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HAUG ASSOCIATES, INC.

A PROPOSAL TO STUDY COMMUTER ATTITUDES  
CONCERNING THE SAN BERNARDINO FREEWAY EXPRESS BUSWAY PROJECT,  
AND DEVELOP RECOMMENDATIONS FOR MARKETING STRATEGY



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CONCERNING THE SAN BERNARDINO FREEWAY EXPRESS BUSWAY PROJECT,  
AND DEVELOP RECOMMENDATIONS FOR MARKETING STRATEGY

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## INTRODUCTION

### 1. Background

Rapid transit in the greater Los Angeles and surrounding metropolitan area has been as problematic to planners of the socio-economic community as any other growing pain. Proposals have been developed and presented for several different types of rapid transit systems, only to be quashed on the drawing board, conference room table, or ballot. Finally, however, one type of system is in the construction phase. The District and State of California Department of Public Works are undertaking a five-year demonstration project in cooperation with the Urban Mass Transportation and Federal Highway Administrations of the Department of Transportation, the cities of Los Angeles, El Monte, and the Southern Pacific Transportation Company.

The project involves the construction of an express busway located center and alongside the San Bernardino Freeway through the "San Gabriel Valley Corridor" which will provide a high-speed service from the El Monte station (Santa Anita Avenue) to downtown Los Angeles (Mission Road), a distance of eleven miles.

Buses will enter the system at each end, via special ramps near the mid-point and also at the Long Beach Freeway. Park-and-Ride stations will be fixed at the El Monte terminal and a mid-point location. It is expected that the trip to downtown Los Angeles (First and Spring Streets) from El Monte will run 18-22 minutes, as compared to 36-45 minutes during peak traffic hours presently.



Cities expected to heavily utilize the Busway East and West of El Monte will include:

<u>East</u>			<u>West</u>
Arcadia	Duarte	Pomona	Alhambra
Baldwin Park	Glendora	San Dimas	Los Angeles
Bassett	Irwindale	South El Monte	Monterey Park
Bradbury	La Puente	Temple City	Rosemead
Claremont	La Verne	Walnut	San Gabriel
Covina	Monrovia	West Covina	

The \$53 million project will take two years to complete. However, a portion of the Busway, from the El Monte station to the Long Beach Freeway, will be opened prior to the completion of the entire run. The buses, 100 special "Freeway Flyers" will use the regular San Bernardino Freeway between the Long Beach Freeway and Downtown until the second portion of the run is constructed.

The Express Busway provides the RTD with options to undertake a number of demonstrations, some under actual operating conditions, as follows:

- Demonstrating the value of increased transit capacity to and from the San Gabriel Valley corridor and its effect on time savings, convenience, and economy;
- Examining the potential for modifying existing commuter trip patterns by providing rapid and more economical access to job locations.
- Comparing the effectiveness of various feeder-trunk line alternatives;
- Testing various alternatives for collection and distribution of commuters;
- Developing community park-ride facilities beyond the end of the Busway;
- Testing advances in bus design, along with new methods of bus propulsion, speed control, communications, safety features, fare collection, and associated equipment;



- Evaluating new methods of handling passenger flow;
- Exploring the feasibility of new concepts of joint highway-bus operation by mixing of autos and buses in the Express lanes.

The RTD has not as yet investigated in detail commuter attitudes and behavior relative to the new system. Haug Associates feels well qualified to carry out a research program which will provide RTD with the essential data necessary to generate maximal effective use of the physical plan. We propose to obtain the socio-psychological information which will form the base for subsequent marketing strategy of the Rapid Transit Service. In following through with this specific project, we will utilize resources developed through experience in related public utilities and transportation industry studies.

## 2. Research Objectives

The primary objective of this research project is to develop information about San Gabriel Valley-downtown Los Angeles commuters which can be applied in the physical and promotional planning of the San Bernardino Freeway Flyer to generate maximal utilization of this new rapid transit system. Consequently, we need to understand who would use the Busway, when they would use it, and why.

To accomplish this objective, it will be necessary to determine for the target areas surrounding the route, the present set of commuter attitudes and behavior relative to traveling from their residences to downtown Los Angeles and back. Knowing where potential Busway commuters come from, finding out



what he expects to have as part of the Rapid Transit Service, ascertaining what in the ideal sense he might hope for, and establishing how he is now handling his commuting problems, will provide the raw data for RTD planning of Busway features, beyond the route itself. Therefore, each relevant attitudinal and behavioral factor must be:

- isolated
- defined
- labeled as a positive or negative influence on utilization of the RTD system.

In order that the subsequent planning and promotion of the Freeway Flyer be carried out effectively, it is further necessary to isolate among the total universe of commuters in the target area, various population segments with varying predispositions to use the RTD system. The determination of where the strongest and weakest potential usage groups lie would enable RTD program directors to focus their efforts on specific population sub-strata where the greatest potential for positive results seems to exist.

As a portion of the express busway will open prior to the final completion of the system, a secondary objective of this project is to ascertain the degree to which this partially completed system would attract commuters, and how increased utilization might be precipitated.

In achieving our objectives, we will have sufficient information to allow us to consult with the RTD regarding marketing and promotional strategies, aimed at both the whole and specific parts of their potential commuter market. Recommendations will be based on what we have found out about the needs of the



commuter from the commuter himself, as well as what we know to be practical limitations based on the physical nature of the RTD system and obvious economic considerations.





## PROPOSED RESEARCH METHOD

### 1. The Qualitative Phase

It is recommended that the study consist of a preliminary qualitative phase which will serve as the basis for quantification of relevant data.

This portion of the research would consist of four group interviews, conducted among the following groups of San Bernardino Freeway commuters:

- 10 women from El Monte and areas East of the Busway's Santa Anita Avenue station
- 10 men from El Monte and areas East of the Busway's Santa Anita Avenue station
- 10 women from areas West of El Monte along the Busway route
- 10 men from areas West of El Monte along the Busway route

The basic line of investigation to be employed in these discussion sessions would be to establish the universe of San Bernardino Freeway travel dynamics, i.e., the reasons (physical needs) why individuals use the freeway, and their feelings (psychological reactions) about doing so. Respondents would be encouraged to talk about their own situations, as well as those of "others whom they know of". Thus, both direct and projective questioning techniques would be employed by the group moderator in order to isolate the full set of attitudinal and behavioral patterns relating to freeway travel.

Once the moderator feels this range of parameters has been explored adequately, he will introduce the Rapid Transit System into the interview, examining commuter reactions to the basic physical concept at first, and then eliciting comments on possible variations relative to service features which the

group will be told are "subject to modification". Given the basic physical concept, he will be trying to establish the commuters' "ideal system" with respect to relevant system attributes, including:

- time of runs
- number of stops
- rates
- parking facilities for cars at stations
- interior comforts (music, smoking, head rests, etc.)
- shopping information
- downtown entertainment guides
- etc.

As the discussion proceeds, in addition to testing out various hypotheses about who will use the system, how and why, the moderator will also be extracting spontaneous comments from group members which will open up new areas of consideration in studying relevant attitudinal and behavioral elements.

From four group samples, the data can be analyzed with respect to the influence of the general area of commuter residences, and the basic reasons why they use the freeway (for work, shopping, or pleasure). Our further analysis of the data will precipitate the construction of a quantitative interviewing instrument to consist of relevant and important questions regarding Freeway Flyer commuting, with scales of measurement based on actual ranges and contexts as suggested by the target population.

As moderating skill is critical to the construction of an effective quantitative instrument, we strongly recommend the use of an experienced moderator

for all four groups, who is fully cognizant of the research problems and aware of specific informational needs. In addition to having sufficient moderating skill, the discussion leader must have analytical ability permitting intelligent, insightful and creative investigation of group responses both during and following the discussion sessions, so that the data obtained is fully relevant, clear, and complete in terms of satisfying our objectives.

Because of the demands of the moderating assignment, one individual will be primarily responsible for all facets of this study phase, from conceptualization of the approach, through moderation of the groups, to performing the analysis, preparing an interim report, and developing the questionnaire for the quantitative phase of the study.

A moderator's guide will be prepared and submitted prior to initiation of the group sessions. These sessions will be taped, and the tapes will in turn be made available to the client.

## 2. The Quantitative Phase

Following the qualitative work, a major quantitative effort will be undertaken, from which data projectable to the commuter population will be derived. We propose that this portion of the project be carried out as follows:

### A. The Questionnaire

Although the finalization of the questionnaire will be dependent on the qualitative findings, there are specific areas of questioning which will most probably be incorporated in to the design. These are



as follows:

1. San Bernardino Freeway Usage Behavior

- reason for trips
- trips taken most often
- total number of trips over given time period
- alternate routes considered/used
- reasons for using alternate routes
- expected future trip rates
- point-to-point length of trips
- average trip times
- number of people in vehicle
- relationship of people in car
- use of public transportation
- use of friends transportation
- en route activities
  - . stops on way
  - . smoking
  - . reading/working
  - . listening to tape/radio
- packages/equipment usually carried
- number of accidents involved in
- number of accidents observed
- point of origin of most trips
- time of origin of most trips, coming and going
- etc.

2. Freeway Flyer Rapid Transit Attitudes

- General reaction to Freeway Flyer
  - . likes/dislikes and reasons why
- comparisons to present travel mode
  - . faster/slower
  - . more safe/more dangerous
  - . more comfortable/less comfortable
  - . more tiring/less tiring
  - . more convenient/less convenient
  - . more expensive/less expensive
  - . fare expectation
  - . fare evaluation
  - . other advantages/disadvantages
- usage (for complete and partially complete system)
  - . intend/not intend
  - . frequency
  - . time of day
  - . general and unique reasons for use
  - . other family members who would use (frequency and time)



### 3. User Demographics

- sex
- age
- family income
- residence
- number of family cars
- driver license
- family size
- place of employment
- and others

It is expected that the final questionnaire will generate an interview of approximately 40 minutes in length. Once the design has been finalized, it will be pilot tested among 10 commuters to insure its workability. The ultimate model would be developed through close cooperation with the client.

#### B. Sample Design and Selection

We recommend that personal at-home interviews be conducted among 690 presently commuting residents of the 23 cities and communities along the route of the Express Busway, mentioned in the Introduction of this proposal. We will develop 30 interviews from each sampling area, developing a geographical spread to avoid any clustering effect.

However, we will avoid areas where specific factors suggest that the rate of commuting households would be very low, such as around small local industrial plants where most workers "live across the street". Fifteen interviews in each area will be among male respondents, and fifteen among females. None will be younger than 16 years.

Interviewing hours will be controlled to insure equal opportunity for working and non-working commuters to be included in the sample.



The representation of 30 respondents from each area provides a minimal representation of that locale, yet the sample is still large enough for us to draw some conclusions relative to other areas along the route. Moreover, when we combine adjacent areas, our individual sub-sample size will increase to a more comfortable figure. It is likely that this latter procedure would be followed in order to investigate regional differences (e.g., East versus West of the Long Beach Freeway). We feel the sample of 690 commuters will provide data sensitive enough to isolate obvious trends in attitudes and behaviors which can be employed in developing marketing strategy.

C. Field Work and Controls

It is well known that interviewers are an important source of error in surveys of public attitudes. However great the possibility of bias at other stages in the survey procedure, it has been found that errors arising from improper handling of the interview situation are of great importance, because it is in the interview that the data are actually elicited and recorded. All subsequent analysis and inference, no matter how carefully and ingeniously contrived, will reflect in some degree the interviewing errors.

With this in mind, Haug Associates has a policy of rigid interviewer recruitment, training and control.

Haug Associates works closely with a network of experienced field supervisors throughout the United States and a large staff of interviewers in the Los Angeles-Orange Counties area. A five-person field



department arranges and coordinates field work on each study. Because of the volume of work Haug is able to offer, we are in constant contact with the field.

Field materials are developed by the project supervisor after finalization of the questionnaire and client approval. A detailed set of instructions is prepared for supervisors in other cities and a set of instructions covering questionnaire handling written for the interviewers. Interviewers in other cities are personally briefed by their supervisors and in Los Angeles and Orange Counties by the Haug project supervisor.

Each interviewer's first day's work is returned to our office for inspection by the project supervisor. This procedure insures that the questionnaire is being properly handled at an early stage. Errors are minimized by conferring with the interviewer about her work when only a small portion of the interviewing has been completed.

At the end of the study, a minimum of 10% of each interviewer's respondents is recontacted to verify that the interview was conducted and to check its quality.

D. Editing and Coding

Completed questionnaires are carefully edited for legibility, completeness, and meaning by our Coding Department.

Open-ended responses are coded into categories developed by the project supervisor, who briefs the coding supervisor on the interpretation and handling.



A percentage of questionnaires is double-checked by the department to insure they have been correctly edited and coded. Additionally, the project supervisor reviews a portion of the open-ended coding.

Computer processing provides a further check on editing. The computer is programmed to accept responses only according to the questionnaire skip patterns, all other responses are "cleaned" or eliminated.

E. Tabulation

Questionnaire data is converted to keypunch cards in preparation for tabulating responses by computer. Twenty-five percent of each questionnaire is verified as a check on keypunching accuracy. A special cleaning program insures that skip patterns have been correctly followed, serving as a control on the editing function. Detailed specifications for tabulating the data are developed in accordance with specific study objectives.

The keypunch cards serve as a permanent record of the questionnaire data and are stored for a one-year period, at which time they are offered to the client at no charge.

The basic tabulations of data will consist of the following:

1. Cross-tabulations of respondent age, family income, family size, place of employment, car ownership, and possibly others.
2. Cross-tabulations by geographic region, East/West of Long Beach Freeway, East/West of Del Mar access, and possibly others.





3. Special cross-tabulations of one or more questions with another.

F. Analysis

As presently visualized, the analysis of the data will be undertaken on two levels. First, there will be the basic analysis involving conventional straight runs and comprehensive cross-tabulations described previously.

Beyond the basic analysis, we suggest a second analytical level involving a market segmentation analysis of the data. This analytical phase will be accomplished under the direction of U.S.C. Professor Dr. James Myers, a long-time Haug Associates consultant.

This market segmentation technique involves locating subgroups of respondents who are similar in terms of their attitudes toward the Rapid Transit System. For a particular point we can see how many different segments there are, how large each segment is, and the characteristics of people in each segment. With this information, market programs especially designed for one or more of the larger segments could be developed.

G. The Report

A formal written report of the study's findings and implications will be prepared. Our normal approach is to report the findings at three levels of detail. On the first level are the major highlights of the study, our conclusions and recommendations for action. This section is followed by a more detailed and documented discussion and



analysis of the findings. This in turn is followed by a complete set of relevant statistical tables, selected from the larger computer run. Either this or a modified report format can be used.

In other words, the research report, as we will prepare it, will be designed as a functional instrument. That is, it will go beyond analysis of the data, to make specific recommendations regarding marketing strategy, substantiated by various elements in the raw data. For example, we should be able to provide direction in the preparation of advertising and promotional material relative to specific type and content.

Also, we will be able to offer comment in terms of where among the general population the greatest number of potential users of the Busway system exists so that advertising and promotional activities can be aimed straight at the target group. Thus, marketing consultation will be an obvious by-product of this research project, so that we have provided the RTD with a dynamic and useful instrument for development of the Freeway Flyer as a viable entity.

In accordance with this approach, the Project Team in addition to preparing the written report, will be available to make personal presentations of the results to the RTD Staff.

### 3. Timing and Costs

It is estimated that the timing of this research project would be as follows:

Qualitative Group Discussions (4)	1 week
Analysis of Groups	1 week
Interim Report and Questionnaire Development	1 week
Pilot Test and Questionnaire Modification	1 week
Full-Scale Interviews	3 weeks
Data Processing (checking, editing, coding, computer run)	2 weeks
Analysis and Report Preparation	<u>3 weeks</u>
Total	12 weeks

Costs for the completed project, including interim and final reports, and a formal data presentation are estimated at \$13,500, with the standard contingency factor for research of this nature of  $\pm 10\%$ .



## QUALIFICATIONS OF HAUG ASSOCIATES

### 1. The Project Group

Should Haug Associates, Inc. conduct this study, the following project team would be assigned:

Howard E. Marylander, Group Vice President  
Kenneth Struman, Associate  
Martin M. Buncher, Associate  
Susan Jacobs, Project Director

#### Howard Marylander, Group Vice President

Mr. Marylander completed his MBA in marketing from the University of Southern California. Formerly he was Assistant Research Director with Mattel, Inc. and with Carnation Company. He is a lecturer in marketing research for the American Management Association. He was involved in pioneering research on the causes of cancer for the Department of Health, Education and Welfare. (Article from Journal of the National Cancer Institute, Vol. 45, No. 6, December, 1970).

#### Ken Struman, Associate

Mr. Struman completed undergraduate and graduate level studies in the Behavioral Sciences. His professional background includes serving as Vice President/Research Director at Grey Advertising, and also management-level research positions at Carnation Company and Mattel, Inc. He is a frequent marketing research lecturer at the University of California - Los Angeles and other universities.

#### Martin Buncher, Associate

Mr. Buncher completed his masters in Industrial Psychology at U.S.C. and has worked as a consultant in market research since 1964. His professional experience includes heavy emphasis in social problem areas, consumer product fields, and multi-media advertising. He is an advisor to the Mayor of Los Angeles on socio-economic problems, and has originated an approach for the application of social research into media production techniques.

#### Susan Jacobs, Project Director

Mrs. Jacobs, who holds a B.A. in psychology from the University of Illinois, is currently working on her M.A. in psychology at the San Fernando Valley State College. Previously, she was a project supervisor with Rabin Research Company in Chicago.



## 2. Related Research Experience

Haug Associates, Inc. has exhaustive experience in market definition and segmentation studies, attitudinal research, and special projects within the transportation field. More recently, members of the project group who would be involved in this study have worked on related research as follows:

- A study of transportation needs in a major Urban area
- Attitudinal research on advertising strategy for major airlines
- Marketing consideration for a company in the private recreational transportation business
- Exploration of the market potential for specific vehicular modes
- Segmentation of numerous consumer markets, based on correlated attitudinal syndromes
- Attitudes towards bus service in Southeast Los Angeles



### 3. Description of Haug Associates, Inc.

Our firm is concerned with marketing consulting and marketing research at both domestic and international levels. We specialize in custom-made research work tailored to solve the specific problems and needs of individual clients. This is based on the conviction that standardized techniques or services lack the flexibility necessary to fully meet the needs of differing research situations. Accordingly, we make continuous efforts to refine and apply a varied battery of established research techniques and to develop new techniques as situations demand.

Apart from consulting, we conduct studies ranging from large national cross-section surveys based on probability sampling techniques, in which a formal questionnaire is administered to several thousand respondents, to small depth interview studies which explore the views of relevant groups in selected fields. Broadly categorized, surveys are conducted in the following areas of research:

- ... Brand image, consumer use and demand
- ... Product development, acceptance and package design
- ... Idea engineering through concept evaluation
- ... Advertising effectiveness
- ... Media evaluation
- ... Public relations
- ... Employee attitudes
- ... Stockholder attitudes



- ... Community attitudes
- ... Corporate image
- ... Public opinion surveys and political polls
- ... Industrial studies

With headquarters in Los Angeles as well as offices in San Francisco and Palos Verdes, our firm has grown to become the major marketing research and consulting firm on the West Coast. Domestically, we are affiliated with The Roper Organization, Inc. of New York. Internationally, our firm has extensive contacts with marketing research firms and marketing consultants. Last year we completed market surveys as well as marketing planning assignments in some 20 foreign countries. In this manner, we offer precision sampling on a regional, national and international basis.

In the greater Los Angeles area, we also operate a consumer panel of approximately 2,000 families which may be used to measure anything from attitudes in general to experiences with specific products and services.

Through our Communication Research Division, we offer a syndicated outdoor advertising service as well as custom-designed studies for pre and post testing of packaging and advertising.

Marketing consulting is offered through Marketing Intercontinental -- a wholly owned subsidiary located in Palos Verdes. Their key personnel, all men who have been officers of and had profit responsibility in major corporations, often participate in the recommendation stages of major marketing research assignments. In addition, this division works with major companies to launch

new products, counsel on agency selection and advertising investment, provide marketing planning and training, and design management systems.

Our Los Angeles office has a permanent staff of some 40 people and we maintain a continuing relationship with outside specialists in the fields of economics, computer programming, engineering, package design, merchandising, statistics and the social sciences. Our New York affiliation further enables us to draw upon additional manpower and problem solving experience.

Because of a desire to be closer to our Northern California clients and to expand our present base, we have opened a San Francisco office. This operation is headed by Robert J. Carlberg with assistance from Donald Orsino, both of whom have solid research backgrounds and bring to our San Francisco office a great deal of experience with problem solving and research methods. They will have a supporting staff so that all work for the local clients can be handled out of the San Francisco office.

During 1971 we completed about 300 assignments for almost 100 clients, ranging from associations with brand names, corporate image and distribution problems to evaluation of new products/services, banking practices, industrial studies, foreign acquisitions, computer applications, employee attitude studies and political polls.

The caliber of our Stockholders/Directors may serve as another indication of the quality of our organization:

Arne F. Haug, President, Haug Associates, Inc.

H. Russell Smith, President, Avery Products Corporation, San Marino, California





O. W. Richard, President, Richard's Lido Market, Newport Beach, California, and also a Director of The Morris Plan, Certified Grocers and Southern Counties Gas Company

H. Safford Nye, Financial Consultant, Los Angeles, California and previously Executive Vice President with Union Bank

Jack Drown, President, Drown's News Agency, Orange County, California

Robert Finch and Maurice Stans resigned from our Board when they accepted positions as Consultant to the President and Secretary of Commerce respectively.



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Southern California Rapid  
Transit District.

A proposal to study commuter  
attitudes concerning the

