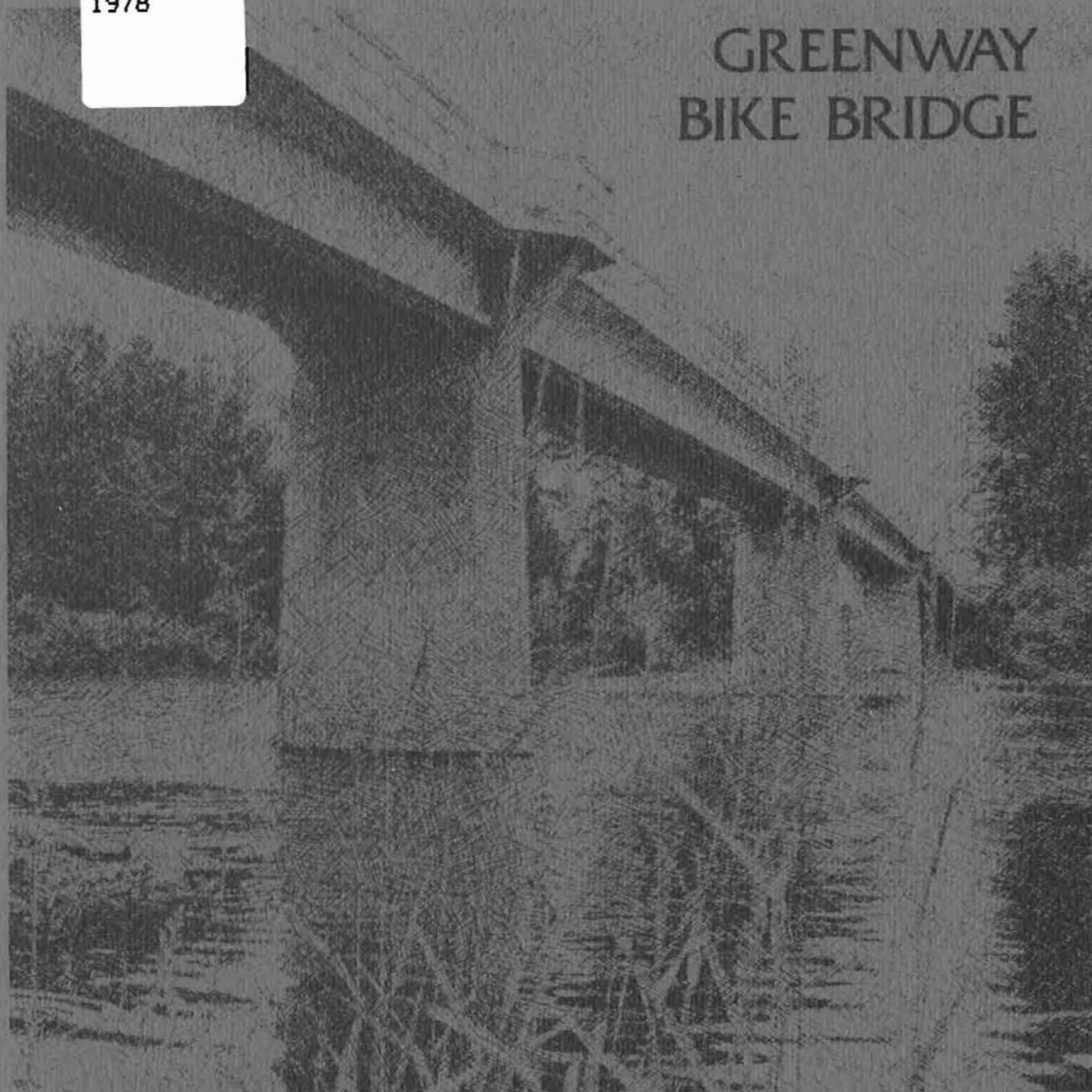


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# GREENWAY BIKE BRIDGE



## EVALUATION REPORT - Phase 1

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City of Eugene  
Public Works

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November 1978

GREENWAY BIKE BRIDGE EVALUATION REPORT ERRATA SHEET

- Page A-7: The first line in the last paragraph should read, "Table 8", not "Table 7".
- Page A-10: The third line should read, "May 30," instead of "June 30."
- Table 9: Table heading should read, "Frequency of Responses of Change in Bus Trips by Bicyclists".
- Table 10: Second line in column headed 5/30/78 should read, "-428", not "-429".

DR:ng/THa6

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## THE PROJECT

The Greenway Bike Bridge\*, funded by the National Bikeway Demonstration Program, was the single most important missing link in the Eugene bikeways system. This bridge was included in the Eugene Bikeway Master Plan to provide greatly improved access for bicyclists and pedestrians across the Willamette River. Without this bridge, many bicyclists would be required to use the next closest crossing, the Ferry Street Bridge. Besides the obvious deterrent of being one and one-half miles east of the Greenway Bridge, and thus out-of-the-way for many users, the Ferry Street Bridge is shared with motorists.

Strategically located at the center of the urbanized area, the new bridge offers a unique opportunity to major urban bicycle use ranging from commuting to recreation. The following areas are directly served by the bridge. (See Figure 1.)

- a. Santa Clara/River Road District, connected with the north bank, Valley River Center, and the Willakenzie area.
- b. Bethel-Danebo District, connected with the north bank, Valley River Center, and the Willakenzie area.
- c. Downtown and West Eugene, connected with Valley River Center and the area west of Norkenzie Road.
- d. The north and south bank trails, which form a five and one-half mile loop extending to Autzen footbridge, and completely separated from automobile traffic.

This project has demonstrated the impact that a single vital element of a bike-way system can produce. Location, types of usage, and desired trips were considered to provide a successful demonstration. (See section on "Usage", and complete report in Appendix A.)

## BICYCLING IN EUGENE

Eugene is Oregon's fastest growing and second largest city, with a 1978 population of 100,000. The relatively flat terrain and mild climate of the Willamette Valley has permitted year-round bicycling. Eugene has been a pioneer in the establishment of a comprehensive bikeway plan which permits the use of the bicycle as an alternative mode of transportation. Bicycle ridership has reached proportions that are surpassed by few other cities in the United States. A survey by the Oregon State Highway Division in 1973 showed that over 35 percent of the metropolitan area population (now estimated at 175,000) were active bicycle riders.

The Greenway Bike Bridge is consistent with the transportation goals and objectives of the officially adopted Metropolitan Area 1990 General Plan. This plan recommends that "Consideration be given to adequate provision for convenient, pleasant, and safe bicycle and pedestrian movement," and that policies be

\*The project application and grant referred to the project as the Valley River Bridge. A subsequent "naming contest" and selection process resulted in the name of Greenway Bridge.



**A**

**View from South Bank**



**B**

**View from North Bank**

**Fig. 2**





C

**View from the bridge ~ looking West**



D

**View from South Bank**

## CHRONOLOGY

- November 9, 1976--Eugene was officially notified that bridge was selected for funding.
- November 30, 1976--Consultant selected for preliminary analysis of design alternatives.
- January 6, 1977--Public hearing on design.
- January 13, 1977--Committee chose design using public hearing recommendations.
- January 19, 1977--City Council approval of design.
- February 25, 1977--FWHA approval of consultant and authorization to proceed.
- May 21, 1977--Weekend "before" questionnaire survey conducted.
- May 25, 1977--All easements and permits secured.
- May 31, 1977--Weekday "before" questionnaire survey conducted.
- June 23, 1977--Construction bids opened.
- July 1, 1978--Contract awarded.
- August 16-21, 1977--Bridge naming contest at the County Fair booth.
- September 8, 1977--Name chosen.
- September 9, 1977--Deadline for completing work in river (salmon spawning).
- November 17, 1977--Winter "before" questionnaire survey.
- February 3, 1978--Final inspection of bridge.
- February 25, 1978--Bridge dedication.
- March 27, 1978--Agreement approved for lighting of bridge.
- April 4, 1978--Winter "after" questionnaire survey.
- May 20, 1978--Weekend "after" questionnaire survey.
- May 30, 1978--Weekday "after" questionnaire survey.
- November 30, 1978--Phase I evaluation report completed and released.
- January 31, 1979 (est.)--Final completion of contract change order (lighting).

On February 25, 1978, the Greenway Bike Bridge was officially opened with a dedication ceremony for approximately 100 spectators. Key speakers were: Ruth Bascom, Chairperson of the Eugene Bicycle Committee as MC; US Senator Bob Packwood, sponsor of the National Bikeway Demonstration Program; Arthur Johnson, Chairman of the State Greenway Committee; Robert Burco, Director of the Oregon Department of Transportation; and Gus Keller, Eugene's Mayor. A bike "beauty" contest was held for the oldest, most decorative, and most unusual bikes. After the Senator christened the plaque with champagne poured from a bike bottle, he led the group via bicycle over the new bridge, down the North Bank Trail, to the Autzen Footbridge, approximately three miles distant, and then back on the South Bank Trail. The group stopped for refreshments (served by Eugene's Advocates for Bicycle Transportation group) at a riverside community center.

#### LOCAL AGENCY SUPPORT

The following agencies gave their full support to the project: Eugene Bicycle Committee, Metropolitan Bicycle Committee, Springfield Bicycle Committee, League of Women Voters, Eugene Chamber of Commerce, Lane Council of Governments, Lane County Commissioners, School District 4-J, Oregon State Highway Division, and Oregon State Bicycle Committee. Perhaps the most crucial cooperation came at the project application stage, when the Springfield and Metro Bicycle Committees agreed to back this project, rather than submit other projects which would have competed with the bridge for funding.

#### PUBLIC HEARINGS

As mentioned above, a public hearing was held in conjunction with the formation of the Eugene Bikeway Master Plan. From 12 hours of citizen testimony, the need for the Greenway Bike Bridge was clearly recognized.

When the consultant was ready with design alternatives for the bridge, the Eugene Bicycle Committee called a second public hearing, inviting each affected neighborhood group and the general public. Thirty-eight people, in addition to the Bicycle Committee members, attended the hearing. The consultant explained the four design alternatives, then the chairperson opened the floor to comments and concerns from the public. Many useful remarks were gathered and later used by the Bicycle Committee in their design decision. These included suggestions on "profile" of the structure to fit in with the natural surroundings; adequate width to accommodate two-way traffic, including joggers and walkers along with cyclists; and the need for "bays" for stopping to rest and enjoy the natural beauty of the surroundings.

#### NEIGHBORHOOD OPPOSITION

The neighborhood group at the south end of the bridge, although supportive of the project, was concerned with the exact placement of the bridge. They asked if it wouldn't be better to add it to an existing structure, the I-105 highway bridge which is approximately one-half mile to the east. After some discussion and consultation with the State Highway Division, it was the consensus that, although technically feasible, placing the structure on (or beneath) the I-105 bridge would significantly change the original project concept and perhaps invalidate the grant.



## USAGE

(Following is a brief summary of the consultant's evaluation report, based on detailed user surveys. The complete report is included as Appendix A.)

The evaluation of the Greenway Bridge has indicated that not only this bridge, but the others as well (Ferry Street and Autzen), are used heavily for utilitarian trips by adults of all income groups. The provision of bicycle facilities creates an alternative to the automobile that is heavily used. The better the system, the more diversion of trips from the automobile can be expected. In addition, the bicycle system is the only form of transportation for one-third of the bicyclists surveyed. These findings are supported by the following observations:

1. Work trips made up to 30 to 40 percent of all weekday trips. During the summer survey, 735 bicyclists were surveyed on all three bridges and 345 were traveling to or from work. During the winter survey, 211 of 535 were commuting.
2. Trips to or from school made up 15 to 20 percent of weekday trips.
3. Recreational trips made up 20 to 35 percent of all weekday trips.
4. Approximately 50 percent of those crossing the Greenway Bridge would not have made the trip by bicycle if the bridge had not been built.
5. Approximately 500 automobile trips per week have been eliminated due to the construction of the bridge. This estimate is conservative and is likely to increase as more people learn of the bridge and additional segments of the bike system are developed.
6. On a weekday, 40 to 50 percent of those interviewed said they rode bikes because it was fun.
7. Almost half the bicyclists rode because it was a cheap form of transportation. One-third had no other form of transportation.
8. The income distribution of the bicyclists roughly parallels that of the general population of Eugene. However, the lowest income group (those earning under \$5,000) is over-represented--that is, low-income people comprise a greater proportion of bicyclists on the bridges than their proportion of the area's population.
9. While bicyclists tend to be younger than the average population, 35 to 40 percent of the cyclists during the weekdays were between 25 to 34 years of age, 10 to 15 percent were between 35 and 49.

## USER CONFLICTS ON NEW FACILITY

Very little conflict of users has evolved on the bridge. With forethought, the Bicycle Committee requested extra width on the bridge--from the original 12 feet to 14 feet. This extra width added only \$8,600 to the total cost of the bridge and was well worth it.

A large number of joggers run the five and one-half mile loop between the Greenway Bridge and the Autzen footbridge, the number of joggers often equalling the number of bicyclists. At times, especially on warm, sunny days, there is congestion on the bridge as some people stop to enjoy the scenery while others wish to continue on. But even with the three modes of travel: bicycling, walking, and jogging, and the various speeds of each, there is very little conflict.

## SUGGESTIONS FOR SIMILAR PROJECTS

### Project Planning

Constant vigilance was necessary in obtaining all the permits and approvals for construction of the bridge. Everyone was busy with their agency's own work and, understandably, these permits could have been set aside. Many telephone conversations passed between Eugene offices and the various agencies.

The project manager kept a strict account of all telephone calls and contacts with people responsible for these approvals. This proved invaluable with such a large number of agencies involved.

### Evaluation Studies

An orientation for all surveyors was held before each survey date. In this way, each person was completely familiar with the background of the project, knew what and why information was desired, and was thoroughly familiar with the questions.

Permanent counters are recommended for future demonstration projects. The rubber hoses used (ours) on temporary counters were continually vandalized, making accurate counts difficult. Also, in order to be sensitive enough to count bikes, the hoses also counted pedestrians.

If a questionnaire is used, it is important to carefully word each question so that it: 1) Gets the information needed; 2) cannot be construed to mean anything else; and 3) is easily understood and answerable.

## CONCLUSION

As stated earlier, access routes to the bridge, except for the river bank trails, are not completed. Many of the routes hinge on the paving and/or bike lane striping of streets in the area. Such streets are Goodpasture Island Road, Willagillespie Road, Railroad Boulevard, and Roosevelt Boulevard. (See Figure 1.) An overpass over Southern Pacific Railroad and River Road from

APPENDIX A

THE BICYCLE IS NOT A TOY: EVALUATION OF THE GREENWAY BICYCLE BRIDGE

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July 26, 1978

## INTRODUCTION

In 1976, the City of Eugene, Oregon, successfully applied for a National Bikeway Demonstration Grant to finance a bicycle and pedestrian bridge to cross the Willamette River near the Valley River shopping center. (Please see Figure 1.) In the application, the City indicated that this bridge was the "most important missing link in the City's bikeway network". It was pointed out that the Willamette River forms a physical barrier separating the River Road, Bethel-Danebo, West Eugene areas, and the Central Business District from the Willakenzie-Goodpasture Island area, as well as separating the north and south bank bicycle paths and parks. With the construction of this new bridge, the Greenway Bridge, this barrier would be reduced, resulting in increased recreational, work, and shopping-related bicycle trips.

This bridge is a link between a major shopping center (Valley River Center) and a residential area, as well as the central business district. It also connects Class I bicycle paths running along the north and south bank of the Willamette River. These paths are, in turn, part of the Greenway park system that includes Alton Baker Park, jogging trails, and the public rose garden. The bridge is also linked with Class II and III bikeways\*. Therefore, the Greenway Bicycle Bridge is felt to have a great potential to influence ridership for recreational and utilitarian trips.

The City indicated that surveys would be taken before and after the construction of the bridge, so that the effects of the bridge on the following could be evaluated:

1. Recreational ridership (as a percentage of total riders).
2. Commuter and shopping ridership (as a percentage of total ridership).
3. Motor vehicle trip reduction due to substitution of bicycle trips for auto trips.
4. Increased winter bicycling (by providing easier access to routes at a time when it is most important to cyclists not to travel out of their way).
5. Increased use of other segments of the bikeway network due to their improved accessibility.

(Demonstration Program Application, July 1976, p. 13)

This report is a summary of that evaluation. In addition, the reasons people choose to bicycle from one side of the Willamette River to the other, rather than use other modes of travel, and the demographic characteristics are reported. This additional analysis disaggregates trips to school and those going to and coming from the University of Oregon. This is done so that those who feel that University and public school students are not typical, and therefore make the evaluation meaningless for their communities may find some value in this Federally funded demonstration project. Finally, an analysis of pedestrian use is included.

\*Class I--Off-street, separated paths;

Class II--Adjacent to street or highway but physically separated;

Class III--On-street, striped or signed-only bike routes.

provide a barrier for those in Bethel-Danebo. The bicycle lanes running along River Road are narrow and in need of repair and the automobile traffic is heavy, thereby increasing the danger and reducing the enjoyment of bicycling for those in River Road-Santa Clara. Those in Willakenzie are faced with the barrier of major freeways (Interstate 105 and Delta Highway) and must navigate through the parking lot at Valley River Center. These barriers must be eliminated if the Greenway Bridge is to meet its full potential.

2. Better signing is needed. This became obvious while driving along River Road. There was a small sign indicating that a bicycle path to Downtown existed; however, no mention of a path to Valley River was visible. This sign was on the southwest side of the street. No sign was noticed on the northeast side. Better signing is also needed near Valley River Center. Larger signs are recommended so that motorists will be able to read them and more likely be enticed out of their cars.
3. Parking of bicycles should be expanded. While only 20 percent indicated convenient parking was a reason for bicycling, it is something that can be provided. A higher percentage indicate parking was a factor in the winter surveys when the weather was bad. Covered bicycle parking would be a pleasant addition. Casual observation indicates that covered bicycle parking areas at the University of Oregon store a higher percentage of all bicycles in the winter than in the summer. There are not enough covered spots.
4. Surveys should be made of randomly chosen individuals to ensure that a representative group of bicyclists and those who do not bicycle are interviewed. This could be done by mail with longer surveys and result in more information being gathered. Surveys on the bicycle paths should also be done. A comparison of both surveys would allow for some comparison and validation of the findings.
5. This evaluation took place shortly after the bridge opened. An evaluation should be made in another year to measure the long-term effects.
6. Permanent counters should be installed in future demonstration projects. The rubber hoses on the temporary counters are continually vandalized, making accurate counts difficult. Permanent counters should also be installed at the Greenway Bridge to facilitate the long-term evaluation.

#### METHODOLOGY

This section is divided into three parts: 1) A discussion of the sampling techniques; 2) the questionnaire; and 3) a short critique.

#### Sampling

The proposal for the National Bikeway Demonstration Grant indicated that surveys would be taken at the river crossings and on the north and south bank trails before and after the Greenway Bridge was built. A survey of shoppers at Valley



Figure A-1  
Survey Schedule

Date	Day of Week	Weather Conditions	Time of Day Surveyed	Group Surveyed
5/21/77	Sat.	Warm, Sunny	Noon - 6:00 pm	Bicyclists
5/31/77	Tues.	Warm, Sunny	7:30 am - 9:30 am, 11:00 am - 1:00 pm, 4:00 pm - 6:00 pm	Bicyclists
11/17/77	Thurs.	Cold, Overcast light rain	7:30 am - 9:30 am, 11:00 am - 1:00 pm, 4:00 pm - 6:00 pm	Bicyclists
Bridge Opened 2/1/78				
4/4/78	Tues.	Cold, Wind, Cloudy	7:30 am - 6:00 pm	Bicyclists & Pedestrians
5/20/78	Sat.	Warm, Sunny	Noon - 6:00 pm	Bicyclists & Pedestrians
5/30/78	Tues.	Warm, Sunny	7:30 am - 6:00 pm	Bicyclists & Pedestrians

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Question 6 and 7 will be useful in measuring how well known the existence and location of the Greenway Bicycle Bridge is to regular bicyclists. The remaining questions were added out of general interest to the staff. Question 8, "Would you have made this trip by bicycle if the new bridge was not built," was added to get at this question more directly. Question 9 will aid in measuring the impact the bridge has on each mode of travel.

#### Critique of the Methodology and Problems

The following points should be made concerning the survey results:

1. The number of days the surveys were administered were limited and not randomly chosen. Therefore, the study may be criticized for not being representative of bicyclists over the entire year. However, the days that were surveyed were chosen to be similar in weather conditions, day of week, etc., as a way of standardizing the before and after characteristics as much as possible. It was felt that this experimental control would give better results than sending inexperienced surveyors out to the bridges at randomly scheduled times over a month's period. This later methodology also ran the risk that the environment would change over the month. It is felt that comparison of the before and after surveys may lack reliability due to not having a random sample. To strengthen the evaluation, Questions 6 through 9 were added to the survey form after the bridge was built. A possible methodology for the future may be a randomly sampled mail survey with follow-ups. This would result in getting more data than is possible in the survey of bicyclists in the field.
2. The number of bicyclists and the tendency for bicyclists to come in groups often overwhelmed the survey team. Some inaccuracy in the responses may have resulted, but this was not felt to be too great a problem.
3. Even though there has been considerable publicity concerning the new bridge, it will take time before all the potential users know about its existence. Sixteen percent of the bicyclists not crossing the Greenway Bridge but using other bridges did not know of the Greenway Bridge's existence five months after it was completed. The percentage not knowing of the Greenway Bridge of those who are not regular bicyclists using the other bridges should be considerably higher. The long-term impacts will therefore be greater than those measured in this study which concluded its data collection only five months after the bridge was open. This early evaluation was necessitated by the need to complete the evaluation by September 1978.
4. It was difficult to get accurate bicycle counts using mechanical counters. The counters malfunctioned and often were vandalized. However, it was possible to ascertain that the number of bicyclists crossing the Greenway Bridge during the survey periods after the bridge was built was considerably lower than the average typical weekday and was considerably higher for a typical weekend. Permanent counters built into future demonstration projects is recommended.

## VEHICLE TRIP REDUCTION

Measuring the number of vehicle trips reduced due to substitution of bicycle trips for auto trips presented a challenge. One measure is provided by looking at the number of trips that would not have been made by bicycles if the Greenway Bridge had not been built (Table 6). Multiplying the number of trips by five to convert to a weekly weekday average and doubling this to take into account return trips, results in 780 and 1,350 bicycle trips being generated by the Greenway Bridge according to the summer weekday surveys respectively. However, not all of these trips are substitutes for automobile trips. Using commuting trips to school and work as being necessary trips, a conservative estimate of 340 and 520 trips per week respectively is developed as an estimate for vehicle trip reduction (Table 6). (There were few pedestrian, work, and school trips that would not have been made. These were not included in this analysis.)

An alternate methodology was also used. Those crossing the three bridges were asked to indicate the change in number of trips made by each mode (bicycle, car, bus, walk) due to the availability of the Greenway Bridge. The frequency of the responses are tabulated in Tables 7, 8, and 9 (walking not shown). If a respondent failed to answer this question, the conservative assumption that no changes occurred was made. Eighty-two bicyclists indicated that they drive their automobile less during the summer due to the Greenway Bridge while 146 indicated that they ride their bicycle more frequently. It should be noted that some bicyclists do not have access to any automobiles. Thirty-one bicyclists use the bus less often due to the new bridge. An estimate of change in the total number of trips by mode was made by multiplying the change in frequency by the number of bicyclists indicating that change and summing overall changes.

For example, 56 people indicated they used their car, 3-1 times less frequently, 30 indicated they used it 6-4 times less frequently, ten indicated they used it 9-7 times less frequently and nine indicated they used it at least ten times less frequently, while two indicated they used it 1-3 times more frequently during the summer survey. By multiplying these frequencies by the mid-point in the range (or by 10 for the "10 or more" answers) the estimated number of trips reduced of 428 per week is obtained ( $56 \times 2 + 30 \times 5 + 10 \times 8 + 9 \times 10 - 2 \times 2$ ).

The changes in number of trips by mode as reported by bicyclists in the surveys made after the bridge was built are summarized in Table 10. Table 11 is a similar analysis of pedestrians surveyed and Table 12 contains the combined total.

The reduction of automobile trips is relatively consistent between the three surveys. Surprisingly, however, a greater reduction in automobile trips was indicated during the winter survey. In fact, automobile trips were reduced more than bicycle trips increased for the winter survey. Clearly something is wrong.

An examination of Table 7 shows that 25 bicyclists indicated that they made fewer trips by car 10 or more times per week in the winter survey compared to nine in the summer survey. It is possible that during the the winter survey people did not have enough experience with the new bridge and overestimated the number of automobile trips reduced. Therefore, the reduction of 428 automobile trips estimated by using the summer survey is probably a better estimate of the impact of the bridge.

## DEMOGRAPHICS

The following two demographic variables were collected on each bicyclist, income and age. These were compared with estimates for the City to see if a representative group of people with respect to income and age were using the bicycle facility. In addition, students and those traveling to and from the University of Oregon were separated out in order to measure their impact on the bicycle system.

### Income

The income distribution of bicyclists is compared to that for the City in Table 14. The lowest income group (0-\$4,999) is over-represented by approximately ten percent of the total. If the University and student community is removed, the two distributions are similar. It does appear, however, that upper-income non-university related individuals make up a higher percentage during the winter months.

Table 15 summarizes the income distribution for pedestrians. The percent in the lowest income group is even higher than that for bicyclists.

### Age

The age distribution for bicyclists is displayed in Table 16. The distribution for the region is also shown. The regional figures exclude those four and under, since they do not yet bicycle. The table clearly indicates that those in the 16 to 34 age cohorts make up the majority of the bicyclists. These age cohorts have higher percentages of bicycle ridership than the younger and older cohorts. The percentage of age cohort riding bicycles decreases with each cohort past 35 year of age.

One interesting point should be made. Those in the 35 to 49 age cohort who are not going to or from school or making a trip to or from the University make up the same proportion of the bicyclists as the regional population during the winter weekday survey.

Pedestrians show a similar age distribution. As Table 17 indicates, the 16 to 34 year olds are over-represented while the younger and older groups are under-represented. As one might expect, the younger adults clearly use the facility more frequently.

The demographics of those using the Greenway Bridge are similar to those using the other bridges. The one major difference is that incomes are higher. This is possibly due to fewer students using the Greenway Bridge. It is clear, however, that all age and income groups use the bridge.

## REASON FOR BICYCLING

People choose to ride bicycles for various reasons. Bicyclists were asked to choose up to three of six possible choices for bicycling. As indicated in Table 18, exercise is the most frequent reason for bicycling. (Many had difficulty choosing just three.) Cheap transportation was the second most popular reason for weekday bicyclists. The fact that bicycling is fun and that the bicyclist is concerned about the environment were also important.

TABLE 1

Purpose of Trip for Bicyclists that Indicated they Wouldn't Have  
Made Trip by Bicycle if Greenway Bridge Had Not Been Built (Weekday)

Purpose	4/14/78 (Winter)						5/30/78 (Summer)					
	Greenway		Autzen Ferry		Total		Greenway		Autzen Ferry		Total	
	%	#	%	#	%	#	%	#	%	#	%	#
Recreation	40.4	21	34.6	9	38.5	30	46.8	36	31.0	18	40.0	54
To-From Work	26.9	14	34.6	9	29.5	23	26.0	20	31.0	18	28.1	38
To-From School	9.6	5	23.1	6	14.1	11	6.5	5	15.5	9	10.4	14
To-From Shopping	11.5	6	0	0	7.7	6	13.0	10	1.7	1	8.1	11
Personal Business	11.5	6	7.7	2	10.3	8	6.5	5	13.8	8	9.6	13
Other	0	0	0	0	0	0	1.3	1	6.9	4	3.7	5
N		52		26		78		77		58		135

GL:jm/PW8b13



TABLE 3

Purpose of Trip for Bicyclists on Greenway Bridge and Ferry and Autzen Bridgel

Purpose	4/4/78						5/30/78					
	Greenway		Autzen Ferry		Total		Greenway		Autzen Ferry2		Total	
	%	#	%	#	%	#	%	#	%	#	%	#
Recreation	32.0	31	20.3	89	22.4	120	40.6	65	31.8	183	33.8	248
To-From Work	34.0	33	40.6	178	39.4	211	32.5	52	33.6	193	33.3	245
To-From School	12.4	12	24.4	105	21.9	117	8.1	13	16.9	97	15.0	110
To-From Shopping	10.3	10	3.9	17	5.0	27	11.9	19	2.3	13	4.4	32
Personal Business	10.3	10	8.0	35	8.4	45	4.4	7	12.7	73	10.9	80
Other	1.0	1	3.2	14	2.8	15	2.5	4	3.5	16	2.7	20
N		97		438		535		160		575		735

1) Survey from 7:30 a.m. to 6 p.m.

2) Surveyors ran out of forms on Autzen Bridge at 4:45 p.m. It is estimated that 63 responses are missing.

GL:jm/PW8b14

TABLE 5

## Purpose of Pedestrian Trips for All Bridges (%)

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<u>Purpose</u>	<u>Tues.</u> <u>4/4/78</u>	<u>Sat.</u> <u>5/20/78</u>	<u>Tues</u> <u>5/30/78</u>
Recreation	34.6	77.2	62.6
To-From Work	24.4	1.9	11.7
To-From School	3.8	0.6	4.3
To-From Shopping	15.4	8.9	9.8
Personal Business	21.8	3.2	6.1
Other	0	8.2	5.5
N	78	158	163

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GL:jm/PW8b16

TABLE 7

Frequency of Responses of Change in Bicycle Trips by Bicyclists  
Due to the Construction of the Greenway Bridge  
(Winter/Summer)

<u>Bridge</u>	<u>Less Frequently</u>				<u>No Change</u>	<u>More Frequently</u>				<u>Total</u>
	<u>10 or more</u>	<u>9-7</u>	<u>6-4</u>	<u>3-1</u>	<u>0</u>	<u>1-3</u>	<u>4-6</u>	<u>7-9</u>	<u>10 or more</u>	
Autzen	0/0	0/0	3/0	0/0	194/290	30/34	5/23	2/4	6/7	240/358
Ferry	1/1	1/1	1/1	7/0	155/213	22/39	11/11	2/7	0/12	200/285
Greenway	0/1	0/0	0/0	0/0	29/66	20/35	22/31	4/9	22/18	97/160
Total	1/2	1/1	4/1	7/0	378/569	72/108	39/65	8/20	28/37	537/803

GL:jm/PW8b17

TABLE 9

Frequency of Responses of Change in Business Trips by Bicyclists  
 Due to the Construction of the Greenway Bridge  
 (Winter/Summer)

Bridge	Less Frequently			No Change	More Frequently			Total		
	10 or more	9-7	6-4	3-1	0	1-3	4-6		7-9	10 or more
Autzen	2/0	0/0	1/3	5/3	229/352	3/0	0/0	0/0	0/0	240/358
Ferry	0/2	1/0	4/1	2/7	193/275	0/0	0/0	0/0	0/0	200/285
Greenway	4/0	0/0	4/2	4/13	85/145	0/0	0/0	0/0	0/0	97/160
Total	6/2	1/0	9/6	11/23	507/772	3/0	0/0	0/0	0/0	537/803

GL:jm/PW8b18

TABLE 11

Change in Number of Trips by Mode Due to  
the Greenway Bridge Reported by Pedestrians<sup>1</sup>

Mode	4/4/78 Tuesday	5/20/78 Saturday	5/30/78 Tuesday
Bicycle	91	119	135
Car	- 94	- 58	-101
Bus	49	- 11	- 51
Walk	<u>124</u>	<u>96</u>	<u>177</u>
Total	72	144	160

<sup>1</sup> Joggers were not surveyed

GL:jm/PW8b19



TABLE 13

Trip Table for Bicyclists on Greenway Bridge for Those Indicating They Would Not Have Made Trip If Bridge Not Built  
/All Trips on Greenway Bridge (Winter Weekday Survey)

	Valley River	Will- kenzie	Down- town	Bethel	River Rd.	W.Will. N.18	W.Will. S.18	Univ.	E.Will. N.18	E.Will. S.18	River- bank Tr.	Spring- field	Missing & Other	Total
Valley R.	0/1	14/15*	4/11*	0/0*	0/0*	5/7*	3/5*	1/3	0/0	1/4	1/1*	0/0	0/0	29/47
Willakenzie		0/0*	0/0*	0/0*	4/7*	0/0	1/1*	0/2	0/0	0/0	1/2*	0/4	0/0	6/16
Downtown			0/1	1/1	0/2	0/0	0/0	0/0	0/0	0/0	3/3*	0/0	0/0	4/7
Bethel				0/0	0/1	0/0	0/0	0/0	0/0	0/0	0/1*	0/0	0/0	0/2
River Road					3/3	0/0	0/1	0/2	0/0	0/0	0/0*	0/0	0/0	3/6
W.Will. N.18						1/2	0/0	0/0	0/0	0/0	2/3*	1/1	0/0	4/6
W.Will. S.18							0/0	0/0	0/0	0/0	0/0*	0/0	0/0	0/0
Univ.								2/5	0/0	0/0	0/1*	0/0	0/0	2/6
E.Will. N.18									0/0	1/1	0/0*	0/0	0/0	1/1
E.Will. S.18										0/0	1/3*	0/0	0/0	1/3
Riverbank Tr.											1/2*	0/0	1/1	2/3
Springfield												0/0	0/0	0/0
Missing & Other													0/0	0/0
Total	0/1	14/15	4/12	1/1	7/13	6/9	4/7	3/12	0/0	2/5	9/16	1/5	1/1	52/97

\* Greater accessibility due to the Greenway Bridge. Part of Willakenzie was accessible to Downtown before the Greenway Bridge was built.

TABLE 15

Income Distribution of  
Pedestrians and Estimate for Eugene (%)

Income	4/4/78 Tuesday	5/20/78 Saturday	5/30/78 Tuesday	City Estimate <sup>1</sup>
0-4,999	32.9	35.7	35.0	18.3
5,000-9,999	20.5	27.9	18.9	25.1
10,000-14,999	21.9	12.9	14.0	19.3
15,000-19,999	11.0	9.3	14.7	16.9
20,000 and above	13.7	14.2	17.5	20.3
N	78	158	163	

<sup>1</sup> Estimate based on updating a 1975 survey of 6.7 percent of Eugene, Oregon households

GL:jm/PW8b22

TABLE 17

Age Distribution for Pedestrians (%)

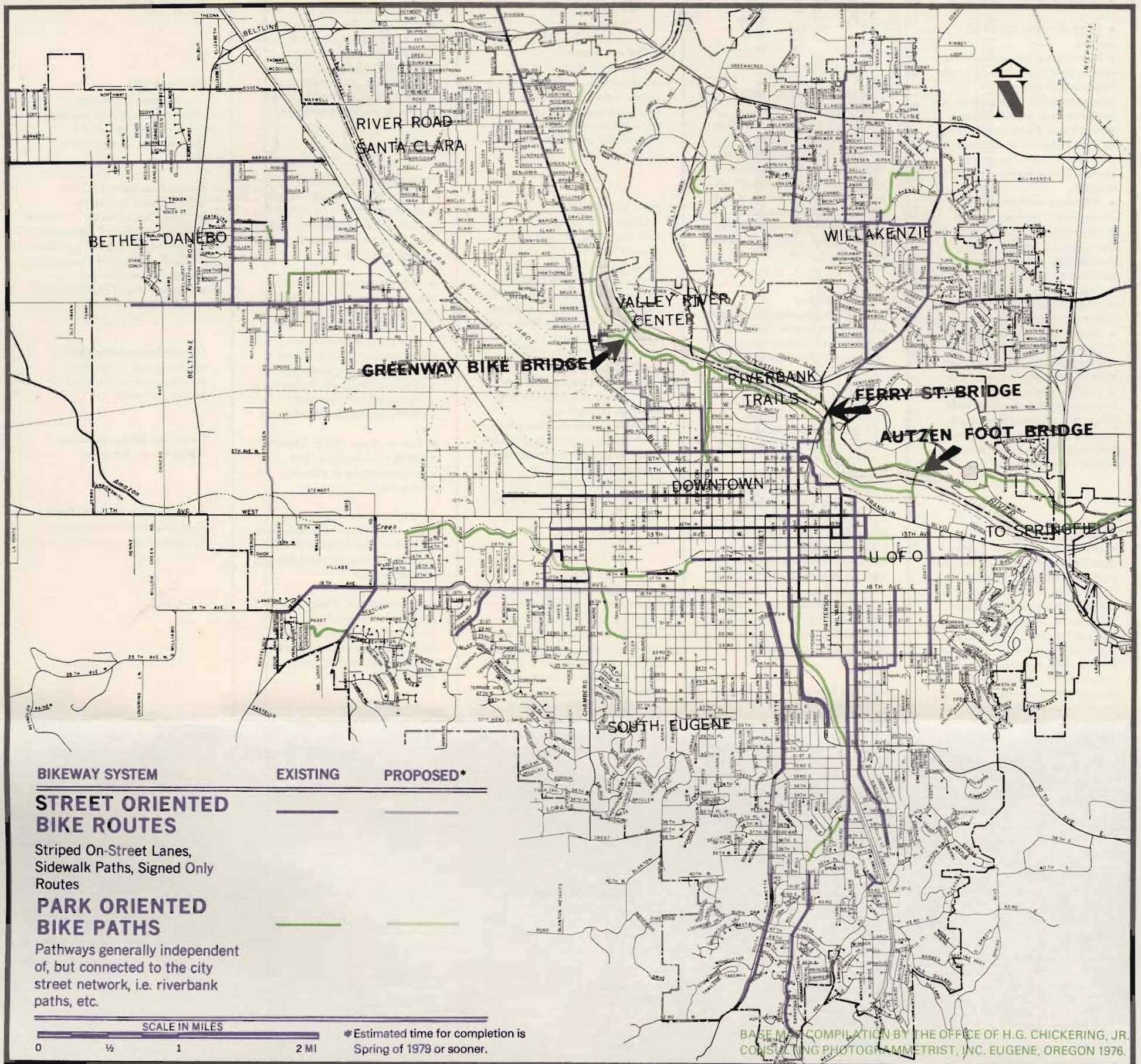
Age	4/4/78 Tuesday	5/20/78 Saturday	5/30/78 Tuesday	Region
15 and under	6.4	5.1	4.9	20.4
16 to 24	37.2	51.9	42.3	23.6
25 to 34	32.1	29.7	31.3	16.3
35 to 49	7.7	7.9	9.8	17.1
50 to 64	6.4	5.1	8.0	13.8
65 and over	10.3	0.6	3.7	8.9
N	78	158	163	

GL/jm/PW8b23



# Eugene Area Bikeways

Compliments of Eugene Public Works Department





**U**nder Oregon law, all bicycles ridden on a public thoroughfare are subject to the same rules and regulations as a vehicle, and have almost all the rights of a vehicle.

Following these suggestions will lessen the conflicts between cars and bikes.

- Always ride with the flow of traffic.
- Obey all traffic signs and signals.
- When riding on public streets ride as close to the curb as is safe. When approaching an intersection that has a right or left turn only lane, switch to the through lane if you do not intend to turn. If there is an optional turn lane move to the center of the lane if you intend to proceed straight.
- When approaching an uncontrolled intersection you must yield the right-of-way to all cars closely approaching the intersection, except oncoming cars turning left.
- Ride single file when cars are approaching from the rear. Never ride more than two abreast.
- Always yield the right of-way to pedestrians. Give an audible warning before overtaking them.
- Bicycles parked on sidewalks, at building entrances, in roadways and driveways can be dangerous and are illegal. Park your bike in a safe place where it will not be an obstruction or a hazard to others.

#### Equipment

- All bicycles ridden in Eugene must be licensed. Licenses may be purchased at the City Finance Department or at local bike shops. Licensing your bike will increase the chances for recovery if it is stolen, and it provides a means of identification if you are injured while cycling. The fees collected from licensing help provide for the construction and maintenance of bikeways.
- Riding a bike at night is dangerous because it is difficult for a motorist to see you. If you ride at night you must have a white light on your bike, or yourself, visible 500 feet to the front and a reflector visible 600 feet to the rear.

- Your bike must be equipped with brakes good enough to skid on clean, dry pavement.
- A bell or horn will help to warn people of your presence. Sirens or whistles are prohibited because they may be confused with emergency vehicles.
- Protect your bike. To prevent your bike from being stolen always lock it to a permanent object with a strong chain. Lock the frame and both wheels if possible.

#### THE BIKE AND CAR MIX

The City of Eugene has committed itself to constructing 150 miles of bikeways to accommodate a large and ever increasing number of bicyclists. Over fifty miles of bikeways are completed; bicyclists can travel safely through most areas of Eugene on designated bikeways. There are four types of bikeways in Eugene.

#### • Striped Routes

Bicyclists have their own travel lane on these streets. Automobile drivers know where to expect the bicycles and bicyclists can realize they are an important part of the traffic flow, rather than an unwanted addition. A bicycle may have to merge into an adjacent auto lane, but only to execute a turn movement or get through a busy intersection.

Dashed lines through intersections indicate that a conflict area is approaching, where cars may have to cross the bike lane to make a turn. The bike lane is a travel lane for bicycles and will not be used for a parking strip for bikes or cars or a turn lane for cars.

Like automobile lanes, bicycle lanes carry only one-way traffic, the direction being shown by stencils on the pavement.

#### • Signed Routes

This type of route is implemented only on streets with low auto traffic volume. These streets connect major bike routes. Bicycles will not have a specific lane to ride in, so will be sharing the auto travel lanes.

#### • Sidewalk Routes

When streets are extremely busy and narrow, sidewalk routes will be available. Corner ramps will be provided to relieve the bicyclist from having to dismount at every intersection. Bicyclists will follow all traffic control devices and automobile drivers should check for bicycles as well as pedestrians on a sidewalk before turning onto a street or a driveway.

#### • Off-street Routes

These are the tops. There are no car-bicycle conflicts to worry about. Generally winding through beautiful parklands, these paths are used by both recreational and utilitarian bicyclists alike.

#### BIKE TRIPPING

Many people enjoy a leisurely bike ride along the bike paths on a sunny day. The bike paths along the north and south banks of the Willamette River provide an ideal place for families to ride and picnic. With the completion of the Greenway Bike Bridge near Valley River Center, a bike trail loop extending to Autzen Footbridge was created. It is also enjoyable to ride the bike lanes and routes throughout the city. Many go through quiet residential areas and near parks.

Information about longer bike trips and routes may be obtained from the Eugene Parks & Recreation Department, 858 Pearl Street, Suite #400, Eugene, OR 97401. 687-5333.

#### WHAT TO TAKE

For a day trip around town take a lunch and a sweater if it's cool. If you intend to ride away from town take a tire patch kit and a pump in case you have a flat tire. A small crescent wrench and a screwdriver are the only other tools you should need if your bike is well maintained. One problem when bicycling is how to carry things. Small back packs are ideal for riding around town. Pannier bags, designed to fit over the rear wheels, or rear baskets hold a lot of equipment and are better for long trips or when carrying a heavy load.

#### FAMILY RIDES

Children enjoy cycling and have a surprising amount of endurance if you plan the trip to suit their skill. They must be taught to obey the laws. Separate paths are a good place to help them gain the skill and confidence they need to ride on public roads.

If you ride with a small child, strap the child securely in a child seat on the rear of the bicycle. Buy a carrier that does not allow the child's feet to get caught in the spokes. Never carry a baby on your back. A baby's unpredictable movements can cause you to lose control of the bicycle and have an accident.

#### TIPS FOR THE CYCLIST

The safety of bicycle riding is often dependent on how aware a cyclist is of the situation around him. Here are some tips bicyclists should keep in mind:

- Ride defensively. Motorists often don't see you. Watch out for their blind spots. Watch also for cars turning suddenly at driveways and intersections. Other hazards to look for are opening car doors, loose gravel and rough pavement. Pedestrians popping out from between parked cars can also be a hazard.
- Ride with the traffic. There is nothing more baffling than someone coming at you the wrong way.
- At intersections be prepared for cars to be turning across your path. If in doubt, merge into the automobile lane to travel through the intersection.
- Be predictable. The motorist needs to know what you are planning to do, even in a bike lane. Signal well in advance if you intend to turn or merge into another lane.
- Be visible. Wear bright clothing in the daytime and use lights and reflectors at night. In addition to the light and reflector required by law, reflectorized pedals and tapes, moving leg lights and spoke reflectors are recommended to increase visibility.

- Don't carry articles which prevent you from keeping at least one hand on the handle bars and having full control at all times.

- If you keep your bike in good condition, you will have hours of carefree cycling. Keep all bolts tightened, check tire pressure frequently and keep brakes adjusted. If your bike needs fixing, take it to a reputable repair shop.

#### DISTANCES

Listed below are some frequently requested mileages along the bike paths. All distances are approximate.

#### From Alton Baker Park to:

- Day Island - 3.6 miles
- Valley River Center - 1.6 miles
- Amazon Village Community Center (via Pearl St.) - 2.6 miles
- Sheldon Meadows Community Center - 2.1 miles
- Westmoreland Park (via 15th Ave.) - 3.2 miles

#### From Skidders Butte Park to:

- River Road - 1.6 miles
- Beltline Road (via River Road) - 3.9 miles

#### Greenway Bridge to Autzen Bridge Loop - 5.5 miles

Total Distance of North Bank Trail (Valley River Center to Springfield city limits) - 4.2 miles

**EUGENE BICYCLE  
COMMITTEE**

**Public Works**

City Hall II  
858 Pearl Street  
Eugene, Oregon 97401  
Telephone 687-5298

Compliments of Eugene Public Works Department

