e., roadside interview schedules and official record check information) and intermediate (i.e., code sheets, punched cards, tapes, and discs) form be stored for an extended period after completion of analysis, whereas, both sets of data in final form (i.e., print-out) should be stored,separately and indefinitely. Be certain that a copy of the program and the code are stored with each set of print-out.

8.3.2. Privacy. The raw data must be given at least the same level of protection during storage as during active processing. The tendency to view and to treat the old interview schedules, etc., as being no more important than last year's newspapers must be strictly guarded against. Moreover, someone responsibly associated with the ASAP project should be on record specifying the final secured disposition of all interview forms and other identifiable material at the termination of the ASAP or at such point that the raw data are definitely no longer needed.

8.3.3. Quality control. The only major concern during storage is accuracy of retrieval for which the ground work can be done during the data processing stage by clearly and systematically labeling all the various forms of data. The only remaining need then is development of a systematic plan for physical storage which will facilitate rapid and accurate retrieval.

REFERENCES

Borkenstein, R.F., Crowther, R.F., Shumate, R.P., Zeil, W.B., & Zylman, R. The role of the drinking driver in traffic accidents. Bloomington, Indiana: Department of Police Administration, Indiana University, 1964.

Holcomb, R. L. Alcohol in relation to traffic accidents. Journal of American Medical Association, September 17, 1938, 111, 1076-1085.

Lucas, G. H. W., Kalow, W., McColl, J. D., Griffith, B. A. & Smith, H. W. Quantitative studies of the relationship between alcohol levels and motor vehicle accidents. Proceedings of the Second International Conference on Alcohol and Road Traffic, Toronto, Garden City Press Cooperative, 1955.

McCarroll, J. R. & Haddon, W. Jr. A controlled study of fatal automobile accidents in New York City. Journal of Chronic Diseases, 1962, 15, 811-826.

Perrine, M. W., Waller, J. A., & Harris, L. S. Alcohol and highway safety Behavioral and medical aspects. Technical Report No. 2, June 1970, University of Vermont, Contract FH-11-6899, U.S. Department of Transportation, National Highway Safety Bureau.

APPENDIX

.01 Governor's letter of introduction

.02 Informational handout: "Questions & Answers about Project ABETS"

.03 Informational handout: "A Brief Orientation To Project ABETS: Aspects Behavioral and Environmental in Traffic Safety

.04 Instructions for Roadblock Interviewing

.05 Suggested State Police Function at Roadblock Control Sites

.06 Roadblock Schedule form

.07 Questionnaire form used for "control site interview"

.08 Coding instructions used for "control site interview"

.09 "Participant Identification Card"

.10 Examples of news releases

.11 Legal Questions Concerning Roadside Surveys

.12 Selected notes excerpted from the coordinator's reports

PHILIP H. HOFF
GOVERNOR

STATE OF VERMONT
EXECUTIVE DEPARTMENT
MONTPELIER
05602

March, 1968

Dear Motorist:

You have been stopped in connection with a study of human factors in traffic accidents currently underway in the State of Vermont. This project is being conducted by a research team from the University of Vermont under the direction of Dr. M. W. Perrine. The funds were provided by the National Highway Safety Bureau of the U.S. Department of Transportation. This traffic safety project has my full support, as well as that of Attorney General Oakes, Public Safety Commissioner Alexander, and Motor Vehicle Commissioner Malloy. We are inviting you to participate in this study.

The information is to be obtained strictly for scientific research purposes. The research team wishes to determine what sorts of people are driving on a particular road at a particular time. They have information on those drivers who actually have had a serious or fatal accident; however, they don't know much about those who drive and do not have an accident. You have just been stopped for a road-block sample which is an attempt to learn more about this no-accident group. We hope that you will assist the project by giving a few minutes of your time and answering some questions.

Your answers will be completely confidential and known only to the immediate research staff. Your interview will be given a scrambled code number, and your actual name will not even be recorded in their files. Under no circumstances could any information you might give them be used against you or anyone else. Immunity from prosecution on this information is guaranteed.

Only a few persons are being interviewed. Thus, you are being offered a unique opportunity to aid meaningful research on traffic safety. However, you are under no obligation to do so. The information you give is a matter of your own conscience and free decision.

Thank you very much for your consideration and cooperation in this project. It is a study that we hope will make a significant contribution to future safety on our highways.

Philip H. Hoff
GOVERNOR

Project ABETS
University of Vermont
John Dewey Hall
Burlington, Vermont 05401

Questions and Answers about Project ABETS

1. What do the letters stand for:

A spects
B ehavioral
and
E nvironmental
in
T raffic
S afety

2. What is the purpose of the Project?

At the present time, it is primarily an investigation of the relation of alcohol to traffic safety. Our efforts are directed toward: (1) determining the extent to which drinking and driving problems are related, and (2) identifying the conditions under which these problems combine in the form of a motor-vehicle crash.

3. Where is the Project located?

The headquarters of the Project is located in a small reserach building on the University of Vermont campus in Burlington. All the equipment and research materials are housed there, as well as the administrative and research staff, which includes psychologists, sociologists, and a Special Investigator from the State Police. In addition, physicians, pathologists, epidemiologists, mathmaticians and other specialists located elsewhere on campus serve as consultants.

In one sense, the Project may be said to exist throughout the state of Vermont by means of the cooperation of such state officials and agencies as the Governor, Attorney General, Motor Vehicle Departme Liquor Control Board, and many others. The actual research is conduct in all parts of the state, with the assistance and protection of local divisions of the State Police.

4. Who is paying for the Project?

The American taxpayers are, since ABETS is federally funded through the National Highway Safety Bureau of the U.S. Department of Transportation.

5. Are there any other current studies which are the same as the Project ABETS?

Strictly speaking, no. However, two related studies on alcohol safety were initiated simultaneously by the National Highway Safety Bureau, one at the University of Michigan and the other at Baylor College of Medicine in Texas.

6. How long has Project ABETS been in existence?

The Project was funded and formally created on July 1, 1967, although some limited preliminary data were gathered during the preceding year.

7. What did ABETS do in the first year?

During 1967-1968, the scene of almost every fatal crash in Vermont was visited and photographed. All vehicles involved were examined and photographed after the crash. All persons killed in the crashes were also examined.

Interview and laboratory procedures, questionnaires, forms, and apparatus were developed and tested.

Experiments were conducted in which volunteer subjects were given known amounts of alcohol under controlled conditions. At selected levels of blood alcohol, tests were administered which attempted to measure changes in the subject's attitudes and decision-making behavior. Other tests measured changes in coordination and reaction time, as well as visual and auditory perception. Testing these subjects also provided an opportunity to compare and evaluate the different methods available for determining blood alcohol concentrations.

Furthermore, control site interviews were conducted at 142 roadblocks across the state, during which 810 motorists cooporated by providing us with the requested information.

8. What are the roadblocks?

The roadblocks provide a means for interviewing motorists. These interviews in turn provide a statistical control for the motorists who were involved in fatal and serious injury crashes. The specific time

and place of each roadblock is determined by some previous crash.

At each control site, a uniformed police officer stops the first two motorists who appear after the appointed time. At the conclusion of each interview, a new motorist is stopped until a total of six interviews has been conducted at the roadblock. Because of the time-and-place method of roadblock selection, these motorists can be said to correspond roughly to the drivers in the two crash groups in terms of exposure to danger or opportunity to be involved in a crash.

Considering the pace of modern life, motorist cooperation has been remarkable. Almost everyone stopped in the roadblocks has agreed to be interviewed. This fact seems to indicate that people are sufficiently interested in highway safety to spend a few minutes of their shopping, travelling, or recreation time to help us in our efforts to study crashes. In fact, many people regard the interview as a long-awaited opportunity to involve themselves meaningfully with a problem that seems to have touched almost everyone's circle of family and friends.

9. What is requested of the motorist who is stopped at a roadblock?

First, he is asked to spend a few minutes in a Project ABETS car with an interview team composed of two persons, one female and one male. One of the team asks questions from a prepared questionnaire while the other codes and records the answers. The questions are as few in number as possible to cover a person's biography, his normal driving patterns, and his ordinary contacts with alcohol. In addition, a sample of the motorist's breath is requested, which takes less time than the questionnaires, but is equally important. It is necessary to obtain the breath sample in order to quantify the <u>actual</u> alcohol level of each driver interviewed.

10. If a driver had been drinking, wouldn't he be "asking for trouble" by giving a breath sample?

No more or no less than if there had been no roadblock. This problem was considered in the development of the interview procedure. It is of no scientific value to us to incriminate our roadblock subjects in the course of the interview. There are several major safeguards that enable us to say that a driver <u>cannot</u> be involved in this manner.

The initial protection is anonymity. The actual <u>name</u> of the person being interviewed is never connected with the completed questionnaire or the alcohol level. We have no need to know <u>who</u> gave <u>which</u> results, so a code number is used instead of a name.

Another protection is the extension of immunity from prosecution

by the State of Vermont to anyone giving information or samples to Project ABETS in the course of the interview. This immunity has been granted through the office of the Attorney General and from the individual county State's Attorneys.

11. Do you allow a subject to drive away with this immunity if it is felt he is "under the influence?"

No. If the person being interviewed appears to need help in driving, whether from the influence of alcohol, fatigue, illness, or any combination of these, the Project staff will furnish transportatic or make whatever arrangements are either necessary or requested. Of the more than eight hundred persons interviewed so far, no serious problem has yet arisen.

12. What use will be made of all this information?

The information gathered at the roadblocks, from the fatal crashe and from the controlled drinking experiments is being analyzed with the aid of computers at the University of Vermont. The basic question to be answered is: "Are there <u>systematic</u> differences between the drinking drivers who do <u>not</u> become involved in crashes or violations and those who do?" The results are reported directly to the National Highway Safety Bureau which makes them available to the public.

Project ABETS
University of Vermont
634 Main Street
Burlington, Vermont

A BRIEF ORIENTATION TO

Project ABETS: Aspects Behavioral and Environmental in Traffic Safety

Any complex society faces a multitude of domestic problems. One of the gravest for our mobile society is the so-called accident, particularly the motor vehicle accident resulting in property damage, injury, and even death. Last year, crashes on American streets and highways resulted in an estimated $10,000,000,000 economic loss; 1,900,000 persons injured; and 52,500 persons killed. In fact, since the beginning of automotive traffic early in this century, a total of 1,500,000 persons have been killed on our roads, which is nearly three times as many Americans as have died in combat during all our many wars since 1776.

Many people still assume that an accident is some sort of bad luck or act of fate over which we have no control. In recent years, however, scientific research has significantly increased our understanding of certain common factors and recurring patterns in some types of accidents. Through such understanding, we should now at least be able to begin to predict -- and thus prevent -- some accidents. Alcohol, for example, is one factor for which a recurring relation to accidents has been demonstrated.

Numerous studies have shown that a very large proportion of persons involved in serious or fatal traffic accidents have been drinking and that, as a group, they have disproportionately high blood-alcohol concentrations. Furthermore, it has been found that the more severe the accident, the higher the probability that alcohol is involved -- and in substantial amounts.

We know that many people drive and that many drink -- and that many do both. We also know that, of those who drive after drinking, some get into trouble and some do not. The basic question here is: Are there systematic differences between the drinking drivers who do not become involved in accidents or violations and those who do? At Project ABETS, we are currently examining this issue.

Three investigations of alcohol in relation to traffic safety are being sponsored by the National Highway Safety Bureau of the U. S. Department of Transportation as part of its $8.7 million research program in 1967-68. In addition to Project ABETS here at the University of Vermont, which was awarded $115,865 for the task, related research is being conducted at the University of Michigan and at Baylor College of Medicine in Houston. These studies are charged with determining "the extent to which drinking and driving problems involve alcoholics and other abnormal drinkers and the ways by which these can be identified." The federal objective of these three studies "is to develop controlling procedures by improving operational practices and by providing a scientific basis for alcohol-safety programs, policies, and legislation at State and local government levels."

More specifically, Project ABETS has three immediate aims, the first of which is pathologic in orientation, while the other two are behavioral:

1. To investigate all fatal motor vehicle accidents occurring in the State of Vermont during the period July 1, 1967 to June 30, 1968, inclusive.
2. To develop a weighted psychometric index to differentiate across the spectrum of drivers, but especially, to isolate the psychological-biographical correlates of drunken and

problem drivers.

3. To investigate the influence of increasing blood-alcohol concentrations on perceptual-cognitive performance as a function of differences in psychological-biographical variables (including driving record and patterns of drinking behavior).

The experimental design specifies 7 different groups, of which there are 2 types of accidents (fatal and serious injury), 2 types of moving violations (driving-while-intoxicated and non-DWI), 1 accident- and violation-free group, and, in order to assess the driving exposure of the population-at-risk, 2 roadblock control groups (1 for each type of accident). The number of drivers in each of the 5 experimental or treatment groups is 70 and in each of the 2 control groups is 420. Each living driver in the first 5 groups provides extensive information on the following topics at an interview conducted in the Project ABETS research center: biographical background, delinquency history, drinking history, driving history, and accident and violation history. He also completes a variety of personality (neuroticism, sensation-seeking, and introversion-extraversion) and attitude (drinking, driving, drinking-and-driving, death, religion, crashes, risk-taking, hostility, etc.) instruments and participates in a number of perceptual-cognitive and psychomotor tasks, i.e., risk taking, psychomotor reaction time, visual and auditory identification thresholds (including dichoptic and dichotic mesures), and visual information processing. Furthermore, a retrospective case study of each in-state driver fatality is conducted in an attempt to approximate as many as possible of the psychological-biographical characteristics analyzed for the living subjects. Finally, a breath sample and information on a limited number of biographical questions is provided by each

control-group subject at the actual roadblock site, each of which is selected on the basis of specific criteria to maximize the evaluation of the probable population-at-risk for the earlier accidents.

A combined field-and-laboratory study of this magnitude depends for its success upon the cooperation and assistance of a number of agencies and individuals. The staff of Project ABETS currently consists of 19 persons (both full and part time) and includes backgrounds in criminology, epidemiology, forensic pathology, psychology, and sociology. The Project has been most fortunate to have received the full support of Governor Philip Hoff, Attorney General James Oakes, Motor Vehicle Commissioner James Malloy, Public Safety Commissioner E. A. Alexander, members of the Legislative Council of the Vermont State Legislature, the Vermont State's Attorneys Association, and especially, of the many individual State Police and municipal police officers. Furthermore, the drivers and other citizens who have thus far been asked to participate in the study have been extremely cooperative and responsive. This fact is particularly auspicious because the validity of such research findings is primarily a function of the honesty and accuracy of those individuals who provide the data.

M. W. Perrine, Ph.D.

Associate Professor of Psychology
Project Director

Project ABETS
University of Vermont

INSTRUCTIONS FOR ROADBLOCK INTERVIEWING

Preliminary Preparation

Prior to each control site interview expedition, it should be ascertained that the two brown cases are stocked with the necessary materials. The brown cases should contain more than enough control site interview forms; instruction to interviewers; letters from the governor; identification cards for the persons interviewed; cards for the recording of names of the persons who are to be contacted for the clear-record group; and 6 Mobat Sobermeter kits in each box, at least one of which should be a plastic type; pencils; and the Project ABETS interview identification pens should also be in these kits.

The two vehicles to be used should be equipped with a breathalyzer each with at least 4 of the sanitized mouth pieces and a glass bubbler tube plus a supply of acid ampules. Dependent upon the time of day and the climate, a sufficient supply of coffee, sugar, and cream; and/or soda plus lollipops should be taken. It should be ascertained that the mechanical counter and the informational tablets are also in one of the vehicles.

Immediately prior to leaving for the roadblock itself, a space of time should be left for the instruction of any new persons, or for re-briefing any persons who have not currently been going on roadblocks. This would also be the time for information gained from the quality control of preceeding roadblocks to be made available.

Each interviewer will be requested to wear the identification pin plus an additional reflectant to be worn during the evening hours.

The set of Project identifying signs used in the front and rear of the interviewing vehicles should also be included.

The breathalyzers need to be turned on at least half an hour previous to the expected time of use. This is usually done on the way to the roadblock location. The breathalyzers are then set up, acid vials opened, and the machines purged, balanced, and made ready for operation. The supplies are distributed, the signs are displayed upon the vehicle, and the interviewers put on the identifying pins and armbands. The recorders make sure that there is an adequate supply of forms to be filled out plus one for the interviewer to read. The other necessary supplies are also made readily accessible at this time, the interviewer equipping himself with an ample supply of the governor's letter to be given to persons at the time of stopping.

As soon as both teams are ready, the trooper is informed to stop the first two cars approaching from the appropriate direction. The trooper then keeps track of the traffic flow (with the mechanical counter furnished for this purpose), from the time of the actual picking of the first samples until the actual picking of the last samples with the exception of the persons interviewed. On stopping the motorist, the trooper will request that he pull off the road to where the interviewer stands in readiness. The interviewer at this time gives the explanation and invitation.

At the conclusion of the interview, the interviewer goes out with the person who is interviewed and, with the trooper, successfully and safely assists him in getting back into the flow of traffic and continuing his journey. This leaves the interviewer available for the trooper to stop the next approaching car.

The procedure at the conclusion of the control site interview roadblock is the reverse of that at the beginning. Care is taken that the acid from the opened ampule is properly disposed of and the ampule itself plus the used mouth pieces and bubbler tubes are placed in a plastic, water-filled bottle brought for this purpose.

Interview Procedure

The interviewer asks the questions of the person being interviewed and the reocrder records them in the proper places on the interview form. The interviewer should be alert to the progress and possible predicament of the recorder. It should not be necessary for the recorder to interrupt the procedure in order to ask forgotten questions or to slow down the interviewer. This also eliminates the tendency for the recorder to ask questions of the person being interviewed. In some situations this might make the person being interviewed feel as though he were being interrogated or badgered thus making the answers that he is giving a good deal less reliable. Except for unusual situations during the actual interview period when the questions are being asked, all conversation should originate from the interviewer. In situations where it's necessary for the recorder to enter into the interview situation, care should be taken that both the interviewer and the recorder are not speaking at the same time.

Sobermeter Instructions

Unscrew the yellow cap from one end of the tube and replace it with the yellow cap (in the box) to which the balloon can then be attached. Three or four breaths are needed to inflate the balloon and the subject should be warned of this in advance. The balloon is adequately inflated when the distance between the two marks on the balloon measures approximately the width of the

Sobermeter box. Once this is accomplished, remove the blue cap (other end of the tube) for 3 to 4 minutes to allow air to pass through the tubes. Then replace it and the original yellow cap to their respective ends of the tube and fasten both tightly.

The subject should be made aware that the Sobermeter is a method of determining blood alcohol concentration and substantiates the answer that he gives to the question concerning how much he has had to drink at that particular time. He should also be informed that:

- since this is a scientific operation, it is necessary to have specific and concrete measurements in conjunction with his statements concerning alcohol.
- although the sobermeter is a method used in some states by enforcement agencies, it is not used in the State of Vermont, or at least not by the Vermont State Police for enforcement purposes. In fact, such a method cou not possibly apply here as the laws of evidence are not being followed.
- the Attorney General and State's Attorneys have granted immunity from prosecution to participating subjects on any information obtained at these control sites.

Breathalyzer Instructions

The actual use of the Breathalyzer is covered both in the instruction manual and in the operating instructions taped on the inside of the access door in the front of the machines. Fundamentally, the same conversation can accompany the Breathalyzer as would be used with the Sobermeter. The Breathalyzer would be offered first, the Sobermeter being an alternative method.

One of the situations in which the interviewer might use a Sobermeter

is if the subject being interviewed has had a certain amount to drink and is not clear as to the immunity granted him. The fact that the Sobermeter sample has to be analyzed in a laboratory at a later date might help to convince him to give a sample.

The Control Site Interview Form

Most of these questions should be asked exactly as they are written. You can read the question to the respondent. The use of phrases such as "do you mind if I ask you" or "would you be willing to tell me", etc. should be avoided. The question should be asked directly and affirmatively. In cases where there are questions pertaining to recording the responses, record them as accurately as you can in the spaces provided and make adequate side comments in the margin.

Interviewer Instructions

Page	Column	Instructions
1	9	"sets" means seatbelts of any kind; lap, harness, or other. (Make separate notation if shoulder strap is used.)
	10	need not be asked if there are no seatbelts in the car.
	11-12	ask everyone this question and make marginal notes of other times or occasions when seatbelts are usually used.
	13	ask everyone this question. The range of choices is very limited here - make notes of other choices as they occur.
2	27-28	a move is defined as a change in legal residence and/or the moving of one's entire family as in the case of a married student.
3	31-40	refer to childhood as the time up until the person was eighteen years of age. In column 35 where it asks "most of the time" this means more than half of the eighteen years. Columns 36-40 are asked to determine where the subject fits in the birth order of the family. Include half brothers and sisters who were present during more than half the subject's first eighteen years.

Page	Column	Instructions
5	46	"total annual income for the family" it would be advisable to phrase this question as "would the total annual income for your family fit between $2500.00 to $4999.00, $5000.00 to $7999.00, etc. Make a side comment in this column noting the number of persons contributing to the total annual income.
7	9-19	If the person wears glasses, defective vision is to be checked. If the condition mentioned is corrected and took place quite some time age, make adequate side comments. The same would appl to the medications if they are no longer taken. How long were they taken and how long since they were last taken.
8	33	Use the "other" classification for the National Guard. Service in the National Guard is indicated in the previous question.
	35-36	"Total time served", if the person has served in more than one branch, add the two branches together.
10	48	"Did you ever take a driver training course?" Use doesn't apply for those who did not attend high school or those attending who have not reached the point where they have the option to either refuse or take advantage of the course.
11	59-60	"Such vehicles" refers to vehicles in the same class as the vehicle being operated at the time the person is stopped. If he were operating an automobile, how many automobiles; if he were operating a truck, how many trucks, etc.
13	9-10	Zero miles yesterday is to be recorded as "less than 2 miles."
	11	If the subject has no typical day you can use the answer from #9 and specify as such.
	13	If the person has no clear cut answer for this, you should discuss with him the following facts: If he drives 11/2 miles per day it would amount to 500 miles a year. 2 1/2 miles a day would equal about 1000 miles per year 7 miles per day would equal about 25000 miles per year 14 miles per day would equal about 5000 miles per year 27 miles per day would equal about 10,000 miles per year 41 miles per day would equal about 15,000 miles per year. From this discussion, both column 13 and 11 should get an answer
14	15-16	Use as many choices as will fit and write down any other possib' responses.
	18	An answer is easily obtained if you ask "do you do most of your driving during the day or night?" After obtaining an answer to that one, ask "do you do most of it during the weekend or on weekdays?"

Page	Column	Instructions
15	24, 28 32, 38 42	These questions are bracketed and signify record check. Leave these responses blank as they are for use at a future time.
18	49	If the subject does not drink, do not ask these questions.
19	60-61	We want the occasion. "What is the occasion you usually drink alcoholic beverages?" Please note all "other" responses.
	64	Make reference to the drinking frequency of the individual such as, "Among these times you have indicated you have had something to drink, what percentage of them would you say you had occasion to drive afterward?"
19	65-67	Should be asked of everyone. The only time "does not apply" should be used would be if the person had never drank and therefore does not have any basis for an opinion.
20	68	The only reason for a "does not apply" response would be if the subject does not drink.
	69-71	"Does not apply" should be used only if the subject responds that he never drinks the item named.
	72	"Does not apply" should be used only when the person never drinks alcohol.
22	65	Credibility rating should be "3" for good unless something definite indicates otherwise.
	66	It is not necessary to ask this question of out of state persons. This would be a "yes" only if the person is coming in and we are getting his name.

The Identification Number

The first two digits are "02" which indicate the second year.

The second two digits are "60" for the fatal group.

The next two digits are the fatal accident number.

The seventh digit indicates the team number.

The last digit is the subject number.

PROJECT ABETS

UNIVERSITY OF VERMONT

SUGGESTED STATE POLICE FUNCTION AT ROADBLOCK CONTROL SITES

Selection of Roadblock Site

In all our highway sampling, the choice of the actual location will be left to the police officers who are responsible for the safety of the entire on-highway operation. It is expected that the choice will be made after contact with Project ABETS personnel in order to insure that the necessary sampling conditions are met. Although safety requirements must be given high priority, scientific effectiveness is also important and is, after all, our whole reason for conducting the roadblock in the first place.

Stopping Procedure

Past experience has indicated that one officer is sufficient for those roadblock sites where (1) it is possible to have sufficient advance-warning distance, (2) the sample is to be taken from one direction, and (3) a suitable off-highway parking area is available. (The officer with his first-hand knowledge of the site location and of the expected traffic and weather conditions would be the person best qualified to request additional officers at the location if he deems it necessary.)

The officer is then able to stop the motorists safely and request them to pull off the traveled portion of the highway to where the Project ABETS interviewers are standing.

The motorist should be requested to direct any inquiries or conversation to the interviewer rather than to the officer. This rule serves two purposes: (1) it quickly removes the stopped vehicle from the lane of traffic, thus helping to minimize the possibility of a rear-end collision; and (2) it has been found necessary for Project ABETS interviewers to have contact with the stopped motorist even though he is not fully interviewed. In the very rare case of an extremely antagonistic person or of a "life-or-death" emergency, the trooper should signal or otherwise indicate this condition to the interviewer so that he may at least contact and converse briefly with the motorist in the highway.

The officer will be furnished a mechanical counter and will be requested to keep a count of the total number of vehicles passing the site during the time between stopping the first and the last car.

Security

It is very important that as few persons as possible be informed in advance of the times and locations of the sampling sites. Thus, all information concerning the actual times or places should be confined to those key persons necessary for the actual planning who can be counted on not to allow unauthorized advance knowledge to become available. Otherwise, the sample could easily become contaminated by the addition of curiosity-seakers or by the omission of persons who would normally have been driving by the site of the particular roadblock.

Project ABETS
University of Vermont
Tel: 864-4511, Ext. 518

ROADBLOCK SCHEDULE

ROADBLOCK NUMBER: _ _ _ _

R.B. Time _____ R.B. Day _____ R.B. Date _____

Case # _____ Accident Time _____ Accident Date _____

Cars Involved _____ Position of Fatality _____ Vehicle Direction _____

Town _____ County _____ Road Type _____

Accident Location _____

Leaving Time _____ Time Returned _____ Miles Traveled _____(tot.)

Weather Conditions _____ Road Conditions _____

Light Conditions: _____Daylight _____Dawn _____Dusk _____Dark

Names of Policemen Present: _____

_____

Starting Time _____ Completion Time _____ Traffic Flow _____

Speed Limit _____

Drivers:

Interviewed: _____

Plausible Refusals: _____

Adamant Refusals: _____

Total: _____

COMMENTS: _____

_____

_____

_____

_____

Investigating Officer: _____

CONTROL SITE INTERVIEW - DRIVERS

Code Number_ _ _ _ _ _ _ _ Date_____ Results_____

Sample number_____

A. GENERAL INFORMATION

___ 9. How many sets of seatbelts are there in this automobile?
(1)___none (5)___4 sets or more
(2)___1 set
(3)___2 sets
(4)___3 sets

___ 10. Was anyone wearing the seatbelts just now?
(1)___no one was
(2)___only the driver (sole occupant)
(3)___only the driver (passengers present)
(4)___only some passengers
(5)___all the passengers
(6)___driver and some passengers
(7)___everyone was wearing seatbelts
(8)___doesn't apply - no seat belts in vehicle

___ ___ 11-12. Under which one of the following conditions do you most frequently use seatbelts?
(01)___never used (08)___thruways
(02)___bad weather (09)___winter
(03)___late at night (10)___with children
(04)___long trips (11)___always used
(05)___pleasure trips (12)___other (Please specify:_____
(06)___shopping
(07)___short trips

___ 13. Under which one of the following conditions do you usually NOT use seatbelts?
(1)___never used (6)___with a date
(2)___around town (7)___always used
(3)___short trips (8)___other (Please specify:_____)
(4)___when dressed up
(5)___when travelling slowly

___ ___ 14-15. What percent of the time do you use seatbelts when driving?
(01)___never used (07)___50% to 59%
(02)___under 10% (08)___60% to 69%
(03)___10% to 19% (09)___70% to 79%
(04)___20% to 29% (10)___80% to 89%
(05)___30% to 39% (11)___90% to 100%
(06)___40% to 49%

Revised 1 November 1968

___ 16. Sex: (1)___male (2)___female

__ ___ 17-18. What is your birthdate?_____
Month Day Year

___ 19. Are you a:
(1)___U.S. citizen by birth
(2)___naturalized U.S. citizen (At what age?___)
(3)___resident alien (Citizen of what country?_____)
(4)___non-resident alien (Citizen of what country?_____)

__ ___ 20-24. What is your present home address? (legal residence)

_____
City State

___ 25. Where is your present home located? (legal residence)
(1)___on a farm
(2)___in the country, but not on a farm
(3)___in a village
(4)___in a small town
(5)___in the suburbs
(6)___in a small or medium-sized city
(7)___in a large city
(8)___other (Please specify:_____)

___ 26. Do you own the home you are presently living in? (Present accommodations)
(1)___I own my own home
(2)___I rent my present accommodations
(3)___accommodations are provided by my employer
(4)___I live in the home of my parents (or my spouse's parents)
(5)___I live with relatives (What relation?_____)
(6)___I live with friends
(7)___other (Please specify:_____)

__ ___ 27-28. How many times have you moved during the past five years?
(01)___never
(02)___one move
(03)___2 moves
(04)___3 moves
(05)___4 moves
(06)___5 moves
(07)___6 moves
(08)___7 moves
(09)___8 moves
(10)___9 moves

B. MARRIAGE

___ 29. What is your present marital status?
(1)___single (4)___divorced
(2)___married (5)___separated (legally or physically)
(3)___widowed

___ 30. How many times have you been married (including your present marriage)?
(1)___never married (4)___three times
(2)___once (5)___four times or more
(3)___twice

___ ___ 31-32. Were your parents divorced or separated before you were eighteen?
(01)___no
(02)___yes, separated (Your age at that time:_____)
(03)___yes, divorced (Your age at that time:_____)

___ 33. Did your mother die before you were eighteen?
(1)___no
(2)___yes (Your age at time of mother's death:_____)

___ 34. Did your father die before you were eighteen?
(1)___no
(2)___yes (Your age at time of father's death:_____)

___ 35. With whom did you live most of the time before you were eighteen?
(1)___lived with both parents
(2)___lived with mother most of the time
(3)___lived with father most of the time
(4)___lived with another relative most of the time (Please specify:_____)
(5)___lived with a series of different relatives
(6)___lived in a foster home
(7)___lived in an institution
(8)___other (Please specify:_____)

____ 36. How many older brothers did you or do you have?
(Record actual number here:_____)

____ 37. How many younger brothers did you or do you have?
(Record actual number here:_____)

____ 38. How many older sisters did you or do you have?
(Record actual number here:_____)

____ 39. How many younger sisters did you or do you have?
(Record actual number here:_____)

____ 40. No brothers OR sisters
(1)___no sibs in columns 36-39
(2)___doesn't apply-presence of sibs indicated in columns 36-39

C. EDUCATION

____ 41-42. What was the highest grade you completed in school?
(01)___ did not, or does not, attend school
(02)___ attended, but did not complete elementary school
(03)___ presently attending elementary school
(04)___ completed elementary school
(05)___ attended high school, but did not graduate
(06)___ presently attending high school
(07)___ high school graduate
(08)___ special, non-college training beyond high school (i.e., business, trade, technical, etc.)
(09)___ attended college, but did not graduate
(10)___ presently attending college
(11)___ college graduate
(12)___ hold an advance degree beyond the bachelor's degree (i.e., M.A., Ph.D., M.D., D.D.S., etc.)
(13)___ other (Please specify:_____)

D. OCCUPATION

___ 43-44. What type of work do you presently do?
(01)___farming (either my own or my family's)
(02)___working full-time for an employer (for salary, wages, or commissions)
(03)___working part-time for an employer
(04)___have my own business (I do not receive salary, wages, or commissions.
(05)___not employed but looking for a job
(06)___not employed and not looking for a job
(07)___student, going to full-time school or college
(08)___student, going to part-time school or college
(09)___military
(10)___retired
(11)___housewife
(12)___other (Please specify:_____)

___ 45. Who has the principal income in your home?
(1)___self
(2)___spouse
(3)___self and spouse contribute about equally
(4)___parent(s)
(5)___other (Please specify:_____)

___ 46. What is the total annual income for your family?
(1)___less than $1,000
(2)___$1,000 to $2,499
(3)___$2,500 to $4,999
(4)___$5,000 to $7,499
(5)___$7,500 to $9,999
(6)___$10,000 to $14,999
(7)___$15,000 to $19,999
(8)___$20,000 or more

___ ___ 47-48. What is your principal occupation (for example, lawyer, carpenter, high-school teacher, grocery store manager, high-school student, college student, housewife, etc.)? If working on more than one job, list the most important, if retired or unemployed, list the job you had when you were working:

_____

___ ___ 49-50. How many hours per week do you presently work?
(01)___none, not employed at present
(02)___10 hours per week or less
(03)___11-20 hours per week
(04)___21-30 hours per week
(05)___31-40 hours per week
(06)___41-50 hours per week
(07)___over 50 hours per week
(08)___student
(09)___housewife
(10)___retired
(11)___other (Please specify:_____)

___ ___ 51-52. What is the longest period which you have worked for a SINGLE EMPLOYER? (includes self-employed)

(01)___never gainfully employed
(02)___under 3 months
(03)___3 to 5 months
(04)___6 to 8 months
(05)___9 to 11 months
(06)___1 year
(07)___2 years
(08)___3 years
(09)___4 years
(10)___5 years
(11)___6 years
(12)___7 years
(13)___8 years
(14)___9 years
(15)___10 to 14 years
(16)___15 to 19 years
(17)___20 years or more

__ ___ 53-54. How many employers have you had in the last five years?

(01)___none
(02)___one
(03)___two
(04)___three
(05)___four
(06)___five
(07)___six
(08)___seven
(09)___eight
(10)___nine or more

__ __ 55-56. How old were you when you got your first full-time job?

(01) _never had a full-time job
(02)___less than 14 years old
(03)___14 years old
(04)___15 years old
(05)___16 years old
(06)___17 years old
(07)___18 years old
(08)___19 to 21 years old
(09)___22 to 24 years old
(10)___25 to 27 years old
(11)___28 to 30 years old
(12)___over 30 years old

__ ___ 57-58. Breath results_____

END OF CARD 01

E. HEALTH

(READ ALOUD:) I will read a list of common health problems. Please indicate whether or not you have experienced any of them. (check for yes)

Have you ever had:

___9 ___any defect of vision (requiring corrective measures)
___10 ___any defect of hearing
___11 ___diabetes or sugar in the urine or blood
___12 ___epilepsy, fits, convulsions, or loss of consciousness
___13 ___stroke or shock
___14 ___heart attack
___15 ___chest pain, shortness of breath, palpitations, or abnormal heart rhythms
___16 ___high blood pressure
___17 ___nervous breakdown, mental illness, or admission to a sanitarium or psychiatric hospital
___18 ___arthritis, rheumatism, or limitation of movement of any extremity
___19 ___other chronic illness (Please specify:_____)

(READ ALOUD: I will read a list of common medications. Please indicate how frequently you have taken each type during the last five years. (Insert the appropriate number in the blank before each choice.)

___(20) blood pressure pills
___(21) heart pills
___(22) weight-reducing pills
___(23) sleeping pills (prescription)
___(24) insulin
___(25) barbiturates
___(26) tranquillizers
___(27) aspirin
___(28) cold tablets
___(29) sleeping pills (non-prescription)
___(30) cough medicine
___(31) hay fever pills

List of Frequencies

1. never
2. when I need them or when my doctor tells me to take them
3. several times a year
4. several times a month
5. several times a week
6. once a day
7. more than once a day

F. MILITARY SERVICE

___32. Are you now, or have you ever been, a member of any branch of the armed forces?
(1)___no, I have never had any military service
(2)___yes, I am now on active duty in the U.S. armed forces
(3)___yes, I am now in the reserves or National Guard
(4)___yes, I am now on active duty in foreign armed forces
(5)___yes, I have previously served in the U.S. armed forces
(6)___yes, I have previously served in the reserves or National Guard
(7)___yes, I have previously served in foreign armed forces

___33. Which branch of the service are you, or were you in? (longest duration)
(1)___U.S. Air Force
(2)___U.S. Army
(3)___U.S. Coast Guard
(4)___U.S. Marines
(5)___U.S. Navy
(6)___branch of foreign service
(7)___other (What?_____)
(8)___doesn't apply - response (1) in Item 32.

___34. What was the highest rank you attained in the service?
(1)___non-commissioned (What rank?_____)
(2)___commissioned (What rank?_____)
(3)___doesn't apply - response (1) in Item 32.

__ __35-36. How long were you, or have you been, in the service?
(01)___under 3 months
(02)___3 to 5 months
(03)___6 to 8 months
(04)___9 to 11 months
(05)___1 year
(06)___2 years
(07)___3 years
(08)___4 years
(09)___5 years
(10)___6 years
(11)___7 years
(12)___8 years
(13)___9 years
(14)___10 to 14 years
(15)___15 to 19 years
(16)___20 years or more
(17)___does not apply - response (1) Item 32.

G. RELIGION

__ __ 37-38. What is your religious preference?(_____) (List of religions below)

__ __ 39-40. What is the religious preference of your wife/husband?(_____)

__ __ 41-42. What is the relgious preference of your father?(_____)

__ __ 43-44. What is the religious preference of your mother?(_____)

List of Relgions

01. none
02. Adventist, Seventh-day Adventist
03. Baptist
04. Christian - Disciples
05. Christian Science
06. Church of God
07. Eastern Orthodox
08. Episcopal
09. Evangelical United Brethren
10. Friends, Quakers
11. Jewish, Conservative
12. Jewish, Orthodox
13. Jewish, Reform
14. Latter Day Saints, Mormon
15. Lutheran; American, Augustana, Missouri Synod
16. Methodist
17. Presbyterian
18. Roman Catholic
19. United Church of Christ; Congregational, Evangelical, Reformed
20. Universalist, Unitarian
21. Other (Write the name on the line above after the person)

__ __ 45-46. How frequently do you attend church?

(01)___never
(02)___about once a year
(03)___about 3 times a year
(04)___about 6 times a year
(05)___once a month
(06)___several times a month
(07)___once a week
(08)___several times a week
(09)___every day

H. DRIVING HISTORY

___ 47. Name the states in which you currently hold a valid driver's license.
(1)_____(2)_____(3)_____(4)___No license

___ 48. Did you take a driver training course in high school?
(1)___yes, I did
(2)___no, but I did have driver training elsewhere (commercial armed forces, etc.)
(3)___no, but it was available in my high school
(4)___no, it was not offered in my high school
(5)___no, I did not attend high school

___ ___ 49-50. How much driving experience have you had since you first began driving?

(01)___less than one week
(02)___one week to one month
(03)___one month to two months
(04)___3 to 5 months
(05)___6 to 8 months
(06)___9 to 11 months
(07)___1 year
(08)___2 years
(09)___3 years
(10)___4 years
(11)___5 years
(12)___6 years
(13)___7 years
(14)___8 years
(15)___9 years
(16)___10 to 14 years
(17)___15 to 19 years
(18)___20 years or more

___ ___ 51-52. What is the make and year of the vehicle you are now driving?
Make:_____ Year:_____

___ 53. Engine location:
(1)___front (2)___rear (3)___doesn't apply (motorcycle, bicycle, etc)

___ 54. Size of vehicle:
(1)___small, non-sports (VW, SAAB, etc.)
(2)___small, sports (Sprite, etc.)
(3)___medium, non-sports (Chevy II, Falcon, Chevelle, etc.)
(4)___medium, sports (Camarro, Firebird, Mustang, Corvette, etc.)
(5)___large, standard and station wagon, non-sports
(6)___large, standard sports (Thunderbird, etc.)
(7)___oversize, limousines, ambulances, etc.
(8)___doesn't apply - vehicle in question is other than an automobile

__ __ 55-56. Type of vehicle (Note special categories 22-25 for VW's)

(01)___automobile convertible
(02)___sedan, 4-door (or number of doors unknown)
(03)___sedan, 2-door hardtop
(04)___sedan, 2-door not hardtop
(05)___automobile station wagon
(06)___automobile camper
(07)___automobile, other
(08)___motorcycle
(09)___motorbike
(10)___scooter
(11)___truck - panel
(12)___truck - pick-up
(13)___truck - scout or jeep
(14)___truck - dump
(15)___truck - farm
(16)___truck - tractor trailer
(17)___truck - other
(18)___farm machinery (tractor, etc.)
(19)___construction equipment
(21)___bicycle
(22)___VW convertible
(23)___VW microbus
(24)___VW sedan
(25)___VW camper
(26)___bus - school
(27)___bus - other

__ __ 57-58. What is the color of this vehicle?

(Record actual color:_____)

__ __ 59-60. How many such vehicles have you actually owned in the past 5 years? (including the one you are driving)

(01)___none
(02)___one
(03)___two
(04)___three
(05)___four
(06)___five
(07)___six
(08)___seven
(09)___eight
(10)___nine or more

__ __ 61-62. What would you estimate the actual market value of this particular vehicle to be now?

(01)___less than $25.
(02)___from $25. to $49.
(03)___from $50. to $99.
(04)___from $100 to $249
(05)___from $250 to $449
(06)___from $500 to $999
(07)___from $1,000 to $1,499
(08)___from $1,500 to $1,999
(09)___from $2,000 to $2,999
(10)___from $3,000 to $3,999
(11)___from $4,000 to $5,999
(12)___$6,000 or more

___ 63. Considering its age and total mileage, how would you rate the mechanical or operating condition of this vehicle?
(1)___excellent (5)___poor
(2)___very good (6)___bad
(3)___good (7)___very bad
(4)___fair

SMOKING HABITS

__ __ 64-68. Do you smoke cigarettes regularly?
__ __ ___never smoked regularly
__ ___yes
___no, I've quit
___at what age did you start smoking regularly
___at what age did you quit smoking regularly

__ __ 69-70. When smoking regularly, how many cigarettes a day do you (did you) smoke? (01)___none (02-99)_____(actual number)

__ __ 71-73. Have you ever smoked anything else regularly?
(1)___never smoked anything else regularly
(2)___pipe (how many years?_____)
(3)___cigars (how many years?_____)
(4)___pipe and cigars (how many years?_____)
(5)___does not apply

__ __ 74-75. When smoking regularly, do you (did you) usually inhale?
(1)___cigarettes
(2)___pipe
(3)___cigars
(4)___does not apply - does not smoke regularly

___ 76. Were you smoking in your car when the officer stopped you?
(1)___yes
(2)___no

___ 77. When did you have your last cigarette (or pipe or cigar)?
(1)___last smoked more than 24 hours ago
(2)___between 3 and 24 hours ago
(3)___less than 3 hours ago
(4)___less than 2 hours ago
(5)___less than an hour ago
(6)___less than 30 minutes ago
(7)___less than 15 minutes ago
(8)___does not apply -- does not smoke regularly

___ 78. INTERVIEWER: DID THE SUBJECT SMOKE DURING THE INTERVIEW?
(1)___yes; cigarette
(2)___yes; pipe
(3)___yes; cigar
(4)___no

END OF CARD 02

__ __15-16. What is the purpose of this trip?

(01)___going to and from work
(02)___going to and from school
(03)___routes sales (dairy, bakery)
(04)___traveling salesman
(05)___farm work
(06)___use in my work (other than route sales, salesman or farm work)
(07)___transporting children
(08)___shopping
(09)___recreation
(10)___practice driving with adult
(11)___other (Please specify: _____)

___ 17. How frequently do you drive this road?

(1)___less than once a month
(2)___about once a month
(3)___2 or 3 days a month
(4)___4 or 5 days a month
(5)___2 or 3 days a week
(6)___4 or 5 days a week
(7)___6 days a week
(8)___7 days a week

___ 18. During which ONE of the following periods do you do most of your driving?

(INTERVIEWER: Try to elicit ONE response from the subject rather than a combination)

(1)___weekdays, daylight hours
(2)___weekdays, nightime
(3)___weekends, daylight hours
(4)___weekends, nighttime

___ 19. What is the total amount of time that you have spent on the road today?

(1)___less than 5 minutes
(2)___from 5 to 15 minutes
(3)___from 16 to 30 minutes
(4)___from 31 to 59 minutes
(5)___from 1 to 2 hours
(6)___not more than 3 hours
(7)___not more than 4 hours
(8)___5 hours or more

___ 20. How much time has elapsed between the last time you stopped your car and the time we stopped you? (Include stretching legs at gas station, use of rest areas, etc.)

(1)___less than 5 minutes
(2)___from 5 to 15 minutes
(3)___from 16 to 30 minutes
(4)___from 31 to 59 minutes
(5)___from 1 to 2 hours
(6)___not more than 3 hours
(7)___not more than 4 hours
(8)___5 hours or more

___ 21. How many miles are you from your home?

(1)___less than 2 miles
(2)___2 to 4 miles
(3)___5 to 9 miles
(4)___10 to 24 miles
(5)___25 to 49 miles
(6)___50 to 99 miles
(7)___100 to 199 miles
(8)___200 miles or more

(ADMINISTER BREATH TEST)

___ 22. How many times has your license been suspended?

(1)___never
(2)___once
(3)___twice
(4)___three times
(5)___four times
(6)___five times or more

___ 23. How many of these suspensions were received in Vermont?

(1)___none of them
(2)___one of them
(3)___two of them
(4)___three of them
(5)___four of them
(6)___five of them
(7)___does not apply - never received a license suspension.

___ 24. (Record check: License suspensions in Vermont:__)

__ __25-26. How many accidents have you reported in your lifetime?

(01)___none
(02)___one
(03)___two
(04)___three
(05)___four
(06)___five
(07)___six
(08)___seven
(09)___eight
(10)___nine or more

___ 27. How many of these reported accidents occurred in Vermont?

(1)___none of them
(2)___one of them
(3)___two of them
(4)___three of them
(5)___four of them
(6)___five of them
(7)___six of them
(8)___seven or more
(9)___does not apply - no reportable accidents

___ 28. (Record check: Reported accidents in Vermont during subject's lifetime____)

__ __ 29-30. How may accidents have you reported in the past five years?

(01)__none (06)__five
(02)__one (07)__six
(03)__two (08)__seven
(04)__three (09)__eight
(05)__four (10)__nine or more

__ 31. How many of these occurred in Vermont?

(1)__none (6)__five
(2)__one (7)__six
(3)__two (8)__seven or more
(4)__three (9)__does not apply - no reported accidents
(5)__four

__ 32. (Record check: Reported accidents in Vermont during the past five years.)

__ __ 33-34. In how many of the accidents reported in the past 5 years had you had something to drink?

(01)__none (07)__six
(02)__one (08)__seven
(03)__two (09)__eight
(04)__three (10)__nine or more
(05)__four (11)__does not apply - no reportable accidents
(06)__five

How many accidents have you reported in the past three years?
How many occurred in Vermont? _____

[INTERVIEWER: Refer to the attached sheet and record on it the number of each type of violation, and then enter the total number of violations in the blank above.]

__ __ 35-36. How many violations have you been convicted of in your lifetime (exclusive of DWI)?_____

__ 37. How many of these violations occurred in Vermont (exclusive of DWI) _____?

__ 38. (Record check: Violations during the subject's lifetime:_____).

__ __39-40. How many of these violations have you been convicted of in the past 5 years (exclusive of DWI)?_____

__ 41. How many of these occurred in Vermont (exclusive of DWI)?_____

___ 42. (Record check: Violations during the past 5 years:_____)

__ __43-44. In how many of the violations you have been convicted of in the past 5 years had you had something to drink? (exclusive of DWI)

(01)___none of them
(02)___one of them
(03)___two of them
(04)___three
(05)___four
(06)___five
(07)___six
(08)___seven
(09)___eight
(10)___nine or more
(11)___does not apply - no violations

__ __45-46. How many DWI convictions have you had in your lifetime?_____ (categories in 43-44)

__ __47-48. How many DWI convictions have you had in the past five years?____ (categories as in 43-44).

I DRINKING HISTORY

__ __49-50. How often do you usually drink beer?

(01)___never
(02)___about once a year
(03)___about 3 times a year
(04)___about 6 times a year
(05)___once a month
(06)___several times a month
(07)___once a week
(08)___several times a week
(09)___every day

___ 51. How much beer do you usually drink at one time?

(1)___one bottle (typical 12 ounce bottle)
(2)___two bottles
(3)___three bottles
(4)___four bottles
(5)___five bottles
(6)___six pack
(7)___more than a six pack
(8)___does not apply - never drinks beer

__ __52-53. How often do you usually drink wine (or hard cider, sherry, port)?

(01)___never
(02)___about once a year
(03)___about 3 times a year
(04)___about 6 times a year
(05)___once a month
(06)___several times a month
(07)___once a week
(08)___several times a week
(09)___every day

___ 54. How much wine (or cider, sherry, port) do you usually drink at one time?

(1)___4 ounces or less (standard water glass holds 8 ounces)
(2)___5 to 8 ounces
(3)___9 ounces to a pint
(4)___more than one pint
(5)___1 quart
(6)___more than 1 quart
(7)___does not apply - never drinks wine

__ __55-56. How often do you usually drink liquor?

(01)___never
(02)___about once a year
(03)___about 3 times a year
(04)___about 6 times a year
(05)___once a month
(06)___several times a month
(07)___once a week
(08)___several times a week
(09)___every day

___ 57. How much liquor do you usually drink at one time?

(1)___one shot (one shot is about one-and-a-half ounces)
(2)___two shots
(3)___3 to 5 shots
(4)___6 to 8 shots
(5)___one pint
(6)___from one pint to one fifth
(7)___more than one fifth
(8)___does not apply - never drinks liquor

__ __ 58-59. Where do you drink most frequently?

(01)_____home
(02)_____relative's home
(03)_____friend's home
(04)_____bar
(05)_____restaurants
(06)_____private club
(07)_____college fraternity
(08)_____car
(09)_____other
(10)_____does not apply - never drinks any alcoholic beverages

__ __ 60-61. When do you usually drink alcoholic beverages? (obtain only one response)

(01)_____before meals
(02)_____celebrations
(03)_____during meals
(04)_____during outdoor recreation
(05)_____while driving home from work
(06)_____at parties
(07)_____religious rituals
(08)_____casual get-togethers
(09)_____sports events
(10)_____while hunting
(11)_____other times (Please specify:_____)
(12)_____does not apply - never drinks any alcoholic beverages

__ __ 62-63. With whom do you drink most often? (obtain only one response)

(01)_____alone
(02)_____with parents
(03)_____with spouse
(04)_____with children
(05)_____with other relatives
(06)_____with fellow club or fraternity members
(07)_____with casual acquaintances (people whom you have met once or twice before)
(08)_____with brand new acquaintances (people whom you have never met before
(09)_____with friends
(10)_____does not apply - never drinks any alcoholic beverages

__ 64. During the past year, how often have you driven after having had anything to drink?

(1)_____never
(2)_____less than one-half of the time
(3)_____one-half of the time
(4)_____more than one-half of the time
(5)_____always
(6)_____does not apply - never drinks any alcoholic beverages

__ 65. How much beer do you feel that you can drink and still drive safely?

(1)_____no beer
(2)_____one bottle (typical 12-oz. bottle)
(3)_____two bottles
(4)_____three bottles
(5)_____four bottles
(6)_____five bottles
(7)_____six pack
(8)_____more than a six pack
(9)_____does not apply - never drank beer

___ 66. How much wine do you feel that you can drink and still drive safely?
(1)___no wine
(2)___4 ounces or less (standard water glass holds 8 ounces)
(3)___5 to 8 ounces
(4)___9 ounces to a pint
(5)___more than one pint
(6)___1 quart
(7)___more than 1 quart
(8)___does not apply - never drank wine

___ 67. How much liquor do you feel that you can drink and still drive safely?
(1)___no liquor
(2)___one shot (one shot is about one-and-a-half ounces)
(3)___two shots
(4)___3 to 5 shots
(5)___6 to 8 shots
(6)___one pint
(7)___from one pint to one fifth
(8)___one fifth or more
(9)___does not apply - never drank liquor

___ 68. How would you rate your ability to handle alcohol compared to most people?
(1)___much worse than average
(2)___a little worse than average
(3)___about average
(4)___somewhat better than average
(5)___much better than average
(6)___does not apply - never drinks any alcoholic beverages

___ 69. How much beer have you had in the last 24 hours?
(1)___none
(2)___one bottle
(3)___two bottles
(4)___three bottles
(5)___four bottles
(6)___five bottles
(7)___six pack
(8)___more than one six pack
(9)___does not apply - never drinks beer

___ 70. How much wine have you had in the last 24 hours?
(1)___none
(2)___4 ounces or less (standard water glass holds 8 ounces)
(3)___5 to 8 ounces
(4)___9 ounces to a pint
(5)___more than one pint
(6)___1 quart
(7)___more than 1 quart
(8)___does not apply - never drinks wine

___ 71. How much liquor have you had in the last 24 hours?
(1)___none
(2)___one shot (one shot is about one-and-a-half ounces)
(3)___two shots
(4)___3 to 5 shots
(5)___6 to 8 shots
(6)___one pint
(7)___from one pint to one fifth
(8)___more than one fifth
(9)___does not apply - never drinks liquor

___ 72. How long ago did you last consume alcohol?
(1)___has had nothing to drink in the last 24 hours
(2)___between 3 and 24 hours ago
(3)___less than three hours ago
(4)___less than two hours ago
(5)___less than one hour ago
(6)___less than 30 minutes ago
(7)___less than 15 minutes ago
(8)___was drinking when stopped
(9)___does not apply - never drinks any alcoholic beverage

END OF CARD 03

J. PASSENGER INFORMATION

(22)
CSI-D/ABETS

__ __ 9-10. How many passengers do you have?

(01)__none
(02)__one
(03)__two
(04)__three
(05)__four
(06)__five
(07)__six
(08)__seven
(09)__eight
(10)__nine

__ __ 11-12. How old is the first passenger? _____

__ 13. What is the passenger's sex?
1__male
2__female

__ __ 14-15. What is his relationship to you?

(01)__spouse
(02)__father
(03)__mother
(04)__child
(05)__brother or sister
(06)__other relative
(07)__friend of same sex
(08)__friend of opposite sex
(09)__business associate
(10)__other (Please specify:___)

__ 16. Where is he seated?

(1) __center front seat
(2) __right front seat
(3) __left rear seat
(4) __center rear seat
(5) __right rear seat
(6) __space in rear of station wagon
(7) __camper portion of pick-up camper
(8) __other (Please specify:____)
*Other passengers on separate sheets

__ 65. Credibility rating

(1) __poor
(2) __fair
(3) __good

__ 66. Is this subject willing to come in for further testing?

(1) __yes
(2) __no

__ 67. Vehicle direction

(1) __correct
(2) __incorrect

__ 68. Had this subject ever had contact with Project ABETS before?
(1)____yes Circumstances:_____
_____
(2)____no _____

END OF CARD 04

VIOLATIONS

(Write in total for each type of violation)

	Lifetime		5 years	
	Total	Vt.	Total	Vt.
1. (CN) Careless and Negligent Driving				
2. (CNA) Careless and Negligent Driving with an Accident				
3. (CNF) Careless and Negligent Driving, Fatality				
4. (SS) Convicted of Passing Stop Sign				
5. (DE) Defective Equipment				
6. (NL) Driving without a License				
7. (DLS) Driving after License Suspended				
8. (ESL) Exceeding Speed Limit				
9. (IP) Improper Person				
10. (LP) Loaning Number Plates				
11. (LSA) Leaving the Scene of an Accident				
12. (OOC) Operating without the Owner's Consent				
13. (PDI) Permitting a Person to Drive a Motor Vehicle while Intoxicated				
14. (PDR) Permitting a Person to Drive under Revocation				
15. (PDS) Permitting a Person to Drive under Suspension				
16. (PC) Protested Check				
17. (RCT) Refusal of Chemical Test				
18. (MIC) Some other violation				
19. (VLR) Violation of the Law of the Road				
20. (VO) Violation of Local Ordinance				
DWI Driving while Intoxicated				

PASSENGER NUMBER____

__ __ How old is the passenger?____

__ __ What is the passenger's sex?
(1) __male
(2) __female

__ __ What is his relationship to you?
(01) __spouse
(02) __father
(03) __mother
(04) __child
(05) __brother or sister
(06) __other relative
(07) __friend of same sex
(08) __friend of opposite sex
(09) __business associate
(10) __other (Please specify:_____)

__ Where is he seated?
(1) __center front seat
(2) __right front seat
(3) __left rear seat
(4) __center rear seat
(5) __right rear seat
(6) __space in rear of station wagon
(7) __camper portion of pick-up camper
(8) __other (Please specify:_____
_____)

PASSENGER NUMBER____

__ __ How old is the passenger?_____

__ __ What is the passenger's sex?
(1) __male
(2) __female

__ __ What is his relationship to you?
(01) __spouse
(02) __father
(03) __mother
(04) __child
(05) __brother or sister
(06) __other relative
(07) __friend of same sex
(08) __friend of opposite sex
(09) __business associate
(10) __other (Please specify_____)

__ Where is he seated?
(1) __center front seat
(2) __right front seat
(3) __left rear seat
(4) __center rear seat
(5) __right rear seat
(6) __space in rear of station wagon
(7) __camper portion of pick-up camper
(8) __other (Please specify:_____
_____)

REVISED CODE INSTRUCTIONS FOR USE WITH 1967-68 CSI DATA ONLY

August 20, 1968

COLUMN NUMBER	VARIABLE	SPECIFIC INSTRUCTIONS
1--8	Subject Number	Insert "01" before the present subject number and record the entire 8 digits.
9	Seatbelts - Number	Code as is
10	Wearing Seatbelts?	Choices "1" and "3" shall mean, "passengers present but their seatbelt use unknown"
11-12	Seatbelts - When Used	Code as is; interpret travel involving extended mileage as "long trips" 97" includes around town
13	Seatbelts - Not Used	Code as is
14-15	Seatbelts - Percentage Used	Code as is
16	Sex	Code as is
17-18	Age	Code actual age
19	Citizenship	If born in USA and claimed US citizenship code "1", otherwise code as is.
20	Present Address	Code: 1 = Vermont 2 = Maine 3 = Connecticut 4 = Massachusetts 5 = Rhode Island 6 = New Hampshire 7 = Other U.S. 8 = Foreign Country 9 = Does not Apply

COLUMN NUMBER	VARIABLE	SPECIFIC INSTRUCTIONS
21-22	Address - County	Code: 01 = Addison, 02 = Bennington, 03 = Caledonia, 04 = Chittenden, 05 = Essex, 06 = Franklin, 07 = Grand Isle, 08 = Lamoille, 09 = Orange, 10 = Orleans, 11 = Rutland, 12 = Washington, 13 = Windham, 14 = Windsor, 15 does not apply
23-24	Address - Town	See attached Motor Vehicle Code Sheet Code '29' as does not apply
25	Present Home Location	Code as is
26	Present Home Ownership	Code as is
27-28	Times Moved	Code as is
29	Marital Status	Code as is
30	Times Married	Code as is
31-32	Parents Divorced or Separated	Try to determine whether parents were separated or divorced during childhood; if no age is given, check the most appropriate response: Code: 01 = No 02 = Separated 03 = Divorced 04 = Does not apply
33	Mother Died?	Code as is
34	Father Died?	Code as is. Code '0' - no response if parents divorced and lived with mother
35	Childhood - Where Lived	Code as is

COLUMN NUMBER	VARIABLE	SPECIFIC INSTRUCTIONS
36	Number Older Brothers	Code: 1 = none, 2 = one, 3 = two, 4 = three, 5 = four, 6 = five, 7 = six, 8 = seven, 9 = does not apply
37	Number Younger Brothers	Code: 1 = none, 2 = one, 3 = two, 4 = three, 5 = four, 6 = five, 7 = six, 8 = seven, 9 = does not apply
38	Number Older Sisters	Code: 1 = none, 2 = one, 3 = two, 4 = three, 5 = four, 6 = five, 7 = six, 8 = seven, 9 = does not apply
39	Number Younger Sisters	Code: 1 = none, 2 = one, 3 = two, 4 = three, 5 = four, 6 = five, 7 = six, 8 = seven, 9 = does not apply
40	No Brothers or Sisters	Code as is
41-42	Education	Code as is
43-44	Type of Work	Code as is
45	Principal Income	Code as no response -- 0
46	Annual Income	Code as no response -- 0

COLUMN NUMBER	VARIABLE	SPECIFIC INSTRUCTIONS
47-48	Occupation	Code: 01 = Professional: clergyman, dentist, physician, engineer, lawyer, professor, teacher, scientist, etc. 02 = Semi-professional: Accountant actor, pilot, armed forces officer, artist, draftsman, librarian, musician, medical technician, etc. 03 = Manager, proprietor, or executive: sales manager, store manager, factory supervisor, owner of own business, contractor, banker, government official, manufacturer, etc. 04 = Farm Owner 05 = Sales: life insurance, real estate, industrial or farm goods, etc. 06 = Farm manager 07 = Craftsman or foreman: baker, carpenter, plumber, tailor, factory foreman, etc. 08 = Clerical worker: sales clerk, office clerk, bookkeeper, ticket agent, etc. 09 = Operatives: bus driver, chauffeur, deliveryman, route man, taxicab driver, truck or trailer-truck driver, etc. 10 = Service or protective: armed forces enlisted man, barber, beautician, policeman, waiter, fireman, etc. 11 = Farm laborer or farm foreman: 12 = Laborer (except farm): carpenter's helper, fisherman, garage laborer, gardener, longshoreman, truck driver's helper, warehouseman, etc. 13 = Housewife 14 = Other 15 - Does not apply
49-50	Hours Worked Weekly	Code as is - include students
51-52	Employment - Longest Time	Use median of class intervals Use lowest response when a multiple response is given
53-54	Employers - Number of	Code as is - use "11" when type of work makes response impossible

COLUMN NUMBER	VARIABLE	SPECIFIC INSTRUCTIONS
55-56	Employment - First Time	Code as no response '00'
57-58	BAC	Code: 01 = No test given or sample lost 02 = Refused Test 03 = No detectable alcohol 04 = 1 to 9 milligrams % 05 = 10 to 19 milligrams % 06 = 20 to 29 milligrams % 07 = 30 to 39 milligrams % 08 = 40 to 49 milligrams % 09 = 50 to 59 milligrams % 10 = 60 to 69 milligrams % 11 = 70 to 79 milligrams % 12 = 80 to 89 milligrams % 13 = 90 to 99 milligrams % 14 = 100 to 149 milligrams % 15 = 150 to 199 milligrams % 16 = 200 to 249 milligrams % 17 = 250 milligrams % and over 18 = Unknown 19 = Does not apply
59-78		To be left blank
79-80	Card Number	Insert '01'

END OF CARD 01

BEGIN CARD 02

COLUMN NUMBER	VARIABLE	SPECIFIC INSTRUCTIONS
1-8	Subject Number	Insert "01" before the present subject number and record the entire eight digets
9	Vision Defect	Code as no response "0"
10	Hearing Defect	Code as no response "0"
11-19	Other Health Problems as listed -- use code as provided for each health problem	Code: 1 = Problem checked 2 = Problem not checked 9 = Does not apply - no defects checked
20-26	Medications-Prescription	Code as is
27-31	Medications - Non-prescription	Code as no response - "0"
32	Military Service	Code as is
33	Military Branch	Code as is
34	Military Rank	Code as is
35-36	Military Time Served	Code as is
37-38	Religion - Subject's	Code as is unless response is "Protestant" In that event, code "23"
39-40	Religion - Spouse's	Code as is unless response is "Protestant" In that event, code "23"

COLUMN NUMBER	VARIABLE	SPECIAL INSTRUCTIONS
41-42	Religion - Father's	Code as is unless response is "Protestant". In that event, code "23"
43-44	Religion - Mother's	Code as is unless response is "Protestant". In that event, code '23"
45-46	Religious Attendance	Code as is '03' = major holidays
47	Driving - Licensed Where?	Code: 1 = Vermont only (check this if "yes" is circled 2 = Two states including Vermont 3 = Three states including Vermont 4 = One state excluding Vermont 5 = Two states excluding Vermont 6 = Three states excluding Vermont 7 = Foreign country 8 = No license 9 = Does not apply
48	Driver Training	Code as is - for students still in school use "5" (Keep a tally of these cases)
49-50	Driving Experience	Code as is when possible: use median of class intervals when necessary.
51-52	Vehicle Year	Code last two digits of year recorded
53	Vehicle Engine Location	Code as is
54	Vehicle Size	Code as is -- use does not apply for other than passenger automobile
55-56	Vehicle Type	Code as is

COLUMN NUMBER	VARIABLE	SPECIFIC INSTRUCTIONS
57-58	Vehicle Color	Code: 01 = black 02 = white 03 = grey 04 = blue 05 = green 06 = yellow 07 = red 08 = orange 09 = brown 10 = tan 11 = cream 12 = pink 13 = maroon 99 = does not apply Note: If vehicle color does not fit into one of these, code numbers may be assigned so long as everyone is made aware of it.
59-60	Vehicles - Number Of	Code as is
61-62	Vehicle - Value	Code as is
63	Vehicle Condition	Code as is
64-78		To be left blank
79-80	Card Number	Code "02"

END OF CARD 02

BEGIN CARD 03

COLUMN NUMBER	VARIABLE	SPECIFIC INSTRUCTIONS
1 - 8	Subject Number	Insert "01" before the present number and record the entire eight digets
9	Miles Yesterday	Code as is (Code 0 miles as "1")
10	Miles Day Before	Code as is (Code 0 miles as "1")
11	Miles typical day	Code as is (Code '0' if the subject could not answer - code 0 miles as "1")
12	Driving Frequency	Code as is
13	Annual Mileage	Code as is
14	Vehicle Ownership	Code as is
15-16	Purpose of Trip	Code as is (Use "other" category sparingly) "08" shall include errands "06" shall include business
17	Driving Frequency This Road	Code as is "1" shall include "seldom"
18	Driving - Time of Day	Code: 1 = Weekday, daylight hours 2 = Weekday, nighttime 3 = Weekend, daylight hours 4 = Weekend, nighttime 5 = combination of choices 1 & 2 6 = combination of choices 1 & 3 7 = combination of choices 2 & 3 8 = combination of choices 3 & 4 9 = does not apply, that is, some other combination
19	Time on Road - Total	Code "0" - no response

COLUMN NUMBER	VARIABLE	SPECIFIC INSTRUCTIONS
20	Time on Road - Last Stop	Code "0" - no response
21	Miles from Home	Code as is (Code "0" where the question is not on the questionnaire)
22	License Suspended?	Code as is - "2" shall include "yes" response
23	Suspensions - Vermont	Code "0"
24	Record Check - Suspensions	Code: 1 = none, 2 = one, 3 = two, 4 = three, 5 = four, 6 = five or more, 7 = does not apply
25-26	Accidents - Lifetime	Code as is (Interpret reported as covering reportable)
27	Accidents - Lifetime Vermont	Code "0" - no response
28	Record Check - Lifetime (If record check has not been made, leave this column blank)	Code: 1 = none, 2 = one, 3 = two, 4 = three, 5 = four, 6 = five, 7 = six, 8 = seven or more, 9 = does not apply
29-30	Accidents - 5 years	Code as is (Interpret reported as covering reportable)
31	Accidents - 5 years Vermont	Code "0" - no response
32	Record Check - 5 Years	Code: 1 = none, 2 = one, 3 = two, 4 = three, 5 = four, 6 = five, 7 = six, 8 = seven or more, 9 = does not apply

COLUMN NUMBER	VARIABLE	SPECIFIC INSTRUCTIONS
33-34	Accidents - 5 years Alcohol Involved	Code as is
35-36	Violations - Lifetime (Disregard DWI Exceptions)	Code: 01 = none, 02 = one, 03 = two, 04 = three, 05 = four, 06 = five, 07 = six, 08 = seven, 09 = eight, 10 = nine or more, 11 = does not apply
37	Violations - Lifetime - Vermont	Code "0" - no response
38	Record Check - Violations Lifetime Vermont (If no record check has been done, leave blank.)	Code: 1 = none, 2 = one, 3 = two, 4 = three, 5 = four, 6 = five, 7 = six, 8 = seven or more, 9 = does not appl
39-40	Violations - 5 Years (Disregard DWI Exceptions)	Code: 01 = none, 02 = one, 03 = two, 04 = three, 05 = four, 06 = five, 07 = six, 08 = seven, 09 = eight, 10 = nine or more, 11 = does not app
41	Violations - 5 Years Vermont (Disregard DWI Exception)	Code "0" - no response
42	Record Check - Violations 5 Years - Vermont (If no record check has been made, leave blank)	Code: 1 = none, 2 = one, 3 = two, 4 = three, 5 = four, 6 = five, 7 = six, 8 = seven or more, 9 = does not appl
43-44	Violations - 5 Years Alcohol	Code as is
45-46	DWI Convictions - Lifetime	Code "00" - no response

COLUMN NUMBER	VARIABLE	SPECIFIC INSTRUCTIONS
47-48	DWI Convictions 5 Years	Code '00' - no response
49-50	Frequency - Beer	Code frequency if given Code 'never' is never drunk Code 'no response' if drunk but not most frequently
51	Quantity - Beer	Code quantity if given Code 'does not apply' if never drinks Code 'no response' if drinks but not most frequently '08' shall include weekends
52-53	Frequency - Wine	Code as in 49-50 above
54	Quantity - Wine	Code as in 51 above
55-56	Frequency - Liquor	Code as in 49-50 above
57	Quantity - Liquor	Code as in 51 above
58-59	Drink - Usual Place	Code as is
60-61	Drink - Usual Time	Code as is Get-together with relatives and/or friends shall be "03" unless a specific occasion is stated
62-63	Drink - With Whom	Code as is "05" shall mean relatives unspecified
64	Drive after Drinking	Code: 1 = never 2 = less than half the time 3 = one-half the time 4 = more than one-half the time 5 = always 6 = does not apply - never drinks

COLUMN NUMBER	VARIABLE	SPECIFIC INSTRUCTIONS
[illegible]	Drive Safely - Beer	Unless the response refers to beer, refer to what the subject drinks. If beer is drunk most frequently, code as is. If beer is drunk, but not most frequently, code "0" - no response. If beer is not drunk, code "0" - no response.
66	Drive Safely - Wine	Code "0" unless response specifies wine
67	Drive Safely - Liquor	Code "0" unless response specifies liquor
68	Ability to Handle Alcohol	Code as is - better than average shall mean "4"
69	Beer Today	Code "does not apply" if never drunk Code "no response" if drunk but not today
70	Wine Today	Code "does not apply" if never drunk Code "no response" if drunk but not today
71	Liquor Today	Code "does not apply" if never drunk Code "no response if drunk but not today
72	Last Drink	Code as is Code "does not apply" if never drinks
73-78		To be left blank
79-80	Card Number	Code "03"

END OF CARD 03

COLUMN NUMBER	VARIABLE	SPECIFIC INSTRUCTIONS
		BEGIN CARD 04
1-8	Subject Number	Insert "01" before the present number and record the entire number
9-10	Number of Passengers	Code as is
11-64	Passenger Information	Code as is disregarding passenger position when coding. When coding for a passenger who is present, code "0" for position; otherwise use "does not apply" Code ages: 01 = infancy through 2 years 02 = 3 through 5 years 03 = 6 through 10 years 04 = 11 through 15 years 05 = 16 through 20 years 06 = 21 through 25 years 07 = 26 through 30 years 08 = 31 through 35 years 09 = 36 through 40 years 10 = 41 through 45 years 11 = 46 through 50 years 12 = 51 through 55 years 13 = 56 through 60 years 14 = 61 through 65 years 15 = 66 through 70 years 16 = 71 years and over 17 = does not apply 00 = no response
65	Credibility	Code as is
66	Testing	Code as is
67	Vehicle Direction	Refer to the front of the old CSI. If "wrong direction" is written here, code "2", if not assume code "1" to be correct
68	Previous Contact	Code "0" unless otherwise indicated
69-78		to be left blank
79-80	Card Number	Code "04"
		END OF CARD 04

23-24 Address - City:

ADDISON COUNTY (01)

01 = Addison	13 = New Haven
02 = Bridport	14 = Orwell
03 = Bristol	15 = Panton
04 = Cornwall	16 = Ripton
05 = Ferrisburg	17 = Salisbury
06 = Goshen	18 = Shoreham
07 = Granville	19 = Starksboro
08 = Hancock	20 = Vergennes
09 = Leicester	21 = Waltham
10 = Lincoln	22 = Weybridge
11 = Middlebury	23 = Whiting
12 = Monkton	29 = does not apply

00 = NR

BENNINGTON COUNTY (02)

01 = Arlington	10 = Rupert
02 = Bennington	11 = Sandgate
03 = Dorset	12 = Searsburg
04 = Glastenbury	13 = Shaftsbury
05 = Landgrove	14 = Stamford
06 = Manchester	15 = Sunderland
07 = Peru	16 = Winhall
08 = Pownal	17 = Woodford
09 = Readsboro	29 = does not apply

00 = NR

CALEDONIA COUNTY (03)

01 = Barnet	10 = Ryegate
02 = Burke	11 = St. Johnsbury
03 = Danville	12 = Sheffield
04 = Groton	13 = Stannard
05 = Hardwick	14 = Sutton
06 = Kirby	15 = Walden
07 = Lyndon	16 = Waterford
08 = Newark	17 = Wheelock
09 = Peacham	29 = does not apply

00 = NR

CHITTENDEN COUNTY (04)

01 = Bolton
02 = Burlington
03 = Charlotte
04 = Colchester
05 = Essex
[sic] 07 = Hinesburg
08 = Huntington
09 = Jericho
10 = Milton
11 = Richmond
12 = St. George
13 = Shelburne
14 = South Burlington
15 = Underhill
16 = Westford
17 = Williston
18 = Winooski
29 = does not apply
00 = NR

ESSEX COUNTY (05)

01 = Bloomfield
02 = Brighton
03 = Brunswick
04 = Canaan
05 = Concord
06 = East Haven
07 = Granby
08 = Guildhall
09 = Lemington
10 = Lunenburg
11 = Maidstone
12 = Norton
13 = Victory
14 = Ferdinand
29 = does not apply
00 = NR

FRANKLIN COUNTY (06)

01 = Bakersfield
02 = Berkshire
03 = Enosburg
04 = Fairfax
05 = Fairfield
06 = Fletcher
07 = Franklin
08 = Georgia
09 = Highgate
10 = Montgomery
11 = Richford
12 = St. Albans City
13 = St. Albans Town
14 = Sheldon
15 = Swanton
29 = does not apply
00 = NR

GRAND ISLE COUNTY (07)

01 = Alburg
02 = Grand Isle
03 = Isle La Motte
04 = North Hero
05 = South Hero
29 = does not apply
00 = NR

LAMOILLE COUNTY (08)

01 = Belvidere
02 = Cambridge
03 = Eden
04 = Elmore
05 = Hyde Park
06 = Johnson
07 = Morrisville
08 = Stowe
09 = Waterville
10 = Wolcott
29 = does not apply
00 = NR

ORANGE COUNTY (09)

01 = Bradford
02 = Braintree
03 = Brookfield
04 = Chelsea
05 = Corinth
06 = Fairlee
07 = Newbury
08 = Orange
09 = Randolph
10 = Strafford
11 = Thetford
12 = Topsham
13 = Tunbridge
14 = Vershire
15 = Washington
16 = West Fairlee
17 = Williamstown
29 = does not apply
00 = NR

Column # Item Description and Code

ORLEANS COUNTY (10)

01 = Albany
02 = Barton
03 = Brownington
04 = Charleston
05 = Coventry
06 = Craftsbury
07 = Derby
08 = Glover
09 = Greensboro
10 = Holland
11 = Irasburg
12 = Jay
13 = Lowell
14 = Morgan
15 = Newport City
16 = Newport Town
17 = Troy
18 = Westfield
19 = Westmore
20 = Orleans
29 = does not apply
00 = NR

RUTLAND COUNTY (11)

01 = Benson
02 = Brandon
03 = Castleton
04 = Chittenden
05 = Clarendon
06 = Danby
07 = Fair Haven
08 = Hubbardton
09 = Ira
10 = Mendon
11 = Middletown
12 = Mt. Holly
13 = Mt. Tabor
14 = Pawlet
15 = Pittsfield
16 = Pittsford
17 = Poultney
18 = Proctor
19 = Rutland City
20 = Rutland Town
21 = Sherburne
22 = Shrewsbury
23 = Sudbury
24 = Tinmouth
25 = Wallingford
26 = Wells
27 = West Haven
28 = West Rutland
29 = does not apply
00 = NR

WASHINGTON COUNTY (12)

01 = Barre City
02 = Barre Town
03 = Berlin
04 = Cabot
05 = Calais
06 = Duxbury
07 = E. Montpelier
08 = Fayston
09 = Marshfield
10 = Middlesex
11 = Montpelier
12 = Moretown
13 = Northfield
14 = Plainfield
15 = Roxbury
16 = Waitsfield
17 = Warren
18 = Waterbury
19 = Woodbury
20 = Worcester
29 = does not apply
00 = NR

WINDHAM COUNTY (13)

01 = Athens
02 = Brattleboro
03 = Brookline
04 = Dover
05 = Dummerston
06 = Grafton
07 = Guilford
08 = Halifax
09 = Jamaica
10 = Londonderry
11 = Marlboro
12 = Newfane
13 = Putney
14 = Rockingham
15 = Somerset
16 = Stratton
17 = Townshend
18 = Vernon
19 = Wardsboro
20 = Westminster
21 = Whitingham
22 = Wilmington
23 = Windham
24 = Bellows Falls
29 = does not apply
00 = NR

Column #	Item Description and Code

WINDSOR COUNTY (14)

01 = Andover	14 = Reading
02 = Baltimore	15 = Rochester
03 = Barnard	16 = Royalton
04 = Bethel	17 = Sharon
05 = Bridgewater	18 = Springfield
06 = Cavendish	19 = Stockbridge
07 = Chester	20 = Weathersfield
08 = Hartford	21 = Weston
09 = Hartland	22 = West Windsor
10 = Ludlow	23 = Windsor
11 = Norwich	24 = Woodstock
12 = Plymouth	29 = does not apply
13 = Pomfret	00 = NR

PARTICIPANT IDENTIFICATION CARD

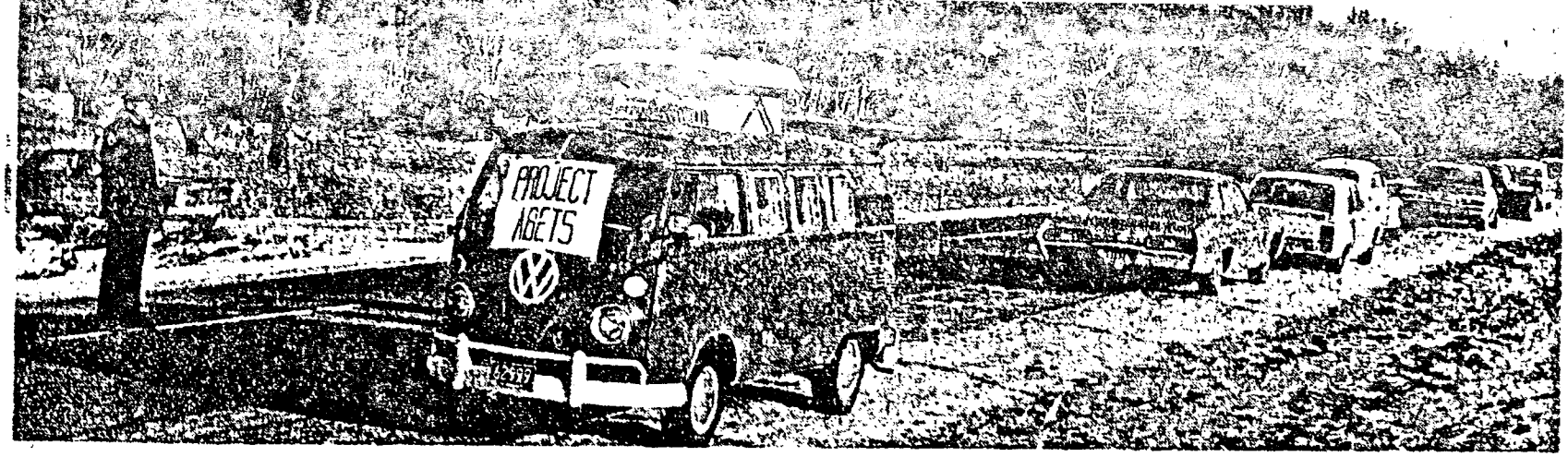
Project ABETS
634 Main Street
Burlington, Vermont

University of Vermont
864-4511
Extension 518, 519

WE ARE CONDUCTING A STATEWIDE INVESTIGATION OF HUMAN FACTORS IN TRAFFIC ACCIDENTS AND ARE BEING FUNDED BY THE U.S. DEPARTMENT OF TRANSPORTATION. THE INFORMATION YOU PROVIDE WILL HELP US TO DETERMINE WHY SOME PEOPLE HAVE ACCIDENTS AND OTHERS DO NOT. OUR FINDINGS WILL EVENTUALLY BE USED TO HELP PREVENT ACCIDENTS ON OUR HIGHWAYS. ALL INFORMATION YOU GIVE WILL BE ENTIRELY CONFIDENTIAL AND WILL ONLY BE USED FOR RESEARCH PURPOSES.

THANK YOU FOR YOUR COOPERATION.

CODE #_____ _____
INTERVIEWER



State police direct traffic at roadblock set up to test non-crash drivers at road fatality site.

ABETS Hunts for Clues to Auto Crashes

By BETTY SPROSTON

The word is CRASH.

"We're no longer using the word 'accident.' Too many still assume an accident is some sort of bad luck or act of fate over which they have no control," said Dr. M.W.Perrine, director of ABETS, short for Aspects Behavioral and Environmental in Traffic Safety.

Project ABETS began a new series of road blocks last week in Ferrisburg, scene of a fatal crash.

With the experience gained from 142 roadblocks last fiscal year, an enlarged staff, and refunding from the federal government, the first of 100 planned roadblocks this year started off with several new aspects.

The roadblocks are set up with the complete sanction and cooperation of the Vermont State Police, by a trained staff, to obtain facts on the part alcohol and drugs play in road fatalities.

The roadblocks are established where a fatality occurred, at the same site, the same time, and the same day of the week.

The roadblock questionnaire seeks information on the blood alcohol concentrations of drivers at the fatality point who have not been involved in a fatal crash at the site.

"We know that many people drive and that many drink, and that many do both. We also know, of those who drive after drinking, some get into trouble and some do not.

"The basic question is: Are there systematic differences between the drinking drivers who do not become involved in a crash, and those who do? This is what ABETS wants to find out," said Dr. Perrine.

Preliminary results indicate that in a fatal crash there is a 50-50 chance the driver is legally drunk. The role of alcohol in the fatality increases in proportion to whether the crash occurred during the day or night; whether it's a weekend night; and if the driver is a male, and under 40.

To determine the alcohol content in drivers' blood at the roadblocks, ABETS this year will use a new method — by Breatholizer. The subject breathes into a tube attached to an apparatus which produces a

Special investigator I.W.Maranville of the Department of Public Safety, who conducts the interviews, stressed information on the roadblock questionnaires is entirely confidential. And no driver is subject to arrest.

Cooperation is a voluntary matter. But almost every driver stopped at the roadblocks last year cooperated, and felt he had contributed to the overall research on public safety, said Maranville.

Project ABETS is also concerned with the precise measurement of the effect of specific alcohol concentrations on drivers' perception and ability to respond properly to situations which may confront them on the road.

This means the simulated cocktail parties will be continued. A participant drinks vodka punch in amounts determined for his body weight, at 15-minute intervals.

Blood samples taken at the "party" determine the alcohol content. The participant also takes various simulated driving tests; his risk-taking behavior is tested; and his attitude and

This year, the enlarged staff will conduct interviews at the ABETS office on upper Main Street with persons having DWI violations records; with persons holding a record of non-DWI violations; and third, with drivers who have clear road records.

Interviews will continue this year with drivrs involved in fatal crashes and with drivers involved in serious-injury crashes.

The drivers are asked to come to Burlington; they receive traveling expenses and $15.

Information is obtained from drivers in all five categories on their education; occupation; marital status; jobs; religion and religious activity; age; and other factors.

Also new this year will be screening for the effect of the combination of therapeutic drugs and alcohol on drivers.

Controlled experiments with drivers who are administered therapeutic drugs such as antihistamines, barbiturates, tranquilizers, together with alcohol, will be conducted.

This will be the first time such drug experiments have been conducted, said Perrine. It is

As the project goes into its second year, Perrine says, "We have significantly increased our understanding of certain common factors and recurring patterns in some types of crashes.

"We should be able to begin to predict — and thus prevent — some crashes.

"Alcohol is one factor which has a recurring relation to crashes."

The Burlington Free Press, Friday, Sept. 27, 1968

The Burlington Free Press

DECEMBER 11, 1967 Burlington, Vermont, On Beautiful Lake Champlain MONDAY Page 13

Claudia Cavagnaro (left) prepares to inflate balloon which Dr. M. W. Perrine is holding. Both are of research team.

Entirely Anonymous

Mr. X Can Help Highway Safety Study

Mr. and Mrs. Robert X and their three little xxx's went for a ride Sunday afternoon and ended up taking part in a scientific research project.

This family of five was in one of 16 cars halted on U.S. 2 in Bolton by State Police working in cooperation with a University of Vermont research team studying major human factors in traffic accidents.

While Mrs. X and her three children waited about 15 minutes in the car, Mr. X had coffee and answered questions in an oversized station wagon parked nearby. He wasn't asked his name, didn't have to produce his driver's license or inspection sticker, and his cooperation was entirely voluntary.

He told the questioners where his trip had started, and where he was going. He described his education, occupation, marital status, health, and how many miles he drives each year. He told them how often he travels over that particular stretch of road. He blew up a balloon as a test for whether he had been drinking.

He was also one of those who, in the interest of improved highway safety, agreed to visit the headquarters of Project ABETS at 63 Main St., Burlington, in the next two weeks for more extensive testing of personality, attitudes and visual perception. ABETS stands for Aspects Behavorial and Environmental in Traffic Safety.

Dr. M. W Perrine, associate professor of psychology at the University of Vermont and project director, said this road block was "the first of many which we will be conducting.

"We are trying to determine what sort of people are on the road at a given time. We know, of course, the ones who have accidents. Now we need to know more about the many who drive and don't have accidents.

"Because this survey is strictly for scientific research purposes, we can promise anonymity to all drivers who cooperate. No information they give will be used against them in any way. In fact, after we finish an interview, it is assigned a scrambled code number by which we identify the case throughout our analysis.

"No record is kept of the person's actual name. He will simply be providing information that will assist us materially in our study of traffic accidents."

Dr. Perrine said the project has the support of the governor's office, the attorney general and the commissioners of Public Safety and the Motor Vehicle Departments, and before setting up a road block, he said, the state's attorney of the county concerned will be notified and the project discussed with him.

The University of Vermont project is primarily interested in the role of alcohol in accidents. The project began July 1 and is financed by a $115,865 award from the National Highway Safety Bureau, U.S. Department of Transportation.

LEGAL QUESTIONS CONCERNING ROADSIDE SURVEYS

Of the many possible legal considerations, two basic areas are of primary concern: (1) the lawful and responsive participation of the police agencies within the testing jurisdictions, and (2) the ethical irresponsibility and financial liability that can be brought against all the parties involved in the testing operation, including the Federal Government.

It is the opinion of some lawyers that should a police agency make a policy decision to not participate in a roadside survey on the grounds that it is their obligation to arrest any identifiable DWI, they are perfectly within their rights to do so. Experiences to date have generally shown that the law enforcement agencies do not follow this line so narrowly, but it must be acknowledged that they have the prerogative to make this negative determination.

In those instances in which the Governor of a State will grant immunity from prosecution of the DWI laws to the participants of the survey, the police department may be more cooperative. It should be kept in mind that only the Governor (and in some States this may not be constitutionally allowable) can grant immunity from State statutes, and most DWI laws are enacted by the State legislatures. Those projects in smaller jurisdictions than Statewide cannot use legally, any professed immunity by the chief executive of that jurisdiction.

There are two basic approaches to police involvement in the roadside interview. The first is that when the officer stops the vehicle, requests the driver to participate in the survey, and the driver displays obvious manifestations of intoxication, the police officer then places that person under arrest for DWI. A question may

arise as to whether this arrest is legal since the physical stopping may be challenged as unwarranted for the purposes of such arrest. Such stopping is probably a proper and justifiable one which would be sufficient to substantiate the arrest. The second approach would be one in which the stopping officer takes no action at that time other than to request the person to participate in the research program.

One vital role of the law enforcement agency is to have an officer and vehicle available at the testing site (either as a stopping officer or in the immediate vicinity) in the event an obviously or identifiable drunk driver refuses to be driven home by staff personnel. In these cases, the police officer should direct the person to be driven home, or face a possible arrest. If he still refuses, the person can then be placed under arrest for refusing to obey the lawful instructions of a police officer and either placed under custody or driven home by the officer. This is such an important element in the framework of the survey that it is strongly recommended that if a police agency does not participate in at least this part of the program, there be no roadside survey.

The second area of major legal concern is the ethical irresponsibility and financial liability that may result from the conduct of these surveys. This factor deals primarily with an identified drinking-driver who refuses to be driven home, takes off down the road and is subsequently involved in an accident. Should this incident be allowed to occur, not only will all of the individuals and agencies involved in the project be subject to a law suit for damages sustained as the result of such an accident (which, in the event of a fatality or serious injuries, can be extremely high), but the entire project can be open to severe criticism for allowing a known inebriate to go back on the road once he has been

identified. That is why it is so important for the law enforcement agency to be available to prevent impaired drivers from getting back on the highway.

Another potential area of financial liability is the negligence of staff personnel in driving the impaired drivers home. Since they are employees of the testing agency, their negligence can be imputed to their employers, and, in most instances, all participating agencies will be named as party defendants in a subsequent law suit. This potential problem can often be remedied by assurances by the responsible project authorities that adequate insurance will be available to cover all parties in the event of such circumstances, and an indemnification agreement by the contracting agency to the Federal Government covering the contingency of there being no insurance in effect at the time of the accident.

It is strongly recommended that each State consider the adoption of a law which would protect the participants of a pure research study from criminal prosecution or civil liability by preventing the findings of the study from being subject to subpeona by <u>any</u> person, association, or governmental agency for the purpose of such prosecution or civil law suit. (A statute now exists in New York State under its Public Health Law in relation to this matter.) The provisions of a bill such as this would go a long way in gaining the cooperation of the police departments and even the general public for roadside surveys.

Selected Notes Excerpted
from the
Coordinator's Reports

(1) "One of the things noted in using the trooper's car is that leaving the trooper at loose ends resulted in his being very interested in what was going on to the point where he was physically closer than desirable, in some cases entering into the area of the testing. This was further complicated by the passing of a car with no taillights. In addition, one of the persons interviewed had a drunken husband in the front of a pickup truck with three other persons - making five in the front seat; the trooper being the eager type, it was a little difficult to explain that the ordinary course of action shouldn't be taken." (pp. 2-3, 2-5, 5-7)

(2) "The only comment I'd make on the use of the cruiser is that it left the troopers out in the cold weather and they kept climbing into the cars of respondents who were being interviewed and visiting with the waiting passengers." (p. 2-5)

(3) "Even with just the two teams of interviewers, it was felt that it was necessary for a large portion of the roadblocks to have a fifth person who functioned as the primary contact of the motorist with the Project. The fifth person functioned as a "host", dispensing the available beverages and lollypops. Another function of this fifth person (which was usually myself) was missionary work with the police officer present at the scene. This was, in my mind, a fairly important function in that by exposing the officer to our questionnaire, literature, etc., he had an understanding

of the operation and a favorable opinion of it. This gave us an ambassador in that particular district. Also, by explaining the operation fully and completely to him, he not only understood it, but he was able to pass on this information to the other officers of that particular area who were quite likely to be assigned to us in the future. This increased our chances of coming into the area on return visits and finding either an experienced officer or an officer who had some idea as to what was expected of him." (p. 3-3)

(4)

"I remember one extreme case in which I myself "babysat" four pre-schoolers and three very energetic dogs all at the same time in one station wagon while the operator was being interviewed." (p. 3-3)

(5)

"While these first two samples were being interviewed, a bad accident occurred not too far away and we lost our trooper. Upon completing the interviewing of the motorists already stopped, I attempted to stop the next two vehicles. This wasn't quite so easy, the first one being one of the half-sized variety which passed me at about 30 miles an hour at knee-level. There wasn't much I could do. Of the next two that I tried to stop, the last one was in the process of passing the first one and they took me, one on either side. The next one that came along I was able to stop and the one following it. One participated in a normal manner. The other was a late-middle-aged, early-elderly person of foreign extraction who sometime in his life had been struck in the face with what appeared to have been either a shovel or a log-hook. He was very pleasant, got out of the car, and listened attentively to all that I said to him. I had ample opportunity to fully explain everything to him. He then stated that he guessed he wouldn't. He was, as previously stated, very pleasant; he

wasn't in any great hurry, nor was he antagonistic or uncooperative. He was driving an old station wagon which had a savage dog in the back, along with a cage with some sort of animal in it, and what appeared to be most of his household belongings. He had a wife in the front seat whose disposition, from her expression, pretty much matched the dog's. The vehicle was registered from out of state and even after all my explaining and urging, he stated quite pleasantly that he would stop on the way back, and again I explained to him that we would not be there on the way back; he just smiled and looked rather pleasant and vacant and after staying around for a second, drove off. It was a genuine refusal, but I think more because he didn't understand and did not want to get into a situation in which he wasn't sure of his ground. The lack of the State Police officer may have been a factor here. If we had had a trooper in uniform, he may have felt a little more comfortable in staying." (p. 3-3)

(6)

"When it became time for the third sample, a late model Cadillac coming from the proper direction was stopped by the police officer and the driver was asked to pull up to where I was standing. A very distinguished-looking elderly gentleman with a mustache was driving the car. I asked him briefly if the officer had indicated what we were doing and got no reply at all, whereupon I proffered the letter from the Governor which explained who we were, what we were doing here, and what we had need of. He said, "Do I have to take it?" "No, you certainly do not have to take it. This will explain what we are doing here." He then very indignantly and profanely asked what we meant by stopping him. I indicated that I had not stopped him, that the police officer had and had requested him to pull over to me. He asked if the police officer was a state police officer and I said no,

he was a village officer. Then he demanded in a loud voice to know who had given this officer permission to stop people. He jumped out of his car, became very argumentative, wanted the policeman's name and demanded to know if this was some of the Governor's doing and promised that he would get to the bottom of it. At several points in his rambling, he demanded an explanation and I asked him to be quiet and stand still a moment and I would give the explanation. He was and I did. This didn't appear to appease him or have any affect on him at all. He continued to be loud and objectionable. I informed him at this time that he had been stopped by the police officer, had been directed to us, asked to voluntarily participate in something he was not willing to do, so, therefore, we had no further business with him and I certainly had no intention of becoming involved in an argument. Then I signaled the police officer, who asked him to move on. Our friend continued to express many opinions of the Governor, the police, and a number of other things. I informed him that he was entitled to his opinions, that he had expressed them, and we did not care to get involved in anything further. We wished him a pleasant good evening and he took off on his way, still disturbed. He went down the road a ways, turned around and came back and parked in front of the other interview car where an interview was in progress. The lady who was with him marched back to the interview car, opened the door and immediately started a conversation with the occupants. I was of the opinion for a moment that they had intention of disrupting our whole operation. I went immediately to the car and found that the person being interviewed was, in fact, the son of the woman who was with the gentleman, who, upon getting out of the car, again began loud objections to the operation and pointed out that we were parked on the left-hand side of the road (this is standard

procedure where it is necessary for us to take our interviewed persons on the right-hand side of the breathalyzer). He continued taking issue with the whole thing, stating that this was highly unconstitutional, improper, and so forth and demanded to know who we were. I showed him my credentials, but he held to his opinion that the whole thing was phony, that we could be just a bunch of criminals - at which point, the uniformed police officer asked if he also had the appearance of a criminal. The gentleman informed the officer that most probably he was impersonating an officer. I couldn't detect any amount of alcohol on his breath, he didn't appear to stumble, nor did he appear to be intoxicated to the degree that he acted, but he was a highly irrational person. Finally the police officer had to tell him that if he did not leave the area that he would find himself in difficulties. The person then went back to his car. I was able to speak to the lady. She was a very well-dressed, well-mannered lady who expressed what she apparently thought was a sincere fear that we were not a legitimate operation. She was afraid that her son was being kidnapped and found it highly improper for us to be on a little-used back road and stopping people in the manner we did. She was nowhere near as agitated as her companion and she explained that he was hot-headed. This was the understatement of the evening. The person who was being interviewed (a teacher in a Junior High School in some other part of the country) was quite willing to be interviewed. When the Cadillac couple had returned to the scene for the second time, I asked this person if he was unhappy with the situation or had any problem. He said he was quite content and wanted to finish the interview. I asked him at this time if he had any influence on the older gentleman to ask him to leave and not make any more trouble either for himself or for us. Another sample came along and it was necessary for me to leave the lady. She insisted that she was going to stay right there because she feared for the safety of her son, and I

informed her she was quite welcome to stay as long as there was no further disturbance. She apologized for the behavior of the gentleman and I informed her there was no necessity for apologies, but that we could not have the interference. The older gentleman repeated that he was going to see the Governor and he was going to make all kinds of trouble and create all kinds of disturbance and for what particular reason I don't know. He most probably will. I do know that after they left the scene they went to the nearest State Police office, where they had conversation with the attending officer and made about the same kind of complaint. The State Police were of the opinion that the couple felt it was a highly improperly run operation in that there were no flares out and no rotating light, etc., and that we were parking on the wrong side of the road. Other than this they had no complaint. They did not indicate they were improperly used in any way themselves. In defense of the police officer who put us on this site, I would say that the site itself was visible for a good quarter of a mile from either direction, that it was within sight of a fairly well-patronized restaurant, and it is possible he did not use the extra lights, etc., because of the feeling that persons would take a different route out to avoid the roadblock. All of the vehicles had their parking lights on and the police officer was in constant attendance at all times with his flashlight and reflecting belt. The gentleman that I have described at such great length will have to be listed as an adamant refusal: although he never openly said he would not cooperate, he took immediate and loud exception to the fact that we were there at all. I'm not even sure that he realized what we were there for. I am not sure he really cared. I think he just welcomed an opportunity to make trouble and I don't know why." (p.3-3)

(7) "The first subject stopped proved to be a little difficult. Before he got out of the car, his passenger read the letter from the Governor, his wife read the letter from the Governor, and he read the letter from the Governor. He then got out of the car in apparent good spirits, and went to the interview vehicle where he participated in a seemingly normal manner until he got to the section of the interview where he was asked to inflate the balloon for the test. He absolutely refused on this, became agitated, and from that point onward, became unreliable and smart-alecky with his answers. It was apparent that this individual had been drinking as it could be smelled on him and also his actions were such as to indicate this. It is not felt that he understood the project, even though it was explained to him a number of times. The interviewer stated that while he tried explaining it to him, the person being interviewed would interrupt the explanation and did not seem to comprehend. The reason we felt he really didn't comprehend, is that at the end of the interview, he gave his name and address and said to be sure and call him - <u>that he hoped very much that he would win</u>. Maybe we should send him a prize of some sort." (p. 3-3)

(8) "Just a few comments on a roadblock that it became necessary to cancel. The reason for its not coming to pass was the result of a double snafu, the first part being that the small radio (State Police radio) did not function, thus, when we arrived at a spot near the roadblock scene, it was necessary to call in by phone. The second portion of the snafu was the complete non-awareness of the police personnel of the fact that we were coming. This apparently was pretty much due to scheduling too far in advance. This roadblock had been parcelled out a long time previous and they, believing that the appointment had been cancelled, had thrown away

the paperwork. Thus, we were up there looking for an accident on two town roads identified only by numbers. We chased up two or three roads, some of which weren't the right roads. We could have been on the right road, but there was nothing that would fit the instructions as given over the telephone. This led us to believe that we'd better make our arrangements by phone and closer to the time of execution, rather than far in advance by paper." (pp. 4-1, 5-6)

(9) "The trooper had not arrived by the time the first sample approached. This vehicle came from the south, travelling in a northerly direction and was a taxicab. I stopped him and he cooperated with us quite willingly. The second sample also came by before the trooper arrived and was stopped and interviewed. Team 1 was finished with their first sample at approximately 1345. It was noted that during the interview, two vehicles passed going in a southerly direction. This was during the period when both interview teams were occupied with a subject and they could not have been stopped anyhow. The trooper came after the first three samples were stopped and assisted us through the rest of the roadblock. Note: this roadblock was held with just two interview teams and no fifth person (coordinator)." (pp. 4-1, 5-6)

(10) "Most of the roadblocks were conducted in either the late hours of night or early hours of the morning or on a Sunday. During these hours, it was possible to conduct the interviews in the yards of closed business establishments. These lend themselves beautifully to our purposes as they have drives in and out and ample parking facilities."

"After the snow left the ground, and the weather became better, it was possible to hold large numbers of blocks in the highway pull-off areas or rest areas as well as in the yards of closed or abandoned businesses. In any event, I would estimate that better than 90% of our roadblocks were conducted completely off the road, our only need being space for four vehicles to get off the road and out of the travelled portion of the highway. This was done in many of the cases right at, or very near, the actual scene of the accident, and in the rest of the cases, close enough so that it was not necessary to go beyond a major intersection or any factor that would tend to increase or decrease the normal flow of traffic past the actual traffic site." (p.4-3)

(11) "It was on this roadblock that we became aware that there was only one Breathalyzer in workable condition -- that is, one of the Breathalyzers had a broken galvanometer. We worked around this by having the persons give their tests after completing their interviews, although one person was asked to give his breath sample at the beginning of the interview. We were able to take all six tests and interview all six normally. Both this particular roadblock and the three that followed were conducted with the one Breathalyzer. In the latter three, the Breathalyzer was set up as the persons were interviewed. We would explain to them at the proper place indicated in the interview schedule for the breath sample that we had had difficulties, that we ordinarily had two breath machines and would therefore ask them to give their sample at the end of the interview. At the end of the interview, the persons in the other car simply opened the passenger's door and gave the breath test. This was disruptive to the

interview taking place in the camper -- not so much in the case where the person just gave the test and was done with it, but in those where the people were interested in the operation of the machine or who wanted to wait for their results; that they wanted to visit about the results made it even more disruptive. However, we did not lose any samples because of the limitations of one Breathalyzer." (p. 5-6)

(12)

"In the stopping procedure, the original plan was that we would have the trooper stop the vehicle and then give the driver a little speech which would tell him that he was not stopped for a violation, but that he was stopped for the purpose of a highway safety research project interview, etc. For a number of reasons, this did not prove to be practical, one of the reasons being that from the safety factor, it was not wise to have the vehicles stationary in the highway for any longer period of time than was absolutely necessary. This was especially true on the heavily travelled or high-speed highways, such as the Interstate; another factor was the inability of the trooper to either memorize or comprehend the speech which was supposed to come forth. This wasn't due so much to the trooper's lack of ability as it was to the fact that he usually arrived just at the time the block was starting. He may or may not have had any previous contact with it. He may or may not have any feelings relative to the Project. I think the fact that since this sort of operation differed from a trooper's main duties, namely that of life and death active law enforcement activities, and the apprehension and arrest of criminals, sometimes the feelings of the trooper would creep into the explanation given to the motorist, thus, the motorist would adopt the opinion of the trooper, who was not overly impressed with the activity himself. This operation was being conducted at a period of time when the Supreme Court had made both the general public and the police officers extremely aware

of a person's rights, especially in the field of self-incrimination and voluntary participation, and this perhaps led to an over-emphasis, by both the officers and the people, on the voluntariness of participation. To be exact, a lot of people would ask the troopers in the road, "Is this necessary? Do I have to do it?", and the trooper would go to great lengths to tell them that he wasn't forcing them to do anything, therefore, they would drive off." (p. 5-8)

(13) "On the two refusals noted on the roadblock sheet, the first person stopped was a lady who had what she referred to as liquid plumber with her. She stated that she had a clogged plumbing problem at home and that the toilet was "boiling" and that she felt that her plumbing problem was of greater urgency than her participation in the test, and that she didn't want to stop. The trooper allowed her to proceed."

"The other subjects were stopped in the normal manner with the exception of one New York registered station wagon, the occupants of which were on their way to Canada on a fishing expedition and who informed the Trooper that, at any other time, or perhaps on their way back they would be glad to participate, but, unless they absolutely had to, they wouldn't stop at this time. There is a feeling that the trooper perhaps is explaining more than is necessary at the time of stopping and this leaves a little more of a loophole than if he had merely given them an extremely brief explanation and motioned them off the road to the interview area." (p. 5-10)

(14) "There were five persons interviewed, one positive refusal, one adamant refusal. Of the adamant refusal, the person said he had been interviewed before and was not interested in being interviewed again. However, he

could not show an identification card nor state where he had been interviewed before. In any event, he did refuse participation. The other stated that because of the lateness of the hour and the fact that they had eight children home about whose welfare they were uneasy, they felt they could not take the time. It was noted that one of the persons interviewed had to leave before completely finishing because of a time problem. During the block, one person did not stop upon being signaled to do so by the police officer, at which point he pursued her down the road to ascertain her reason for not stopping. Upon coming back, he had been informed, apparently by a passerby, that there was a house on fire in another section of town. He had to leave the project roadblock for a period of some minutes while he went to the scene of the fire, ascertained the condition as far as traffic was concerned, the presence of fire department and so forth, then returned to the roadblock." (p. 5-10)