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September 29, 1999

To: Michael L. Robinson
District Engineer, D-1 Duluth

From: Carol R. Braun 
Safety Rest Area Manager
Office of Technical Support, Site Development Unit, MS 686

Subject: 1996 Safety Rest Area Usage Survey Summary Report For
Kettle River Safety Rest Area, I-35, M.P. 198 and
General Andrews Safety Rest Area, I-35, M.P. 208

Enclosed are copies of the 1996 Rest Area Usage Survey Reports for the Kettle River and General Andrews safety rest areas. This is the first distribution of these reports. Data contained in these reports was used to project 20 year capacity needs for the recently constructed rest area buildings at these sites. Although preparation of the reports was long overdue, the information in these reports has been and will continue to be useful in projecting parking capacity and service needs for future investment planning and proposed additional rehabilitation of these sites.

The objective of the motorist survey is to document percent of vehicles stopping at the rest area and to collect user data during an average summer travel weekend. This data is used to verify design criteria used in the planning, location and design of rest areas statewide, in addition usage data is evaluated for site specific facility rehabilitation and redesign. To provide information on motorist use of rest area in this corridor, both of the above noted rest area surveys were conducted simultaneously. The five day user surveys were conducted from August 8 to August 12, 1996. The methods for conducting the surveys, copies of the survey forms and analysis of data collected is included in the enclosed reports.

The Office of Technical Support, Site Development Unit will continue to conduct user surveys at selected interstate and trunk highway safety rest areas, especially at new facilities and sites marked for rehabilitation, to measure overall user patterns and needs and to verify and update statewide design criteria. If you have any questions or comments concerning the methodology or results of the surveys or would like additional copies of the reports, please contact me.

Attachments

Michael L. Robinson
September 29, 1999
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cc: Commissioner E. Tinklenberg, MS 100
D. Weiszhaar, MS 110
P. Hughes, MS 120
D. Ekern, MS 120
J. Swanson, MS 140
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P. Jensen, MS 715
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L. Brady, Market Research, MS 150
Mn/DOT Library
SDU File

(Attachment sent to cc List)



Minnesota Department of Transportation

General Andrews Safety Rest Area I-35 Southbound 1996 User Survey

*Prepared by the Office of Technical Support
Site Development Unit*



*Minnesota Department
of Transportation*

*General Andrews
Safety Rest Area
I-35 Southbound
1996 User Survey*

*Prepared by the Office of Technical Support
Site Development Unit*

September 1999

**State of Minnesota
Department of Transportation
Office of Technical Support - Site Development Unit
Transportation Building, Mail Stop 686
395 John Ireland Boulevard
St. Paul, Minnesota 55155**

General Andrews Safety Rest Area - 1996 Usage Survey

The Minnesota Department of Transportation (Mn/DOT), Office of Technical Support - Site Development Unit, conducted a rest area user survey at the General Andrews Safety Rest Area, serving southbound travelers on I-35, located 2 miles northeast of Willow River, Minnesota, from August 8 through 12, 1996.

The objective of rest area user surveys is to collect user data during an average summer travel weekend to verify or modify statewide design criteria developed for safety rest area planning, location and design. Pertinent information collected includes percent of vehicles stopping, traffic classification, number of persons per vehicle, and motorist use of facilities.

During the survey period, Mn/DOT staff collected information about every vehicle entering the rest area. As each vehicle approached, the information boxed at the top of each user survey, (day of week, licensing state, vehicle type and time-in), was recorded. Each vehicle was stopped on the entrance ramp before entering the parking areas and building. The driver of each vehicle was handed a user survey form and asked to fill it out during their visit at the rest area facility. (See copy of user survey, page 5.) The surveys were collected by Mn/DOT staff waiting on the exit ramp, who then recorded the time-out.

During the five day survey period, from 9:00 am to 6:00 pm, 3,208 vehicles and 7,859 people used the rest area facilities. Of all the northbound I-35 traffic passing the site, during the survey hours 9.4% stopped and used the rest area. However, 14.4% of all recreational vehicles passing the rest area stopped. A higher than average percentage of cars with recreational trailers (23.9%), commercial trucks (14.8%), trucks with recreational trailers (13.5%) and semi's (11.6%) also stopped. The calculated design value for percent of traffic stopping at interstate rest areas in a rural highway section is 12%.

Statewide the desirable spacing between safety rest areas is 50 miles. This spacing is based on the distance motorists are willing to drive after making a decision to stop for various service needs. It is known from the average distance motorist drive between stops that most motorist do not stop at consecutive rest area along a route. General Andrews rest area is

located 42 miles south of the Thompson Hill Travel Information Center/Safety Rest Area and 77 miles north of the Forest Lake Rest Area. Over two-thirds of the motorists stopping at this facility found the distance to the next rest area (80 mile to the Forest Lake rest area) was about right, one-in-four (27%) stated it was too far and less than 2% said it was too close.

The average length of stay for all vehicle types¹ was 14.2 minutes, however the oversized and commercial vehicle stayed an average of 17.3 minutes at the rest area. Motorist averaged 1.45 hours since their last stop and 1.78 hours until their next stop. The averages for the driving times identified by respondents for their last and next stops corresponds closely with stopping points in the Duluth/ North Shore Drive and Metro areas.

Users of the rest area were made up mostly of people who were either starting (88.1%) or ending (87.8%) their trip today in the state of Minnesota. Overall, Midwest locations dominated trip starting and trip ending points. Approximately 35% of the users responded they were on a multi-day trip and of those 25-30% began or will end there trip in another state. A total of 18.2% of the vehicles entering the site were licensed out-of-state. Approximately 80% of all non-commercial vehicles were traveling for "pleasure travel" or vacation.

When asked to "Select your main reason(s) for stopping at this rest area" over 88% of the respondents stated it was to use the restrooms. Motorist safety needs were the second highest group of reasons for stopping (39.0%). Safety needs include: rest/relax 27.4%, switch drivers 9.4%, check vehicle 8.7% and sleep 2.1% (due to multiple responses to this question, totals equal more than 100%, see question #9 for breakdown).

The percent of oversized and commercial vehicles stopping at the rest area for safety needs was substantially higher than for standard sized vehicles, 47.5% and 54.1% respectively. A significant number of Commercial vehicle drivers responded that they stopped to check their vehicle (34.9%) and to rest/relax (27.4%). In addition, the second single highest reason for commercial drivers to stop at this rest area was to use the telephone 41.8%.

Motorists in standard and oversized vehicles used the restrooms, waste and recycling receptacles, vending machines and picnic tables most. Of all commercial vehicle drivers 43.1% used the public telephone.

The State of Minnesota's safety rest areas remain popular with travelers. At this rest area, 61.6% of all motorists prefer to use safety rest areas compared to 3.8% who prefer private

¹Standard vehicle: car, pick-up, van, motorcycle

Oversized vehicle: car, pickup or van with trailer, recreational vehicle

Commercial vehicle: semi-tractor trailer truck, commercial truck, bus

commercial facilities. Although Minnesota does not have any combined safety rest areas/private commercial facilities, 32.4% of the motorists indicated a preference to use such facilities if available.

If private/commercial development were permitted in Minnesota's safety rest areas 28.9% of the respondents prefer vending machines, and 40.9% prefer no private development. Commercial vehicle users were more likely than users of other vehicle types to prefer restaurants (both fast food/take out & sit down) if private/commercial development were permitted at Minnesota's safety rest areas.

When asked, "If you were fatigued, needed to change drivers or experiencing potential mechanical problems, where would you have stopped?", 55.7% of all respondents identified rest areas as their preferred safety stop. Responses were similar across vehicle types. The second highest location respondents identified for stopping was the next town (15.7%). Commercial vehicle drivers were more likely to stop at a commercial facility than were drivers of other vehicle types.

Three types of highway operation activities were explored. Responses across all vehicle types were quite similar to the three highway operations. Each of: Road Signs and Traffic Signals, Rest Areas, and Emergency Road Condition Information were ranked as "very important".

The majority (95.5%) of the users said they feel safe using Minnesota's interstate rest areas. Less than 2% stated they do not feel safe. Motorists feel less safe using Minnesota rest areas after dark with 12% stating they do not feel safe after dark and 74.4% stated they do feel safe after dark.

The data collected from this user survey is stored in a computer data file which allows comparison of a wide range of information and permits further opportunity for sorting data and analyzing specific user information.

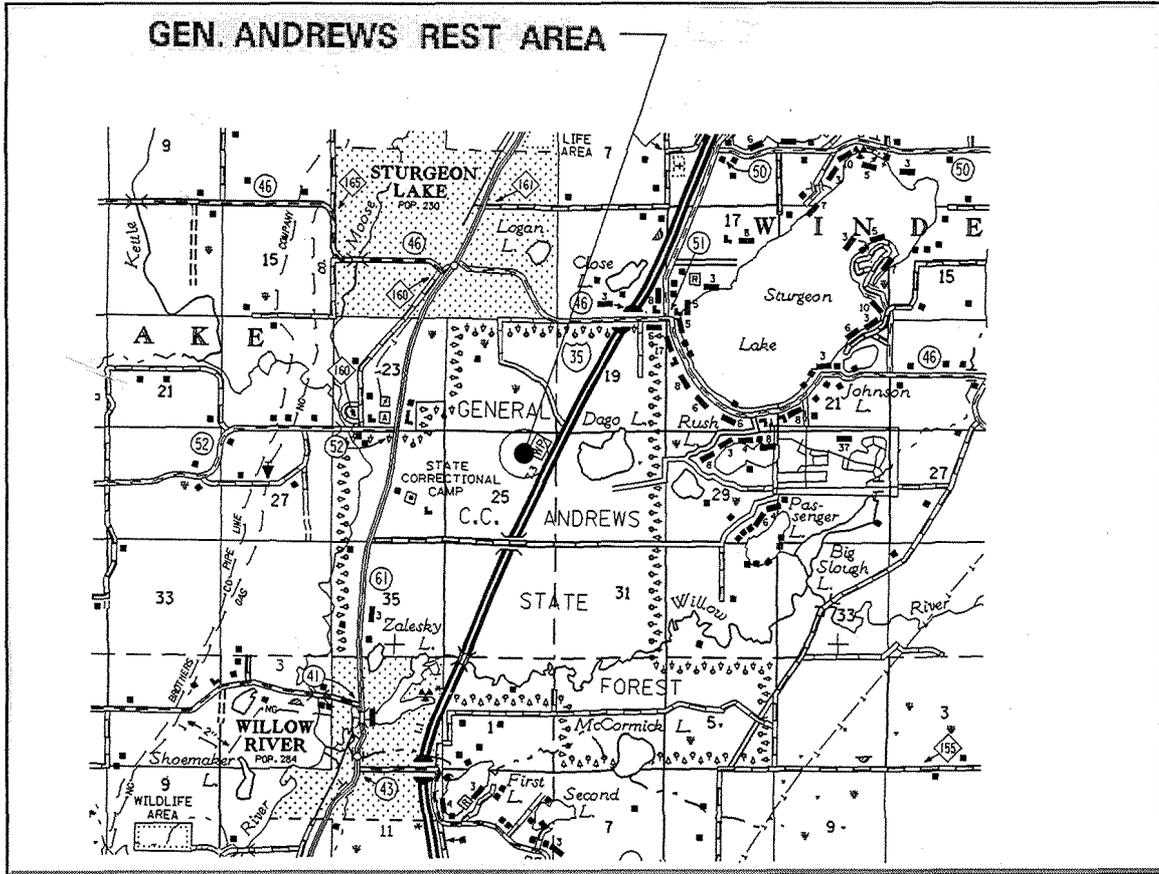
For more information about this survey, please call the Mn/DOT Site Development Unit.



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This document is available in alternative formats to individuals with disabilities by calling (651)296-1648 or through the Minnesota Relay Service at 1-800-627-3529.

Location of the General Andrews Safety Rest Area.



The General Andrews Safety Rest Area is located on I-35 in Pine County approximately 2 miles northeast of Willow River. The facility is located in a mix of pine stands and open fields within General Andrews State Forest. This rest area is approximately 45 miles south of Duluth and 125 miles north of St. Paul.

SUMMARY OF COLLECTED DATA

Date of survey: August 8 through 12, 1996

Time of survey: 9:00 a.m. to 6:00 p.m.

Weather on site: Partly cloudy to sunny

Total I-35 mainline vehicles traveling southbound: 34,299

I-35 mainline vehicles traveling southbound passing safety rest area without entering: 31,091

Vehicles traveling southbound entering safety rest area: 3,208

Percent of I-35 mainline vehicles stopping at safety rest area: 9.35%

Percent of vehicles stopping at safety rest area that are from out-of-state: 18.20%

Percent of vehicles stopping at safety rest area that are from in-state: 81.80%

Age distribution of people using the safety rest area:

<u>Age</u>	<u>Male</u>	<u>Percent</u>	<u>Female</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>
Over 60	926	11.78%	696	8.86%	1,622	20.63%
16 to 59	2,609	33.20	2,040	25.96	4,649	59.16
Under 16	<u>908</u>	<u>11.55</u>	<u>680</u>	<u>8.65</u>	<u>1,588</u>	<u>20.21</u>
	4,443	56.53%	3,416	43.47%	7,859	100.00%

Average number of people per vehicle: 2.59

Average length of stay in safety rest area: 14.18 minutes (All Vehicles)
 13.46 minutes (Standard Vehicles)
 17.34 minutes (Oversize & Commercial Vehicles)

Number of vehicles 9:00 am to 6:00 pm

<u>Date</u>	<u>Day</u>	<u>Vehicles Entering Rest Area</u>	<u>Vehicles Not Entering Rest Area</u>	<u>One Way Traffic Totals</u>	<u>Average Percent Stopping at Rest Area</u>
August 8	Thurs.	582	3,541	4,123	14.12%
August 9	Fri.	429	5,528	5,957	7.20
August 10	Sat.	639	5,583	6,222	10.27
August 11	Sun.	1,020	11,519	12,539	8.13
August 12	Mon.	<u>538</u>	<u>4,920</u>	<u>5,458</u>	<u>9.86</u>
Total (surveys returned)		3,208	31,091	34,299	9.35%

General Andrews Safety Rest Area

Hourly volume of vehicles entering Safety Rest Area

<u>Time</u>	<u>Thursday</u>	<u>Friday</u>	<u>Saturday</u>	<u>Sunday</u>	<u>Monday</u>	<u>Total</u>	<u>Percent</u>
9:00 - 10:00	50	--	49	55	44	198	6.19%
10:00 - 11:00	66	1	74	64	79	284	8.88
11:00 - 12:00	129	3	80	89	79	380	11.88
12:00 - 1:00	70	90	68	114	62	404	12.63
1:00 - 2:00	56	69	75	144	47	391	12.23
2:00 - 3:00	60	74	85	139	62	420	13.13
3:00 - 4:00	49	64	77	153	68	411	12.85
4:00 - 5:00	63	63	73	131	51	381	11.92
<u>5:00 - 6:00</u>	<u>38</u>	<u>62</u>	<u>56</u>	<u>127</u>	<u>46</u>	<u>329</u>	<u>10.29</u>
Totals	581	426	637	1,016	538	3,198	100.00%

Note: Total does not equal 3,208 'Vehicles Entering Safety Rest Area' due to recording errors on 'Time In' for 10 vehicles.

Type of vehicle entering Safety Rest Area

	<u>Vehicle Total</u>	<u>Average Length of Stay -- In Minutes</u>	<u>Number of People</u>	<u>(A)</u>	<u>(B)</u>
Standard Vehicles					
Cars	1,545	13.55	3,577	48.45%	8.55%
Pick-up or van	1,022	13.05	2,672	32.05	8.87
Other - Motorcycle	36	<u>21.40</u>	59	1.13	11.84
Standard (average)		(13.46)			
Oversize Vehicles					
Pick-up - van w/ rec. trailer	246	15.63	737	7.71	13.48
Recreational vehicles	76	16.97	195	2.38	14.39
Pick-up - van w/ other trailer	41	12.24	142	1.29	10.25
Car w/ recreational trailer	55	13.44	137	1.72	23.91
Car w/ other trailer	8	8.83	17	0.25	10.13
Commercial Vehicles					
Semi-tractor trailer trucks	122	25.48	200	3.83	11.62
Commercial trucks	35	15.71	55	1.10	14.77
Buses	<u>3</u>	<u>19.00</u>	<u>6</u>	<u>0.09</u>	4.05
Oversize & Commercial (average)		(17.34)			
Total	3,189	14.18	7,797	100.00%	

(A) Percentage of total number of vehicles using the safety rest area.

(B) Percentage of vehicles that stopped in the safety rest area, out of the total number of mainline vehicles of the same type both entering and passing the safety rest area.

Note: Total does not equal 3,208 due to recording error for 19 vehicles.

SURVEY QUESTIONS

Note: The total number of responses for subgroups does not always match the total number of vehicles due to omissions in recording the vehicle type.

Question 1: Number of people in your vehicle (by gender)?

<u>Age</u>	<u>Male</u>		<u>Female</u>		<u>All People Entering Safety Rest Area</u>	
	<u>Count</u>	<u>Percent</u>	<u>Count</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>
Over 60	926	11.78%	696	8.86%	1,622	20.63%
16 to 59	2,609	33.20	2,040	25.96	4,649	59.16
Under 16	<u>908</u>	<u>11.55</u>	<u>680</u>	<u>8.65</u>	<u>1,588</u>	<u>20.21</u>
	4,443	56.53%	3,416	43.47%	7,859	100.00%

Average number of people per vehicle: 2.59

% Responding: 94.54%

Question 2: How long have you traveled since your last stop?

	<u>All Vehicles</u>	<u>Standard Vehicles</u>	<u>Oversize Vehicles</u>	<u>Commercial Vehicles</u>
Miles				
Average	82.09	79.74	95.86	82.04
Median	65.65	60.86	80.70	61.00
% Responding:	27.77%	27.47%	28.40%	32.50%
Minutes				
Average	85.54	83.83	97.26	80.80
Median	60.97	60.93	90.35	60.74
% Responding:	56.92%	56.28%	60.80%	56.25%

Question 3: When do you think your next stop will be?

	<u>All Vehicles</u>	<u>Standard Vehicles</u>	<u>Oversize Vehicles</u>	<u>Commercial Vehicles</u>
Miles				
Average	93.99	91.47	97.29	120.13
Median	101.34	100.65	101.83	110.83
% Responding:	27.96%	27.47%	28.87%	34.38%
Minutes				
Average	99.62	96.76	107.57	123.87
Median	105.14	100.52	121.51	123.27
% Responding:	45.36%	44.79%	48.83%	46.88%

General Andrews Safety Rest Area

Question 4: What is your reason for traveling today?

	<u>All Vehicles</u>		<u>Standard Vehicles</u>		<u>Oversize Vehicles</u>		<u>Commercial Vehicles</u>	
	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>
Pleasure travel	2,189	77.05%	1,805	79.00%	364	91.69%	8	5.59%
Other personal travel	324	11.41	301	13.17	18	4.53	5	3.50
Business travel	206	7.25	176	7.70	14	3.53	15	10.49
Comm'l driver	<u>122</u>	<u>4.29</u>	<u>3</u>	<u>0.13</u>	<u>1</u>	<u>0.25</u>	<u>115</u>	<u>80.42</u>
Total	2,841	100.00%	2,285	100.00%	397	100.00%	143	100.00%
% Responding:		88.56%		87.78%		93.19%		89.38%

Question 5: Where did your trip start today?

	<u>All Vehicles</u>		
	<u>Total</u>	<u>Percent</u>	
Midwest U.S.	<u>2,519</u>	<u>96.81%</u>	
Minnesota	2,291	88.05	
Wisconsin	183	7.03	
Iowa	4	0.15	
Illinois	1	0.04	
North Dakota	1	0.04	
South Dakota	0	0.00	
Other	39	1.50	(Michigan, Missouri, Ohio, Nebraska, Kansas, Indiana)
West U.S.	2	0.08	
Northeast U.S.	1	0.04	
South U.S.	<u>0</u>	<u>0.00</u>	
Total U.S.	2,522	96.93%	
Canada	71	2.73	
Other	<u>9</u>	<u>0.34</u>	
Total	2,602	100.00%	
% Responding:		81.11%	

Question 6: If this is a multi-day trip, where did your overall trip begin?

<u>All Vehicles</u>		
	<u>Total</u>	<u>Percent</u>
<u>Midwest U.S.</u>	<u>1,251</u>	<u>90.85%</u>
Minnesota	1,035	75.16
Iowa	63	4.58
Wisconsin	38	2.76
Illinois	23	1.67
South Dakota	11	0.80
North Dakota	3	0.22
Other	78	5.66
		(Michigan, Missouri, Ohio, Nebraska, Kansas, Indiana)
West U.S.	59	4.28
South U.S.	27	1.96
Northeast U.S.	<u>19</u>	<u>1.38</u>
Total U.S.	1,356	98.47%
Canada	15	1.09
Other	<u>6</u>	<u>0.44</u>
Total	1,377	100.00%

% Responding: 42.92%

Question 7: Where will your trip end today?

<u>All Vehicles</u>		
	<u>Total</u>	<u>Percent</u>
<u>Midwest U.S.</u>	<u>2,617</u>	<u>99.24%</u>
Minnesota	2,315	87.79
Iowa	152	5.76
Wisconsin	83	3.15
South Dakota	19	0.72
Illinois	15	0.57
North Dakota	0	0.00
Other	33	1.25
		(Michigan, Missouri, Ohio, Nebraska, Kansas, Indiana)
West U.S.	15	0.57
South U.S.	3	0.11
Northeast U.S.	<u>1</u>	<u>0.04</u>
Total U.S.	2,636	99.96%
Other	<u>1</u>	<u>0.04</u>
Total	2,637	100.00%

% Responding: 82.20%

General Andrews Safety Rest Area

Question 8: If this is a multi-day trip, where will your overall trip end?

	<u>All Vehicles</u>		
	<u>Total</u>	<u>Percent</u>	
Midwest U.S.	1,006	88.63%	
Minnesota	789	69.52	
Iowa	62	5.46	
Wisconsin	35	3.08	
Illinois	29	2.56	
South Dakota	13	1.14	
North Dakota	1	0.09	
Other	77	6.78	(Michigan, Missouri, Ohio, Nebraska, Kansas, Indiana)
West U.S.	72	6.34	
South U.S.	27	2.38	
Northeast U.S.	<u>18</u>	<u>1.59</u>	
Total U.S.	1,123	98.94%	
Canada	6	0.53	
Other	<u>6</u>	<u>0.53</u>	
Total	1,135	100.00%	

% Responding: 35.38%

**Question 9: Please select your main reason(s) for stopping at this rest area.
(Check all that apply.)**

	<u>All Vehicles</u>		<u>Standard Vehicles</u>		<u>Oversize Vehicles</u>		<u>Commercial Vehicles</u>	
(Base:)	(2,831)		(2,275)		(394)		(146)	
	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>
Restrooms	2,495	88.13%	2,034	89.41%	340	86.29%	110	75.34%
<u>Motorist Safety</u>								
<u>Value/Use (Net)</u>	<u>(1,105)</u>	<u>(39.03%)</u>	<u>(831)</u>	<u>(36.53%)</u>	<u>(187)</u>	<u>(47.46%)</u>	<u>(79)</u>	<u>(54.11%)</u>
Rest/Relax	775	27.38	611	26.86	119	30.20	40	27.40
Switch drivers	267	9.43	225	9.89	35	8.88	7	4.79
Check vehicle	246	8.69	102	4.48	88	22.34	51	34.93
Sleep	59	2.08	42	1.85	3	0.76	14	9.59
Water	249	8.80	198	8.70	33	8.38	16	10.96
Vending	245	8.65	199	8.75	25	6.35	20	13.70
Eat/Picnic	186	6.57	144	6.33	35	8.88	7	4.79
Telephone	159	5.62	81	3.56	14	3.55	61	41.78
Travel information	41	1.45	33	1.45	7	1.78	1	0.68
Other	238	8.41	193	8.48	33	8.38	10	6.85

% Responding: 88.25% 87.40% 92.49% 91.25%

Note: Adds to more than 100% due to multiple mentions.

General Andrews Safety Rest Area

Question 10: Which of the following facilities were used by your party? (Check all that apply)

(Base:)	<u>All Vehicles</u>		<u>Standard Vehicles</u>		<u>Oversize Vehicles</u>		<u>Commercial Vehicles</u>	
	(2,747)		(2,217)		(378)		(137)	
	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>
Restroom	2,627	95.63%	2,134	96.26%	359	94.97%	121	88.32%
Trash receptacles	599	21.81	476	21.47	85	22.49	33	24.09
Vending	395	14.38	330	14.88	38	10.05	25	18.25
Recycle receptacles	245	8.92	199	8.98	37	9.79	6	4.38
Picnic table	238	8.66	201	9.07	29	7.67	7	5.11
Map displays	223	8.12	181	8.16	31	8.20	11	8.03
Telephone	164	5.97	83	3.74	19	5.03	59	43.07
Other	173	6.30	139	6.27	29	7.67	5	3.65
% Responding:	85.63%		85.17%		88.73%		85.63%	

Note: Adds to more than 100% due to multiple mentions.

Question 11: When traveling, which type of facility do you prefer to use? (pick only one)

	<u>All Vehicles</u>		<u>Standard Vehicles</u>		<u>Oversize Vehicles</u>		<u>Commercial Vehicles</u>	
	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>
Safety rest area	1,716	61.64%	1,392	62.14%	263	68.14%	56	39.44%
Combined safety rest areas & private/Commercial facilities	902	32.40	715	31.92	106	27.46	72	50.70
Private/Commercial facilities	106	3.81	84	3.75	8	2.07	13	9.16
Public park	<u>60</u>	<u>2.15</u>	<u>49</u>	<u>2.19</u>	<u>9</u>	<u>2.33</u>	<u>1</u>	<u>0.70</u>
Total	2,784	100.00%	2,240	100.00%	386	100.00%	142	100.00%
% Responding:	86.78%		86.05%		90.61%		88.75%	

Question 12: Which of the following private commercial business types would you prefer at Minnesota's rest areas? (Check all that apply.)

(Base:)	<u>All Vehicles</u> (2,705)		<u>Standard Vehicles</u> (2,174)		<u>Oversize Vehicles</u> (379)		<u>Commercial Vehicles</u> (137)	
	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>
Vending machines	1,105	40.85%	907	41.72%	134	35.36%	58	42.34%
Gas & vehicle services	815	30.13	673	30.96	109	28.76	29	21.17
None	781	28.87	620	28.52	133	35.09	23	16.79
Restaurant (fast food/ take out)	759	28.06	613	28.20	93	24.54	48	35.04
Restaurant (sit down)	283	10.46	219	10.07	34	8.97	27	19.71
Other	75	2.77	59	2.71	10	2.64	6	4.38
% Responding:	84.32%		83.52%		88.97%		85.63%	

Note: Adds to more than 100% due to multiple mentions.

Question 13: If you were fatigued, needed to change drivers or experiencing potential mechanical problems, where would you stop? (pick one only...however, some checked all that applied)

(Base:)	<u>All Vehicles</u> (2,725)		<u>Standard Vehicles</u> (2,192)		<u>Oversize Vehicles</u> (377)		<u>Commercial Vehicles</u> (141)	
	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>
Rest area	1,517	55.67%	1,217	55.52%	217	57.56%	73	51.77%
Next town	427	15.67	357	16.29	56	14.85	14	9.93
Commercial facility	368	13.50	289	13.18	42	11.14	34	24.11
<u>Safety Issues (Net)</u>	<u>(294)</u>	<u>(10.79)</u>	<u>(233)</u>	<u>(10.63)</u>	<u>(47)</u>	<u>(12.47)</u>	<u>(12)</u>	<u>(8.51)</u>
Highway shoulder	195	7.16	155	7.07	30	7.96	8	5.67
Interchange	80	2.94	60	2.74	16	4.24	4	2.84
Continue driving	19	0.70	18	0.82	1	0.27	0	0.00
Other	123	4.51	98	4.47	16	4.24	9	6.38
% Responding:	84.94%		84.21%		88.50%		88.13%	

Note: Adds to more than 100% due to multiple mentions.

Question 14: Please rate, using a range of 1 to 10, the importance of each of the following highway operation activities (1 = not important to you at all, 5 = medium importance, 10 = extremely important)

	<u>All Vehicles</u>
Road Surface	
Mean	9.09
(Base)	(2,678)
% Responding:	83.48%
Motorist Services	
Mean	8.22
(Base)	(2,659)
% Responding:	82.89%
Roadside	
Mean	6.16
(Base)	(2,646)
% Responding:	82.48%

Terms Defined: Road Surface (i.e., pavement construction, snow and ice removal, smooth pavement)
 Motorist Services (i.e., road signs, rest areas, emergency road condition information)
 Roadside (i.e., landscaping, mowing, trash removal, eliminating weeds)

Question 15: Please rate, using a range of 1 to 10, the importance of the following motorist services (1 = not important to you at all, 5 = medium importance, 10 = extremely important)

	<u>All Vehicles</u>
Road Signs and Traffic Signals	
Mean	8.72
(Base)	(2,645)
% Responding:	82.45%
Rest Areas	
Mean	8.08
(Base)	(2,658)
% Responding:	82.56%
Emergency Road Condition Information	
Mean	7.54
(Base)	(2,614)
% Responding:	81.48%

General Andrews Safety Rest Area

Question 16: Do you usually feel safe using Minnesota rest areas on interstate highways?

	<u>All Vehicles</u>		<u>Standard Vehicles</u>		<u>Oversize Vehicles</u>		<u>Commercial Vehicles</u>	
	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>
Yes	2,594	95.51%	2,091	95.83%	362	95.26%	127	91.37%
No	40	1.47	30	1.37	5	1.32	5	3.60
No opinion	<u>82</u>	<u>3.02</u>	<u>61</u>	<u>2.80</u>	<u>13</u>	<u>3.42</u>	<u>7</u>	<u>5.03</u>
Total	2,716	100.00%	2,182	100.00%	380	100.00%	139	100.00%
% Responding:	84.66%		83.83%		89.20%		86.88%	

Question 17: Do you feel safe using Minnesota rest areas after dark?

	<u>All Vehicles</u>		<u>Standard Vehicles</u>		<u>Oversize Vehicles</u>		<u>Commercial Vehicles</u>	
	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>
Yes	2,025	74.42%	1,603	73.33%	294	77.98%	117	81.82%
No	324	11.91	274	12.53	34	9.02	15	10.49
No opinion	<u>372</u>	<u>13.67</u>	<u>309</u>	<u>14.14</u>	<u>49</u>	<u>13.00</u>	<u>11</u>	<u>7.69</u>
Total	2,721	100.00%	2,186	100.00%	377	100.00%	143	100.00%
% Responding:	84.82%		83.98%		88.50%		89.38%	

Question 18: The next rest area is located at Forest Lake (80 miles), is this distance (pick only one):

	<u>All Vehicles</u>		<u>Standard Vehicles</u>		<u>Oversize Vehicles</u>		<u>Commercial Vehicles</u>	
	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>
About right	1,949	71.37%	1,548	70.52%	299	78.68%	92	65.25%
Too far	738	27.02	609	27.75	76	20.00	49	34.75
Too close	<u>44</u>	<u>1.61</u>	<u>38</u>	<u>1.73</u>	<u>5</u>	<u>1.32</u>	<u>0</u>	<u>0.00</u>
Total	2,731	100.00%	2,195	100.00%	380	100.00%	141	100.00%
% Responding:	85.13%		84.33%		89.20%		88.13%	



GENERAL ANDREWS SAFETY REST AREA - I35
USER SURVEY, AUGUST 8 - 12, 1996

Day of the week: Thu. Fri. Sat. Sun. Mon. Time in: _____ Lic. State: MN _____ (specify other)
Vehicle type: 1 2 3 10 11 12 13 20 30 31 40 Time-out: _____

Dear Motorist: The Minnesota Department of Transportation, (Mn/DOT), is attempting to determine how Safety Rest Areas and Travel Information Centers along highways are utilized and what facilities should be provided to satisfy your needs.

- 1. Number of people in your vehicle? senior adults (over 59) adults (16-59) children (under 16)
Male _____
Female _____
2. How long have you traveled since your last stop? _____ (minutes or miles)
3. When do you think your next stop will be? _____ (minutes or miles)
4. What is your reason for traveling today? (Write letter here): _____
A. Business Travel C. Pleasure travel (vacation, recreation, etc.)
B. Commercial Driver (truck, bus, etc.) D. Other personal travel (other than pleasure travel)
5. Where did your trip start today? _____ (city/state)
6. If this is a multi-day trip, where did your overall trip begin? _____ (city/state)
7. Where will your trip end today? _____ (city/state)
8. If this is a multi-day trip, where will your overall trip end? _____ (city/state)
9. Please select your main reason(s) for stopping at this rest area. (check all that apply)
restrooms (a) rest/relax (d) telephone (g) vending (j)
eat/picnic (b) water (e) switch drivers (h) other (please specify)
sleep (c) check vehicle (f) travel information (i) _____ (k)
10. Which of the following facilities were used by your party? (check all that apply)
restroom (a) map displays (d) vending (g)
picnic table (b) trash receptacles (e) other (please specify) _____ (h)
telephone (c) recycle receptacles (f)
11. When traveling, which type of facility do you prefer to use? (pick only one, write letter here): _____
A. safety rest area C. private/commercial facilities
B. public park D. combined safety rest areas & private/commercial facilities
12. Which of the following private commercial business types would you prefer at Minnesota's rest areas? (check all that apply)
none (a) restaurant (fast food/takeout) (c) gas and vehicle service (e)
vending machines (b) restaurant (sit down) (d) other _____ (f)
13. If you were fatigued, needed to change drivers or experiencing potential mechanical problems, where would you stop? (pick only one, write letter here): _____
A. interchange C. commercial facility E. continue driving G. next town
B. highway shoulder D. rest area F. other (please specify) _____
14. Please rate, using a range of 1 to 10, the importance of each of the following highway operation activities.
1 = not important to you at all 5 = medium importance 10 = extremely important
Road surface (i.e., pavement construction, snow and ice removal, smooth pavement)
Roadside (i.e., landscaping, mowing, trash removal, eliminating weeds)
Motorist Services (i.e., road signs, rest areas, emergency road condition information)
15. Please rate, using a range of 1 to 10, the importance of each of the following motorist services.
1 = not important to you at all 5 = medium importance 10 = extremely important
Road signs/traffic signals rest areas emergency road condition information
16. Do you usually feel safe using Minnesota rest areas on Interstate highways? Yes No No Opinion
17. Do you feel safe using Minnesota rest areas after dark? Yes No No Opinion
18. The next rest area is located at Forest Lake (80 miles), is this distance:(pick only one, write letter here): _____
A. Too far B. Too close C. About right

Additional Comments:

Please return survey to the staff at the exit ramp. Thank you. (Please use other side for additional comments)

General Andrews REST AREA USAGE SURVEY - THURSDAY, AUGUST 8, ~~1994~~ 1996

HOUR	CARS			PICK-UPS, VANS			Commer TRUCK S	SEMI'S	RV'S	BUS	OTHER	TOTAL
	car only	w/rec. trailer	w/other trailer	p- up/van only	w/rec. trailer	w/other trailer		tractor trailers			(motorcycles)	
	1	2	3	10	11	12	13	20	30	31	40	
9** - 10	NO STOP											
10:55-11 10 - 11	28	0	0	13	0	0	3	3	1	0	2	50
11 - 12	243	0	0	142	13	5	15	37	14	0	6	475
12 - 1	227	3	1	145	15	7	7	38	5	0	1	449
1 - 2	240	3	2	131	5		3	42	5	1	3	453
2 - 3	271	2	0	163	19	2	9	21	8	2	2	499
3 - 4	302	2	1	186	16	5	1	41	4	2	3	563
4 - 5	323	3	1	211	17	4	7	28	11	2	2	611
5 - 6**	261	1	1	175	12	8	2	27	1	0	1	489
TOTAL												3589

** CHECK THE WATER METERS @ 9:00a 18278800 AND @ 6:00p 18281100, RECORD ON MIKE'S SHEET!

11:00 AM - 18279200

General Andrews REST AREA USAGE SURVEY - FRIDAY, AUGUST 9, 1994* 1996

HOUR	CARS			PICK-UPS, VANS			Commer TRUCKS	SEMI'S	RV'S	BUS	OTHER	TOTAL
	car only	w/rec. trailer	w/other trailer	p-up/van only	w/rec. trailer	w/other trailer		tractor trailers			(motorcycles)	
	1	2	3	10	11	12	13	20	30	31	40	
9** - 10	186	0	1	152	5	2	2	28	8	0	0	384
10 - 11	239	0	1	139	12	6	4	36	7	0	2	446
11 - 12	288	2	0	202	21	6	7	36	17	0	4	583
12 - 1	307	2	0	209	23	5	8	24	5	0	2	585
1 - 2	326	4	1	227	26	3	6	27	13	3	3	639
2 - 3	364	3	0	253	32	7	11	32	20	0	2	724
3 - 4	420	2	0	284	31	15	12	27	10	0	1	808
4 - 5	359	4	3	248	18	8	9	20	8	0	5	682
5 - 6**	371	7	0	233	30	3	7	22	7	1	2	683
TOTAL	2860	24	6	1947	198	55	66	252	95	4	21	5528

** CHECK THE WATER METERS @ 9:00a 18281800 AND @ 6:00p 18284900 , RECORD ON MIKE'S SHEET!

General Andrews REST AREA USAGE SURVEY - SATURDAY, AUGUST 10, ~~1994~~ 1996

HOUR	CARS			PICK-UPS, VANS			Commer TRUCKS	SEMI'S tractor trailers	RV'S	BUS	OTHER (motorcycles)	TOTAL
	car only	w/rec. trailer	w/other trailer	p- up/van only	w/rec. trailer	w/other trailer						
	1	2	3	10	11	12	13	20	30	31	40	
9** - 10	273	1	3	181	18	2	3	6	3	1	0	491
10 - 11	290	2	1	198	25	5	1	7	10	0	5	544
11 - 12	342	3	2	208	50	9	2	9	10	1	2	638
12 - 1	325	4	1	194	43	6	3	2	8	0	4	586 590
1 - 2	334	4	4	198	60	10	5	9	6	1	9	640
2 - 3	321	4	2	196	55	6	1	9	8	2	8	612
3 - 4	334	12	5	218	94	9	1	6	10	4	8	701
4 - 5	376	8	4	228	48	8	1	5	10	11	4	703
5 - 6**	360	13	2	204	46	11	3	7	5	3	7	710 661
TOTAL												5580

** CHECK THE WATER METERS @ 9:00a 18286300 AND @ 6:00p 18289900, RECORD ON MIKE'S SHEET!

General Andrews REST AREA USAGE SURVEY - SUNDAY, AUGUST 11, 1994 1996

HOUR	CARS			PICK-UPS, VANS			Commer TRUCK S	SEMI'S	RV'S	BUS	OTHER	TOTAL
	car only	w/rec. trailer	w/other trailer	p- up/van only	w/rec. trailer	w/other trailer		tractor trailers			(motorcycles)	
	1	2	3	10	11	12	13	20	30	31	40	
9** - 10	273	2	1	158	19	6	2	2	9	0	5	477
10 - 11	413	3	2	213	32	9	0	1	15	0	9	697
11 - 12	475	6	2	318	47	8	0	2	18	0	9	885
12 - 1	561	9	4	377	58	7	2	1	11	3	13	1046
1 - 2	779	12	4	466	80	17	1	4	21	3	30	1414
2 - 3	850	19	2	539	98	10	2	8	18	3	16	1565
3 - 4	960	13	3	621	105	36	0	2	22	1	40	1803
4 - 5	1017	3	5	644	92	32	2	6	18	1	21	1844
5 - 6**	979	8	2	617	118	23	1	11	21	-	11	1794
TOTAL	6307	75	25	3953	649	145	10	37	153	11	154	11519

** CHECK THE WATER METERS @ 9:00a 18291600 AND @ 6:00p 16296400, RECORD ON MIKE'S SHEET!

General Andrews REST AREA USAGE SURVEY - MONDAY, AUGUST 12, 1994 1996

HOUR	CARS			PICK-UPS, VANS			Commer TRUCK S	SEMI'S	RV'S	BUS	OTHER	TOTAL
	car only	w/rec. trailer	w/other trailer	p- up/van only	w/rec. trailer	w/other trailer		tractor trailers			(motorcycles)	
	1	2	3	10	11	12	13	20	30	31	40	
9** - 10	190	0	2	120	10	3	7	38	3	0	0	373
10 - 11	274	0	1	176	17	7	6	34	6	1	2	524
11 - 12	304	1	2	167	16	2	5	37	9	0	4	547
12 - 1	337	2	1	190	20	9	4	48	4	3	5	623
5 1 - 2	277	2	0	180	14	9	5	23	7	1	5	523
2 - 3	296	0	1	177	39	8	6	33	13	8	1	576 582
5 3 - 4	250	3	1	176	37	10	12	62	24	9	4	588
4 - 5	338	1	2	233	24	4	6	34	9	4	4	659
5 - 6**	243	2	2	175	19	8	8	33	10	0	1	501
TOTAL												4,920

** CHECK THE WATER METERS @ 9:00a _____ AND @ 6:00p _____, RECORD ON MIKE'S SHEET!