TranPlan 21 | 2003 Telephone Survey

Statewide Public Involvement Survey

State of Montana
Department of Transportation
In conjunction with University of Montana-Missoula
Bureau of Business and Economic Research

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TRANPLAN 21

2003 Public Involvement
Telephone Survey

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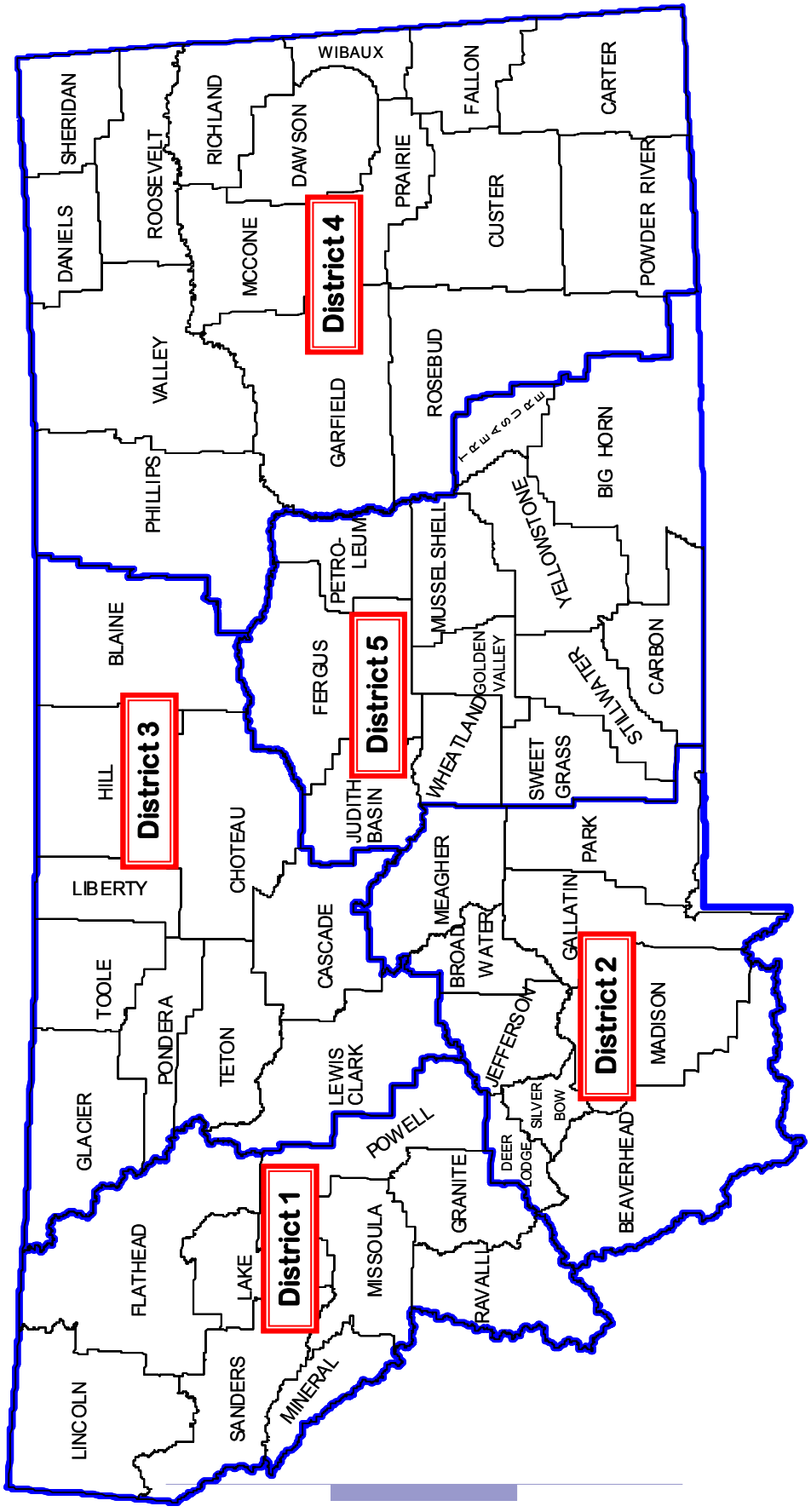


Executive Summary

In 2003 Montanans were:

- Generally satisfied with the state's transportation system
- Satisfied with the physical condition of the system components (bus depots and city streets received the lowest ratings)
- Somewhat satisfied with the availability of various transportation services, (passenger rail and taxi services receiving the lowest ratings)

The things Montanans said they wanted most were:

- City streets
- Major highways other than interstates
- Rest areas
- Interstate highways

Montanans said all of the problems studied were small problems, but there was some variations among MDT districts. Traffic congestion was viewed as a moderate or serious problem in District 1.

Of the 16 proposed actions to improve Montana's transportation system, respondents gave the highest ranking to:

- Keeping up with current technology
- Informing the public on transportation issues
- Improving roads and streets, other than interstates
- Promoting existing passenger rail service
- Improving safety

Montanans level of interest in MDT was generally higher than their level of knowledge, as measured by how much they heard about MDT. Respondents in District 1 reported hearing the least about MDT.

When compared to previous *TranPlan 21* telephone surveys, the following trends show:

- Overall satisfaction is unchanged from 1994
- Satisfaction with the physical condition of the transportation system continues to increase
- Satisfaction with the availability of services remains generally unchanged, after declining in the late 1990s
- Declines in the perceived need for more facilities, equipment, and services persist, perhaps reflecting Montana's current budget crisis

The top three public notification practices mentioned by respondents were public service announcements (PSAs), newspaper articles, and radio updates.

When asked to rank possible actions to improve roadways, the top three were:

- Wider roadways
- Increased shoulder widths to accommodate bicycles
- More guardrails and crash cushions

Montanans gave MDT an average or slightly above average (B- or C+) grade for customer service and performance.

I. INTRODUCTION

The purpose of the *2003 TranPlan 21 Public Involvement Survey* was to:

- Measure user opinions about Montana's transportation system
- Determine priorities for potential actions to improve Montana's transportation system,
- Measure perceptions of the quality of service provided by MDT
- Identify transportation related special issues currently important to Montanans
- Collect data that can be compared to earlier surveys

The telephone survey is a Montana Department of Transportation (MDT) public involvement process that provides information to MDT policymakers and planners about the transportation needs and preferences of Montanans. The survey provides trends in public perceptions because certain questions are comparable to ones asked in the 1994, 1997, 1999, and 2001 *TranPlan 21* telephone surveys. The 2003 survey was designed to help MDT policymakers determine public opinions about the efficiency, capacity, and flexibility of Montana's transportation system.

Survey Design

The *2003 TranPlan 21 Public Involvement Survey* is the fifth iteration and was designed to provide both a snapshot of current public opinion and trend analysis. This survey was administered by telephone using a Computer-Assisted Telephone Interviewing (CATI) process. The population sample was chosen using a Random-Digit Dial (RDD) process. The population sampled was adult Montanans who live in a household with a working telephone. This population should not be confused with all Montanans, since it excludes households without working telephones, the institutional population, and Montanans absent from the state during the survey period. The approximate sampling error for this survey is plus or minus 3.2 percent. This means that using this study design, in 95 of 100 samples a sampled mean would be within 3.2 percent of the population mean.

Survey Administration

The survey was administered from June 12, 2003 through July 13, 2003. Of the 1,353 eligible respondents contacted, 937 (69 percent) participated in the survey. An additional 27 potential respondents were cooperative, but were excluded because they were homebound or in nursing homes and were unfamiliar with MDT and its activities. A 69 percent response rate is considered typical for a survey of this type.[1]

Respondents were selected randomly within households. The person answering the telephone had the same probability of being selected as any other adult member of the household. If the selected member of the household was not home, an appointment was made to interview the absent respondent. Sampled individuals who were out of state during the administration period and individuals with medical problems that precluded participation were ineligible. Telephone numbers drawn by the RDD process were ineligible if they were out-of-service, fax machines, or businesses. Numbers for which there was no answer were called repeatedly during morning, evening, and weekend hours. Those numbers not answering after five call-backs (at a variety of times) were classified as ineligible.

[1] Bradburn, Norman, and Sudman, Seymour: Polls and Surveys: Understanding What They Tell Us. San Francisco: Jossey-Bass, 1988, page 123.

The Respondents

Table A below describes the respondents and provides benchmarks against which they may be compared. Nearly half (54.9 percent) of respondents are female, and nearly half (45.1 percent) are male. The percentage of females and males in this sample is within the sampling margin of error of the 2000 Census[2].

The racial distribution of the sample approximates that reported in previous surveys and the 2000 Census of Population. American Indians or Alaskan Natives comprise 8.9 percent of respondents, while 86.7 percent are white. The slightly lower percentage of 2003 respondents describing themselves as white, and the corresponding increase in the "other/don't know" category, reflect a changing perception of race. Due to the structure of the 2000 Census of Population race question, the components reported in the Census no longer sum to 100[3].

Continuing the trend found in earlier surveys, the 2003 survey respondents reported somewhat higher educational attainment than was found in the 2000 Census of Population. Among respondents age 25 and over, 5.1 percent report attaining less than a high school diploma or General Education Diploma (GED). 2000 Census of Population data show that, among Montanans age 25 or older, 10.4 percent did not complete high school or earn a GED[4]. A

Table A 2003 TranPlan 21 Public Involvement Survey Respondents (%)	1994	1997	1999	2001	2003	2000 Census Bureau Est.
Male	49.8%	49.4%	52.1%	47.6%	45.1%	49.3%
Female	50.2	50.6	47.9	52.4	54.9	50.7
American Indian/ Alaskan Native	NA	4.0	8.9	8.0	8.9	7.4
Asian/Pacific Islander	NA	0.6	0.3	0.2	NA	0.9
Hispanic	NA	0.7	NA	NA	NA	NA
Black	NA	0.4	0.6	0.4	NA	0.5
White	NA	93.5	90.2	95.9	86.7	92.2
Other/Don't Know	NA	0.8	0.0	0.6	4.4	0.9
Mean Age	44.8	49.6	49.0	49.6	50.7	46.5
1-12 Grade	5	9.5	8.0	5.3	5.1	10.4
H.S. Diploma or Some College	62.3	61.2	59.8	60.6	65.6	65.8
B.A. or More	32.7	29.3	32.2	34.1	29.2	23.8

[2] Gender estimates, US Census Bureau, 2000 Census, Montana Table DP-1.

[3] Race estimates, US Census Bureau, 2000 Census, Montana Table DP-1. Race alone or in combination with other races. Note that US OMB race definition changed in 2000.

[4] Educational attainment from Detailed Tables for the Current Population Reports, P20-536, Table 13, March 2000.

greater percentage of 2003 survey respondents said they earned a bachelor's degree or higher than was reported in the 2000 Census of Population.

The mean age of 2003 respondents was 50.7 years, while the average age of Montanans age 18 and over in 2000 was 46.5 years[5]. The difference in mean ages is within the margin of sampling error. However, it is likely that older people are easier to reach on the telephone. The probable effect of this slight difference on the data is small.

Table B shows about 29.5 percent of respondents live in MDT District 1 (*Lincoln, Flathead, Sanders, Mineral, Missoula, Ravalli, Granite, Powell, and Lake counties*), 19.5 percent live in District 2 (*Beaverhead, Madison, Deer Lodge, Silver Bow, Jefferson, Broadwater, Meagher, Gallatin, and Park counties*), 21.3 percent live in District 3 (*Glacier, Pondera, Teton, Lewis and Clark, Cascade, Toole, Chouteau, Liberty, Hill, and Blaine counties*), 9.4 percent live in District 4 (*Phillips, Valley, Daniels, Sheridan, Roosevelt, Richland, McCone, Garfield, Dawson, Prairie, Rosebud, Fallon, Custer, Powder River, Carter, and Wibaux counties*) and 20.3 percent lived in District 5 (*Bighorn, Treasure, Stillwater, Sweet Grass, Wheatland, Yellowstone, Golden, Valley, Petroleum, Fergus, Musselshell, Judith Basin, and Carbon counties*). A map of MDT districts is located in the front of this report on page iii.

Table B

Respondents in MDT Districts

District	%	N
District 1	29.5	276
District 2	19.5	183
District 3	21.3	200
District 4	9.4	88
District 5	20.3	190

Table C

Respondents Income Distribution

Income	%
< $15,000	16.4
$15,000-29,999	21.8
$30,000-39,999	14.1
$40,000-49,999	10.6
$50,000-74,999	21.7
> $75,000	15.4

The household income distribution for the respondents is listed in Table C. The median household income for the respondents was $35,000. The median household income for Montana reported in the 2000 Census of Population was $33,000[6]. The two incomes are statistically identical given the respective margins of error and the roughly six percent inflation since 2000.

For compliance with Environmental Justice requirements, the low-income populations were tracked during this survey. Montana's household poverty income level is approximately $15,000 per year.

Structure of this Report

This report presents and analyzes the data collected by the *2003 TranPlan21 Public Involvement Survey*. The following sections present an extensive set of tables. The report consists of eight sections:

1. Attitudes about Montana's transporta-

[6] US Census Bureau, Money Income in the US: P60-213, September 2001, adjusted using CPI US City average 1982 - 1984 = 100.

tion system
2. Perceived problems with Montana's transportation system
3. Actions to improve the transportation system
4. Trends in attitudes about the transportation system
5. Interest in MDT and its activities
6. Awareness of information sharing
7. Actions to improve roadways
8. MDT customer service grades

The text of the *2003 TranPlan 21 Public Involvement Telephone Survey* questions may be found in Appendix A (Volume II), along with the comments and suggestions received from the surveys two open ended questions. Tables of responses to each question are also found in Appendix A (Volume II), and can serve as a useful, quick-reference tool.

To determine differences between group means and percentages, t-tests were calculated and are reported throughout this document. T-test results reported here will use the .05 significance level unless stated otherwise. If a value is said to differ from a second value at the .05 level, in 95 out of 100 samples the value will be found to differ from the second value. When comparing group means for this report, a Bonferroni-adjusted t-test was used. The reason for using an adjusted t-test is that when one makes many comparisons involving the same means, the probability increases that one or more comparisons will turn out to be statistically significant, even when the population means are equal[7]. For instance, if one compares mean satisfaction scores from five income groups using an unadjusted test, the probability that at least one mean will be found significantly different is almost one in three, even if the population means are not different.

Often in this report means will be listed in tables from highest to lowest. Unless noted otherwise, "Montanans" in this report refer to those age 18 and older.

II. ATTITUDES ABOUT MONTANA'S TRANSPORTATION SYSTEM

Overall Satisfaction

Montana's overall transportation system was ranked on a scale of one to ten, where one is "very unsatisfied" and ten is "very satisfied." The mean response was 6.27, reflecting moderate satisfaction with the overall transportation system. The psychological midpoint of the one to ten scale is five. The distance above five is a measure of the intensity of satisfaction.

Satisfaction with the Condition of System Components

Each component of Montana's transportation system was also rated using the one to ten scale. Table 1 summarizes Montana's responses.

Airports ranked highest in terms of satisfaction (7.73). People also expressed relatively strong satisfaction with interstate highways (7.34). Behind interstate highways was a group of four components with which Montanans are moderately satisfied:

- Other major highways (6.18)
- Pedestrian walkways (6.15)
- Rest areas (6.01)
- Bicycle pathways (5.90)

Respondents expressed a neutral level of satisfaction with bus depots (5.06) and city streets (4.98). Both of these rankings are statistically indistinguishable from 5.0, the psychological midpoint. A relatively large number of respondents said they did not have enough information about bus depots.

Satisfaction with system components can also be examined by region. Table 2 (on the next page) presents mean satisfaction scores for each of the five financial districts.

Tests were calculated to assess the statistical significance of differences between the means presented. Overall, there is general agreement between respondents from the various MDT regions. District 3 expressed less satisfaction with the condition of interstate highways than did Districts 2 and 4. District 2 reported more satisfaction with the condition of major highways than did Districts 1 and 5. District 1 is less satisfied with pedestrian walkways than Districts 4 and 5. District 1 has the highest level of satisfaction with bus depots. District 4 is more satisfied with rest areas than any other district. District 4 is more satisfied with city streets than Districts 2 and 3.

Table 1
Satisfaction with Condition of Transportation System Components

	Mean	95% Confidence Lower Limit	95% Confidence Upper Limit	N
Airports	7.73	7.59	7.88	704
Interstate Highways	7.34	7.23	7.46	908
Other Major Highways	6.18	6.05	6.31	875
Pedestrian Walkways	6.15	5.98	6.32	772
Rest Areas	6.01	5.84	6.18	815
Bicycle Pathways	5.90	5.66	6.14	570
Bus Depots	5.06	4.82	5.30	395
City Streets	4.98	4.84	5.12	924
Overall System	**6.27**	**6.15**	**6.38**	**901**

[7] Norusis, Marija: Guide to Data Analysis. Englewood Cliffs, NJ: Prentice Hall, 1995, page 291.

Table 2
Satisfaction with Condition of System Components by MDT District

	District 1	2	3	4	5
Airports	7.74	7.80	7.47	7.71	7.95
Interstate Highway	7.29	7.54	7.12	7.55	7.37
Other Major Highway	6.05	6.48	6.17	6.39	6.02
Rest Areas	5.85	6.01	5.73	6.97	6.10
Pedestrian Walkways	5.77	6.25	6.19	6.94	6.28
Bicycle Paths	5.72	5.97	5.82	6.02	6.17
City Streets	5.03	4.70	4.80	5.58	5.08
Bus Depots	5.06	4.77	4.97	4.53	4.88
Overall System	**6.27**	**6.38**	**6.21**	**6.22**	**6.39**

than half of the respondents say they didn't feel qualified to answer about bus depot infrastructure (54.1 percent).

A few regional differences are found across MDT districts (see Table 4). The relatively large percentages of persons who didn't feel qualified to answer several questions reduce the significance of the regional comparisons.

Perceived Need for More Infrastructure

Montanans were asked whether the eight transportation system components needed additional facilities, equipment, or services. Consistent with their satisfaction ratings, roughly half of Montanans (50.4 percent) feel additional infrastructure is not needed for airports (see Table 3).

Approximately 70.5 percent of Montanans believe that more infrastructure is needed for city streets, and 60.3 percent said the same thing for other major highways. Smaller majorities advocate more infrastructure for the following:

- Rest areas (55.8 percent)
- Bicycle pathways (53.4%)
- Interstate highways (50.4%)

Less than half of the respondents perceived a need for additional infrastructure for pedestrian walkways (49.9 percent) and bicycle pathways (42.7 percent). More

Table 3
Perceived Need for Additional Facilities, Equipment, or Services (%)

	Yes	No	Don't Know	N
City Streets	70.5%	25.2%	4.3%	931
Other Major Highways	60.3	28.6	11.1	930
Rest Areas	55.8	30.8	13.4	932
Interstate Highways	50.4	38.9	10.6	930
Pedestrian Walkways	49.9	32.9	17.2	930
Bicycle Pathways	42.7	27.8	29.5	932
Bus Depots	27.6	18.3	54.1	929
Airports	22.3	50.4	27.3	933

Fewer District 4 respondents cite a need for additional other major highways than any other district. More District 4 respondents said no more rest areas are needed than those in Districts 1, 2, and 3. District 2 residents are more likely than District 4 residents to say no more interstate highways are needed.

Table 4
Perceived Need for Additional Facilities, Equipment, or Services in Each MDT District (%)

	District 1	2	3	4	5
City Streets	71.9%	71.7%	69.8%	62.5%	71.6%
Other Major Highways	61.5	49.2	64.6	62.5	63.7
Rest Areas	56.4	56.0	61.8	47.7	52.1
Interstate Highway	46.4	44.8	55.3	54.5	54.8
Pedestrian Walkways	56.0	50.3	47.0	45.5	45.8
Bicycle Pathways	46.4	44.5	41.2	30.7	42.9
Bus Depots	24.6	29.7	26.1	28.7	30.7
Airports	18.2	22.5	25.6	28.4	21.6

Satisfaction with Service Availability

As seen in Table 5, respondents stated they were moderately satisfied with the availability of the following:

- Air transportation to destinations outside Montana (6.15)
- Transit for the elderly or disabled (5.64)
- Freight rail (5.77)
- Air transportation to Montana destinations (5.66).

Respondents' satisfaction was slightly lower with the availability of local bus or van service (5.37). Intercity bus service (5.06) and taxi service (4.85) received a neutral satisfaction rating. Montanans were dissatisfied with the availability of passenger rail service, giving this service a satisfaction score of only 3.99.

The highest levels of satisfaction with service availability were generally found in District 5. Respondents from District 5 reported significantly more satisfaction (6.97) with the availability of air transportation to destinations within Montana than District 2 (5.28). District 5 has greater satisfaction than District 3 with transit for the elderly (5.98 vs. 5.26). Respondents in District 5 expressed more satisfaction with local van or bus service than did any other MDT districts. District 5 respondents were more satisfied than District 4 respondents in both intercity bus service and taxi service.

Table 5
Satisfaction with Service Availability

	Mean	95% Confidence Lower Limit	Upper Limit	N
Air Transportation Outside MT	6.15	5.98	6.32	752
Freight Rail	5.77	5.53	6.02	403
Air Transportation in MT	5.66	5.46	5.85	621
Transit for Elderly/Disabled	5.64	5.44	5.84	626
Local Bus or Van	5.37	5.12	5.62	538
Inter City Bus	5.06	4.81	5.31	463
Taxi	4.85	4.60	5.11	468
Passenger Rail	3.99	3.76	4.22	574

Table 6 shows the differences in Montana's districts of satisfaction of services. District 1 respondents were more satisfied than District 2 respondents with air service in Montana (5.81 vs. 5.28). Respondents in District 2 were more satisfied with intercity buses than respondents in District 4 (5.40 vs. 4.32).

Table 6
Satisfaction with Service Availability

	1	2	3	4	5
Air Transportation Outside of MT	6.15	6.08	6.01	6.21	6.36
Freight Rail	6.02	5.49	5.88	5.77	5.55
Air Transportation in	5.81	5.28	5.60	5.45	5.97
Transit for Elderly/ Disabled	5.63	5.70	5.26	5.63	5.98
Local Bus or Van	5.29	5.19	5.04	4.64	6.35
Inter City Bus	4.95	5.40	4.95	4.31	5.46
Taxi	4.73	4.44	5.12	4.31	5.40
Passenger Rail	4.24	2.93	4.67	4.91	3.08

Districts 2 (2.93) and 5 (3.08) expressed far less satisfaction with passenger rail service than Districts 1 (4.24), 3 (4.67), and 4 (4.91).

Perceived Problems with Montana's Transportation System

Montanans rated possible problems on a scale from one to four, where one is "not a problem" and four is a "serious problem." Montanans classified none of the 11 options studied as meriting moderate concern (with a mean score of 2.5 or above). Reinforcing the positive overall level of satisfaction with the transportation system (see Table 7 on the next page).

The four greatest perceived problems were the following:

- Traffic congestion
- Number and condition of rest areas
- Timely resolution of safety issues
- Vehicle damage from construction and maintenance

The question concerning rest areas was reworded this year and the findings cannot be compared to earlier surveys.

While no significant problems emerge when examining statewide data, the conclusions are quite different at the district level. Table 8 (on page 10) explores the percentage of respondents in each district that say an item is a moderate or serious problem. For many of the perceived problems, the greatest differences were between respondents in District 1, containing populous western Montana, and District 4, with very rural eastern Montana.

Respondent views on traffic congestion and rest areas are representative of Montana's current regional differences. Rest area concerns ranked first in the sparsely populated eastern Montana Districts 3 and 4. One the other hand, traffic congestion is by far the greatest perceived problem in more densely populated western Montana (District 1). These two concerns are much closer in terms of being perceived as a problem in Districts 2 and

Table 7
Perceived Problems with Montana Transportation System (%)

	Not a Problem	Small Problem	Moderate Problem	Serious Problem	Don't Know	Mean	N
Traffic Congestion	32.9%	15.3%	27.4%	22.1%	2.5%	2.40	902
Number & Condition of Rest Areas	28.9	17.2	27.4	17.2	9.4	2.36	838
Timely Resolution of Safety Issues	25.6	17.0	27.0	13.1	17.3	2.33	763
Vehicle Damage From Construction and Maintenance	28.2	26.1	26.1	13.1	6.4	2.26	863
Debris on Roadway	34.1	29.9	25.4	8.9	1.7	2.09	908
Vehicle CO Emissions	39.1	18.6	25.8	9.6	6.8	2.06	862
Number of One Occupant Vehicles	45.2	15.3	18.8	12.2	8.4	1.98	846
Too Many Driveways & Approaches	49.4	16.0	20.2	9.3	5.1	1.89	877
Road Maintenance Impact on Air	44.3	25.3	18.5	5.1	6.7	1.83	861
Adequate Road Signs	65.3	15.7	14.6	3.4	1.1	1.55	910

4, which contain both rural and urban areas.

About three of every four District 1 respondents say traffic congestion is a moderate or serious problem. This percentage is significantly larger than that found in any other district. Roughly half of the respondents in Districts 2 and 5 also say traffic congestion is a moderate or serious problem.

Safety issues are considered more of a problem in District 1 than in other districts. The percentage of respondents who said the resolution of safety issues was a moderate or severe problem (46.3 percent) is statistically greater than in any other district.

More respondents in District 1 (40.5 percent) believe that debris on roadways is a serious problem than in District 4 (23.8 percent).

Vehicle carbon monoxide emissions are, by a wide margin, considered a moderate or serious problem by more respondents (47.1 percent) in District 1 than in any other district. The other end of the spectrum, the fewest respondents (26.2 percent) said emissions are a moderate or serious problem in District 4.

Far more respondents in District 1(43.0) consider single-occupant vehicles a moderate or serious problem than in any other district. The number of responses from District 5 (29.6 percent) is greater than in District 4 (19.6 percent).

Too many driveways and approaches onto major highways are considered a moderate or serious problem by

more respondents (42.8 percent) in District 1 than in any other district. In contrast, the fewest respondents (13.6 percent) said emissions are a moderate or serious problem in District 4.

More respondents in District 1 (34.2 percent) said there were moderate or severe air quality impacts from construction than in any other district. The fewest respondents (10.2 percent) in District 4 perceive them to be a moderate or severe problem.

Table 8
Perceived Moderate or Serious Problems with Montana Transportation System (%) by District

	1	2	3	4	5
Traffic Congestion	72.9%	48.6%	31.7%	21.6%	48.2%
Number & Condition of Rest Areas	42.6	45.8	50.2	39.8	42.4
Timely Resolution of Safety Issues	46.3	40.2	34.7	34.1	39.7
Vehicle Damage from Construction & Maintenance	40.4	37.4	42.7	42.1	34.6
Debris on the Roadway	40.5	34.6	30.6	23.8	33.9
Vehicle CO Emissions	47.1	31.8	28.6	26.2	33.9
Number of Single Occupant Vehicles	43.0	25.1	26.7	19.5	29.6
Too Many Driveways & Approaches	42.8	24.6	20.6	13.6	32.3
Road Maintenance Impact on Air	34.2	23.5	20.1	10.2	18.5
Adequate Road Signs	21.5	14.5	18.1	18.3	15.6

Possible Actions to Improve Transportation System

Respondents were asked to prioritize 16 possible actions to improve Montana's transportation system (Table 9). Respondents were given five choices of priority categories. They are:

- Very Low priority
- Somewhat Low priority
- Medium priority
- Somewhat High priority
- Very High priority

Table 9
Priority of Possible Actions to Improve Transportation System (%)

	Very Low Priority	Somewhat Low Priority	Medium Priority	Somewhat High Priority	High Priority	Don't Know	Mean	N
Keep Up With Current Technology	6.0%	4.8%	26.8%	24.7%	31.0%	6.6%	3.75	850
Inform Public on Transportation Issues	4.9	4.6	29.8	29.4	28.7	2.6	3.74	890
Improve Other Roads & Streets	4.1	6.3	28.9	30.2	28.2	2.3	3.74	900
Support Efforts to Preserve Existing Passenger Rail	7.9	7.0	21.5	21.3	30.3	12.1	3.67	802
Improve Safety	8.3	7.9	27.5	24.0	28.9	3.4	3.59	885
Support Efforts to Increase Availability of Airline Service	11.6	9.6	24.8	20.1	19.8	14.2	3.31	786
Improve Rest Areas	11.4	11.1	29.3	19.0	21.4	7.8	3.30	844
Ensure Adequate Ped Facilities	9.9	14.3	33.9	18.6	19.5	3.8	3.24	883
Promote Use of Local Bus/Vans	12.3	10.7	30.2	21.8	17.0	8.1	3.22	840
Improve Interstates & Major Highways	11.0	12.5	36.0	19.0	17.3	4.2	3.20	881
Reduce Traffic Congestion by Increasing Capacity	17.1	11.9	26.2	19.5	18.8	6.5	3.12	854
Improve Bus Depots	9.7	8.1	19.9	13.1	9.7	39.3	3.08	554
Ensure Adequate Bicycle Facilities	16.9	14.2	30.3	16.9	13.6	8.1	2.96	843
Regulate Highway Approaches	17.9	13.2	31.7	17.5	13.0	6.6	2.94	854
Reduce Air Quality Impacts from Road Use	23.6	15.8	27.9	12.2	12.2	8.4	2.71	835
Reduce Single Occupant Vehicle Use	42.6	18.7	19.8	7.1	6.5	5.2	2.12	870

Table 10
Percent in Each MDT District Say Possible Actions to Improve Transportation System a Medium or High Priority

	1	2	3	4	5
Keep Up With Current Technology	56.9%	52.6%	54.6%	58.6%	56.7%
Inform Public on Transportation Issues	59.6	56.4	59.0	57.9	56.7
Improve Other Roads & Streets	62.6	59.2	54.6	51.1	59.0
Support Efforts to Preserve Existing Passenger Rail	51.3	48.9	54.4	60.9	47.0
Improve Safety	57.4	48.0	55.1	39.8	55.1
Support Efforts to Increase Availability of Airline Service	36.4	42.4	45.4	34.4	39.0
Improve Rest Areas	35.2	48.0	43.4	32.9	41.1
Ensure Adequate Ped Facilities	44.3	43.0	39.2	20.5	31.7
Promote Use of Local Bus/Vans	42.0	41.9	35.7	36.3	35.4
Improve Interstates & Major Highways	37.4	34.2	38.3	32.9	36.2
Reduce Traffic Congestion by Increasing Capacity	50.9	32.9	34.5	25.0	35.6
Improve Bus Depots	18.0	27.0	20.0	25.0	28.1
Ensure Adequate Bicycle Facilities	35.4	33.0	31.1	22.7	24.2
Regulate Highway Approaches	38.8	29.6	27.0	16.0	29.9
Reduce Air Quality Impacts from Road Use	33.8	20.8	19.9	15.2	23.3
Reduce Single Occupant Vehicle Use	20.9	15.7	10.2	8.0	7.5

A value of one was assigned to the very low priority category, two to somewhat low priority, three to medium priority, four to somewhat high priority, and five to very high priority. A slightly different scale and modification of questions to this portion of the survey were some of the changes made to the 2003 telephone survey.

As with the perceived problem items, very few respondent said they "don't know" and most felt qualified to prioritize the options presented.

While Montanans view most transportation system problems as small, they believe solving those problems should take on a medium priority. Montanans classified, on average, 14 of the 16 possible action items as medium priorities. Only one possible action was considered a low priority.

Although there was not clear breakpoint, five actions received top priority scores. Three actions were statistically tied for first place with mean scores of about 3.75. They include:

- MDT keeping current with new technology
- MDT keeping the public informed
- MDT improving other roads and streets

Supporting efforts to preserve existing passenger rail was technically 4th (3.67), but a relatively large percentage of the respondents (12.1 %) felt they didn't know much about this topic. The number five action was to improve safety.

In the second tier of possible improvement, support efforts to increase availability of air service received the highest score (3.31), but again with a relatively many "don't knows" (14.2 percent). Improved rest areas ranked next, with a mean score of 3.3. Reducing single occupant vehicle use (2.12) was the only action rated by respondents as a low priority.

Priorities for possible actions to improve the transportation system were also examined across each of the five MDT regions. The percentage of respondents in each district who said an action was somewhat or very high priority (the top two categories) is presented in Table 10. Since, on average, respondents classified almost all of the studied actions as medium priorities the differences between districts largely focus on the relative magnitude of majorities.

All the MDT districts are in general agreement about seven of the highest priority actions (see Table 10), though there are some exceptions. Improving safety is more important in District 1 (57.4 percent) and District 4 (39.8 percent), and rest area improvements rates higher in District 2 (48.0 percent) than in District 4 (32.9 percent).

In seven of the remaining nine possible actions, District 1 displayed the highest percentage saying these are a medium or high priority. Differences were statistically significant in five of the seven cases, and most involve a contrast between western Montana District 1 and various combinations of the more rural districts in the eastern part of the state, especially District 4. They are as follows:

- Adequate pedestrian facilities rated higher in Districts 1 and 2 (44.3 % and 43.0 %, respectively) than in Districts 4 and 5 (20.5 % and 31.7 %, respectively).
- Reducing traffic congestion was more important in District 1 (50.9 percent) than in any other district.
- Adequate bicycle facilities are more important in District 1 (35.4 percent) than in Districts 4 and 5 (22.7 % and 24.2 % respectively).
- Regulating highway approaches and reducing air quality impacts received the higher ratings in District 1 (38.8 % and 33.8 %, respectively) than in any other MDT district.
- Reducing one-occupant vehicles was rated a higher priority in District 1 (20.9 percent) and the Districts 3, 4, and 5 (10.2 % 8.0 % and 7.5 %, respectively).

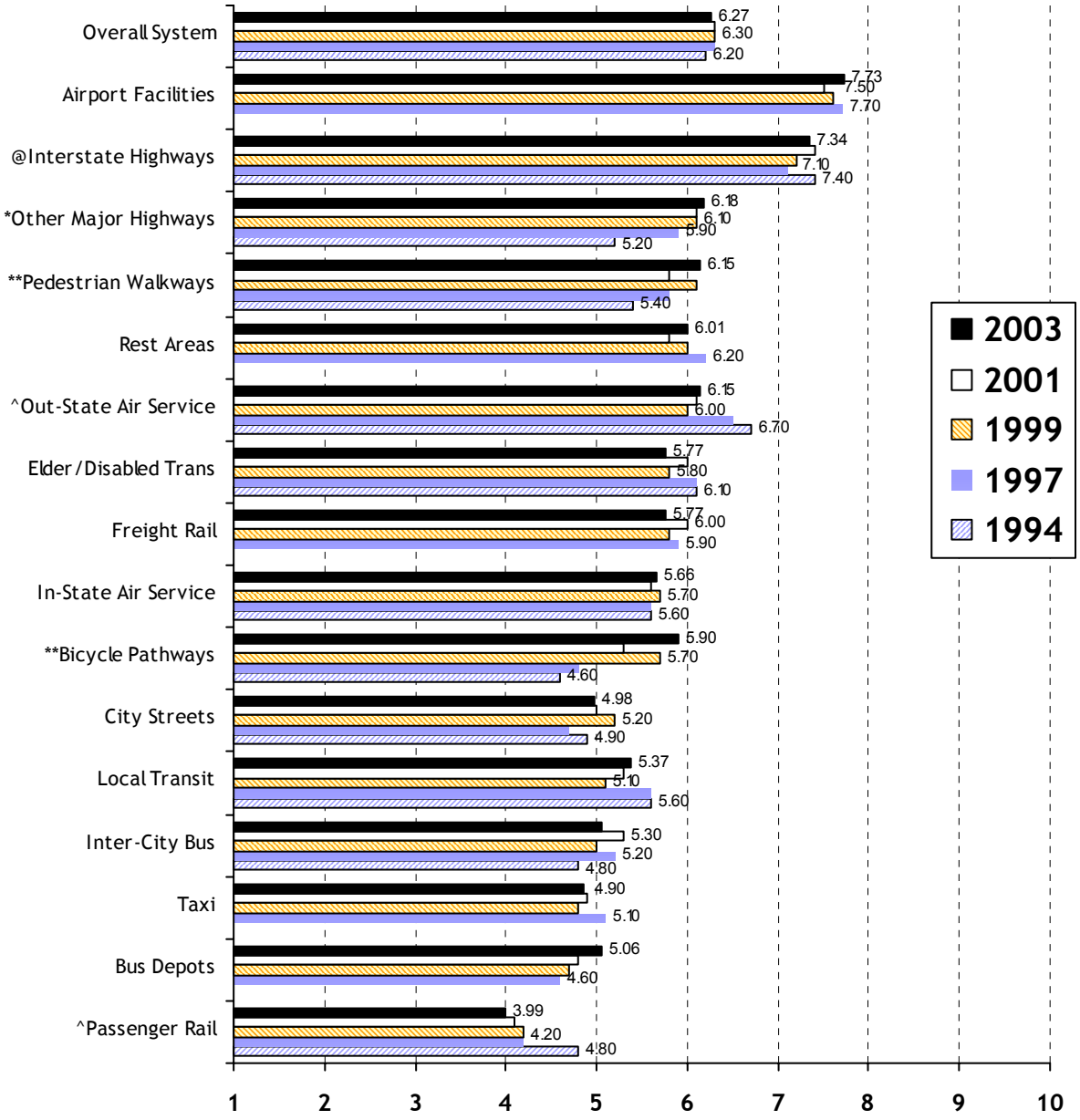
III. TRENDS IN MONTANA'S TRANSPORTATION SYSTEM

The *2003 TranPlan21 Public Involvement Survey* was designed to analyze Montanan's attitudes and perceptions about their transportation system. To the extent

possible, the wording of the questions was repeated exactly, so that responses from the 2003 survey can be compared to those from previous years. There were, however, several question changes. In these cases, a new trend analysis is provided using a non-parametric statistic (mean rank) that can be used to compare questions with different metrics.

The 2003 survey findings are compared in the following sections to those of

Figure 1
Trends in System Component Satisfaction
1994-2003



@1997-2003 difference significant at .05 level
*1994-2003 and 1997-2003 differences significant at .05 level
**1994-2003, 1997-2003, and 2001-2003 differences significant at .05 level
^1994-2003 difference significant at .05 level

the surveys conducted in 1994, 1997,1999, and 2001. Several questions were added 1997, thus in some cases comparisons can only be made for the later years in some cases.

As explained in Chapter I of this report, comparisons are made using t-tests and other statistical tests. Items are reported only if the differences are significant at the .05 level. The values reported in the Figures 1 to 3 were rounded and some of the values were deleted (such as two almost equal adjacent values) in the interest of clarity.

Satisfaction with the Transportation System

In each of the five iterations of this study respondents were asked to rate their satisfaction with the physical condition of various system components on a one to ten scale, where one is very unsatisfied and ten is very satisfied. The surveys also asked respondents whether or not more facilities, equipment, or services are needed for certain system components.

As shown in Figure 1, when asked to rate their overall satisfaction with Montana's transportation system in 2003, respondents' attitudes were unchanged (6.27) from 1994 (6.20), 1997 (6.28), 1999 (6.30) or 2001 (6.26). The mean satisfaction for the various components is shown in Figure 1

Relative to previous studies, satisfaction with the physical condition of system components has improved in 2003. Of the eight items studied, satisfaction is higher in five studies, while the remaining four showed no significant change.

Montanans' rating of the physical condition of interstate highways in 2003 (7.37) has improved since 1997 (7.06). The rating of the condition of other major highways in 2003 (6.18) has increased since 1994 (5.23) and 1997 (5.91). Pedestrian walkways are reported to be in better condition in 2003 (6.15), than they were in 1994 (5.39), 1997(5.76), or in 2001 (5.79). The condition of bicycle pathways in 2003 is rated higher (5.90) than in either 1994 (4.61) or in 1997 (4.77) or in 2001 (5.31).

In contrast to their ratings of the physical condition of system components, Montanans rate their satisfaction with availability of transportation services in 2003 as the same or lower than some earlier survey respondents. Two of the eight services studied in 2003 were rated lower than in the 1994 or 1997 studies, but no change was found between 1999 and 2003.

Satisfaction with the availability of out-of-state air travel services declined from 6.70 in 1994 to 6.13 in 2003. Most of this decline occurred early in the period, mean satisfaction remained stable from 1999 to 2003. Satisfaction with the availability of passenger rail services was lowest of all items mentioned, and it continued to decline. It dropped from 4.78 in 1994 to 3.99 in 2003. As with out-of-state air service, most of the deterioration occurred in the 1990's, as the mean level of satisfaction remains unchanged between 1997 and 2003.

Perceived Need for More Facilities, Equipment, or Services

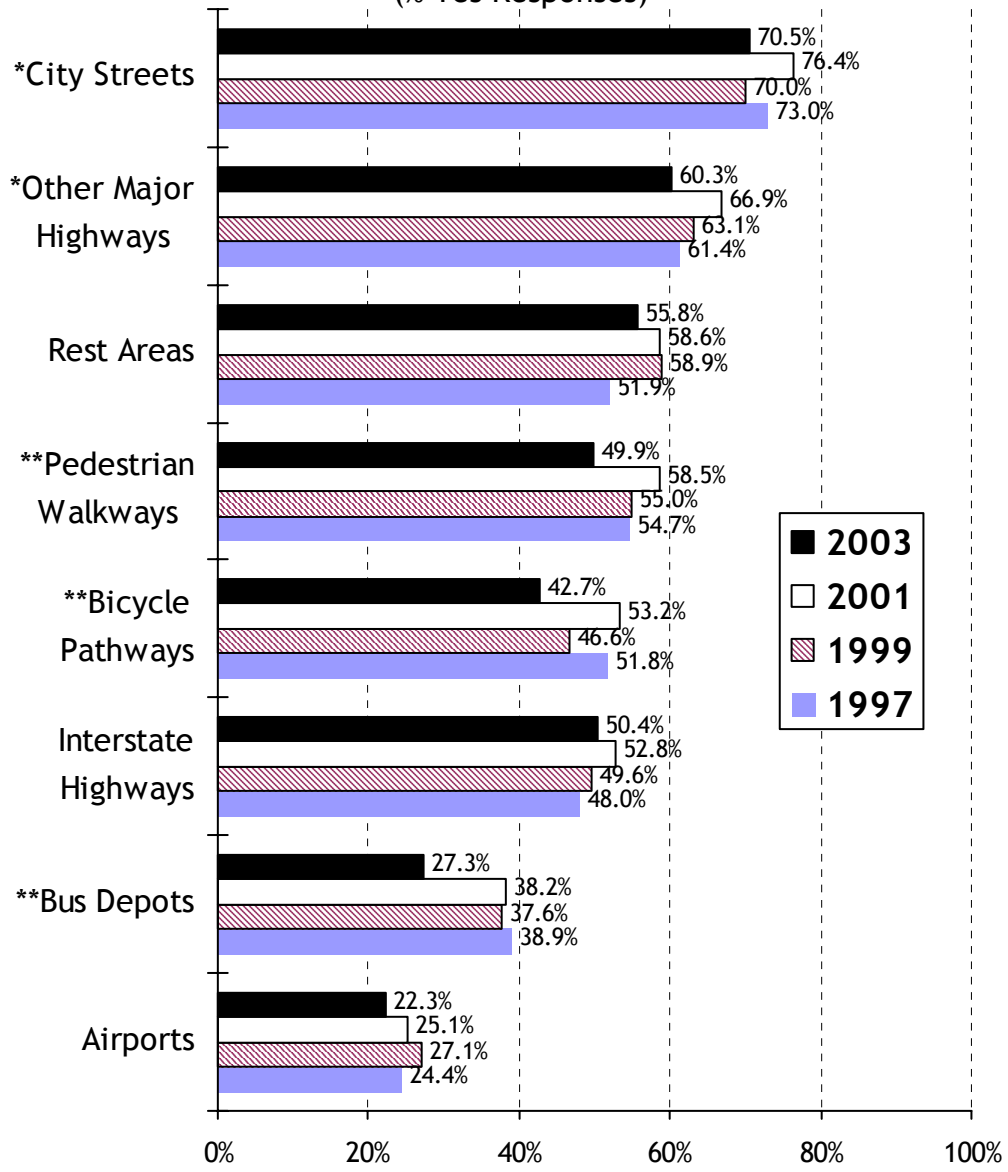
In 1997, 1999, 2001, and 2003 respondents were asked whether they perceived a need for certain other additional facilities, equipment, or services. These responses are presented in Figure 2.

The 2003 findings are noteworthy because the percentage of respondents that felt there was a need for more facilities declined. In five of the eight categories (bus depots, bicycle pathways, pedestrian walkways, other major highways, and city streets), the 2003 percentage was significantly lower than in 2001. In fact, the

2001-2003 decreases were so large in several categories (bus depots, bicycle pathways, and pedestrian walkways) that the 2003 percentage is lower than the 1994 figure.

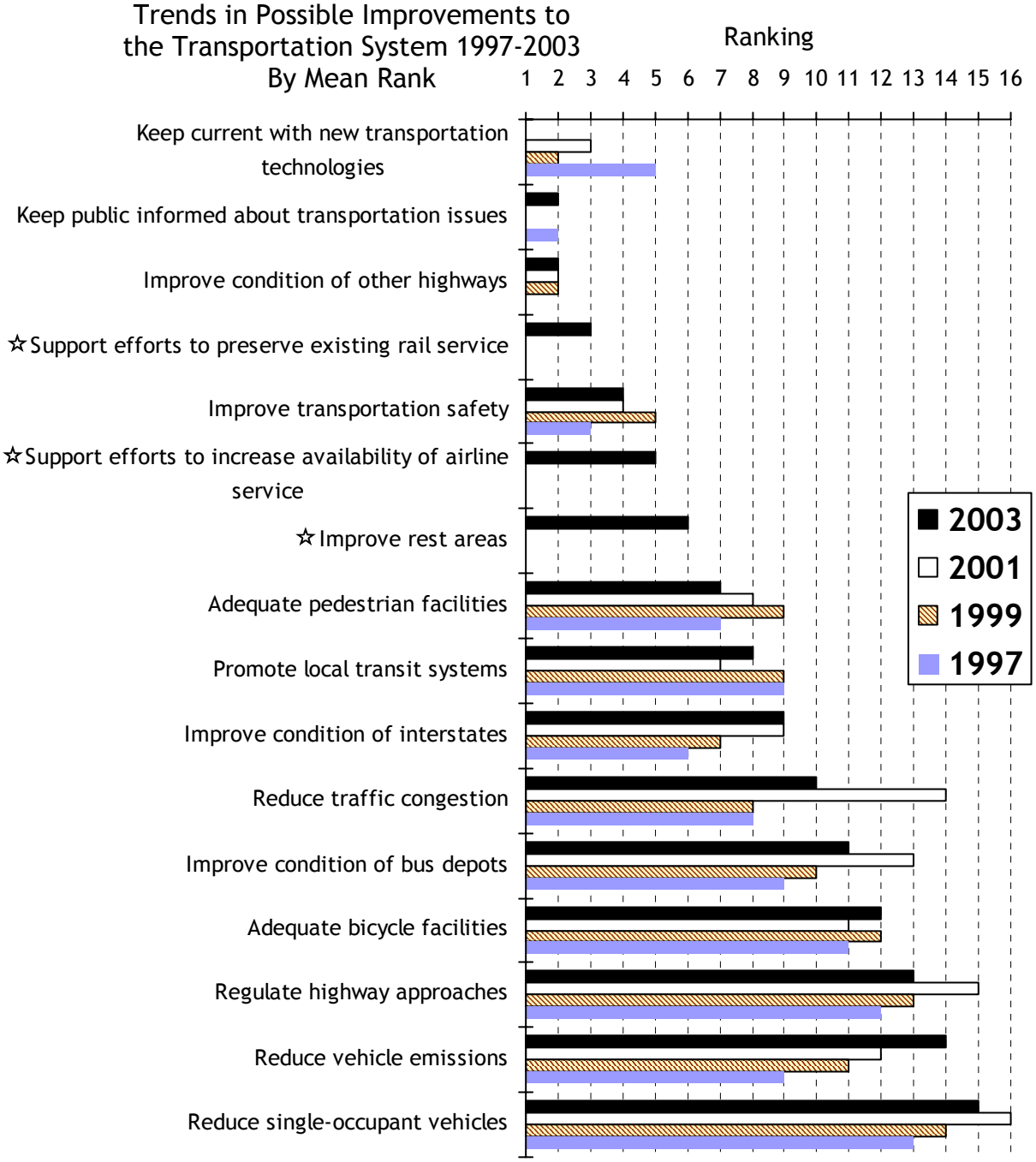
The reasons for this dramatic and consistent decline across all categories cannot now be definitively identified. We can speculate that 2003 was a year of state budget crises in Montana. The media coverage of the revenue shortfalls and spending declines may have influenced the respondents and decreased their perceived need for more facilities. We hope, the 2005 survey will shed more light on this development and help determine if this was a change in trend or just a short-term blip in the data. Prior to 2003, many of the categories had persistent long-term increases in the perceived need for more facilities.

Figure 2
Trends in Perceived Need for More Facilities, Equipment, or Services 1997-2003
(% Yes Responses)



*2001-2003 difference significant at .05 level
**1994-2003 and 2001-2003 differences significant at .05 level

Figure 3
Trends in Possible Improvements to the Transportation System 1997-2003
By Mean Rank



☆ Modified questions in 2003

Possible Improvements to the Transportation System

The *TranPlan 21* questions concerning improvements in the transportation system and roadways were changed for the 2003 survey. A more precise five-part scale was substituted for the previous four-part scale. In addition, some questions were dropped or modified to reflect changes

in MDT policy and procedure. Unfortunately, these changes in scale and questions invalidates comparisons of the 2003 survey with those conducted earlier.

In an attempt to provide some information concerning trends, Figure 3 presents the mean rank for each of the items from the 1997, 1999, 2001, and 2003 surveys. The mean rank is a non-parametric statistic that ranks each item from 1 (highest rank) to 16 (lowest rank) for each of the four surveys. This statistic is unaffected by the change in wording.

IV. SPECIAL INTEREST AREAS

Interest in MDT and Its Activities

For the first time this year, interviewers asked Montanans about their interest in MDT and its activities. This information will provide baseline data that may be compared to the findings of future surveys.

The respondents were first asked two questions to gauge their interest and how much they actually had heard about MDT. Both questions utilized a four-part scale ranging from "not at all" to "a lot" to measure how much they have heard about MDT and how interested they are in MDT.

Table 11

Level of Interest in MDT and Its Activities (%)

	Heard	Interested
Not at all	12.8	5.0
Not very	35.1	20.0
Some	35.6	53.7
A lot	16.5	21.3
N	905	905

As shown in Table 11, Montanans level of interest in MDT is generally higher than how much they have heard. Approximately 52.1 percent of the respondents said they heard "some" or "a lot" about MDT. In contrast, about 75.0 percent said they were interested "some" or "a lot" in MDT.

Table 12

Respondents with High Level of Interest in MDT and Its Activities (%)

	Heard	Interested
District 1	10.9%	18.6%
District 2	15.1	25.3
District 3	18.1	25.8
District 4	21.8	23.5
District 5	21.5	15.8
Overall	**16.5**	**21.3**

The regional variation in how much respondents heard and their interest in MDT is reported in Table 12. Reported is the percentage of respondents in each region who said they had heard "a lot" or had "a lot" of interest the MDT, the highest of the four-part scale. Respondents heard the most about MDT in the eastern Montana Districts 4 and 5. Respondents in southwest and Golden Triangle Districts 2 and 3 heard less about MDT. Western Montana District 1 reported hearing the least about MDT. Respondents in Districts 2,3 and 4 reported about the same level of interest. The lowest levels of interest were reported in Districts 1 and 5.

Awareness of Information Sharing

In order to efficiently disseminate information to Montanans, respondents were queried about their knowledge concerning MDT's public information and information-sharing efforts. Despite express-

ing relatively low levels of knowledge about MDT, most felt qualified to answer these questions concerning information dissemination.

Table 13

Awareness of Information Sharing

	Yes	No	Don't Know	N
PSAs	76.0%	23.0%	1.0%	908
Newspaper Articles	69.7	29.2	1.1	910
Radio Updates	66.0	33.0	1.0	909
Press Releases to All Media	45.9	50.8	3.3	910
Project Public Meetings	45.1	54.1	0.8	911
MDT Website	22.1	76.2	1.7	908
Special Mailings	17.7	81.2	1.1	908
Weekly meetings	15.2	82.8	2.0	909

Table 13 reports that the top three public notification practices mentioned by respondents are public service announcements, newspaper articles, and radio updates. At least two-thirds of the respondents said they were aware MDT use each of these practices.

Press releases and public meeting constitute a second group of practices, which were known to slightly less than half (about 45 percent) of the respondents.

The MDT web site, special mailings, and weekly meetings ranked last in terms of public awareness. At least three-fourths of the respondents said they were not aware that MDT uses these practices.

As shown in Table 14, there are significant differences between the MDT districts in terms of respondents' evaluations of certain public notification practices. For newspaper articles, the respondents in District 1 (63.5 percent) expressed the lowest level of awareness. The respondents in Districts 3,4, and 6 (75.8 %, 77.0 %, and 71.2 %, respectively) expressed the highest level of awareness.

Awareness of radio updates was lowest among respondents in District 1 (54.5 percent) and highest in Districts 2 and 3 (72.1 % and 74.7 %, respectively). Newspaper advertisements for public meetings had the lowest awareness among respondents in District 1 (50.9 percent) and the highest levels in District 2 (64.0 percent) and District 4 (64.0 percent).

Awareness of the MDT website was least among respondents in Dis-

Table 14

Awareness of Information Sharing in Each MDT District (%)

	1	2	3	4	5
PSAs	70.7%	77.7%	78.9%	76.7%	78.7%
Newspaper Articles	63.5	67.0	75.8	77.0	71.2
Radio Updates	54.5	72.1	74.7	60.9	69.9
Newspaper Ads	50.9	64.0	58.0	64.0	57.6
Press Releases	46.6	43.0	44.3	43.7	50.5
Project Public Meetings	42.1	43.3	48.2	49.4	45.9
MDT Website	17.3	20.7	27.8	27.6	22.0
Special Mailings	14.3	13.4	20.2	25.3	20.8
Weekly Meetings	13.2	16.2	18.6	14.9	13.7

trict 1 (17.3 percent) and greatest in District 3 (27.8 percent) and District 4 (27.6 percent). MDT special mailings were least known n Districts 1 and 2 (14.3 % and 13.4 %, respectively) and best known in District 4 (25.3 percent).

Actions to Improve Roadways

For the first time this year, respondents were asked to prioritize seven possible actions to improve Montana's roadways (see Table 15). Respondents were given five choices of priority categories from "very low priority" to "very high priority:" As with the perceived problem items, a very large majority of respondents felt qualified to prioritize the action items presented.

The top three improvements, as measured by the mean score, were:

- Wider roadways
- Increased shoulder widths
- More guardrails and crash cushions.

The three improvements that had intermediate mean scores were:

- More signals and left turn bays
- More pavement markings
- More illuminations of roadways.

The respondents ranked more directional signs last in terms of proposed improvements.

The regional responses to possible actions to improve roadways are presented in Table 16. These figures are the percentage of respondents in each district who said the improvement is a "somewhat" or "very high" priority (the two highest priority options).

There are no regional differences in the priorities for three of the roadway improvement proposals: wider roadways; more illumination, and more directional signs.

Increasing the shoulder widths received a higher priority rating by more respondents in District 1 (64.4 percent) than in Districts 4 and 5 (48.2 % and 52.2 %, respectively). More guardrails and crash cushions were given higher priority ratings in Districts 1, 3, and 4 (56.6 %, 56.0 %, and 54.0 %, respectively) than in Districts 3 and 5 (47.5 % and 43.5 %, respectively). More signals and left turn bays received a

Table 15
Priority of Possible Actions to Improve Roadways (%)

	Very Low	Somewhat Low	Medium	Somewhat High	Very High	Don't Know	Mean	N
Wider Roadways	9.5%	6.5%	20.3%	28.0%	34.0%	1.7%	3.72	888
Increase Shoulder Widths to Accommodate Bicycles	12.8	6.6	19.4	27.8	29.7	3.5	3.57	873
More Guardrails and Crash Cushions	11.2	10.1	23.8	24.9	26.8	3.1	3.48	872
More Traffic Signals and Left Turn Bays	14.4	10.9	25.5	23.9	22.2	3.1	3.30	877
More Pavement Markings	16.5	14.5	26.7	23.5	17.0	1.9	3.10	887
More Directional/Informational Signs	21.7	16.7	28.1	19.6	12.7	1.3	2.85	823
More Illumination (lighting) of Roadways	17.0	14.0	27.7	20.2	18.3	2.8	2.48	814

Table 16
Percent in Each MDT District Say Possible Actions to Improve Roadways a Somewhat or Very High Priority

	1	2	3	4	5
Wider Roadways	62.7%	57.3%	60.5%	68.6%	64.1%
Increase Shoulder Widths to Accommodate Bicycles	64.4	56.2	58.8	48.2	52.2
More Guardrails and Crash Cushions	56.6	47.5	56.0	54.0	43.5
More Traffic Signals and Left Turn Bays	52.1	46.6	44.0	33.3	45.1
More Pavement Markings	45.5	35.4	40.8	44.8	35.9
More Illumination (lighting) of Roadways	36.8	37.5	39.6	35.6	42.3
More Directional/Informational Signs	31.3	32.6	31.8	32.2	33.9

higher priority rating by District 1 respondent, (52.1 percent) than from District 4 respondents (33.3 percent). More pavement markings were given a high priority by respondents in District 1 (45.5 percent) than in District 2 (35.4 percent) and in District 5 (35.9 percent).

V. OVERALL MDT CUSTOMER SERVICE AND PERFORMANCE

The *2003 TranPlan 21 Public Involvement Survey* asks a number of questions that examine public opinion regarding overall MDT performance and responsiveness to the public. The responses to those questions are summarized in this section.

Respondents were asked to grade various aspects of MDT overall performance and customer service. The responses to these questions are found in the Table 17. In general, Montanans give MDT an average or slightly above average, (B- or C+) grade for customer service and performance.

Montanans gave the highest grade to the MDT services compared with five years ago (2.91 on a four-point scale). Second place went to MDT quality of service compared to last year (2.71). Third place was a statistical tie between three categories: MDT overall performance 2.64), MDT highways and maintenance repair 2.61), and MDT convenience of travel through construction areas (2.60). The lowest grade (2.27) was given to MDT's responsiveness to customer ideas and concerns.

Respondent grades of MDT overall performance and customer service in each district are presented in Table 18. For the most part, there is widespread agreement between the districts regarding MDT overall performance and customer service. Where there are statistically significant differences between districts, a pattern does emerge. Namely, the lowest average grade is generally given in western Montana District 1, while higher grades are given in the more sparsely populated districts in the eastern part of the state.

Respondents in District 1 gave MDT quality of service now vs. five years ago a lower grade than those in any other district (2.76). District 2 respondents gave a higher grade (2.85) than District 1 or 5 respondents (2.62 and 2.63, respectively) for

Table 17
MDT Overall Performance and Customer Service Grades (%)

	A or B	C	D or F	Don't Know	Mean	N
Quality of service now compared with 5 years ago	59.2%	18.1%	3.4%	19.4%	2.91	723
MDT's quality of service grade last year	58.3	28.8	5.2	7.6	2.71	825
MDT's overall performance grade last year	56.7	32.8	4.2	6.3	2.64	846
MDT's overall highway maintenance and repair	58.2	31.4	8.1	2.3	2.61	878
Convenience of travel through construction zones	58.3	31.4	7.7	2.6	2.60	874
MDT's quality of planning to meet statewide	45.4	33.6	8.7	12.4	2.50	786
Keeping the public informed	45.9	32.3	12.4	9.4	2.48	813
MDT 's public notification process about	58.3	31.4	7.7	2.6	2.47	814
Extent of inconvenience by roadway work	47.3	34.2	14.5	4.0	2.41	860
MDT's responsiveness to customers	26.5	23.8	11.5	4.0	2.27	555

MDT quality of service during the previous year.

MDT overall performance last year received the highest grade in District 4 (2.84), which was greater than the grades given in Districts 1, 2, and 5 (2.55,2.66, and 2.61 respectively). Respondents in District 2 gave the highest grade to MDT overall highway maintenance and repair (2.77), while those in Districts 1 and 5 gave lower grades (2.54, 2.56, respectively). District 3 gave higher a higher grade (2.58) than District 1 (2.39) for the MDT quality of planning.

Keeping the public informed received the highest grade in District 3 (2.63), which was higher than the grades given in Districts 1 and 2 (2.40 in both districts). District 1 respondents gave a lower grade (2.34) than those in Districts 3 and 5 (2.69 and 2.55 respectively) for MDT's information efforts about local construction. Districts 1 and 5 gave the lower grades (2.14 and 2.19,respectively) than Districts 3 and 4 (2.47 and 2.50, respectively) for MDT's responsiveness to customer ideas and concerns.

Improvement Suggestions

Survey respondents were asked if they had any other comments or suggestion about MDT's customer service. The two prominent issues mentioned were:

1. MDT needs a toll free number or hot line with:
   - Current project information
   - To leave complaints
   - For voicing issues and concerns
2. More information about construction projects, such as:
   - When and where happening
   - What is planned
   - How long a project will last
   - Cost of the project

A complete listing of the comments can be found in Appendix A (Volume II).

Table 18
Average MDT Overall Performance and Customer Service Grades in Each MDT District

	1	2	3	4	5
Quality of service now compared with 5 years ago	2.76	2.94	2.99	3.05	2.95
MDT quality of service grade last year	2.62	2.85	2.76	2.74	2.63
MDT overall performance grade last year	2.55	2.66	2.70	2.84	2.61
MDT's overall highway maintenance and repair	2.53	2.77	2.65	2.58	2.56
Convenience of travel through construction zones	2.54	2.67	2.57	2.55	2.69
MDT's quality of planning to meet statewide transportation needs	2.39	2.56	2.58	2.51	2.49
Keeping the public informed	2.39	2.40	2.63	2.43	2.50
MDT 's public notification process about construction projects	2.34	2.44	2.69	2.32	2.55
Extent of inconvenience by roadway work	2.40	2.36	2.42	2.42	2.46
MDT's responsiveness to customers	2.14	2.21	2.47	2.50	2.19

VI. OTHER ISSUES

To complete the survey's exploration of attitudes concerning the transportation system, respondents were asked if there were any other transportation related issues which should be addressed by MDT. A variety of issues were brought up by respondents. Comments and suggestions ranged from education of drivers to the widening of specific roadways.

The six leading issues raised by the respondents were:
1. Widen or make US 93 a four lane
2. Provide more passenger rail service
3. Lower speed limits
4. Fix or do more work on city streets
5. Improve and add more rest areas
6. Provide more airline service

Increasing the number of highway patrol and having more enforcement was also mentioned several times by respondents.

These responses should be viewed as a rough measure of the intensity of feelings about certain issues. All of the comments received are recorded in Appendix A (Volume II).