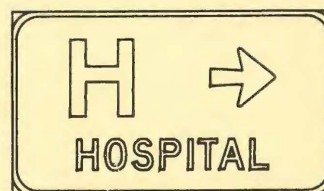
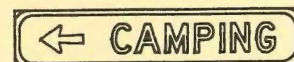
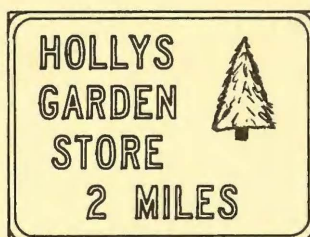
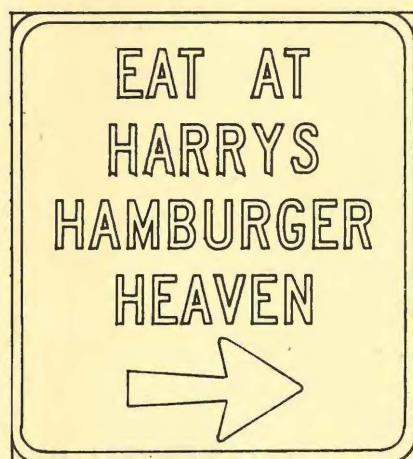


# A DIRECTIONAL SIGNING STUDY FOR THE MINNESOTA STATE LEGISLATURE

Prepared by

Mn. Dept. of Transportation &  
Dept. of Energy, Planning and Development



LEGISLATIVE REFERENCE LIBRARY  
STATE OF MINNESOTA

January 1982

Pursuant to Mn Stat 173.17, Supplemental  
Section 1 Mn 1981 Session Laws,  
ch 294. Section 1(4)

## TABLE OF CONTENTS

Legislative Charge .....	1
Introduction .....	2
Studies of Signing Needs .....	2
TRB Report 71 .....	2
KLD Associates .....	3
Advisory Committee on Outdoor Advertising .....	3
Study of Informational Needs of Tourists in Minnesota .....	5
Other State's Programs .....	6
Vermont System .....	6
Oregon System .....	7
California System .....	8
Potential for Advertising .....	9
Location of Signs .....	11
Options.....	14
Conclusions and Recommendations.....	20
Appendix A .....	22
Typical Sign Drawings .....	22
Appendix B .....	26
Background .....	26
History of Directional Guide Signing .....	26
Billboard Laws .....	27
Minnesota Billboard Laws .....	28
Directional Guide Signing Standards .....	31
Compliance .....	33
Motorist Services vs. Advertising .....	34
Directional Signing and Motorist Services Programs .....	35
Numbered or Named Public Highways and Roads .....	35
County Resort "Slat-Type" Sign Program .....	36
Specific Services Signing Program .....	38
Logos .....	39
Kiosks .....	40
Information Centers .....	41
Maps .....	42
Other Motorist Services Programs .....	43
Bibliography .....	45

### Legislative Charge

This report was prepared by the Minnesota Department of Transportation, with the cooperation of the Minnesota Department of Energy, Planning and Development.

On May 28, 1981 the Legislature of the State of Minnesota amended Minnesota Statutes 1980, Chapter 173.17 (Removal of Devices, Time for Removal, Compensation) to read in part:

"The Minnesota Department of Transportation with the assistance and cooperation of the Department of Economic Development shall make recommendations to the standing committees on transportation of both houses of the legislature by February 1, 1982 for a comprehensive directional signing program."

This report contains several options and recommendations for consideration. These options can be packaged in a number of combinations to strengthen the various components of a good driver information program.

# A DIRECTIONAL SIGNING STUDY FOR THE MINNESOTA STATE LEGISLATURE

## INTRODUCTION

This report is intended for use by members of the Minnesota State Legislature in determining what, if any, changes should be made in the Directional Signing and Motorist Services Programs in Minnesota.

This report draws heavily on research into the needs of the traveling public. The number of businesses in Minnesota is assessed as well as the structure and location of billboards. Options are presented in nine areas that include signing, advertising and non-signing changes. Finally, recommendations are presented that highlight the potential for change in several areas.

The attached appendices contain drawings of typical signs and background on the history of directional signing. Also included is a description of the Federal Highway Beautification Act, Minnesota's Outdoor Advertising Control Law and Minnesota's Directional Signing and Motorist Services Programs.

## Studies of Signing Needs

In an effort to determine motorist services needs, several studies have been undertaken at the Federal and State level.

### TRB Report 71

In September of 1980, the Transportation Research Board published Report 71 "Direction Finding From Arterials to Destinations"<sup>16</sup>. While this report largely addressed urban problems, some of the conclusions reached are applicable to more rural areas like Minnesota. These include:

- "There is near unanimity among traffic engineers, representatives of motorists organization, and human-factor specialists in highway transportation that street-name signs including road name/number signs are a key element in the destination-finding process."
- "It is not all clear that the driving public favors the removal and prohibition of food and lodging signs resulting from the highway beautification efforts in recent years."
- "The destination and service-signing policies of individual states vary considerably, not only in the types of services and attractions that are signed by the states but also in those types that are permitted to install their own signs."

- "The procedures used by motorists to find their destinations are numerous and not well-documented."
- "Service stations, fire and police departments, and pedestrians continue to serve as major components of the destination-finding information system."

#### KLD Associates

A second national study was disseminated by the Federal Highway Administration in February 1980. KLD Associates, Inc., completed a study on "Motorists Needs for Service Information on Interstate and Federal-Aid Primary Highways"<sup>4</sup>. This study investigated sources of information available; evaluated selected information systems, and offered a prototype information system.

Based on their study, KLD Associates identified a prototype information system that is designed to:

- "Satisfy traveler's information needs"
- "Use existing information transmission techniques"

KLD's recommendation for information systems included:

- Increased reliance on pre-trip planning and hard copy information sources.
- Use of four distinct information transmission techniques:  
     General Service Signs  
     Specific Service Signs (Logo Signing)  
     Official Business Signs  
     Information Centers
- The level of information obtained by the motorist is a function of the effort expended.
- No reliance on outdoor advertising as a primary information source.
- Flexibility to allow the use of radio, CB and other sophisticated techniques as optional, secondary, redundant information sources.

#### Advisory Committee on Outdoor Advertising

In September, 1981, the Federal Highway Administration issued the "Final Report of the National Advisory Committee on Outdoor Advertising and Motorist Information"<sup>1</sup>.

The 24 member National Advisory Committee on Outdoor Advertising and Motorist Information was composed of a membership representing a broad

base of interest in and knowledge of the program. The Committee was given full freedom in investigating any and all aspects of outdoor advertising and motorist information. The Committee was encouraged to examine possible administrative and legislative actions and to report their recommendations to the FHWA. The FHWA could then act on administrative recommendations and pass on the legislative recommendations to Congress.

The text of the report states the major problem this committee had in reaching consensus.

"Early in the deliberations, it became apparent that the membership of the full committee was generally divided into two strongly committed but divergent groups. One favored retention of the present Highway Beautification Act based on its results; felt positive about mandatory compensation for sign removal; and agreed that roadside and tourist oriented businesses were entitled to relief from unfairly severe sign restrictions."

The second group was critical of the Highway Beautification Act; felt that the Act tried to cover too much territory; wanted to return major responsibility for billboard control to state and local governments with greatly relaxed compensation requirements such as amortization; and strongly supported alternative information systems in place of traditional advertising signs.

A resolution seeking repeal of the 1965 Highway Beautification Act was passed on a 13-11 vote. Many pages of comments by committee members, attached to the report, indicate the controversy attached to this resolution. The results of the task force work can be best summarized by quoting from the postscript of the report:

"By virtue of the fact that the Committee voted on the resolutions according to Subcommittee reports rather than according to issues, there were conflicting votes cast. The most obvious conflict was the vote for and against the maintenance of just compensation for the removal of billboards. The Committee voted not to allow members absent from discussion to vote on resolutions put forth at the final meeting. During part of the discussion, three members were absent, all from the Legislative Subcommittee. If these absent members had been allowed to vote, there is a possibility that they would have changed the outcome of some of the earlier votes. However, the missing votes would still not have given any issue a decisive majority.

In summary, due to the closeness of the votes on all issues, the resolutions and minority opinions of the Committee should be viewed more as options for dealing with the Highway Beautification Act than as hard and fast recommendations. The votes show that there are no

easy answeres and no clear path to resolving the outdoor advertising delemma. The Committee deliberations showed that the opinions are strong and not easily changed. This report clearly delineates the beliefs of both schools of thoughts. The arguments, pro and con, for each issue have been provided as guidance to those responsible for restructuring the program."

#### Study of Informational Needs of Tourists in Minnesota

I 1978 a study by Marketing Decisions<sup>7</sup>, Inc. was conducted for the Minnesota State Legislature, to assess the impact of the Federal Highway Beautification Act, which called for removal of non-conforming billboards on State and Interstate roads. An advisory committee of business representatives and legislators participated in this effort. The findings of this study indicated that signing on the Interstate and Trunk Highway systems was adequate. The traveler experienced problems locating a destination once he left the trunk highway. To address this problem, the following recommendations were made:

##### Maps

1. Produce a new statewide directional map that also promotes destinations by a pictorial representation of places of interest in Minnesota.
2. Produce new inexpensive regional/county maps that provide for advertising.
3. Increase availability of current state map, which is primarily directional.

##### Signs

1. Place more signs on secondary roads providing highway distance and directions.
2. Develop an organized signage program on secondary roads for specific resort information (using slat signs, directional signs, and site signs).
3. Provide for strategically-located central tourist information points, with signs or sign bays.

##### Tourist Information Identification Symbol

Incorporate into these elements an identification symbol (or tourist information logo) that ties all the elements together and accredits them.

## Other States' Programs

The following descriptions of other states' programs illustrate things that can be done to fill some of the information void identified in the previous section.

### Vermont System

The Vermont service and attractions system completely prohibits off-premise outdoor advertising and imposes severe restrictions on on-premise signs. Except for route markers and other official signs, all off-premise signs visible from the highway are prohibited. The State legislation is far more restrictive than the minimum requirements of the Highway Beautification Act.

The legislation created a Travel Information Council to promulgate the rules and regulations for implementation of an official business sign and information plaza program. The Council is made up of seven governmental, industry and citizen members--three of which represent industry.

The Travel Information Council is aided in administering the law on the local level by committees in each highway district. Generally, guidelines such as the number of official signs per establishment and distance from the business at which official signs may be erected are subject to modification by common sense, responsive to local conditions.

The policy of the Travel Information Council has been to require that a highway district be "adequately signed" under the official program before existing advertising signs are removed. This procedure is designed to minimize any possible dislocation caused by loss of travel information.

The system has two major components:

- Official business signs using color coding and symbols.
- Information plazas.

Official business signs are directional signs for travel-related facilities. The signs are standardized and are erected by highway officials, but paid for by the affected business. The signs are erected on the primary system, usually at the last choice point. This type of signing was pioneered by the State of Vermont and adopted by some additional jurisdictions on an experimental basis.

The Vermont system utilized both color and symbol coding. The symbols are combined with names, distances, logos, and directional arrows to form a sign unit.



Vermont has established an extensive system of unmanned sign plazas on both the interstate and primary systems. These sign plazas became necessary because the demand for signs at certain intersections was greater than the space available for on right-of-way signs.

Each of Vermont's plazas conform to specific building requirements that allow for individual graphic panels that may be removed for updating with relative ease. All include the following information:

- A recently published map showing the location of the plaza;
- Up to 66 descriptive plaques of business advertisements;
- Information on recreation areas, sports, history and cultural attractions;
- An explanation of the Travel Information Council symbol signing.

Initially, road maps were dispensed free of charge from open-top boxes attached to the information plaza. However, it proved impossible to keep the boxes filled and the map portion of the program had to be discontinued.

A study of the effectiveness and public acceptance of the system was made in 1970-71. A survey was conducted by interviewing businessmen and travelers in the Brattleboro area, where the first trial installation was made.

When asked to compare the Travel Information Council color signing and conventional signing, two-thirds of the respondents considered the new signs better or superior to conventional signing. Only a relatively small portion thought the signing was worse, while one-fifth of the respondents did not notice the signs.

In the second portion of the study, businessmen in the area were interviewed. Both participants and non-participants in the program were included. The results show that while 100 percent of the businessmen felt it was important to have Vermont highways as attractive as possible, they were sharply divided in their opinions of the new signing system. About one-third of the interviewees would still prefer conventional roadside advertising to the new system.

Although the results of the study were divided, they were considered sufficiently encouraging to implement the system for the entire state. This implementation has now been completed and a major evaluation is now under way.

## Oregon System

The Oregon service and attractions information system is distinguished in that it represents an attempt to maximize the role that unmanned information centers can play.

The Oregon legislature created a Travel Information Council similar to Vermont's to administer and implement the State's roadside sign control program. The Oregon outdoor advertising control program, like Vermont's is more restrictive than the requirements of the Highway Beautification Act, but does not amount to full prohibition.

The Oregon system is composed of standard service signs, logo signs and information plazas at rest areas.

Oregon has an elaborate plaza system built and operated by a private concern, Travel Info Centers, Inc. of Portland Oregon. They are open-air buildings with lighted displays providing information to the motorist about basic travel services. Of the display area, 40 percent is reserved by the State for road information, scenic and historical sites and other State advisories.

The remaining 60 percent of the display area is devoted to commercial panels. The motorist can find information on:

Lodging	Campgrounds
Food	Recreation Areas
Service Stations	Scenic and Historical Sites

Sizes vary slightly but the format is standardized including logo or trademark, routing instructions, address, descriptive copy, color photographs and a series of pictographs showing services available and credit cards accepted. Changes may be made with relative simplicity.

A series of studies was conducted to measure the effectiveness of the Info Centers. In one study, it was found that for the motorists using the Info Center, 63 percent said that they intended to use at least one of the services the advertisers offered.

Studies in June and August of 1976 indicate that although there has been an aggressive publicity campaign concerning this information system, 84 percent of all drivers did not become aware of the system prior to entering the highway system.

## California

California established criteria for determining when a facility would qualify for logo signing. The following criteria must be met to qualify for food or lodging signs.

Establishments must be open to serve breakfast, lunch and dinner. Both food and lodging establishments must score at least ten points in the following, including at least one point in the category, E, to qualify for signs.

- a. Minimum distance in miles from the highway exit to the first service facility:
 

0-1/2 mile	3 points
1/2-1 mile	2 points
1-3 miles	1 point
More than 3	0 points
- b. Number of traffic control devices (signals or stop signs) between the exit and the facility:
 

0-1 device	3 points
2-3 devices	2 points
4-5 devices	1 point
More than 5	0 points
- c. Number of seats available in food facilities or number of room with private baths in lodging facilities reachable from the interchange:
 

50 or more	3 points
30-45	2 points
15-29	1 point
Less than 15	0 points
- d. Distance, in miles, to next highway exit served by a food or lodging establishment:
 

10 or more miles	3 points
3-10 miles	2 points
1-3 miles	1 point
Less than 1 mile	0 points
- e. Judgment factors including comfort, appearance, scope of service provided, etc. should be scored 0 to 3 points, based on opinion of inspection official.

#### Potential for Advertising

There are approximately 50,000 businesses in Minnesota, excluding the urban counties of Hennepin and Ramsey. Each of these businesses has a need to communicate the availability of their goods and services to the public. Minnesota has approximately 5,300 publically administered recreation areas and 2,900 privately administered recreation areas.

In an effort to determine the concentration of businesses, four counties were analyzed. Blue Earth County was chosen as retail county; Crow Wing, a tourist county; and Jackson and Norman Counties as agricultural. Analysis of these and other similar counties resulted in estimates of numbers of business establishments which may desire signs for each type of county.

<u>County Activity</u>	<u>Average Number of Businesses Per County</u>
Agricultural	300
Retail	800
Tourism	750

Recreational facilities were tabulated in a similar fashion:

<u>County Activity</u>	<u>Public Recreational Facilities</u>	<u>Private Recreational Facilities</u>
Agricultural	13	7
Retail	46	12
Tourism	73	138

To keep the need for additional advertising signs in perspective, if each private recreation area was allowed two advertising signs (one in each direction) this would result in an additional 5,800 billboards along our highway system.

If each business was allowed two advertising signs, this would add 100,000 additional billboards statewide.

However, it is unlikely that all businesses would install two signs. Many would not install any signs, while some businesses would install more than two signs if they were permitted. In 1966 there were about 42,000 signs in existence. The removal of signs that were illegal or not in compliance with state and federal beautification laws and not voluntarily removed has cost Minnesota about \$8.3 million.

It would be reasonable to assume that because of previous sign concentrations perhaps 45,000 to 50,000 billboards could reappear under the greatly liberalized signing law. If these signs were located on the 8,500 miles of rural Interstate and Primary Highways, the following concentrations could result:

<u>County Activity</u>	<u>Approximate Signs Per Mile*</u>
Agricultural	3
Retail	9
Tourism	7

\* These are averages and it is likely that sign concentrations would be much heavier in certain areas.

Another advertising device is the portable on-site billboard (tractor-mounted). Its usage continues to be a problem.

The provisions of MSA 169.07 reads in part: "No person shall place, maintain, or display upon or in view of any highway any unauthorized

sign, signal, marking, or device which purports to be or is an imitation of or resembles an official traffic-control device or railroad sign or signal, or which attempts to direct the movement of traffic, ...."

Many of these portable billboards are deemed a hazard because flashing arrows or rotating beacons incorporated in the billboard design draw the motorists attention away from the driving task and do, to some extent, resemble official warning devices.

Further, since these billboards are usually trailer mounted, and easy to move, owners tend to place the signs, so as to encroach on the trunk highway right of way in many cases (unlawful under MSA 160.27).

Present procedures require a 60 day notice of violation, for not conforming to the outdoor advertising law, before the sign must be removed. The sign can then be moved to a new location for a similar 60 day period. Some cities, through their zoning ordinances, have set the notice of violation at as low as 10 days.

#### Location of Signs

The traditional role of signing is that traffic control devices are located on the highway right of way while advertising signs are located off the right of way. Federal standards prohibit the placement of advertising signs on the right of way unless they are part of an experimental program. The FHWA will not authorize the expenditure of Federal funds for any project that does not meet standards. The Highway Beautification Act also provides for a 10% Federal aid penalty for non compliance with off right of way billboard regulations. In 1981, Minnesota's apportionment was approximately \$134 million in Federal aid highway funds.

Traffic control signs located on the right of way are designed to be easily readable from a distance approximately 800 feet. Margins, letter size and spacing are designed to provide maximum target value or readability to the motorist. A typical directional sign on the interstate will be approximately 10 ft. by 13 ft. and will cost about \$15.00/sq. ft.

Advertising signs, by contrast, are located off the right of way.

Typical sizes for rural commercial billboards on two-lane roadways are about 12 ft. by 24 ft. Rental fees for signs of this size range from about \$200 to \$400 per month in a rural area to \$1,500 per month in urban areas. Painted panel billboards often range from 10 ft. by 40 ft. to 14 ft. by 50 ft. in size. Present permit fees range from \$10 per year to \$40 per year depending on size.

Because the Highway Beautification Act does not control advertising beyond 660 feet of the roadway. "Jumbo billboards" can be located in open areas where they are readable from the highway. These jumbo billboards often reach 1,200 square feet to 5,000 square feet.

These are certain advantages and disadvantages to locating billboards on or off the right of way.

#### On Right of Way

##### Advantages

1. Control of location and size.
2. Signs are smaller for particular message.
3. Greater night time effectiveness.

##### Disadvantages

1. Interference with traffic control devices.
2. Could be hit by vehicles.
3. Administration could be expensive.
4. Variance in road design could cause non-standard location of signs.
5. Roadway improvement could require relocation of signs.
6. Service/advertising mixture could confuse the motorist.
7. Could result in loss of Federal aid.

#### Off Right of Way

##### Advantages

1. Do not interfere with traffic control devices.
2. Unlikely to be a roadside obstacle.
3. Do not affect maintenance operations.
4. Signs are private property.
5. Additional income to land owner

##### Disadvantages

1. Site control and administration costly if standards are detailed.
2. Larger sign sizes required.
3. May require illumination for night time effectiveness.
4. Scenic area designation would eliminate some locations.

One method of controlling off right-of-way advertising size could be the development of standard size "generic billboards". These signs would have a uniform colored background, a white legend and could permit the use of a logo.

The size of these billboards would depend on the right of way width. The following table illustrates how the sign would have to increase in size to be readable as the right of way width increases.

<u>Distance to ROW Line from Centerline</u>	<u>Suggested Letter Size</u>	<u>Approximate Sign Size</u>	<u>Sign Area</u>
33 ft.	13 in.	18 ft. by 7 ft.	126 Sq. Ft.
50 ft.	16 in.	22 ft. by 9 ft.	198 Sq. Ft.
75 ft.	20 in.	28 ft. by 11 ft.	308 Sq. Ft.

If any of the on right-of-way sign programs are expanded, additional costs and manpower needs will be incurred for administration, design, installation and maintenance. Any off right-of-way sign program would require policing to maintain an inventory, as required by the Highway Beautification Act, as well as enforcement of spacing requirements, sign sizes and controlling sign proliferation such as the "Wall Drug" syndrome.

The control of portable billboards in Minnesota continues to be a problem. Present procedures require a 60 day notice of violation, for not conforming to the outdoor advertising law, before the sign must be removed. The sign can then be moved to a new location for a similar 60 day period. Some cities, through their zoning ordinances, have set the notice of violation at as low as 10 days.

## OPTIONS

It has been documented many times that there is no magic solution to providing motorist services information and directional information to address everyone's needs. It has also been shown that some elements are better than others, and basic motorist information needs have been identified. Nine options are presented in this report that outline things that can be done in Minnesota. These options fall in three areas.

1. Improvement and expansion of our present programs.
2. Changes in our outdoor advertising law.
3. Non-signing improvements.

While the nine options are presented individually, as listed above; the options could actually be packaged in any number of ways to fill a particular need.

For each option, advantages and disadvantages are presented, estimated costs are made as well as estimates of additional staff that would be necessary to implement each option.

Comments, which reflect the views of the Department of Transportation and the Department of Energy, Planning and Development, are included for each option.

Each option presented, attempts to fill the needs of the transient motorists. Individually, some options, may give support to specific businesses, perhaps at the expense of competitors who do not qualify for that particular program. The question of "fairness" should be considered when packaging options into a program to solve motorists needs.



## OPTIONS

### REVISE THE COUNTY SLAT PROGRAM

The County Slat Program Law (Chapter 675, 1971) could be changed to reflect the following:

1. Owners Pay full cost of the signs.
2. Allow for the purchase of vendor supplied signs.
3. Make county participation mandatory.
4. Expand eligibility guidelines to cover same activities as specific services signing program.  
(resorts, camping, motels)

#### Advantages

1. Improved signing for services on local roads.
2. All counties will participate in the program.
3. The program will be self supporting.
4. Would be compatible with the Highway Beautification Act.
5. Could be implemented as a pilot study.
6. Would promote statewide uniformity.
7. Consistent with findings of the "Study of Informational Needs of Tourists."

#### Disadvantages

1. Will require administration and policing (although self supported).
2. More signs along local roads.
3. May increase maintenance costs.
4. There may be demand for a large number of slats at a given location.
5. Counties may oppose mandatory participation in the program.

Comments: This program would be more equitable and useful if it was made consistent with the specific services signing program.

A typical sign is shown on page 23.

### IMPROVE THE SECONDARY ROAD GUIDE SIGNING PROGRAM (Destination Signing, Route Numbers, Road Names)

Provide Financial aid to the local authorities to upgrade guide signing to Manual on Uniform Traffic Control Devices guidelines.

#### Advantages

1. Improves identification of local roads.
2. Improves ability of business to advertise location.
3. Promotes statewide consistency.
4. Consistent with finding of the "Study of Informational Needs of Tourists in Minnesota".
5. Improves location identification without negative "billboard" effect.
6. Could be administered through present state-aid channels.

#### Disadvantages

1. Statewide program could cost \$1,700,000 to \$2,000,000 to implement.
2. Would require additional state financial support.
3. May increase maintenance costs.
4. Could require additional local staff to implement the program.
5. Locals could have difficulty financing any local match which may be required.

Comments: This is one area where there is a documented public expression of the need to improve guide signing.

## OPTIONS

### EXPAND THE TRUNK HIGHWAY GUIDE SIGNING PROGRAM THROUGH THE USE OF GLYPHS

Mn/DOT policy could be changed to expand the use of glyphs (symbol signs) to locate motorist services and recreational activities.

#### Advantages

1. Improved identification of recreational facilities and motorist services.
2. Control of signs is centralized.
3. Implementation requires no legislative action.
4. Would be compatible with the Highway Beautification Act.
5. Could be used in place of specific services signing.

#### Disadvantages

1. Increased number of signs.
2. Costs about \$25 Sq. Ft. of sign.
3. Program could cost \$150,000 to \$300,000 and require 9 additional staff to implement.
4. May increase maintenance cost.
5. Would require period of time to educate drivers as to meaning of glyph.
6. Large numbers of glyphs at one location would be confusing.

Comments: The use of a large number of glyphs would result in a long educational process before they would be quickly interpreted by the traveler. Glyphs should be limited to trailblazing for regional or major traffic generators. Examples of glyphs are shown on page 24.

### USE GLYPHS AS A SUPPLEMENT TO SPECIFIC SERVICES SIGNING

The Specific Services Signing Program (Chapter 160, 1979) could be modified to provide for the use of Glyphs as a supplement to the specific services sign to identify which services are available. For example a "resort" could provide camping, ski trails, marina, fuel, food, landing strip, golf course, etc.

#### Advantages

1. Additional information about a site is transmitted from a single sign installation.
2. May be implementable (with FHWA approval) as part of the specific services experimental sign program.
3. Would promote state/national/international uniformity.

#### Disadvantages

1. Need to control how many glyphs to allow on each installation. An accumulation can overwhelm the traveler.
2. Overuse would result in sign clutter.
3. Cost 25 per sign
4. Program could cost 100,000 to 500,000 and require additional staff.
5. May increase maintenance costs.
6. Would require a period of time to educate drivers as to the meaning of the glyph.

Comments: If a facility offers more than one service, as mentioned above, the profusion of glyphs can become overwhelming and unreadable. Limited space may require changing glyphs for seasonal services.

## OPTIONS

### EXPAND THE SPECIFIC SERVICES SIGN PROGRAM

The Specific Services Sign Program (Chapter 160, 1979) could be modified to allow specific services signing for additional motorists services and recreational activities.

#### Advantages

1. Program is self supporting.
2. Additional services would have access to the sign program.
3. Control of the program is centralized.
4. Motorist would have additional business location information.

#### Disadvantages

1. Expansion of the experimental program would require FHWA approval.
2. Criteria would have to be set to decide who qualifies.
3. Demand at a location can be greater than available space for signs.
4. May increase maintenance.
5. Additional manpower needed to implement program (although it could be made self supporting).

Comments: If this program is expanded, it is very difficult to equitably determine who is allowed a sign. An example sign is shown on page 22.

### ALLOW ADDITIONAL ADVERTISING SIGNS

Minnesota's Outdoor Advertising Control Law (Chapter 173, 1980) could be modified to allow:

1. Billboards advertising Motorist Services Businesses.
2. Billboards for all businesses but prohibiting product advertising.
3. Allowing billboards anywhere.
4. Allowing billboards in designated advertising areas along trunk highways.

#### Advantages

1. Provides additional advertising opportunities.
2. Controls advertising locations to minimize impact on sensitive areas (option 4 above).
3. Keeps traffic signing and advertising signing separate.
4. Size and spacing of advertising signs could be controlled.
5. This program could be fee supported.

#### Disadvantages

1. Highway Beautification Act restricts advertising signs on FAI and FAP routes. Could result in loss of 10% of Federal aid; about \$18 million annually.
2. Severe competition for available spaces (option 4 above).
3. Criteria would have to be developed for the selection of advertising zones and businesses (options 1, 4 above).
4. Could impact zoning ordinances of cities and counties.
5. Would require 9 positions and \$250,000 to \$500,000 dollars to administer program.
6. Create strong opposition from product manufacturers.

Comments: Mn/DOT and DEPD do not support the expansion of the use of billboards. A sample generic billboard is shown on page 23.

## OPTIONS

### INCREASE NUMBER OF KIOSKS AND INFORMATION CENTERS

Expand programs to allow, encourage and fund additional kiosk and information centers.

#### Advantages

1. Aids the traveler.
2. Retains control of advertising.
3. Kiosks are self supporting.
4. Service clubs, tourism and business groups could operate information centers.
5. Availability of road reports and weather conditions.

#### Disadvantages

1. Driver must leave the travelled way to use the facility.
2. Increased maintenance and vandalism possible.
3. Manned information center costs \$35,000 to \$45,000 annually to operate and requires 5 people.
4. There are not enough facilities to give specific directional guidance to all destinations.
5. Available material is mostly recreation oriented.

Comments: The kiosk program has not been fully implemented as yet so its effectiveness cannot be evaluated. An example of a kiosk is shown on page 25.

### PROVIDE ADDITIONAL FUNDS FOR TOURISM PROMOTION

Additional funds could be provided to the Bureau of Tourism for use in promoting tourism in Minneosta.

#### Advantages

1. Makes more tourism material available.
2. Improves advertising efficiency of businesses
3. Consistent with findings of the "Study of Informational Needs of Tourism in Minnesota".
4. This effort could supplement many of the other options presented.
5. Lot of material available free.

#### Disadvantages

1. Requires additional funds and manpower to implement.
2. Not all businesses benefit equally from this program.

Comments: Each one dollar of tourism promotion results in about a four dollar increase in tourism based tax revenue.

## OPTIONS

### PROVIDE MORE STATE AND LOCAL MAPS

State and local area maps could be made available at a nominal fee.

#### Advantages

1. Fee could be set so the program would be self supporting.
2. Maps could be made available at public and private locations.
3. Bikeway maps provide excellent local road coverage at a nominal (\$1.00) fee.
4. Mapping is standardized
5. Consistent with findings of the "Study of Informational Needs of Tourism in Minnesota".

#### Disadvantages

1. Need to overcome "free map" expectation.
2. May be difficult to distribute maps to enough outlets to benefit the public.
3. Would compete with private map businesses.
4. A policy of charging for all State Maps would seriously reduce the State's ability to encourage tourism travel in Minnesota.

Comments: Mn/DOT & DEPD agree there is a problem with the availability and distribution of maps.

In order to properly promote the Minnesota Tourism Industry free maps are an integral and necessary part of the literature package used to encourage travel to Minnesota.

## Conclusions and Recommendations

While the national studies (pages 2-4), discussed in this report, have indicated a void in the delivery of motorist services information; in Minnesota (Page 5) this void exists mainly on the local road system. These studies also show that an adequate directional signing program should be supplemented with non-signing techniques (maps and information centers) to maximize their effectiveness.

There are really two issues addressed in this study; the need for motorist services information, and the preceived need for business advertising. The Minnesota Department of Transportation and Department of Energy, Planning and Development feel strongly that "on right-of-way" programs should serve the motorist services information needs. Business advertising needs can best be addressed in the private sector.

The Minnesota Department of Transportation and Minnesota Department of Energy, Planning and Development make the following recommendations:

1. Guide signing on the local road systems should be upgraded to the level of signing on the trunk highway system. This improvement would require additional road name and numbering at intersections as well as more distance and directional signing to cities. This improvement would cost approximately \$1.7 to \$2.0 million to implement; a cost that is beyond the ability of the local units of government to fund. This program addresses the major signing deficiency addressed in the study of tourist information needs discussed on Page 5. (See page 31.)
2. The County Slat Sign Program (Page 30) should be made compatible with the State's Specific Services Sign Program (SSS). This change would result in a more equitable and uniform application of specific destination sign programs. The County Slat Sign Program changes would include:
  - a. The participant should pay 100 percent of the sign costs. Presently the County pays 25 percent of the sign costs.
  - b. This program should be available statewide. At present only 8 counties have instituted the program.
  - c. The signs should be the same design as SSS signs.
  - d. Eligibility guidelines would be expanded from resorts only to include resorts, camping and motels.
3. Care must be exercised to avoid allowing additional advertising signs to be placed indiscriminately along the right-of-way. Sufficient time should be allowed for the Kiosk Program (Page 34) to become fully operational, to measure its effectiveness. Additionally, the addition of "motels" to the Specific Services Signing Program have only been in effect for about one year.

4. Major changes in the Highway Beautification Act are being considered. One of these (The Hatfield Bill) would substantially alter the present Act (page 23). Any major change in State signing laws should be deferred until the significance of the federal changes, and the resulting local options, are more fully known.
5. There is a definite problem concerning the number of State Transportation maps available for distribution as well as limited locations where maps are available. One method to alleviate this would be to allow private vendors to print and distribute the map. This would increase the number of maps printed (over the number that can be printed within Mn/DOT's budget) and could greatly improve accessibility by utilizing retail outlets (as opposed to using Mn/DOT's offices, six highway information centers and other tourism information outlets). A second method to meet the map demand would be to increase the appropriation for printing more maps.

Specific Service Signs: Sign panels designed to display motel, resort, and recreational camping information at non-freeway trunk highway intersections in rural areas.

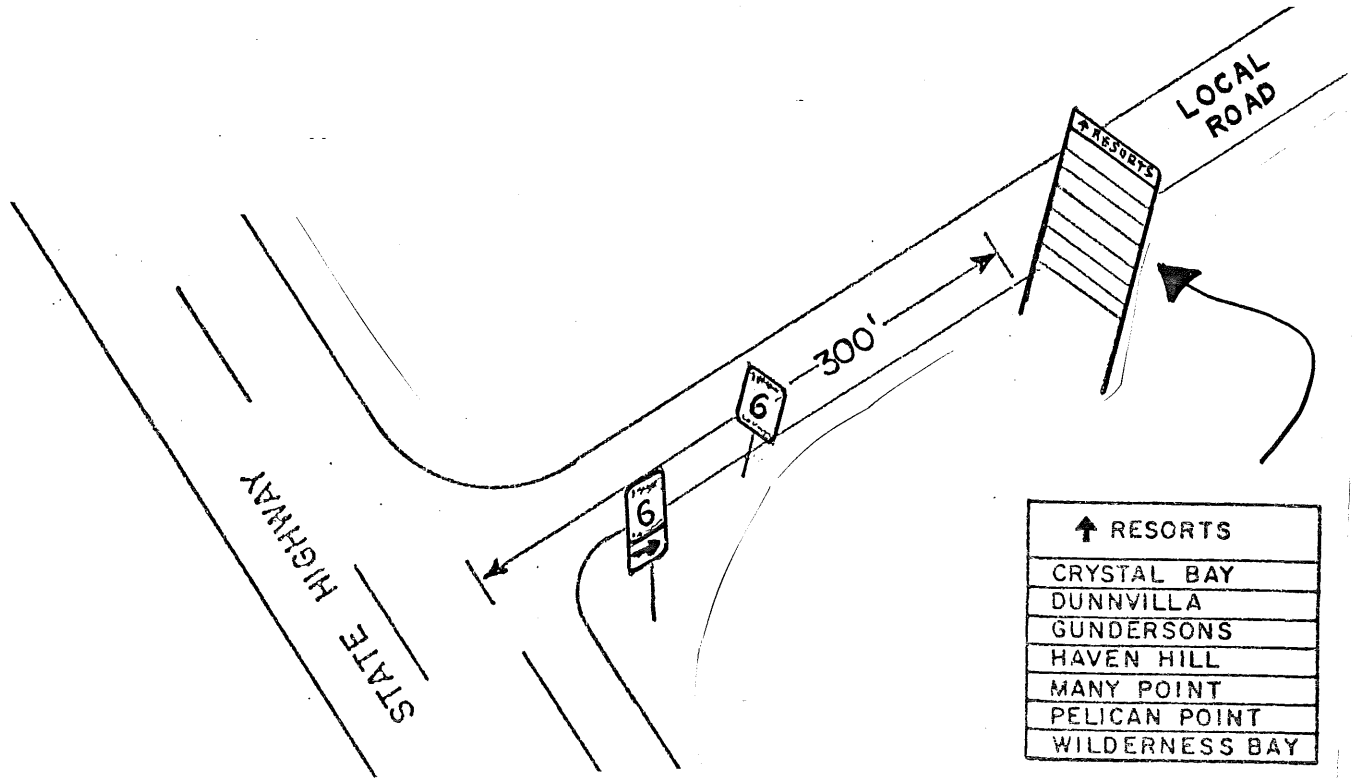


General Motorist Services Sign: Standard signs for use on rural freeways to indicate availability of approved motorist services: Gas, Food, Lodging, Camping, Hospital.

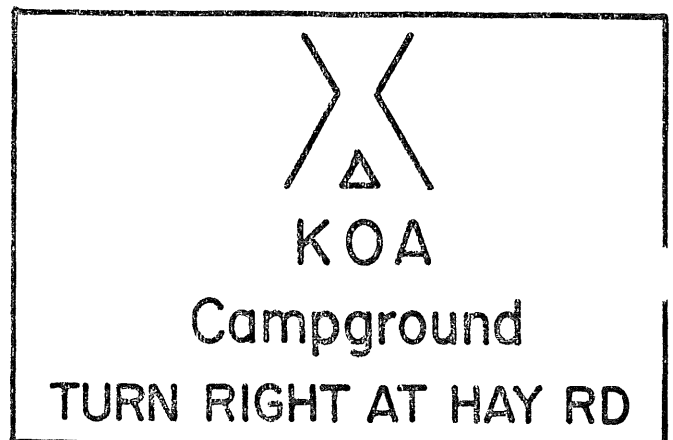
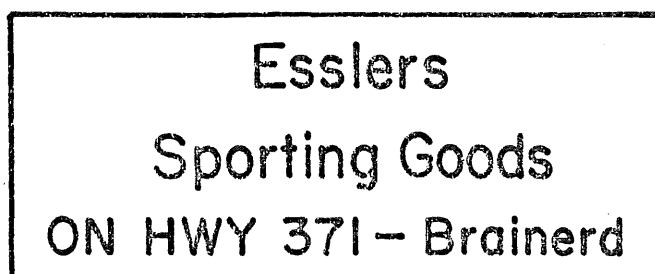




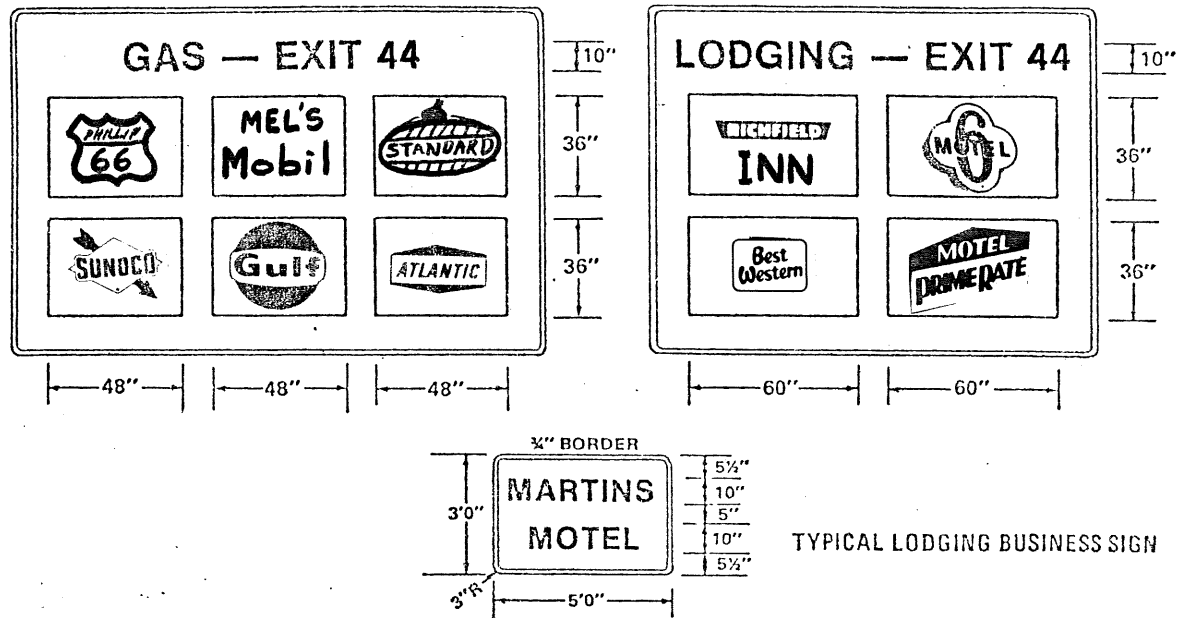
County Slat Sign: Resort information signs intended to be installed on county or township roads, giving the motorist confirmatory guidance or reassurance that he is on the right road once he has left the trunk highway.



Generic Billboard: A standard-sized advertising sign having a uniform colored background and a white legend, and permitting the use of a logo.



Logo Sign: Special motorist services signs (giving specific service information) for use on freeways, showing the brand, symbol, trademark, or name of the available motorist service, whether GAS, FOOD, LODGING, or CAMPING.



Glyph: A symbol that conveys information non-verbally.



Lodging



Camp-ground



Information



Downhill Skiing

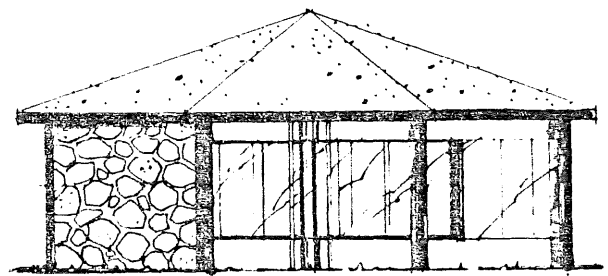
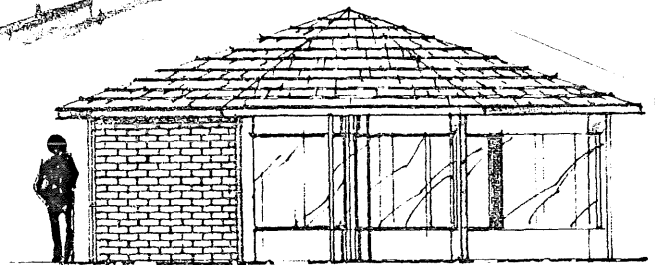
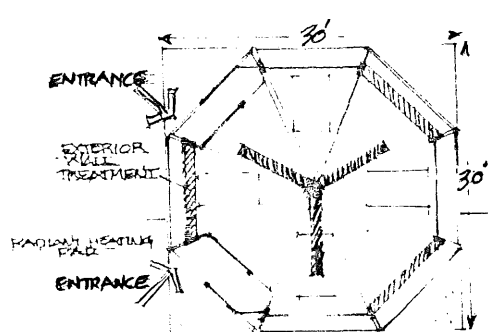
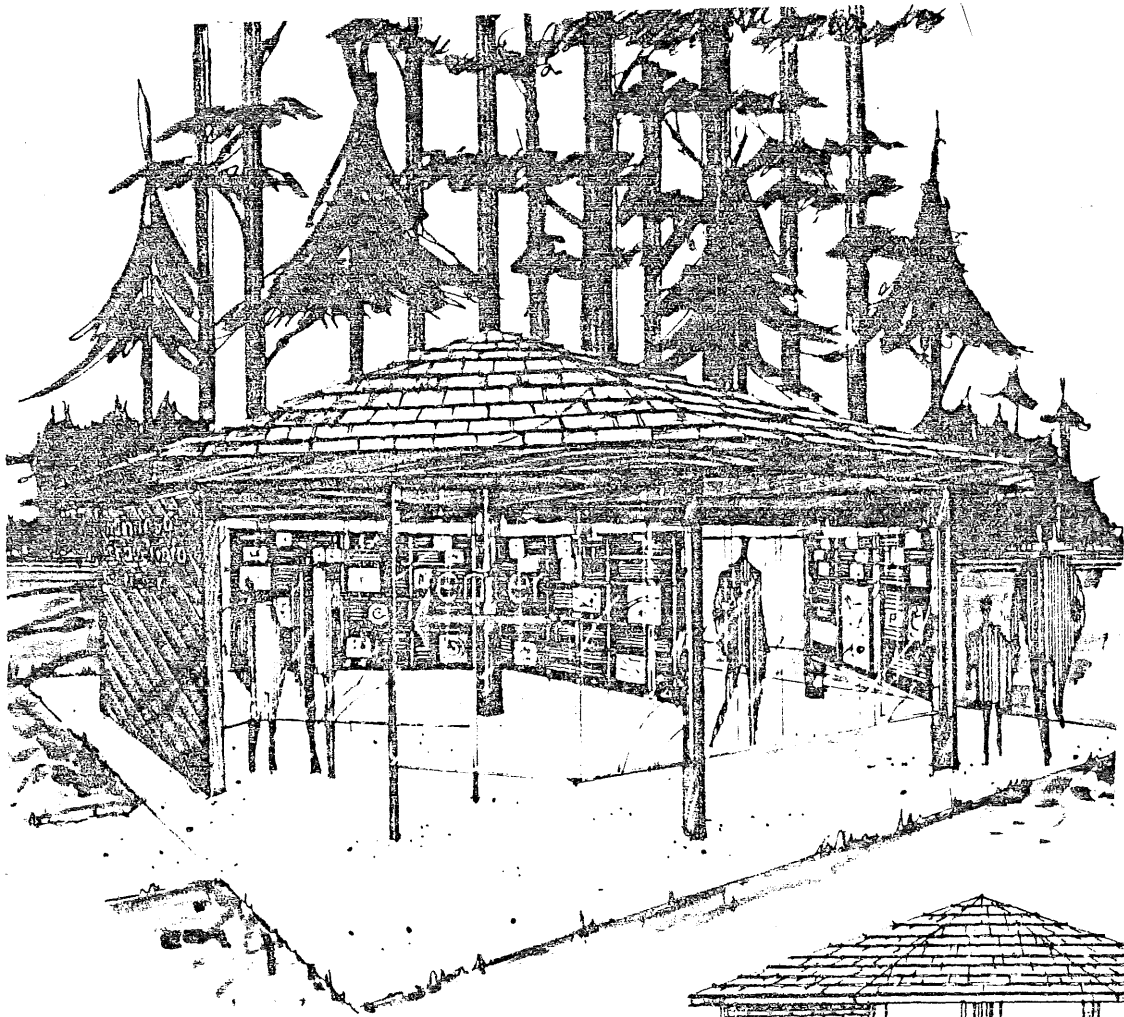


Marina



Launching Ramp

KIOSKS: Small, separate buildings constructed adjacent to rest areas for the purpose of providing information to tourists and utilizing lighted, wall panel display signs.



## APPENDIX B

### BACKGROUND

#### History of Directional Guide Signing

In 1927 the U.S. Bureau of Public Roads published the "Manual and Specifications for the Manufacture, Display, and Erection of U.S. Standard Road Markers and Signs".

The Highway Traffic Act (G.L. 1927, Chap. 412) was enacted by the Legislature of the State of Minnesota following the above publication which provided in part, "The Commissioner (of highways) is hereby authorized to establish a standard of highway signs and signals".

In January of 1929 the Minnesota Department of Highways published the "Manual of Standard Signs, and Signals". An important statement in the preface of this manual reads as follows:

"The System of Standardized Signs and Markers, as developed by the Bureau of Public Roads of the United States Department of Agriculture and adopted by the American Association of State Highway Officials is closely followed with only such modifications and additions as are necessary to adopt the same to our laws and conditions."

A Commissioner's memo dated 9/19/41 authorized the identification of resorts by use of a black legend on white background that displayed the resort name with an arrow.

During this period of time, billboards were erected with little or no regulation. Minnesota's first outdoor advertising control law was enacted in May, 1965; just prior to enactment of the Federal Highway Beautification Act of 1965. The Highway Beautification Act set forth criteria and guidelines for states to follow, but each of the states were to enact their own laws. The Minnesota law was amended in 1967, to bring it into compliance with the Highway Beautification Act. As a direct result of the Highway Beautification Act of 1966, in 1969 the Minnesota Department of Transportation issued a revised policy and new standards effectively ended the resort slat program and stressed identification of local roads by route number, geographical area or road name. This policy applied to resorts and private campgrounds. Exceptions were made where no effective private identification could be made, in which case a slat was permitted.

In 1971, the Minnesota Highway Department revised and refined the preceding policy, requiring uniformity and governing body input into selection of local road names, and geographical area signing. An exception, where private signing was impossible, limited the sign legend to "resort" or "campground", without business name identification.

In 1973 the Minnesota Highway Department established a new policy for Resort and Campground Motorist Services Signing on the Trunk Highway System (other than freeways), at local road intersections. The basic intent was to give guidance to these services, where Advertising Regulation law had restricted the owners from installing their own private signs.

The signs permitted were "RESORT(S)" and "CAMPING", containing a white legend and a directional arrows on a blue background.

On January 13, 1976, the Federal Highway Administration approved changes in the Manual on Uniform Traffic Control Devices to allow (as alternates) symbol signs for motorist services on mainlines of freeways, expressways and conventional roads. Symbols, also called Glyphs, permitted include Gas, Food, Lodging, Phone, Hospital and Camping. These glyphs are alternates only and few are being utilized in Minnesota.

The Federal Highway Administration introduced National Standards for Specific Information Signs in February of 1979. These standards permitted, "... at the option of the State...", that specific information signs could be erected on any highway open to public travel.

"Specific information signs consists of a "rectangular sign panel to show the brand, symbol, trademark, or name, ..., for a motorist service available on a crossroad at or near an interchange or an intersection. Motorist services included under this standard are Gas, Food, Lodging and Camping."

Mn/DOT has chosen not to utilize this option, because of the satisfactory operation of gas, food and lodging signs already in place.

The legislature in 1980 created the Specific Services Signing Program for resorts and camping signing. This bill provided for a sign 72" x 18" to be placed on the right of way in advance of intersections or crossings giving the name of the resort or campground, an arrow designating the direction to turn and the mileage to the facility. The signs were to be installed by the Minnesota Department of Transportation and paid for by the respective resort or campground owner or operator. Federal approval was given as an experimental project in June of 1980. The 1981 legislature amended this program (M.S. 160.292) to include motels.

## BillboardsLaws

President Lyndon Johnson signed the Highway Beautification Act in 1965. The basic objective, as stated in the law, was that "The erection and maintenance of outdoor advertising signs, displays, and devices in areas adjacent to the Interstate system and the primary system should be controlled in order to protect the public investment on such highways, to promote the safety and recreational value of public travel, and to preserve natural beauty".

As early as 1915, in Churchill and Tait v. Rafferty, 32 Philippine Rpts. 580, 609 (Phil. Isl. Sup. Ct.) the doctrine that billboard control laws represent regulation of the roads rather than regulation of private property was established:

"The success of billboard advertising depends not so much upon the use of private property as it does upon the use of the channels of travel used by the general public. Suppose that the owner of private property, who so vigorously objects to the restriction of this form of advertising, should require the advertiser to paste his posters upon the billboards so that they would face the interior of the property instead of the exterior. Billboard advertising would die a natural death if this were done, and its real dependency not upon the unrestricted use of private property but upon the unrestricted use of the public highways is at once apparent. Ostensibly located on private property, the real and sole value of the billboard is its proximity to the public thoroughfares. Hence, we conceive that the regulation of billboards and their restriction is not so much a regulation of private property as it is a regulation of the use of the streets and other public thoroughfares."

The federal law does not control any signs on its own; but requires that the states must provide "effective control" of outdoor advertising. The concepts of effective control contains two elements.

1. Illegal signs, or those which are erected or maintained in violation of the law, must be removed.
2. Enforcement of reasonable land use controls that are applicable to non-conforming signs, such as abandonment, discontinuance, destruction and customary maintenance requirements. A non-conforming sign is one that was erected prior to the effective date of the State law, but is not in conformance with the law.

The Highway Beautification Act controls all interstate highways and all highways on the Federal-Aid primary system. In Minnesota there are approximately 870 miles of interstate and 9,300 miles on the Federal-Aid primary system.

Several types of signs are allowed under the Federal Highway Beautification Act:

1. Sale or lease signs, when located on the property which is for sale or lease.
2. On-premise signs which advertise goods or services offered by businesses on the premises where the sign is located.

3. Directional and official signs which include those official signs erected by state or local units of government officials under authority of law; public utility signs that are warning or informational; service club and religious notices; school bus stop shelter sponsors; and directional signs containing directional information about public places.
4. Landmark signs which include those on farm structures or natural surfaces, of historic or artistic significance.
5. "Free Coffee" signs by non-profit organizations.
6. Signs in commercial or industrial areas that are in compliance with state billboard laws.
7. Economic hardship signs, where removal would create a substantial economic hardship in specific area determined by the State. Individual claims of hardship are not allowed.

The Highway Beautification Act provides for Federal participation in 75 percent in the cost to remove non-conforming signs including the payment of just compensation. Failure to pay just compensation could subject the state to a 10 percent reduction of the State's annual Federal-Aid highway apportionment. In F.Y. 1981 Minnesota's apportionment was approximately \$134 million.

On November 2, 1981, Senator Hatfield introduced S-1876 in the Congress which would amend the Highway Beautification Act "A State may allow activities not visible from the main traveled way of a highway on the Interstate system or the primary system to erect signs, displays, or devices adjacent to such highway which at a minimum, conforms to the size, lighting and spacing standards ... identifying the location of the activity, if the activity is not able to advertise its presence through a sign permitted under subsection (c)(3) of this section."

#### Minnesota's Billboard Law

Minnesota enacted an outdoor advertising control law in May, 1965; prior to enactment of the Federal Highway Beautification Act. In 1967, the Minnesota law was amended to comply with the Federal act.

The current applicable law is found in Minnesota Statutes 1980, chapter 173, 1980 "Advertising Devices". This law establishes procedures for permitting signings that are in compliance with the Highway Beautification Act.

Minnesota's law is applicable to the interstate highways, the federal-aid primary system and all other state trunk highways, a total of about 12,000 miles.

Similar to the Federal act, certain types of signs are permitted:

- a. Directional and other official signs, including, but not limited to, signs pertaining to natural wonders, scenic and historical attractions, which are required or authorized by law, and which comply with regulations which shall be promulgated by the commissioner of Transportation relative to their lighting, size, spacing and other requirements as may be appropriate to implement Laws 1971, Chapter 883;
- b. Advertising devices advertising the sale or lease of property upon which they are located, provided that there shall not be more than one such sign, advertising the sale or lease of the same property, visible to traffic proceeding in any one direction on any one interstate or primary highway;
- c. Advertising devices advertising activities conducted on the property on which they are located, including, without limiting the generality of the foregoing, goods sold, stored, manufactured, processed or mined thereon, services rendered thereon, and entertainment provided thereon;
- d. Advertising devices stating the name and address of the owner, lessee or occupant of such property or information otherwise required or authorized by law to be posted or displayed thereon;
- e. Public utility signs;
- f. Service club and religious notices, except that a permit with a fee of \$2 shall be required;
- g. Advertising devices on which the advertising copy or the name of the owner thereof is in no part visible from the traveled way of the aforesaid highways;
- h. Advertising devices which are located, or which are to be located, in business areas and which comply, or will comply when erected, with the provisions of Laws 1971, Chapter 883.

The Minnesota law also governs spacing of conforming signs. Chapter 173.16 Subd. 4, (2) states:

No advertising device shall be erected closer to any other such advertising device on the same side of the same highway facing traffic proceeding in the same direction than (a) 500 feet on any interstate highway or fully controlled freeway in a zoned or unzoned commercial or industrial area within or outside an incorporated city, (b) 300 feet on a primary highway in a zoned commercial or industrial area outside an incorporated city, (c) 400 feet on a primary highway in an



unzoned commercial or industrial area outside an incorporated city, (d) 100 feet on a primary highway inside an incorporated city; provided, however, that this provision shall not prevent the erection of double-faced, back-to-back, or V-type advertising devices with a maximum of two signs per facing; provided further, however, that such spacing requirements shall not apply as between any off-premise advertising device permitted under the provisions of Laws 1971, Chapter 883.

Additional sections of the law limit placement of signs in the vicinity of interchanges, intersections and railroad crossings. The Minnesota law also prohibits placement of advertising devices with 100 feet of a church or school.

The Minnesota law also allowed the commissioner of transportation to promulgate rules that establish scenic areas adjacent to the interstate or primary highways. The areas could include parks, historic sites, monuments and picnic, rest or recreation areas maintained by the public. No new off-premise advertising devices can be erected within the area after the scenic area has been established. There are approximately 900 miles of scenic areas in the State.

Chapter 173 also provides for the removal of non-conforming signs with the payment of just compensation for the signs.

When the Minnesota law took effect in 1966 there were about 42,000 signs under its jurisdiction. Today there are approximately 4,000-5,000 legal signs standing, as well as nearly 200 non-complying signs whose removal is still in litigation.

Chapter 173 provides that whenever a bona fide county or local zoning authority has made a legitimate determination of customary usage and in the judgment of the commissioner, reasonably provides for size, lighting and spacing control of advertising devices, such determination shall be accepted in lieu of the provisions of this chapter in the zoned commercial and industrial areas within the geographical jurisdiction of such authority.

While county and local zoning authorities have authority to control advertising, the Federal act restricts the labeling of long stretches adjacent to controlled highways a "commercial" or "industrial" solely to permit billboards by subjecting the State to the 10 percent penalty.

#### Directional Guide Signing Standards

As previously mentioned, the Minnesota Department of Highways published the "Manual of Standard Signs and Signals" in 1929.

Although there have been many improvements in the sign design standards over the years, the present law as set forth under M.S.A. 169.06 is similar in content and in principle to that adopted in 1927.

Under M.S.A. 169.06 the Minnesota Manual on Uniform Traffic Control Devices is the official state manual on standards for the use and application of directional guide signs.

The basic premise is that it is essential to guide the motorist along his way in the most simple, direct manner possible.

Directional guidance is furnished by the following legend types:

1. Route numbering.
2. Street or highway names,.
3. Destination signs to cities and villages.
4. Destination signs to other geographic locations - Parks, Forests, Historic Sites, etc.
5. General Information Signs - city limits, county lines, and other political boundaries and geographical features such as lakes, rivers and streams which help orient the motorist.
6. National Standard Motorists Services - Gas, Food, Lodging, Camping, Hospital and Telephone. (Signs are not placed in urban areas where these services are anticipated, with the exception of emergency Hospital.)

In 1971, the Federal Manual on Uniform Traffic Control Devices authorized symbol signs (as alternates) for motorist services. The only symbols currently in general use in Minnesota are the Hospital and Handicapped services symbols.

Legend on direction signs must be kept to a minimum to be legible at a glance during the few seconds that a driver can turn his eyes from the road.

The design of directional signs is related to the design features of the street or highway.

The Manual specifies standards for the following road classifications:

1. Conventional Roads (Non-Freeway)
2. Expressways
3. Freeways

1. Guide Signing Conventional Roads (Non-Freeway)

These roads generally have intersections at-grade at public roads and railroad crossings and in most cases direct access to business and residences.

The Manual contains specific standards for the design and application of route markers, destination signs, street names, and general information signs and shows typical directional signing arrangements at intersections and junctions.

Motorist services, that are commercial in nature, such as gas, food, and lodging usually are within sight and available to the traveler at reasonably frequent intervals along the route. Consequently, signs for these services are not ordinarily placed on conventional highways.

## 2. Guide Signing - Expressway

These roads are divided highways with partial control of access. Expressways call for an intermediate level of signing more advanced than that prescribed for Conventional Roads, but less demanding in their requirements and specifications than Freeway signing standards. Interchanges are provided at major intersecting roads with some intersections at-grade at minor roads.

## 3. Guide Signing - Freeway

Freeways are defined as Expressways with full control of access. That is, all public road crossings are separated with no intersections at-grade. Egress leaving the freeway and ingress entering the freeway is afforded by means of one-way ramps.

National Freeway signing standards include distinctive Interstate shield route markers and guide sign design and application which provide a uniform and effective system of highway signing that is fully adequate for the high-volume, high-speed traffic on these roads.

## Compliance with the Manual on Uniform Traffic Control Devices

The provisions of M.S.A. 169.06, Subd. 1 read in part: "the Commissioner (of Transportation) shall adopt a manual and specifications for a uniform system of traffic-control devices ....". The provisions of M.S.A. 169.06 Subd. 2 State "the Commissioner shall place and maintain such traffic-control devices conforming to the manual and specification, upon all state trunk highways as he shall deem necessary to indicate and to carry out the provisions of this chapter or to regulate, warn, or guide traffic".

On county roads, township roads, and city streets governed by local boards or councils compliance provisions are set forth as follows in M.S.A. 169.06 Subd. 3. Placement and maintenance by local authorities. "Local authorities in their respective jurisdictions shall place and maintain such traffic-control devices upon highways under their jurisdiction as they may deem necessary to indicate and to carry out the provisions of this chapter or local traffic ordinances, or to regulate, warn, or guide traffic. All such traffic-control devices hereafter erected shall conform to the state manual and specifications."

Whereas M.S.A. 169.06 mandates that the commissioner shall conform to the manual on all state trunk highways; M.S.A. 169.06 subd. 3 states that local authorities shall place only those traffic control devices as they deem necessary. This permissive placement of traffic control devices at the local level can and often does result in local roads with less than ideal directional signing.

#### Motorist Service Signing vs. Advertising

A Guide Sign is a sign used to show route designations, destinations, directions, distances, services, points of interest, and other geographical or cultural information.

A motorist service sign is merely a guide sign giving directions to facilities that provide basic services, such as Gas, Food, Lodging, Camping, Hospital, or Tourist Information.

An advertising sign, in contrast, provides information about a specific provider of a particular good or service.

"Advertising Device" as defined in M.S. 173.02, Subd. 2, means any billboard, sign notice, poster, display, or other device visible to and primarily intended to advertise and inform or to attract or which does attract the attention of operators and occupants of motor vehicles on the interstate system of highways and shall include any structure erected primarily for use in connection with the display of any such device and all lighting or other attachments used in connection therewith. (Though referring to "Interstate" highways, this definition can likely apply to other highways as well.)

The Manual on Uniform Traffic Control Devices states: "Guide signs are essential to guide vehicle operators along streets and highways, to inform them of intersecting routes, to direct them to cities, towns, villages, or other important destinations, to identify nearby rivers and streams, parks, forests, historical sites, and generally to give such information as will help them along their way in the most simple, direct manner possible."

On conventional highways commercial services such as gas, food and lodging are generally within sight and available to the traveler at reasonably frequent intervals along the route. Consequently, there is not expected to be much need on this class of roads for special signs calling attention to these services. Moreover, it is assumed that service signing will not be required in urban areas except for hospitals, tourist information centers and camping.

General service signs, if used at intersections, carry legends for one or more of the following services: Food, Gas, Lodging, Camping, Phone, Hospital, Diesel, or Tourist Information, along with a directional message.

The general concept of service signing, is to provide signing for only essential service destinations. This concept was originally applied to the controlled access Interstate freeway system, as a service to motorists in rural areas, to provide needed information (Gas, Food, Lodging, Hospital). The nature of the freeway entailed high-speed, non-stop traffic, with essential services available only at certain interchanges. Eventually "CAMPING" was added, in deference to its association with lodging, and its widespread use.

The nature of the regular (non-freeway) highway system indicated that a great variety of services and commercial establishments are readily available, and often are adjacent to the roadway, with nearly unlimited access and ready visual identification.

Even with the advent of billboard removal and restrictions, commercial advertising is available via numerous methods, including radio, TV, brochures, printed news media and others. Business locations can be readily tied to street numbering systems, route numbers, road names, and distances.

#### Directional Signing and Motorist Service Programs

The programs described in this section are the legislative or departmental directed programs that comprise the directional signing and motorist service programs in Minnesota.

#### Numbered or Named Public Highways and Roads

Minnesota's named-road policy is intended to provide a means whereby business owners could give adequate directions to their facilities, especially when access was via an un-numbered county or township road. Certain criteria are enumerated relative to acceptable methods of naming roads.

When the access to a business is via a numbered or named county or other public road, appropriate identification of such public road will be provided on the State Highway by the State. Numbered county highways, which are so marked by the county, can be identified by the number. Highways and roads which carry an officially designated name can be so identified. In the case of a numbered highway which is also known by a name, this may result in use of both types of identification.

Unnamed roads cannot be identified until they are officially named. Marking will be provided for such roads on the basis of the following conditions.

1. The appropriate local government having jurisdiction shall officially designate and furnish a name for the road. Once a road name has been designated and the road so marked, no change will be considered until such time that the sign condition warrants renewal.
2. Once a road has been officially named and marked, supplemental signs carrying individual lake names or geographical area designations will not be installed or maintained.
3. An official road name may include the word "Lake" if the road serves only the one lake, otherwise the use of the word "lake" is to be discouraged.
4. Combination names which attempt to incorporate multiple identifications only confuse and shall not be used.

Actions which dilute and erode this policy, such as requests for names to identify roads in a blatantly commercial manner (i.e., "Jones Construction Co. Road", etc.) are to be denied.

#### County Resort "Slat-Type" Sign Program

The 1971 Session of the Legislature passed a law (Chapter 675) governing the installation of resort information signs and which stipulated certain responsibilities of the Department, as well as the counties, in carrying out the provisions of this law.

The intent of these signs is to give the motorist confirmatory guidance or reassurance that he is on the right road once he has turned off the Trunk Highway. Standard guide signs must guide him to this point. In brief, the law provides that:

- a. Counties are permitted and authorized to expend road and bridge funds for fabrication and erection of these slat signs on local roads in their county, i.e. County State Aid Highways, county and town roads.
- b. The Department may fabricate and sell such signs to counties. Counties may, in turn, charge the resort owner for 75 percent of the cost of the individual slat.
- c. Nothing prevents counties from fabricating their own signs.
- d. Resorts, as defined in M.S.A. 1969, Section 157.01, are the only accommodations mentioned in the law.
- e. Mounting posts shall be adequate to support at least 5 slats.
- f. Mounting costs are borne by the county.

- g. Upon leaving State highways, the initial assembly shall not be erected closer than 300 feet from the intersection. Leaving interstate highways, the assembly shall not be erected closer than 500 feet from the nearest interchange ramp.

In order to provide for uniform application of the law, the State is charged with developing a standard design for the signs and a method of installation.

The county shall install signs, grouping no more than 7 names on any one assembly. Individual slats shall be arranged in alphabetical order - reading from top to bottom. Trailblazer heading slats shall be installed on each assembly. Where separate assemblies are required, they shall be spaced a minimum of 200 feet apart. Each slat assembly shall be uniform in appearance. All blank material used in any one assembly shall be of the same type of material.

Resorts and campgrounds served by motorist service guide signing shall meet the following warrants:

- a. Resorts shall have a State Department of Health license as required by Minnesota Statutes 1969, Chapter 157.03. A Resort is defined in Minnesota Statutes 1969, Chapter 157.01 as follows: "A resort means any building, structure or enclosure, or any part thereof, located on, or on property neighboring any lake, stream, or skiing or hunting area for purposes of providing conventional access thereto, kept, used, maintained, or advertised as, or held out to the public to be an enclosure where sleeping accommodations are furnished to the public, and primarily to those seeking recreation, for periods of one day, one week, or longer, and having for rent five or more cottages, rooms or enclosures."
- b. Private Campgrounds shall have:
- 1) A State Department of Health license as required by Minnesota Statutes 1969, Chapter 327.15.
  - 2) Modern sanitary facilities (flush, chemical, or incinerator toilets).
  - 3) Services available 24 hours per day.

A survey was conducted in March 1981 to determine the extent to which counties have implemented this program.

Only 8 of Minnesota's 87 counties have implemented a slat signing program. All eight have been involved in the program for at least 4 years.

Becker	Otter Tail
Cass	Rice
Douglas	Todd
Itasca	Wright

For example: Becker County has resort signs at 116 locations with a total of 471 slats. Some of these counties have allowed signs for other businesses in addition to resorts.

### Specific Services Signing

Specific Services signing was mandated by the 1979 Legislature, and is covered under Minnesota Statutes 1980, 160.292 to 160.297. The 1981 Legislature amended the Statutes to permit the inclusion of motels.

Specific service signs are intended to display motel, resort and recreational camping information to the traveling public at non freeway trunk highway intersections in rural areas. (The law includes "by-passes of outstate municipalities", and permits signing at the "intersection of two trunk highways".)

No other services or business facility is to be signed under the specific services signing provisions.

"Motels", "Resorts" and "Campgrounds" must meet the following criteria in order to be considered for signing:

- a. Conformity with all applicable laws and regulations concerning the provisions for public accommodation without regard to race, religion, color, sex, or national origin.
- b. Located within 10 miles of the signed intersection.
- c. Motels and Resorts shall be licensed by the Department of Health per M.S. 157.03.
- d. Recreational camping areas shall possess a Department of Health license per M.S. 327.15 and the following:
  1. A minimum of 15 camping spaces;
  2. Modern sanitary facilities (flush, chemical or incinerator toilets) and drinking water;
  3. Services available 24 hours a day.

Specific service signing is not to be permitted if the applicant's place of business meets any of the following conditions:

- a. Place of business is readily visible from the trunk highway; or
- b. Effective directional advertising is visible; or
- c. Business advertising sign(s) can be legally and effectively located near the intersection.



Specific service signs may be placed only on trunk highway approaches to local road or other trunk highway intersections. However, each individual motel, resort or campground is limited to one intersection on the trunk highway system. Businesses accessible only by non-governmental jurisdiction roads (private entrances) at trunk highway intersections are to be checked on an individual basis. Signing may normally be permitted if all other criteria are met.

Specific service sign panels shall be rectangular in shape, 6 feet by 1.5 feet, and shall consist of a white legend on a blue background. One or two lines of legend may be used as needed, and direction and distance may be shown; however, signing for straight ahead movements shall not be permitted.

Each specific service sign assembly consists of not more than four sign panels, mounted one above the other. A grouping of two sign assemblies is called a sign cluster. Only one cluster is permitted on each trunk highway approach to a specific intersection.

Participants are required to pay for the total cost of the sign, \$225. Normally two panels would be ordered at a cost of \$450. This charge covers all costs of initial installation, including:

1. Furnish and install specific sign panel.
2. Repositioning costs of in-place signs.
3. Cost of seasonal "CLOSED" sign if appropriate.
4. Administrative cost, overhead, 3-year renewal request.

Replacement costs are born by the participant. As of January 1982, the following numbers of signs were installed under this program.

	Sites	Signs
Resorts	56	66
Campgrounds	32	54
Motels	6	8
	<u>94</u>	<u>128</u>

#### Logos (Experimental Program on I-35)

A study was done in 1967, by Mn/DOT, on Interstate 35, midway between the Twin Cities and Duluth, covering a freeway section of 35 miles. The purpose of the study was to compare the effectiveness of standard GAS-FOOD-LODGING motorist services signing, as used on the freeway system, to the effectiveness of LOGO - type motorist services signs. LOGO signing displayed the names or trademarks of businesses that supplied gas, food or lodging near Interstate highway interchanges in the study area. The study also sampled public reaction to LOGO signs.

Standard GAS-FOOD-LODGING signs were in place at three of the interchanges - Pine City, Hinckley, and Sandstone. These were left in their original positions which were approximately 4000 feet in advance of the exit ramps.

Sixteen businesses chose to participate in the study - six motels, five restaurants, and five service stations. Only the Hinckley interchange had all three services represented on LOGO signing.

Seven of the 16 businesses that chose to have advertising placed on motorist services signs also had private billboards advertising their businesses. These private billboards were, of course, located outside of the highway right-of-way line, generally more than 100 feet from the traffic lanes.

No significant difference was found in the percentage of motorists influenced to leave the Interstate freeway by standard GAS-FOOD-LODGING signs or by LOGO signs. Motorists used gasoline LOGO signs more than food or lodging LOGO signs, and lodging LOGO's were the least used. The study suggested that if billboards are restricted, either LOGO signs or standard GAS-FOOD-LODGING could effectively provide motorist services information.

Motorist comments about GAS-FOOD-LODGING and LOGO signs were generally favorable at an approximate ratio to 4 to 1. Unfavorable comments on LOGO signs related to the government's function in private advertising and to the excess number of signs already on the highway.

## Kiosks

The Minnesota Legislature passed MSA 160.276, 1980, established the kiosk program in Minnesota.

Taken in the context of Mn/DOT application, kiosks are small, separate buildings constructed adjacent to rest areas for the purpose of providing information to tourists. These sign kiosks utilize lighted, wall panel display signs and will permit advertising for tourist related services such as restaurants, campgrounds, resorts, hotels, motels, and service stations. Free telephone service will be available for travelers to make reservations and inquiries.

The program has been recommended by the Federal Highway Administration as a way to promote conformance with the Federal Highway Beautification Act and to provide needed travel information. Allowing advertising at the rest areas is expected to reduce the growth of advertising signs along state and interstate highways.

The sign kiosks will be open 24 hours a day. Sale of advertising space is expected to produce approximately 4 million in revenue during the next 10 years. However, 40 percent of the available advertising space will be reserved for public service information, such as highway maps, local history, and recreational activities.

The sign kiosks are being built by CDI, Inc. of St. Paul in cooperation with Mn/DOT. The Department will receive from 5 to 20 percent of the advertising revenue generated by each kiosk. In addition to bearing the costs of building the kiosks, CDI, Inc. is responsible for maintenance, cleaning and sign panel replacement.

Sign kiosks are slated to be built at 48 highway rest areas within the next five years.

The first two kiosks were opened in August, 1981, at the Heath Creek Rest Area on I-35 near Faribault, and at the Thompson Hill Travel Information Center near I-35 in Duluth. Twelve more are expected to be operational by April 1, 1982.

At this date, it is obviously too early to judge the full effectiveness of the program. The several goals already mentioned are fully expected to be achieved, and the public relations value should be significant.

This program could have a very positive effect on the advertising options available to commercial business owners, and should lessen the demand for additional signs on state highways, thereby adding a safety factor as well.

#### Information Centers

There are currently seven travel information centers in operation throughout Minnesota's trunk highway system. One additional information center is planned to be built when I-94 is completed east of St. Paul.

These centers are in combination with rest areas, and often provide a visitor's first contact with Minnesota.

The evolution of the Travel Information Centers (T.I.C.'s) began with Minnesota's trunk highway rest area and wayside development program, initiated in the 1930's. The program virtually stopped by the late 1950s, due to growing emphasis on interstate highway construction, but rest area construction resumed in the 1960s. With this resumption, Mn/DOT developed its policy to establish travel information centers at major highway entry points to the state in 1969.

Since that time, 5 travel information centers have been built on the interstate system, and 2 on the U.S. trunk highway route system. The remaining planned center will be on Interstate 94, east of St. Paul, as mentioned above. Other locations are Dresbach, Moorehead, Albert Lea, Beaver Creek, Duluth, Anchor Lake (Eveleth) and Fisher's Landing (East Grand Forks).

Visitors to the State, as well as Minnesotans, can obtain local tourist, travel and recreational information at the information center buildings, which are staffed by Mn/DOT employees. Each facility also has telephones, restrooms, picnic areas, and vehicle parking. All centers are year-round facilities, except Fishers Landing, with extended hours in the summer.

All centers have teletype machines hooked directly to Emergency Services in the Central Office for road condition updates, and weather reports are posted to help drivers plan their travel.

It has been documented that all centers have a variety of visitors. Truckers, sales people and other business people use the centers frequently. Families making short trips often stop for up-to-date road condition information. Primarily, of course, the centers are utilized by tourists seeking more detailed information about destinations within Minnesota.

Use of the T.I.C.s has more than doubled since 1975, with a total of 880,000 people visiting the centers in 1980. The 1980 figure was an increase of 100,000 from 1979.

During the first quarter of 1981, T.I.C. use increased by 15% compared with the same period in 1980. In addition, travelers are making many more inquiries and requesting maps and brochures more frequently than in the past. This is an indication of more complete and careful trip planning by motorists from both Minnesota and out of state.

#### Maps

The Minnesota Department of Transportation has published an official Highway Map for free distribution since about 1930. The quantity printed and cost per map for recent years has been:

<u>Year</u>	<u>Quantity</u>	<u>Cost per Map</u> <sup>1</sup>
1970	1,000,000	6.0 cents
1971	1,000,000	6.0 cents
1972	1,300,000	5.3 cents
1973	1,400,000	5.4 cents
1974	1,400,000	6.3 cents
1975	1,400,000	6.8 cents
1976	1,700,000	7.2 cents
1977 <sup>2</sup>	750,000	9.1 cents
1978	750,000	9.1 cents
1979	650,000	13.0 cents
1980	650,000	13.0 cents
1981	631,500	12.7 cents
1982	631,500	12.7 cents

<sup>1</sup> Cost includes map preparation, map positives, and printing costs.

<sup>2</sup> Beginning in 1977-78 a two year map was produced.

These maps are available through Mn/DOT offices and Information Centers. The State Transportation map details the Interstate and Trunk Highway systems as well as major county roads. The maps also contain a listing, showing the location and services provided at each state park.

During the past few years Mn/DOT's Bikeway Unit has been developing a 54-map series detailing all roads in the state. Although these maps are designed to identify roads for bicycling, the map detail is such that the maps are useful for identifying locations on local roads. The metropolitan area is shown on eight maps, Duluth is shown on two maps and the remainder of the state is shown on forty-four maps. At present, all of Minnesota south of a line from Moorhead to Two Harbors and east of a line from Duluth to Ely have been mapped. By fall of 1982, the remainder of the state will be completed.

Ten thousand copies of each metropolitan map were printed initially. Three thousand copies of the maps for Duluth and the remainder of the state were initially printed. The maps are available from Mn/DOT for one dollar each.

Each map contains a listing of all camping facilities in the coverage area as well as a discussion of historic, scenic and cultural attractions. These maps could be made readily available to the traveling public.

Mn/DOT also prepares and maintains sets of detailed county and city maps which are for sale to the public. These maps are updated annually.

The Bureau of Tourism prepares and distributes many kinds of maps showing locations of recreational activities, scenic areas and cultural events. Many maps are also produced by organizations and private parties to help locate their facilities.

#### Other Motorist Services Programs

There are many sources of information for travelers and tourists, in addition to guide signs and advertising signs. Actually, these "other" motorist services programs are usually the initial and primary source of information, are generally most fully detailed, and are available to all travelers. Frequently there is no cost for the services.

The list of sources for traveler information can vary in length, depending upon the subject matter.

There are public and private, local and national sources - most are free of cost. The Minnesota Department of Economic Development's Tourism Division provides a variety of information. Mn/DOT's Official

Transportation Map is a very valuable guide for motorists. Other sources include the six regional tourist organizations (Arrowhead, Heartland, Hiawathaland, Metroland, Pioneerland and Vikingland), Chamber of Commerce, Minnesota Historical Society, Minnesota Resort Association, Minnesota Camping Guide, Minnesota Motel Association Guide, County Maps, Automobile Clubs and many more.

## BIBLIOGRAPHY

The following materials were utilized in the preparation of this report. These materials may be viewed by contacting the State Traffic Engineer, Room 309, Transportation Building, St. Paul, Minnesota, 612/296-6164.

1. Federal Highway Administration, "Final Report of the National Advisory Committee on Outdoor Advertising and Motorist Information", September, 1981.
2. Federal Highway Administration, "Options for Assuring Adequate Motorist Travel Information Systems", May, 1979.
3. Federal Highway Administration, "Outdoor Advertising Control and Acquisiton", April, 1981.
4. Federal Highway Administration, Report No. FHWA/RD-80/010, "Motorists Needs for Services Information on Interstate and Federal-Aid Primary Highways", February, 1980.
5. Federal Highway Administration, FHPM 6.8.3.8. "National Standards for Specific Information Signs".
6. Floyd, Charles F. and Shedd, Peter J., Highway Beautification: The Environmental Movement's Greatest Failure, Westview Press, 1979.
7. Marketing Decisions, Inc., "Study of Informational Needs of Tourists in Minnesota", December, 1978.
8. Minnesota Department of Natural Resources, DNR Inventory of Public and Private Recreational Areas, December, 1981.
9. Minnesota Department of Transportation, Minnesota Bikeways Map.
10. Minnesota Department of Transportation, Minnesota Bikeway Map Order Form.
11. Minnesota Department of Highways, "Motorist Services Experimental Sign Study (Logo's)", October, 1967.
12. Minnesota Department of Transportation, "Specific Information Signing for Motels, Resorts and Recreational Camping Areas", May, 1981.
13. Minnesota Department of Transportation, "Traffic Engineering Manual", Chapter 5, Traffic Signs, April, 1978.

14. Minnesota Department of Transportation, Staff Work Papers
  - A. McRae, Kermit, Specific Services Signing, Additional Instructions, November 4, 1981.
  - B. McRae, Kermit, Survey of Counties Regarding County Slat Sign Program, April 6, 1981.
  - C. Ofstead, Gene, Mn/DOT Sign Enforcement, November 26, 1980.
  - D. Olson, Ken, Generic Billboard.
  - E. Olson, Ken, Cost Estimate for County Road Sign Program.
  - F. Paulson, Stan, Travel Information System
  - G. Schmitz, Mary Darrogh, Potential Need for Advertising Signs.
  - H. Shea, Ed, California DOT Point System for Food and Lodging Signing.
  - I. Shea, Ed, Specific Services Signing, Poll of Districts.
  - J. Shea, Ed, Vermont Program, Official Business Directional Signs.
  - K. Teeters, Richard, Minnesota Highway Map, Publication Costs.
15. Minnesota State Laws
  - A. MSA, 1937, Chapter 169, Highway Traffic Regulation
  - B. MSA, 1971, Chapter 675, County Resort Sign Program
  - C. MSA, 1979, Chapter 160, Specific Services Signing
  - D. MSA, 1980, Chapter 160, Kiosks
  - E. MSA, 1980, Chapter 173, Advertising Devices
  - F. MSA, 1981, Chapter 173, Comprehensive Directional Signing Program.
16. National Cooperative Highway Research Program, Report No. 71, "Direction Finding From Arterials to Destinations", September, 1980.
17. U.S. Congress, 1981, Senate Fill 1876, Senator Hatfield, November, 1981.
18. U.S. Department of Transportation, "Federal Laws and Material Relating to the Federal Highway Administration," January, 1980.