

RIDE-SHARING ACTIVITIES IN THE RICHMOND REGIONAL  
PLANNING DISTRICT

by

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(The opinions, findings, and conclusions expressed in this report are those of the authors and not necessarily those of the sponsoring agencies.)

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## ABSTRACT

This report gives the results of a survey made of industries in the Richmond Regional Planning District to determine the current and expected ride-sharing activities there and the type of information deemed most useful in planning ride-sharing programs. Present ride-sharing activity was found to consist predominantly of carpools organized by the employees. Larger firms are more inclined to provide assistance for ride-sharing programs than are smaller firms and they use a greater variety of vehicle types. Over two-thirds of the firms without ride-sharing programs indicated a possible interest in considering a program, and of these 75% selected carpools. Over 65% of these firms indicated that research-developed information would be useful in planning programs.



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INTRODUCTION

This report was prepared in response to a request by the Richmond Regional Planning District for an inventory of ride-sharing programs in that area. The report presents the results of a survey made of industries in that Planning District to determine present and expected ride-sharing activities and the types of information deemed useful in planning ride-sharing programs. The results given here were obtained as part of a statewide survey now being analyzed and evaluated. Where possible, statewide totals were compared with results from the Richmond Planning District. Due to the small sample size of 47 industries in the Richmond District, general conclusions concerning ride sharing are given in terms of statewide results. Appendix A provides the name and address of the responding Richmond area firms, and Appendix B lists the specific responses at each firm.

SURVEY DESIGN

A survey questionnaire (see Figure 1) was distributed by mail to all industrial and mining firms with 50 or more employees. The questionnaires were coded so that the firm's location, product, and number of employees could be determined.

## Figure 1. Survey questionnaire.

## VIRGINIA HIGHWAY AND TRANSPORTATION RESEARCH COUNCIL

## SURVEY OF RIDE-SHARING ACTIVITIES

1. Do you have a ride-sharing program in your organization? (Check one)  Yes  No
- ANSWER QUESTIONS 2, 3 and 4 ONLY IF YOUR ANSWER TO QUESTION 1 IS "YES". IF YOUR ANSWER IS "NO", GO TO QUESTION 5.
2. If your answer to Question 1 is yes, how is the ride-sharing program arranged? (Check one)
- Solely by employees with no involvement of firm or institution.
- With assistance from firm or organization in organizing or running the program.
- Other. (Specify) \_\_\_\_\_
3. If your answer to Question 1 is yes, indicate the type of program your organization has (Check one or more)
- Car pool (an automobile owned by one of the riders or by your organization that carries employees between home and work).
- Van pool (a 10-to 12-passenger van owned either privately or by your organization that is used instead of an automobile).
- Bus pool (a bus owned by either a transit company or your organization that picks up your employees at specified stops, but travels directly to your place of business).
- Other. (Specify) \_\_\_\_\_
4. If you have a ride-sharing program, please furnish additional details about the program on the reverse side of this sheet or on separate sheets.
5. If you do not have a ride-sharing program, would you be interested in considering one? (Check one)
- Yes  No  Possibly
6. If your answer to Question 5 is yes, which type of program would you most likely select? (Check one or more)
- Car Pool  Bus Pool
- Van Pool  Other. (Specify) \_\_\_\_\_
7. Would additional information about operating or assisting with ride-sharing programs be useful to you in planning such activities?  Yes  No
8. If your answer to Question 7 is yes, what type of information would be most important to you? (Check one or more)
- Costs and benefits of ride-sharing programs.
- Methods to encourage employees to become riders in the program.
- Methods for identifying interested employees.
- Administration and management procedures.
- Other. (Specify) \_\_\_\_\_
9. If you think your firm or organization would be interested in future information about a ride-sharing program or if you have a ride-sharing program now, would you please furnish the name of the person who should be contacted.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
10. Are you aware of any other firm(s) or organization(s) in your area which operate ride-sharing programs? (Check one)  Yes  No
11. If your answer to Question 10 is yes, please list the names of the firm(s) below.

## LIMITATIONS OF SURVEY

This study sought to assess industry's perception of ride-sharing programs, but did not attempt to determine the extent of employee involvement in ride-sharing activity. The results are based on a sample of manufacturing and mining establishments only. Inferences concerning ride sharing in other employment sectors should take this into account.\*

## SURVEY RESULTS

Of the 47 firms in the Richmond Planning District that responded to the questionnaire, 21 reported that they had a ride-sharing program. The results are shown in Table 1.

Table 1

Existing Ride-Sharing Programs  
Richmond Planning District

<u>Type</u>	<u>Number</u>	<u>Percentage</u>
Carpool	19	40.4
Vanpool	2	4.3
Buspool	0	0.0
None	26	55.3
	<u>    </u>	<u>    </u>
Total	47	100.0

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\*Zevin, Israel, "Car Pooling in Connecticut," Traffic Statistics Section, Division of Planning, Connecticut Department of Transportation, April 1972. This study, made in Hartford, Connecticut, showed that manufacturing had the lowest level of carpooling of the ten employment sectors measured. Furthermore, as the distance commuted became longer, a reduction of carpooling by manufacturing employees occurred, while in the majority of sectors, the level of pooling increased with distances. Thus the industrial sector is not representative of ride-sharing activity in all sectors of employment.

Seventy-five percent of the ride-sharing programs were organized by the employees themselves, while the other 25% received assistance from the firm. Thus in the Richmond area (as in the rest of the state), the ride-sharing programs are usually carpools organized by the employees. This result is most common for small firms; larger organizations tend to become more involved in employee ride-sharing programs and have a greater variety of transportation modes.

When firms without ride-sharing programs were asked whether or not they were interested in considering a program, 68.7% stated that they might be interested (see Table 2). Of these, the majority named carpooling as the type of program they would consider (see Table 3).

Table 2

## Potential Ride-sharing Programs

<u>Would you consider a program?</u>	<u>Number</u>	<u>Percentage</u>
No	10	31.3
Yes	5	15.6
Possibly	17	53.1
	<hr/>	<hr/>
Total	32	100.0

Table 3

## Type of Program that Would be Considered

<u>Type</u>	<u>Number</u>	<u>Percentage</u>
Carpool	12	75.0
Vanpool	2	12.5
Buspool	2	12.5
	<hr/>	<hr/>
Total	16	100.0

Twenty firms, or 42.6%, of the Richmond total stated that research-developed information on ride-sharing programs would be helpful. The type of information cited is shown in Table 4.



Table 4

## Information Considered to be Most Useful

<u>Type Cited</u>	<u>Number</u>	<u>Percentage</u>
Methods to encourage employees	19	40.4
Techniques to identify interested employees	15	31.9
Cost and benefits of programs	13	27.7
Administration and management procedures	11	23.4
Other	1	2.1

## CONCLUSIONS

The following general conclusions came from an analysis of the Richmond data. These appear to be consistent with the observations made to date from the statewide results.\*

1. Over half of Richmond's industrial and mining firms have a ride-sharing program.
2. The majority of the programs are arranged by employees without aid from the firm.
3. Carpooling is the predominant form of ride sharing. For smaller firms, ride sharing is accomplished almost exclusively this way, whereas larger firms often support van-or buspools.
4. Of the firms without ride-sharing programs, more than two-thirds indicated an interest in starting a program.
5. Carpooling is the most common form of ride sharing selected by firms considering the establishment of a new program.

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\*Hoel, Lester A. and Moreland Herrin, Perception of Ride-sharing Programs by Industry, Urban Transportation Efficiency, American Society of Civil Engineers, 1977, pp. 119-124.

6. Over half of the firms stated that additional information on ride sharing would be helpful. Information on methods of encouraging employees to participate was cited as the most important type needed. Data on cost-benefits, identification of interested employees, and administration and management procedures were cited as being equally needed.

## ACKNOWLEDGEMENT

This report is based on survey data collected during the period April — June 1976 under the supervision of Moreland Herrin, visiting research associate. The authors acknowledge the work of Mr. Herrin in developing the survey questionnaire and organizing the data in form suitable for analysis. We also acknowledge the cooperation and support of Jack H. Dillard, who initially suggested the need for information about ride-share activities in Virginia. Jerry Korf provided valuable assistance in developing computer printouts and data reductions. Neal Robertson and Gary Allen reviewed early drafts of the report and made many valuable suggestions. Notwithstanding the assistance received in preparing the report, the authors are wholly responsible for its contents.



## APPENDIX A

NAMES AND MAILING ADDRESSES OF RESPONDING FIRMS FROM  
RICHMOND REGIONAL PLANNING DISTRICT

Of the 47 firms located in the Richmond Planning District, all but one was listed as having a Richmond address. The name of each firm is listed below with the address to which the questionnaire was sent and the name of the person contacted.

1. Jerry Cornwall, Jr., President  
Win-Dor Inc.  
2419 Grenoble Road  
Richmond, Va. 23229
2. George E. Manesi, Plant Manager  
Ralston Purina Company  
2101 Westmoreland Street  
Richmond, Va. 23230  
Carpool arranged by employees only
3. Plant Manager  
Spruance Textile Fiber Plant-Dept.  
Ampthill  
P. O. Box 1477  
Richmond, Va.
4. E. B. Douberly  
Hoerner Woldorf Corporation  
P. O. Box 3466  
Richmond, Va.  
Carpool, employee run
5. Raymond B. Jones, Plant Manager  
M & Q Plastic Products  
4725 Jefferson Davis Highway  
Richmond, Va. 23219
6. Karl Rudolph, President  
Virginia Log Co., Inc.  
P. O. Box 4508  
Richmond, Va. 23229
7. Brick Rider, Manager of Community Relations  
Reynolds Metals Company  
6601 W. Broad Street  
Richmond, Va. 23261

8. R. Nesbit, President  
Union Envelope Company  
Division of Hammermill Paper Co.  
P. O. Box 27007  
Richmond, Va. 23261
9. M. C. Jones  
Machine & Conveyor Manufacturing, Ltd.  
P. O. Box 4342  
Richmond, Va. 23224
10. E. Sanders Ruttin, President  
Richmond Gravare, Inc.  
3400 Deepwater Terminal Road  
Richmond, Va. 23234
11. F. E. Wasensale, President  
Liphart Steel Co., Inc.  
3308 Rosendale Avenue  
P. O. Box 6326 West End Station  
Richmond, Va. 23230.
12. Charles L. Slade, Mgr.  
Koppers Company, Inc.  
Forest Products Division  
4005 Charles City Road  
P. O. Box 7568  
Richmond, Va. 23231
13. T. P. Allen  
Reynolds North Plant  
11th and Byrd Street  
Richmond, Va.
14. J. M. Loving, Plant General Manager  
Westvaco Container Division  
P. O. Box 1460  
2300 Jefferson Davis Highway  
Richmond, Va. 23212
15. C. R. Montijo, Plant Superintendent  
Continental Can Company  
4123 Carolina Avenue  
Richmond, Va. 23222

16. Gerald E. Gholson, Vice President  
Litton Business Systems, Inc.  
Everett Waddey Division  
1101 E. Laburnum Avenue  
Richmond, Va. 23222
17. Loring F. Lyford, Industrial Relations Manager  
Southern Biscuit Company  
P. O. Box 27487  
Richmond, Va. 23261
18. Ken Wingem  
Lea Industries, Inc.  
P. O. Box 27506  
Richmond, Va. 23260
19. Frank M. Wood, Vice President  
James River Corporation  
P. O. Box 2218  
Richmond, Va. 23217
20. Dr. R. R. McCracken  
Director of Personnel  
A. H. Robins Company  
1407 Cummings Drive  
Richmond, Va. 23220
21. Plant Manager  
Bethlehem Steel Corporation  
2031 Westwood Avenue  
Richmond, Va. 23230
22. Deweitt F. Helm, Jr., President  
Miller Morton Company  
2007 N. Hamilton Street  
Richmond, Va. 23230
23. L. C. Harcum  
Lone Star Industries, Inc.  
P. O. Box 3778  
Richmond, Va. 23234
24. Dan Cravey  
Union Camp Corporation  
Richmond Division  
2801 Cofer Road  
P. O. Box 1598  
Richmond, Va. 23213

25. L. H. Levy, President  
Modern Woodwork Specialties, Inc.  
1620 Altamont Avenue  
Richmond, Va. 23230
26. J. L. Wellener, General Manager  
Westvaco Corporation  
Milton Carton Division  
2828 Coter Road  
Richmond, Va. 23224
27. Byron Johnson  
AMF World Tobacco Company  
6301 Midlothian Turnpike  
Richmond, Va. 23225
28. Harold L. Hughen  
Circle Wood Working Corp.  
923 N. Meadow Street  
Richmond, Va. 23220
29. W. M. J. Waymack  
Flight Research  
P. O. Box 1-F  
Richmond, Va. 23201
30. Robert Turner  
Continental Can Company  
3200 Williamsburg Avenue  
Richmond, Virginia 23223
31. Mr. G. R. Dupey  
Salt Supervisor  
VEPCO  
Richmond, Va. 23261
32. Don Newcomb  
AMF, Inc.  
Union Machinery Division  
2115 West Laburnum Avenue  
Richmond, Va. 23227
33. Frank A. McDonald, Jr., Director of Personnel  
Richmond Newspaper Inc.  
333 E. Grace Street  
Richmond, Va. 23219
34. Larry D. Cripe  
Phillip Morris, USA  
P. O. Box 26603  
Richmond, Va. 23261



35. L. M. Lawrence, Jr.  
Industrial Alloy Fabrication, Inc.  
1502 Valley Road  
Richmond, Va. 23222
36. J. Rowley  
International Paper Company  
P. O. Box 7697  
Richmond, Va. 23231
37. E. I. DuPont de Nemours  
Spruce Plant Film Dept.  
Amphill P. O. Box 1559  
Richmond, Virginia 23212
38. Craig Ruffin, Executive Vice President  
Ruffin & Payne, Inc.  
P. O. Box 27386  
Richmond, Virginia 23261
39. Robert Brooke  
I. T. T. Continental Baking Co.  
105 Jefferson Street  
Richmond, Virginia 23220
40. G. L. Morgan, Plant Manager  
American Distilling Co.  
Colonial Heights, Virginia 23834
41. R. L. Hammond, Plant Manager  
Ethyl Corp. PVC Film & Sheet Div.  
Norman & Lewis Roads  
Sandston, Virginia 23150
42. H. M. Howell  
General Electric Co.  
5401 Staples Mill Road  
Richmond, Virginia 23235
43. R. A. Pahl, General Manager  
Hoerner Waldorf Corp.  
5700 Lewis Road  
Sandston, Virginia 23150
44. Donald Gillies, Vice President  
Old Dominion Iron & Steel Corp.  
Bell Isle  
Richmond, Virginia 23219

45. Poythress William P. & Co., Inc.  
P. O. Box 26946  
16 North 22nd Street  
Richmond, Virginia 23217
46. Tomas C. Redford  
Redford Brick Co., Inc.  
P. O. Box 4096  
Richmond, Virginia 23224
47. James R. Daniel, President  
Richmond Plastics Inc.  
1351 W. Hundred Road  
Box T  
Chester, Virginia 23831

## APPENDIX B

## SUMMARY OF RESPONSES

Table A-1 summarizes the responses from the 47 Richmond area firms that returned questionnaires. The numbers given on the left-hand side correspond to the numbers assigned firms in Appendix A.

The size of the firm, and nature of its product are given in the next two columns. The number listed across the remaining columns, except that labelled Comments, designate questions from the survey questionnaire (see Figure 1). For example, number 1 refers to the question, Do you have a ride-sharing program in your organization? Responses to item 4 of the questionnaire are not given because no specific information response was requested. The Code letters used are defined below.

E	Ride-sharing program organized solely by the employees with no assistance from the firm
F	Ride-sharing program with assistance from the firm
O	Other
C	Carpool
V	Vanpool
B	Buspool
NA	Not applicable
NG	Not given
Poss	Possibly
Encor	Methods to encourage employees to become riders in the program
ID	Methods for identifying interested employees
C/B	Costs and benefits of ride-sharing programs
Admin	Administration and management procedures
All	All information was requested

Table A-1. Survey Responses

Firm	No. of Employees	Firm Characteristics Type of Firm	Ride Sharing (1)	Organized Type (2)	Interested in Ride Sharing (5)	Type (6)	Information (7)	Type (8)	Comments
1	500-600	Fabricated Metal	Yes	F	N.A.	N.A.	No	N.G.	None
2	50-100	Food	Yes	E	N.A.	N.A.	N.G.	N.G.	None
3	2,000-2,100	Chemicals	Yes	F	N.A.	N.A.	No	N.A.	None
4	200-300	Paper	Yes	E	Poss	N.G.	Yes	C/B/Encor.	None
5	50-100	Rubber	Yes	E	N.A.	N.A.	N.G.	N.G.	None
6	50-100	Lumber, Wood	Yes	E	N.A.	N.A.	N.G.	N.G.	None
7	500-600	Primary Metal	Yes	F	N.A.	N.A.	N.G.	N.G.	None
8	300-400	Paper	Yes	E	N.A.	N.A.	Yes	Encor. ID	None
9	50-100	Machinery	Yes	E	N.A.	N.A.	No	N.A.	None
10	50-100	Paper	Yes	E	No	N.A.	No	N.A.	Informal Carpool
11	50-100	Fabricated Metal	Yes	E	N.A.	N.A.	N.G.	N.G.	Volunteer 20% Carpool
12	100-200	Lumber, Wood	Yes	E	N.A.	N.A.	N.G.	N.G.	Approximately 50% R. S.
13	300-400	Primary Metal	Yes	F	N.A.	N.A.	N.G.	N.G.	Started program in gas shortage
14	100-200	Paper	Yes	E	N.A.	N.A.	N.G.	N.G.	C. P. with long distance commuter
15	50-100	Paper	Yes	E	N.A.	N.A.	Yes	Encor. ID.	Approximately 10% C. P.
16	100-200	Print, Publish	No	N.A.	Poss	N.G.	No	N.G.	None
17	500-600	Food*	Yes	F&F	N.A.	N.A.	Yes	C/B, Encor. ID.	C. P. by E. V by Firm
18	200-300	Furniture	Yes	O	Yes	N.A.	Yes	Encor. ID.	None
19	200-300	Paper	Yes	E	Poss	C	Yes	Encor. ID.	None
20	500-900	Chemical	No	N.A.	Poss	N.G.	No	N.A.	Informal program, use newsletter*
21	100-200	Fabricated Metal	Yes	O	No	N.A.	No	N.A.	None
22	100-200	Chemical	No	E	No	N.A.	No	N.A.	None
23	100-200	Mineral mining	No	N.A.	Poss	C&V	Yes	All	Employee runs carpools*
24	200-300	Paper	No	N.A.	Poss	C&B	Yes	All	None
25	50-100	Furniture	No	N.A.	Yes	C&B	Yes	Encor. ID, Admtn.	None
26	300-400	Machinery	No	N.A.	Poss	C	Yes	C/B	Interested in E run only
27	300-400	Lumber, Wood	No	N.A.	Poss	C	Yes	Admin	None
28	50-100	Measure Analyze	No	N.A.	Yes	C	Yes	Encor.	None
29	50-100	Paper	No	N.A.	Poss	C	Yes	C/B/Encor.	None
30	100-200	Electric	No	N.A.	Yes	C	Yes	All	None
31	100-200	Electric	No	N.A.	Yes	C	Yes	All	None
32	300-400	Machinery	No	N.A.	Poss	N.G.	Yes	All	None
33	1100-1200	Print, Publish	No	N.A.	Poss	N.G.	Yes	All	None
34	6500-6600	Tobacco	No	N.A.	Poss	N.G.	Yes	All	None
35	50-100	Fabricated Metal	No	N.A.	Poss	N.G.	Yes	C/B	None
36	50-100	Paper	Yes	F	N.A.	N.A.	N.G.	N.G.	Grid map in cafeteria
37	2000-2100	Chemical	Yes	E	No	N.A.	N.G.	N.G.	None
38	50-100	Lumber, Wood	Yes	E	No	N.A.	N.G.	N.G.	Irregular hrs. prevent RS
39	200-300	Food	No	N.A.	No	N.A.	No	N.A.	None
40	50-100	Food	No	N.A.	No	N.A.	No	N.A.	None
41	100-200	Chemical	No	N.A.	No	N.A.	No	N.A.	None
42	700-800	Electric	No	N.A.	Poss	N.G.	Yes	Encor.	None
43	100-200	Paper	No	N.A.	Poss	C	Yes	ID, Admtn.	None
44	200-300	Fabricated Metal	No	N.A.	No	N.A.	No	N.A.	None
45	50-100	Food	No	N.A.	No	N.A.	No	N.A.	None
46	50-100	Stone, Clay	No	N.A.	No	N.A.	No	N.A.	None
47	50-100	Plastics	No	N.A.	Poss	N.G.	No	N.A.	None

\* contradictions occur between the comments and question one