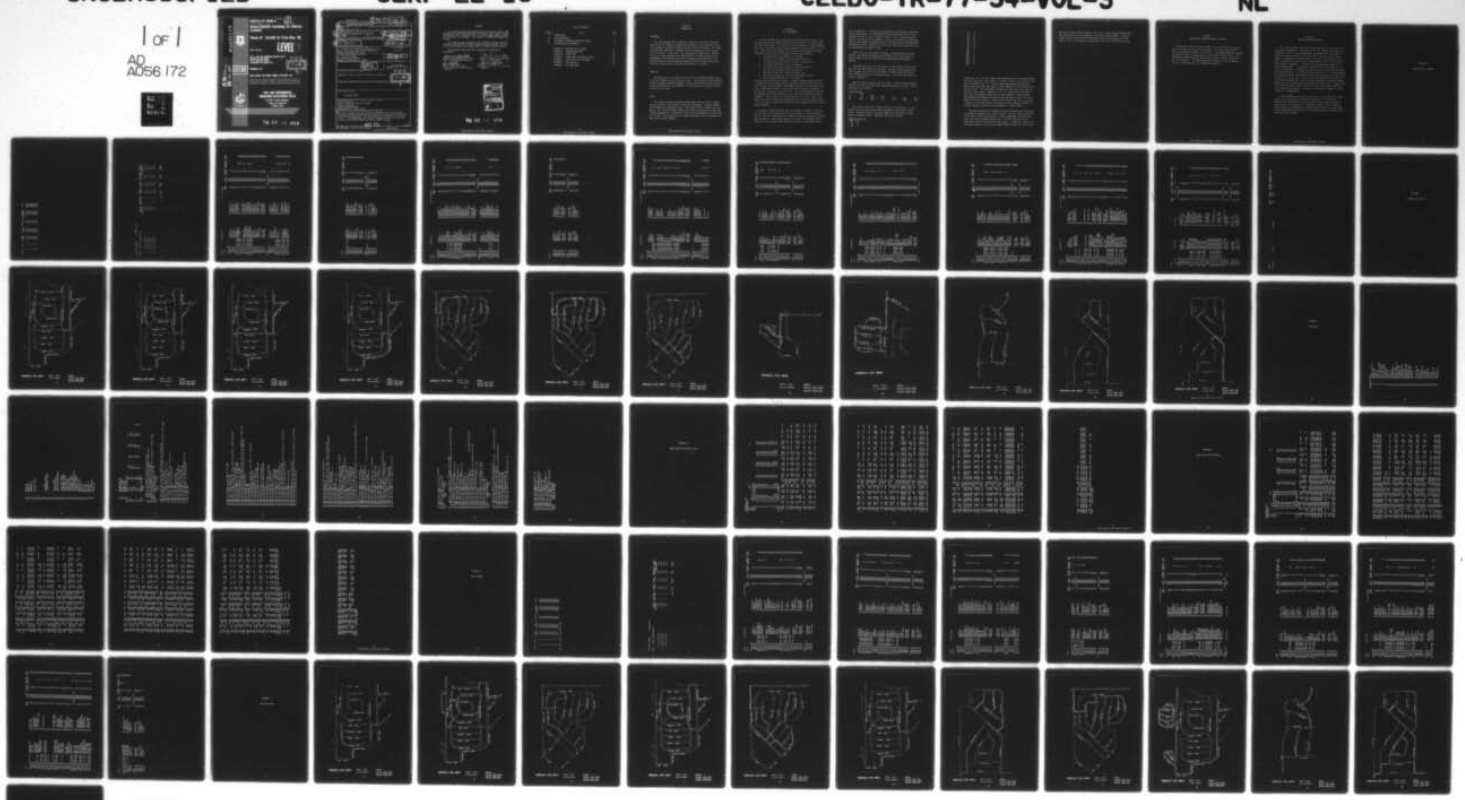
AD-A056 172 NEW MEXICO UNIV ALBUQUERQUE ERIC H WANG CIVIL ENGINE--ETC F/G 13/2
REFUSE-COLLECTION SCHEDULING FOR SELECTED LOCATIONS. VOLUME III--ETC(U)
NOV 77 H J IUZZOLINO F29601-76-C-0015
UNCLASSIFIED CERF-EE-16 CEEDO-TR-77-54-VOL-3 NL

1 OF 1
AD
A056 172



END
DATE FILMED
8-78
DDC

AD A056172

AD No.
DDC FILE COPY

CEEDO-TR-77-54, VOLUME III

(2)

A055716 - V.4

# Refuse-Collection Scheduling For Selected Locations

## Volume III: Fairchild Air Force Base, WA

LEVEL III

Harold J Iuzzolino

ERIC H. WANG CIVIL ENGINEERING RESEARCH FACILITY
UNIVERSITY OF NEW MEXICO
BOX 25, UNIVERSITY STATION
ALBUQUERQUE, NEW MEXICO 87131

DDC
RECEIVED
JUL 13 1978
B

CEEDO

NOVEMBER 1977

FINAL REPORT FOR PERIOD JANUARY 1976-APRIL 1977

Approved for public release; distribution unlimited

CIVIL AND ENVIRONMENTAL
ENGINEERING DEVELOPMENT OFFICE
(AIR FORCE SYSTEMS COMMAND)
TYNDALL AIR FORCE BASE
FLORIDA 32403

78 07 00 079

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

(19) TR-77-54-VOL-3

## REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS BEFORE COMPLETING FORM

(18)

1. REPORT NUMBER: CEEDO-TR-77-54, Vol. III
2. GOVT ACCESSION NO.
3. RECIPIENT'S CATALOG NUMBER

4. TITLE (and Subtitle): (6) REFUSE-COLLECTION SCHEDULING FOR SELECTED LOCATIONS, Volume III, Fairchild Air Force Base, Washington

5. TYPE OF REPORT & PERIOD COVERED: (9) Final Technical Report, Jan 1976 - Apr 1977

6. PERFORMING ORG. REPORT NUMBER: (14) CERF-EE-16

7. AUTHOR(s): (10) Harold J. Iuzzolino

8. CONTRACT OR GRANT NUMBER(s): (15) F29601-76-C-0015

9. PERFORMING ORGANIZATION NAME AND ADDRESS: Eric H. Wang Civil Engineering Research Facility, University of New Mexico, Box 25, University Station, Albuquerque, NM 87131

10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS: T.D. 4.03

11. CONTROLLING OFFICE NAME AND ADDRESS: DET 1 (CEEDO) HQ ADTC, Air Force Systems Command, Tyndall Air Force Base, FL 32403

12. REPORT DATE: (11) November 1977

13. NUMBER OF PAGES: 83

14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office): (12) 82 p.

15. SECURITY CLASS. (of this report): Unclassified

15a. DECLASSIFICATION/DOWNGRADING SCHEDULE: --

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited.

DDC RECEIVED JUL 13 1978 B

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

Available in DDC

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Refuse collection
Refuse-Collection Scheduling Program
Vehicle scheduling
Computer-generated maps
Approximation of street shapes

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This report presents maps and schedules produced by the Air Force Refuse-Collection Scheduling Program for residential refuse collection at Fairchild Air Force Base, Washington. The data required for scheduling are discussed briefly. The computer-generated schedule reduced the number of trips from 10 to 8 and the total mileage from 272.6 to 264.4 miles.

400 976

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

## PREFACE

This report documents work performed during the period January 1976 through April 1977 by the University of New Mexico under contract F29601-76-C-0015 with DET 1 (CEEDO) HQ ADTC, Air Force Systems Command, Tyndall Air Force Base, Florida 32403. Capt. Robert F. Olfenbuttel managed the program.

This report has been reviewed by the Information Officer and is releasable to the National Technical Information Service (NTIS). At NTIS it will be available to the general public, including foreign nations.

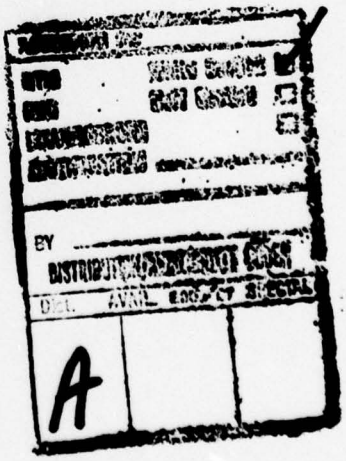
This technical report has been reviewed and is approved for publication.

Robert F. Olfenbuttel
ROBERT F. OLFENBUTTEL, Capt, USAF
Chief, Resources Conservation Br

Peter A. Crowley
PETER A. CROWLEY, Maj, USAF, BSC
Director of Environics

Emil C. Frein
EMIL C. FREIN, Maj, USAF
Chief, Env Engr & Energy Research Division

Joseph S. Pizzuto
JOSEPH S. PIZZUTO, Col, USAF, BSC
Commander




78 07 00 079



(The reverse of this page is blank.)

TABLE OF CONTENTS


| Section | Title | Page |
|---|---|---|
| I | INTRODUCTION | 1 |
| II | DATA REQUIREMENTS | 3 |
| III | EVALUATION OF COMPUTER-GENERATED SCHEDULE | 7 |
| IV | IMPLEMENTATION REQUIREMENTS | 9 |
| | APPENDIX A ORIGINAL ROUTE SCHEDULE | 11 |
| | APPENDIX B ORIGINAL ROUTE MAPS | 25 |
| | APPENDIX C RCINPT DATA | 39 |
| | APPENDIX D PHASE4 DATA FOR ORIGINAL ROUTES | 47 |
| | APPENDIX E PHASE4 DATA FOR RCSP ROUTES | 53 |
| | APPENDIX F RCSP SCHEDULE | 61 |
| | APPENDIX G RCSP ROUTE MAPS | 73 |




(The reverse of this page is blank.)

# SECTION I
# INTRODUCTION

## BACKGROUND

From 1973 through 1975, a study was conducted at the Civil Engineering Research Facility (CERF) to evaluate the usefulness of the IBM Vehicle Scheduling Program for scheduling refuse collection at Air Force bases. This study indicated that reductions in manpower and total mileage of up to 20 percent could be obtained in some cases. The large amount of human effort required to put the routes produced by the IBM program in a useable form led to the development of the CERF Refuse-Collection Scheduling Program (RCSP). This program produces a printed schedule and maps that can be used, without modification, by the driver of the collection vehicle or in reports.

## OBJECTIVE

The objective of this report was to use RCSP to determine optimum refuse-collection schedules for four Air Force bases. These test bases provide enough variety in refuse-scheduling problems to allow a determination of the program's range of applicability and, ultimately, an evaluation of its potential for use on all Air Force bases.

## SCOPE

This report presents the results obtained when RCSP was used to schedule refuse collection at Fairchild Air Force Base, Washington. The data required for scheduling are described briefly. The original and new schedules are compared. Since the new schedule requires only eight collection trips, while the original required ten, a procedure for verifying and implementing the new schedule is given. The original and the computer-generated routes are presented on maps and as printed schedules.



(The reverse of this page is blank.)

## SECTION II
## DATA REQUIREMENTS

The data available for Fairchild Air Force Base include six maps. One map shows the area surrounding the base with the locations of Geiger Heights and Geiger Base marked. Two other maps show enlargements of on-base housing areas, while the remaining maps show enlargements of Geiger Heights and Geiger Base. The original routes within the housing areas are marked on the maps. In addition to the maps, the following information was provided:

1. unloading time at the landfill is 15 minutes,
2. the speed limit on base is 30 miles per hour outside of housing areas and 15 miles per hour in housing areas,
3. a 10-cubic-yard vehicle services 70 houses,
4. the collection vehicle travels at 5 miles per hour in the housing areas while collecting refuse,
5. the vehicle stops for 1 minute per house, and
6. the vehicle averages 45 miles per hour between off-base housing areas and traveling to the landfill.

Ten routes were indicated on the maps. To obtain computer-generated maps and a schedule for these original routes, information describing the routes was used as input to program PHASE4. The schedule and maps thus obtained are presented in Appendixes A and B. On the first page of material in Appendix A, the sections correspond to the final trips. The section numbers on that page can be found on the route summary on the second page, in the column marked SECTION(S). Thus, section 5 is serviced by trip 1 of route 3. The section numbers are useful to the person running RCSP, but not to the vehicle drivers, so only the pages including and following the route summary would go to operational personnel.

The page of output preceeding the route summary in Appendix A indicates that 196 families are serviced by the trip to section 5. This information conflicts with the information that accompanied the maps (one vehicle services only 70 houses), so the smaller number was not used. The original routes showed two trips on Cedar Street between Palm Drive and South Maple Street,

with no indication as to which trip collected the six households on that portion of Cedar Street. If these households are collected by the trip corresponding to route 3, trip 2, instead of route 3, trip 1, then the largest capacity trip services 194 households. If each of the two trip collects one side of Cedar Street, the largest capacity trip would service 193 households. Although the latter is unlikely to be the case, the vehicle capacity was set at 193 households for safety's sake.

RCSP consists of four computer programs: the data-checking program (RCINPT), the section-assignment program (PHASE2), the route-traversing program (PHASE3), and the route-map- and schedule-generating program (PHASE4).

The RCINPT data consist of six records: street names, size of output maps, and four descriptions of input maps. The third record describes the streets connecting Fairchild Air Force Base to Geiger Heights and Geiger Base, without any details of the housing areas. The actual data cards are listed in Appendix C.

Data for PHASE2 consist of only five cards: a title card, the vehicle-capacity card, the time-limits card, and two output-map size cards. These data cards are as follows:

```
FAIRCHILD AFB
          193.
 .5                    15.       4.
 .8        2.8         10.       3.5       5.5       10.       10.
 8.        10.         10.       1.        5.        20.       10.
```

The required input data to PHASE3 consist of only two cards: a title card and a card giving the node numbers assigned to the landfill and the garage. Twenty-one optional cards were added, each reassigning a street segment to another section. These data cards are as follows:

```
FAIRCHILD AFB, WA
 1800  726
   22    6
   34    6
   35    5
```

| | |
|---|---|
| 51 | 7 |
| 52 | 7 |
| 56 | 7 |
| 75 | 6 |
| 57 | 8 |
| 43 | 8 |
| 62 | 8 |
| 61 | 8 |
| 49 | 8 |
| 66 | 4 |
| 64 | 5 |
| 102 | 3 |
| 113 | 3 |
| 116 | 2 |
| 117 | 2 |
| 137 | 3 |
| 139 | 2 |
| 188 | 1 |

Segments 34, 116, 117, and 139 were reassigned because the close approximation of street shapes had caused segments of a single street to be assigned to different collection trips. If a coarser shape approximation had been used, these streets would have been shown as single segments, and the problem would not have arisen. The reassignment eliminated the need to use two trucks to service a single street. Segments 22, 102, 113, and 188 were reassigned because they were somewhat remote from the other segments in their sections. The remaining reassignments were made to keep the loads in each trip from exceeding the vehicle capacity. Because each trip comes very close to filling a vehicle, it was often necessary to reassign several segments to remove an overflow condition caused by the reassignment of a single segment.

The three data records for PHASE4 are listed in Appendix D for the original routes and Appendix E for the RCSP routes. The first record consists of a title card, a card giving the unit of refuse measurement, two time-limits cards, and a vehicle-identification card. The third record consists of cards describing the paths in each of the routes. For the final routes, this information normally is passed from program PHASE3 to PHASE4 on disk or tape,

but since a minor change was desired in the final routes, the data were punched onto cards, modified, and included as card input to program PHASE4. The minor change involved replacing travel along Harder Place and Wortman Drive in RCSP route 4, trip 2, by an equally long but more direct route along Malstrom Drive.

## SECTION III
## EVALUATION OF COMPUTER-GENERATED SCHEDULE

The original refuse-collection schedule for Fairchild Air Force Base required 10 trips to service all of the houses. The total mileage for the 10 trips, as estimated by PHASE4, is 272.6 miles. The computer-generated schedule requires only eight trips and covers a total distance of 264.4 miles. Thus, the computer-generated schedule decreases mileage by 3 percent and number of trips by 20 percent. The computer-generated schedule is given in Appendix F, and the corresponding maps are presented in Appendix G.



(The reverse of this page is blank.)

## SECTION IV
## IMPLEMENTATION REQUIREMENTS

RCSP assumes that any two vehicles of the same capacity could service the same number of households. Therefore, the two most important preliminary verifications are that 1) the maximum number of households serviced on one trip has been correctly determined and 2) the vehicle involved is almost always capable of completing its route without overfilling. For Fairchild Air Force Base, the heaviest collection trip is labeled ROUTE3, TRIP1 in the original route summary in Appendix A. The vehicle involved was found capable of servicing 196 households. In the routes produced by RCSP, the longest trip services 192 households, so it need only be verified that at least 192 households are serviced by what is currently the largest-capacity trip. If 196 households are actually serviced, there should be no problem with the vehicle overfilling. If none of the current trips service at least 192 households, corrected route information should be sent to the Civil and Environmental Engineering Development Office so the capacity can be determined accurately and the program rerun. If the trip described as ROUTE3, TRIP1 does service approximately 196 households, then the new schedule in Appendix F and the maps in Appendix G will be suitable for implementation.

If the scheduling is under Air Force control, the new maps and schedules can be given to the person in charge of scheduling. If a contractor is responsible for scheduling and refuse collection, the new maps and schedules may be given to him; the savings in mileage and number of trips should provide incentive for implementation. When the refuse collection contract goes out for open bidding, distribution of the computer-generated schedule may produce lower cost estimates.



(The reverse of this page is blank.)

# APPENDIX A

## ORIGINAL ROUTE SCHEDULE

| SECTION | TRIP | DISTANCE (MILES) | TIME (MINUTES) | HOUSEHOLDS | CAPACITY (HOUSEHOLDS | LOAD ) |
|---|---|---|---|---|---|---|
| 1 | 1 | 18.9 | 118.3 | 159 | 193.0 | 159.0 |
| 2 | 1 | 18.9 | 99.9 | 125 | 193.0 | 125.0 |
| 3 | 1 | 19.1 | 113.3 | 147 | 193.0 | 147.0 |
| 4 | 1 | 19.1 | 78.8 | 84 | 193.0 | 84.0 |
| 5 | 1 | 18.0 | 139.2 | 196 | 193.0 | 196.0 |
| 6 | 1 | 19.0 | 138.1 | 188 | 193.0 | 188.0 |
| 7 | 1 | 22.2 | 124.8 | 143 | 193.0 | 143.0 |
| 8 | 1 | 20.1 | 121.8 | 160 | 193.0 | 160.0 |
| 9 | 1 | 19.0 | 126.0 | 156 | 193.0 | 156.0 |
| 10 | 1 | 18.0 | 113.8 | 146 | 193.0 | 146.0 |

FINAL ROUTE SUMMARY FAIRCHILD AFB

| ROUTE | VEHICLE IDENTIFICATION | VEHICLE CAPACITY (HOUSEHOLDS) | SECTION(S) TRIP1 | TRIP2 | DISTANCE (MILES) | TIME (HR:MIN) | HOUSEHOLDS SERVICED | REFUSE QUANTITY (HOUSEHOLDS) |
|---|---|---|---|---|---|---|---|---|
| 1 | 10 CU YD VEHICLE | 193.0 | 1 | 2 | 53.9 | 4:20 | 284 | 284.0 |
| 2 | 10 CU YD VEHICLE | 193.0 | 3 | 4 | 54.2 | 3:54 | 231 | 231.0 |
| 3 | 10 CU YD VEHICLE | 193.0 | 5 | 6 | 53.1 | 5:19 | 384 | 384.0 |
| 4 | 10 CU YD VEHICLE | 193.0 | 7 | 8 | 58.4 | 4:48 | 303 | 303.0 |
| 5 | 10 CU YD VEHICLE | 193.0 | 9 | 10 | 53.0 | 4:42 | 302 | 302.0 |
| | | | | TOTALS | 272.6 | 23:04 | 1504 | 1504.0 |

ROUTE 1 FAIRCHILD AFB 10 CU YD VEHICLE

| ACTION | | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|---|
| LEAVE GARAGE | | | | | 8:00 | | | |
| DRIVE ON | | 5TH AVE | TO FAIRCHILD ST | 30 | 8:01 | .3 | | |
| DRIVE ON | | FAIRCHILD ST | TO MARCH ST | 30 | 8:01 | .3 | | |
| DRIVE ON | | MARCH ST | TO HOSPITAL DR | 30 | 8:01 | .2 | | |
| DRIVE ON | | HOSPITAL DR | TO OFFUTT DR | 15 | 8:02 | .1 | | |
| DRIVE ON | | OFFUTT DR | TO MAINE AVE | 30 | 8:02 | .2 | | |
| DRIVE ON | | MAINE AVE | TO CALIFORNIA ST | 15 | 8:04 | .3 | | |
| PICK UP ON | BOTH SIDES | CALIFORNIA ST | TO MINNESOTA PL | 5 | 8:08 | .1 | 8 | 4 |
| PICK UP ON | BOTH SIDES | CALIFORNIA ST | TO CAROLINA DR | 5 | 8:25 | .2 | 29 | 19 |
| PICK UP ON | BOTH SIDES | CALIFORNIA ST | TO | 5 | 8:35 | .1 | 18 | 28 |
| PICK UP ON | BOTH SIDES | | TO | 5 | 8:37 | .0 | 2 | 29 |
| DRIVE ON | | | TO DAKOTA AVE | 15 | 8:37 | .0 | | 29 |
| PICK UP ON | BOTH SIDES | DAKOTA AVE | TO PENNSYLVANIA ST | 5 | 8:59 | .2 | 39 | 49 |
| PICK UP ON | BOTH SIDES | PENNSYLVANIA ST | TO OFFUTT DR | 5 | 9:00 | .0 | 2 | 50 |
| DRIVE ON | | PENNSYLVANIA ST | TO DAKOTA AVE | 15 | 9:00 | .0 | | 50 |
| PICK UP ON | BOTH SIDES | PENNSYLVANIA ST | TO MICHIGAN AVE | 5 | 9:05 | .1 | 8 | 54 |
| PICK UP ON | BOTH SIDES | PENNSYLVANIA ST | TO COLORADO AVE | 5 | 9:24 | .2 | 33 | 72 |
| PICK UP ON | BOTH SIDES | PENNSYLVANIA ST | TO WASHINGTON AVE | 5 | 9:29 | .1 | 9 | 76 |
| PICK UP ON | BOTH SIDES | PENNSYLVANIA ST | TO MAINE AVE | 5 | 9:33 | .1 | 7 | 80 |
| PICK UP ON | BOTH SIDES | MAINE AVE | TO OFFUTT DR | 5 | 9:36 | .1 | 4 | 82 |
| DRIVE ON | | OFFUTT DR | TO HOSPITAL DR | 30 | 9:36 | .2 | | 82 |
| DRIVE ON | | HOSPITAL DR | TO MARCH ST | 15 | 9:37 | .1 | | 82 |
| DRIVE ON | | MARCH ST | TO FAIRCHILD ST | 30 | 9:37 | .2 | | 82 |
| DRIVE ON | | FAIRCHILD ST | TO MITCHELL ST | 30 | 9:39 | .8 | | 82 |
| DRIVE ON | | MITCHELL ST | TO SUNSET HIGHWAY | 30 | 9:39 | .1 | | 82 |
| DRIVE ON | | SUNSET HIGHWAY | TO | 55 | 9:45 | 5.9 | | 82 |
| DRIVE ON | | | TO HALLET ROAD | 45 | 9:49 | 3.2 | | 82 |
| DRIVE ON | | HALLET ROAD | TO HENRY ROAD | 45 | 9:51 | 1.0 | | 82 |
| DRIVE ON | | HENRY ROAD | TO SPOKANE ROAD | 40 | 9:54 | 2.0 | | 82 |
| DRIVE ON | | SPOKANE ROAD | TO LAND FILL | 40 | 9:58 | 3.0 | | 82 |
| UNLOAD | | | | | 9:58 TO 10:08 | | | |
| LEAVE LAND FILL | | | | | 10:08 | | | |
| DRIVE ON | | 5TH AVE | TO FAIRCHILD ST | 30 | 10:09 | .3 | | |
| DRIVE ON | | FAIRCHILD ST | TO MARCH ST | 30 | 10:09 | .3 | | |
| DRIVE ON | | MARCH ST | TO OFFUTT DR | 30 | 10:10 | .3 | | |
| DRIVE ON | | OFFUTT DR | TO PENNSYLVANIA ST | 30 | 10:10 | .2 | | |
| DRIVE ON | | PENNSYLVANIA ST | TO MICHIGAN AVE | 15 | 10:11 | .1 | | |
| PICK UP ON | BOTH SIDES | MICHIGAN AVE | TO OHIO ST | 5 | 10:31 | .2 | 36 | 18 |
| PICK UP ON | BOTH SIDES | OHIO ST | TO CAROLINA DR | 5 | 10:35 | .1 | 6 | 21 |
| PICK UP ON | BOTH SIDES | CAROLINA DR | TO | 5 | 10:43 | .1 | 14 | 29 |
| PICK UP ON | BOTH SIDES | | TO | 5 | 10:48 | .8 | 10 | 34 |
| DRIVE ON | | | TO CAROLINA DR | 15 | 10:48 | .0 | | 34 |
| PICK UP ON | BOTH SIDES | CAROLINA DR | TO COLORADO AVE | 5 | 10:56 | .1 | 12 | 40 |
| PICK UP ON | BOTH SIDES | COLORADO AVE | TO OHIO ST | 5 | 11:03 | .1 | 13 | 47 |
| PICK UP ON | BOTH SIDES | MINNESOTA PL | TO WASHINGTON AVE | 5 | 11:09 | .1 | 9 | 51 |
| DRIVE ON | | CALIFORNIA ST | TO CAROLINA DR | 15 | 11:09 | .2 | | 51 |
| PICK UP ON | BOTH SIDES | CAROLINA DR | TO OHIO ST | 5 | 11:14 | .1 | 7 | 55 |
| PICK UP ON | BOTH SIDES | OHIO ST | TO COLORADO AVE | 5 | 11:21 | .1 | 12 | 61 |

| ACTION | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|
| DRIVE ON | COLORADO AVE | TO CAROLINA DR | 15 | 11:21 | .1 | | 61 |
| PICK UP ON BOTH SIDES | COLORADO AVE | TO PENNSYLVANIA ST | 5 | 11:25 | .1 | 6 | 64 |
| DRIVE ON | PENNSYLVANIA ST | TO MAINE AVE | 15 | 11:25 | .1 | | 64 |
| DRIVE ON | MAINE AVE | TO OFFUTT DR | 15 | 11:26 | .1 | | 64 |
| DRIVE ON | OFFUTT DR | TO HOSPITAL DR | 30 | 11:26 | .2 | | 64 |
| DRIVE ON | HOSPITAL DR | TO MARCH ST | 15 | 11:26 | .1 | | 64 |
| DRIVE ON | MARCH ST | TO FAIRCHILD ST | 30 | 11:27 | .2 | | 64 |
| DRIVE ON | FAIRCHILD ST | TO MITCHELL ST | 30 | 11:28 | .8 | | 64 |
| DRIVE ON | MITCHELL ST | TO SUNSET HIGHWAY | 30 | 11:29 | .1 | | 64 |
| DRIVE ON | SUNSET HIGHWAY | TO | 55 | 11:35 | 5.9 | | 64 |
| DRIVE ON | | TO HALLET ROAD | 45 | 11:39 | 3.2 | | 64 |
| DRIVE ON | HALLET ROAD | TO HENRY ROAD | 45 | 11:41 | 1.0 | | 64 |
| DRIVE ON | HENRY ROAD | TO SPOKANE ROAD | 40 | 11:44 | 2.0 | | 64 |
| DRIVE ON | SPOKANE ROAD | TO LAND FILL | 40 | 11:48 | 3.0 | | 64 |
| UNLOAD | | | | 11:48 TO 11:58 | | | |
| DRIVE ON | SPOKANE ROAD | TO HENRY ROAD | 40 | 12:03 | 3.0 | | |
| BREAK FOR LUNCH | | | | 12:03 TO 12:33 | | | |
| DRIVE ON | HENRY ROAD | TO HALLET ROAD | 40 | 12:36 | 2.0 | | |
| DRIVE ON | HALLET ROAD | TO | 45 | 12:37 | 1.0 | | |
| DRIVE ON | | TO SUNSET HIGHWAY | 45 | 12:41 | 3.2 | | |
| DRIVE ON | SUNSET HIGHWAY | TO MITCHELL ST | 55 | 12:48 | 5.9 | | |
| DRIVE ON | MITCHELL ST | TO FAIRCHILD ST | 30 | 12:48 | .1 | | |
| DRIVE ON | FAIRCHILD ST | TO 5TH AVE | 30 | 12:49 | .5 | | |
| DRIVE ON | 5TH AVE | TO GARAGE | 30 | 12:50 | .3 | | |

ROUTE 2 FAIRCHILD AFB 10 CU YD VEHICLE

| ACTION | | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|---|
| LEAVE GARAGE | | | | | 8:00 | | | |
| DRIVE ON | | 5TH AVE | TO FAIRCHILD ST | 30 | 8:01 | .3 | | |
| DRIVE ON | | FAIRCHILD ST | TO MARCH ST | 30 | 8:01 | .3 | | |
| DRIVE ON | | MARCH ST | TO HOSPITAL DR | 30 | 8:01 | .2 | | |
| DRIVE ON | | HOSPITAL DR | TO OFFUTT DR | 15 | 8:02 | .1 | | |
| DRIVE ON | | OFFUTT DR | TO MAINE AVE | 30 | 8:02 | .2 | | |
| DRIVE ON | | MAINE AVE | TO CALIFORNIA ST | 15 | 8:04 | .3 | | |
| DRIVE ON | | CALIFORNIA ST | TO MINNESOTA PL | 15 | 8:04 | .1 | | |
| PICK UP ON | BOTH SIDES | WASHINGTON AVE | TO PENNSYLVANIA ST | 5 | 8:24 | .2 | 35 | 18 |
| DRIVE ON | | PENNSYLVANIA ST | TO MAINE AVE | 15 | 8:24 | .1 | | 18 |
| PICK UP ON | BOTH SIDES | MAINE AVE | TO CALIFORNIA ST | 5 | 8:51 | .3 | 48 | 43 |
| PICK UP ON | BOTH SIDES | MAINE AVE | TO GRAHAM RD | 5 | 8:53 | .0 | 2 | 44 |
| DRIVE ON | | MAINE AVE | TO CALIFORNIA ST | 15 | 8:53 | .0 | | 44 |
| PICK UP ON | BOTH SIDES | CALIFORNIA ST | TO LOUISIANA AVE | 5 | 8:56 | .1 | 5 | 46 |
| PICK UP ON | BOTH SIDES | CALIFORNIA ST | TO GEORGIA AVE | 5 | 8:58 | .1 | 3 | 48 |
| PICK UP ON | BOTH SIDES | CALIFORNIA ST | TO NEBRASKA AVE | 5 | 9:01 | .0 | 5 | 50 |
| PICK UP ON | BOTH SIDES | NEBRASKA AVE | TO PENNSYLVANIA ST | 5 | 9:22 | .2 | 35 | 68 |
| PICK UP ON | BOTH SIDES | PENNSYLVANIA ST | TO GEORGIA AVE | 5 | 9:25 | .1 | 6 | 72 |
| PICK UP ON | BOTH SIDES | PENNSYLVANIA ST | TO LOUISIANA AVE | 5 | 9:27 | .1 | 2 | 73 |
| PICK UP ON | BOTH SIDES | PENNSYLVANIA ST | TO MAINE AVE | 5 | 9:31 | .1 | 6 | 76 |
| DRIVE ON | | MAINE AVE | TO OFFUTT DR | 15 | 9:31 | .1 | | 76 |
| DRIVE ON | | OFFUTT DR | TO HOSPITAL DR | 30 | 9:31 | .2 | | 76 |
| DRIVE ON | | HOSPITAL DR | TO MARCH ST | 15 | 9:32 | .1 | | 76 |
| DRIVE ON | | MARCH ST | TO FAIRCHILD ST | 30 | 9:32 | .2 | | 76 |
| DRIVE ON | | FAIRCHILD ST | TO MITCHELL ST | 30 | 9:34 | .8 | | 76 |
| DRIVE ON | | MITCHELL ST | TO SUNSET HIGHWAY | 30 | 9:34 | .1 | | 76 |
| DRIVE ON | | SUNSET HIGHWAY | TO | 55 | 9:40 | 5.9 | | 76 |
| DRIVE ON | | | TO HALLET ROAD | 45 | 9:44 | 3.2 | | 76 |
| DRIVE ON | | HALLET ROAD | TO HENRY ROAD | 45 | 9:46 | 1.0 | | 76 |
| DRIVE ON | | HENRY ROAD | TO SPOKANE ROAD | 40 | 9:49 | 2.0 | | 76 |
| DRIVE ON | | SPOKANE ROAD | TO LAND FILL | 40 | 9:53 | 3.0 | | 76 |
| UNLOAD | | | | | 9:53 TO 10:03 | | | |
| LEAVE LAND FILL | | | | | 10:03 | | | |
| DRIVE ON | | 5TH AVE | TO FAIRCHILD ST | 30 | 10:04 | .3 | | |
| DRIVE ON | | FAIRCHILD ST | TO MARCH ST | 30 | 10:04 | .3 | | |
| DRIVE ON | | MARCH ST | TO HOSPITAL DR | 30 | 10:05 | .2 | | |
| DRIVE ON | | HOSPITAL DR | TO OFFUTT DR | 15 | 10:05 | .1 | | |
| DRIVE ON | | OFFUTT DR | TO MAINE AVE | 30 | 10:06 | .2 | | |
| DRIVE ON | | MAINE AVE | TO PENNSYLVANIA ST | 15 | 10:06 | .1 | | |
| DRIVE ON | | PENNSYLVANIA ST | TO LOUISIANA AVE | 15 | 10:06 | .1 | | |
| PICK UP ON | BOTH SIDES | LOUISIANA AVE | TO CALIFORNIA ST | 5 | 10:33 | .3 | 48 | 24 |
| DRIVE ON | | CALIFORNIA ST | TO GEORGIA AVE | 15 | 10:33 | .1 | | 24 |
| PICK UP ON | BOTH SIDES | GEORGIA AVE | TO PENNSYLVANIA ST | 5 | 10:53 | .3 | 34 | 42 |
| DRIVE ON | | PENNSYLVANIA ST | TO MAINE AVE | 15 | 10:54 | .1 | | 42 |
| DRIVE ON | | MAINE AVE | TO OFFUTT DR | 15 | 10:54 | .1 | | 42 |
| DRIVE ON | | OFFUTT DR | TO CASTLE ST | 30 | 10:54 | .0 | | 42 |
| DRIVE ON | | CASTLE ST | TO GALVESTON AVE | 15 | 10:54 | .1 | | 42 |
| PICK UP ON | BOTH SIDES | GALVESTON AVE | TO GRANT ST | 5 | 10:58 | .2 | 2 | 43 |

| ACTION | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|
| DRIVE ON | GALVESTON AVE | TO CASTLE ST | 15 | 10:59 | .2 | | 43 |
| DRIVE ON | CASTLE ST | TO MAINE AVE | 15 | 11:00 | .2 | | 43 |
| DRIVE ON | CASTLE ST | TO FAIRCHILD ST | 30 | 11:02 | .9 | | 43 |
| DRIVE ON | FAIRCHILD ST | TO MITCHELL ST | 30 | 11:02 | .3 | | 43 |
| DRIVE ON | MITCHELL ST | TO SUNSET HIGHWAY | 30 | 11:03 | .1 | | 43 |
| DRIVE ON | SUNSET HIGHWAY | TO | 55 | 11:09 | 5.9 | | 43 |
| DRIVE ON | | TO HALLET ROAD | 45 | 11:13 | 3.2 | | 43 |
| DRIVE ON | HALLET ROAD | TO HENRY ROAD | 45 | 11:15 | 1.0 | | 43 |
| DRIVE ON | HENRY ROAD | TO SPOKANE ROAD | 40 | 11:18 | 2.0 | | 43 |
| DRIVE ON | SPOKANE ROAD | TO LAND FILL | 40 | 11:22 | 3.0 | | 43 |
| UNLOAD | | | | 11:22 TO 11:32 | | | |
| DRIVE ON | SPOKANE ROAD | TO HENRY ROAD | 40 | 11:37 | 3.0 | | |
| DRIVE ON | HENRY ROAD | TO HALLET ROAD | 40 | 11:40 | 2.0 | | |
| DRIVE ON | HALLET ROAD | TO | 45 | 11:41 | 1.0 | | |
| DRIVE ON | | TO SUNSET HIGHWAY | 45 | 11:45 | 3.2 | | |
| DRIVE ON | SUNSET HIGHWAY | TO MITCHELL ST | 55 | 11:52 | 5.9 | | |
| DRIVE ON | MITCHELL ST | TO FAIRCHILD ST | 30 | 11:52 | .1 | | |
| DRIVE ON | FAIRCHILD ST | TO 5TH AVE | 30 | 11:53 | .5 | | |
| DRIVE ON | 5TH AVE | TO GARAGE | 30 | 11:54 | .3 | | |

ROUTE 3 FAIRCHILD AFB 10 CU YD VEHICLE

| ACTION | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|
| LEAVE GARAGE | | | | 8:00 | | | |
| DRIVE ON | 5TH AVE | TO FAIRCHILD ST | 30 | 8:01 | .3 | | |
| DRIVE ON | FAIRCHILD ST | TO MITCHELL ST | 30 | 8:02 | .5 | | |
| DRIVE ON | MITCHELL ST | TO POPLAR AVE | 30 | 8:02 | .1 | | |
| PICK UP ON BOTH SIDES | POPLAR AVE | TO S MAPLE ST | 5 | 8:04 | .0 | 3 | 1 |
| PICK UP ON BOTH SIDES | N MAPLE ST | TO | 5 | 8:13 | .1 | 16 | 9 |
| PICK UP ON BOTH SIDES | | TO | 5 | 8:17 | .0 | 6 | 12 |
| DRIVE ON | | TO N MAPLE ST | 15 | 8:17 | .0 | | 12 |
| PICK UP ON BOTH SIDES | N MAPLE ST | TO CEDAR ST | 5 | 8:29 | .1 | 21 | 23 |
| PICK UP ON BOTH SIDES | N MAPLE ST | TO PINE ST | 5 | 8:35 | .1 | 10 | 29 |
| PICK UP ON BOTH SIDES | N MAPLE ST | TO OAK ST | 5 | 8:39 | .1 | 7 | 32 |
| PICK UP ON BOTH SIDES | N MAPLE ST | TO SYCAMORE ST | 5 | 8:43 | .1 | 7 | 36 |
| PICK UP ON BOTH SIDES | N MAPLE ST | TO ELM ST | 5 | 8:44 | .0 | 2 | 37 |
| PICK UP ON BOTH SIDES | ELM ST | TO | 5 | 8:48 | .1 | 7 | 40 |
| PICK UP ON BOTH SIDES | ELM ST | TO | 5 | 9:02 | .1 | 25 | 53 |
| PICK UP ON BOTH SIDES | ELM ST | TO | 5 | 9:11 | .1 | 14 | 61 |
| PICK UP ON BOTH SIDES | ELM ST | TO OAK ST | 5 | 9:14 | .1 | 5 | 63 |
| PICK UP ON BOTH SIDES | ELM ST | TO PINE ST | 5 | 9:18 | .1 | 6 | 66 |
| PICK UP ON BOTH SIDES | ELM ST | TO S MAPLE ST | 5 | 9:27 | .1 | 16 | 75 |
| PICK UP ON BOTH SIDES | S MAPLE ST | TO OAK ST | 5 | 9:29 | .1 | 2 | 76 |
| DRIVE ON | S MAPLE ST | TO ELM ST | 15 | 9:29 | .1 | | 76 |
| PICK UP ON BOTH SIDES | S MAPLE ST | TO CEDAR ST | 5 | 9:32 | .1 | 5 | 78 |
| PICK UP ON BOTH SIDES | CEDAR ST | TO PALM DR | 5 | 9:36 | .1 | 6 | 81 |
| PICK UP ON BOTH SIDES | CEDAR ST | TO | 5 | 9:42 | .1 | 10 | 87 |
| PICK UP ON BOTH SIDES | CEDAR ST | TO PALM DR | 5 | 9:55 | .2 | 24 | 99 |
| PICK UP ON BOTH SIDES | CEDAR ST | TO N MAPLE ST | 5 | 9:58 | .1 | 4 | 101 |
| DRIVE ON | N MAPLE ST | TO POPLAR AVE | 15 | 9:59 | .3 | | 101 |
| DRIVE ON | POPLAR AVE | TO MITCHELL ST | 15 | 9:59 | .0 | | 101 |
| DRIVE ON | MITCHELL ST | TO SUNSET HIGHWAY | 30 | 10:00 | .2 | | 101 |
| DRIVE ON | SUNSET HIGHWAY | TO | 55 | 10:06 | 5.9 | | 101 |
| DRIVE ON | | TO HALLET ROAD | 45 | 10:10 | 3.2 | | 101 |
| DRIVE ON | HALLET ROAD | TO HENRY ROAD | 45 | 10:12 | 1.0 | | 101 |
| DRIVE ON | HENRY ROAD | TO SPOKANE ROAD | 40 | 10:15 | 2.0 | | 101 |
| DRIVE ON | SPOKANE ROAD | TO LAND FILL | 40 | 10:19 | 3.9 | | 101 |
| UNLOAD | | | | 10:19 TO 10:29 | | | |
| LEAVE LAND FILL | | | | 10:29 | | | |
| DRIVE ON | 5TH AVE | TO FAIRCHILD ST | 30 | 10:30 | .3 | | |
| DRIVE ON | FAIRCHILD ST | TO MITCHELL ST | 30 | 10:31 | .5 | | |
| DRIVE ON | MITCHELL ST | TO POPLAR AVE | 30 | 10:31 | .1 | | |
| DRIVE ON | POPLAR AVE | TO S MAPLE ST | 15 | 10:31 | .0 | | |
| DRIVE ON | N MAPLE ST | TO CEDAR ST | 15 | 10:32 | .3 | | |
| DRIVE ON | CEDAR ST | TO PALM DR | 15 | 10:32 | .1 | | |
| PICK UP ON BOTH SIDES | PALM DR | TO | 5 | 10:37 | .1 | 8 | 4 |
| PICK UP ON BOTH SIDES | PALM DR | TO | 5 | 10:42 | .0 | 9 | 8 |
| PICK UP ON BOTH SIDES | PALM DR | TO POPLAR AVE | 5 | 10:46 | .1 | 6 | 11 |
| PICK UP ON BOTH SIDES | PALM DR | TO | 5 | 10:51 | .1 | 8 | 16 |
| PICK UP ON BOTH SIDES | PALM DR | TO | 5 | 10:55 | .1 | 8 | 20 |
| PICK UP ON BOTH SIDES | PALM DR | TO CEDAR ST | 5 | 10:58 | .0 | 4 | 22 |

| ACTION | | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|---|
| DRIVE ON | | CEDAR ST | TO S MAPLE ST | 15 | 10:58 | .1 | | 22 |
| PICK UP ON BOTH SIDES | | S MAPLE ST | TO | 5 | 11:07 | .1 | 16 | 38 |
| PICK UP ON BOTH SIDES | | S MAPLE ST | TO POPLAR AVE | 5 | 11:17 | .1 | 17 | 39 |
| PICK UP ON BOTH SIDES | | POPLAR AVE | TO PALM DR | 5 | 11:19 | .1 | 2 | 40 |
| DRIVE ON | | PALM DR | TO CEDAR ST | 15 | 11:20 | .2 | | 40 |
| DRIVE ON | | CEDAR ST | TO N MAPLE ST | 15 | 11:20 | .1 | | 40 |
| DRIVE ON | | N MAPLE ST | TO PINE ST | 15 | 11:20 | .1 | | 40 |
| PICK UP ON BOTH SIDES | | PINE ST | TO | 5 | 11:27 | .1 | 12 | 46 |
| PICK UP ON BOTH SIDES | | PINE ST | TO ELM ST | 5 | 11:44 | .2 | 30 | 62 |
| DRIVE ON | | ELM ST | TO OAK ST | 15 | 11:45 | .1 | | 62 |
| PICK UP ON BOTH SIDES | | OAK ST | TO SYCAMORE ST | 5 | 11:49 | .1 | 7 | 65 |
| PICK UP ON BOTH SIDES | | SYCAMORE ST | TO | 5 | 11:55 | .1 | 10 | 78 |
| PICK UP ON BOTH SIDES | | SYCAMORE ST | TO N MAPLE ST | 5 | 12:08 | .1 | 23 | 82 |
| BREAK FOR LUNCH | | | | | 12:08 TO 12:38 | | | |
| DRIVE ON | | N MAPLE ST | TO OAK ST | 15 | 12:38 | .1 | | 82 |
| PICK UP ON BOTH SIDES | | OAK ST | TO SYCAMORE ST | 5 | 12:55 | .2 | 28 | 97 |
| DRIVE ON | | SYCAMORE ST | TO N MAPLE ST | 15 | 12:55 | .2 | | 97 |
| DRIVE ON | | N MAPLE ST | TO POPLAR AVE | 15 | 12:57 | .4 | | 97 |
| DRIVE ON | | POPLAR AVE | TO MITCHELL ST | 15 | 12:57 | .0 | | 97 |
| DRIVE ON | | MITCHELL ST | TO SUNSET HIGHWAY | 30 | 12:58 | .2 | | 97 |
| DRIVE ON | | SUNSET HIGHWAY | TO | 55 | 13:04 | 5.9 | | 97 |
| DRIVE ON | | | TO HALLET ROAD | 45 | 13:08 | 3.2 | | 97 |
| DRIVE ON | | HALLET ROAD | TO HENRY ROAD | 45 | 13:10 | 1.0 | | 97 |
| DRIVE ON | | HENRY ROAD | TO SPOKANE ROAD | 40 | 13:13 | 2.0 | | 97 |
| DRIVE ON | | SPOKANE ROAD | TO LAND FILL | 40 | 13:17 | 3.0 | | 97 |
| UNLOAD | | | | | 13:17 TO 13:27 | | | |
| DRIVE ON | | SPOKANE ROAD | TO HENRY ROAD | 40 | 13:32 | 3.0 | | |
| DRIVE ON | | HENRY ROAD | TO HALLET ROAD | 40 | 13:35 | 2.0 | | |
| DRIVE ON | | HALLET ROAD | TO | 45 | 13:36 | 1.0 | | |
| DRIVE ON | | | TO SUNSET HIGHWAY | 45 | 13:40 | 3.2 | | |
| DRIVE ON | | SUNSET HIGHWAY | TO MITCHELL ST | 55 | 13:47 | 5.9 | | |
| DRIVE ON | | MITCHELL ST | TO FAIRCHILD ST | 30 | 13:47 | .1 | | |
| DRIVE ON | | FAIRCHILD ST | TO 5TH AVE | 30 | 13:48 | .5 | | |
| DRIVE ON | | 5TH AVE | TO GARAGE | 30 | 13:49 | .3 | | |

ROUTE 4 FAIRCHILD AFB 10 CU YD VEHICLE

| ACTION | | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|---|
| LEAVE GARAGE | | | | | 8:00 | | | |
| DRIVE ON | | 5TH AVE | TO FAIRCHILD ST | 30 | 8:01 | .3 | | |
| DRIVE ON | | FAIRCHILD ST | TO 9TH AVE | 30 | 8:01 | .4 | | |
| DRIVE ON | | 9TH AVE | TO ELM ST | 15 | 8:03 | .3 | | |
| DRIVE ON | | ELM ST | TO OAK ST | 15 | 8:04 | .2 | | |
| DRIVE ON | | OAK ST | TO LINDEN ST | 15 | 8:04 | .1 | | |
| PICK UP ON | BOTH SIDES | OAK ST | TO S MAPLE ST | 5 | 8:14 | .1 | 17 | 8 |
| PICK UP ON | BOTH SIDES | OAK ST | TO 9TH AVE | 5 | 8:16 | .1 | 2 | 9 |
| PICK UP ON | BOTH SIDES | 9TH AVE | TO ELM ST | 5 | 8:17 | .0 | 2 | 10 |
| DRIVE ON | | 9TH AVE | TO OAK ST | 15 | 8:18 | .0 | | 10 |
| PICK UP ON | BOTH SIDES | 9TH AVE | TO LINDEN ST | 5 | 8:23 | .1 | 8 | 15 |
| PICK UP ON | BOTH SIDES | LINDEN ST | TO S MAPLE ST | 5 | 8:28 | .1 | 8 | 19 |
| PICK UP ON | BOTH SIDES | LINDEN ST | TO WALNUT ST | 5 | 8:40 | .2 | 21 | 38 |
| PICK UP ON | BOTH SIDES | LINDEN ST | TO OAK ST | 5 | 8:46 | .1 | 9 | 34 |
| DRIVE ON | | OAK ST | TO S MAPLE ST | 15 | 8:47 | .1 | | 34 |
| PICK UP ON | BOTH SIDES | S MAPLE ST | TO WALNUT ST | 5 | 8:50 | .1 | 6 | 37 |
| PICK UP ON | BOTH SIDES | S MAPLE ST | TO LINDEN ST | 5 | 8:54 | .1 | 5 | 40 |
| DRIVE ON | | S MAPLE ST | TO WALNUT ST | 15 | 8:54 | .1 | | 40 |
| PICK UP ON | BOTH SIDES | WALNUT ST | TO LINDEN ST | 5 | 9:02 | .1 | 12 | 46 |
| DRIVE ON | | WALNUT ST | TO S MAPLE ST | 15 | 9:02 | .1 | | 46 |
| DRIVE ON | | S MAPLE ST | TO ELM ST | 15 | 9:03 | .1 | | 46 |
| PICK UP ON | BOTH SIDES | ELM ST | TO BONG ST | 5 | 9:06 | .1 | 5 | 49 |
| DRIVE ON | | BONG ST | TO 6TH AVE | 30 | 9:06 | .3 | | 49 |
| DRIVE ON | | 6TH AVE | TO CASTLE ST | 30 | 9:07 | .2 | | 49 |
| DRIVE ON | | CASTLE ST | TO MAINE AVE | 30 | 9:08 | .8 | | 49 |
| DRIVE ON | | MAINE AVE | TO OFFUTT DR | 30 | 9:08 | .0 | | 49 |
| DRIVE ON | | MAINE AVE | TO GRAHAM RD | 15 | 9:10 | .3 | | 49 |
| DRIVE ON | | GRAHAM RD | TO 43RD ST | 30 | 9:10 | .2 | | 49 |
| PICK UP ON | BOTH SIDES | 43RD ST | TO ARTILLERY CIRCLE | 5 | 9:12 | .0 | 2 | 50 |
| PICK UP ON | BOTH SIDES | 43RD ST | TO ARTILLERY CIRCLE | 5 | 9:16 | .1 | 6 | 53 |
| PICK UP ON | BOTH SIDES | ARTILLERY CIRCLE | TO | 5 | 9:19 | .1 | 5 | 55 |
| PICK UP ON | BOTH SIDES | ARTILLERY CIRCLE | TO 43RD ST | 5 | 9:23 | .1 | 7 | 59 |
| DRIVE ON | | 43RD ST | TO ARTILLERY CIRCLE | 15 | 9:24 | .1 | | 59 |
| PICK UP ON | BOTH SIDES | 43RD ST | TO | 5 | 9:25 | .0 | 3 | 61 |
| PICK UP ON | BOTH SIDES | 43RD ST | TO FIRST ST | 5 | 9:28 | .0 | 4 | 63 |
| PICK UP ON | BOTH SIDES | FIRST ST | TO GRAHAM RD | 5 | 9:41 | .2 | 21 | 74 |
| DRIVE ON | | GRAHAM RD | TO MAINE AVE | 30 | 9:41 | .2 | | 74 |
| DRIVE ON | | MAINE AVE | TO OFFUTT DR | 15 | 9:42 | .3 | | 74 |
| DRIVE ON | | MAINE AVE | TO CASTLE ST | 30 | 9:43 | .0 | | 74 |
| DRIVE ON | | CASTLE ST | TO FAIRCHILD ST | 30 | 9:44 | .9 | | 74 |
| DRIVE ON | | FAIRCHILD ST | TO MITCHELL ST | 30 | 9:45 | .3 | | 74 |
| DRIVE ON | | MITCHELL ST | TO SUNSET HIGHWAY | 30 | 9:45 | .1 | | 74 |
| DRIVE ON | | SUNSET HIGHWAY | TO | 55 | 9:52 | 5.9 | | 74 |
| DRIVE ON | | | TO HALLET ROAD | 45 | 9:56 | 3.2 | | 74 |
| DRIVE ON | | HALLET ROAD | TO HENRY ROAD | 45 | 9:57 | 1.0 | | 74 |
| DRIVE ON | | HENRY ROAD | TO SPOKANE ROAD | 40 | 10:00 | 2.0 | | 74 |
| DRIVE ON | | SPOKANE ROAD | TO LAND FILL | 40 | 10:05 | 3.0 | | 74 |
| UNLOAD | | | | | 10:05 TO 10:15 | | | |

| ACTION | | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|---|
| LEAVE LAND FILL | | | | | 10:15 | | | |
| DRIVE ON | | 5TH AVE | TO FAIRCHILD ST | 30 | 10:15 | .3 | | |
| DRIVE ON | | FAIRCHILD ST | TO MARCH ST | 30 | 10:16 | .3 | | |
| DRIVE ON | | MARCH ST | TO OFFUTT DR | 30 | 10:16 | .3 | | |
| DRIVE ON | | OFFUTT DR | TO GRAHAM RD | 30 | 10:17 | .5 | | |
| DRIVE ON | | GRAHAM RD | TO UTAH DR NORTH | 30 | 10:18 | .2 | | |
| PICK UP ON | BOTH SIDES | UTAH DR NORTH | TO IDAHO ST | 5 | 10:19 | .0 | 2 | 1 |
| PICK UP ON | BOTH SIDES | UTAH DR NORTH | TO OREGON DR | 5 | 10:28 | .1 | 14 | 8 |
| PICK UP ON | BOTH SIDES | OREGON DR | TO | 5 | 10:40 | .2 | 20 | 18 |
| PICK UP ON | BOTH SIDES | OREGON DR | TO IDAHO ST | 5 | 10:41 | .0 | 2 | 19 |
| DRIVE ON | | UTAH DR NORTH | TO OREGON DR | 15 | 10:42 | .1 | | 19 |
| PICK UP ON | BOTH SIDES | UTAH DR NORTH | TO UTAH DR WEST | 5 | 10:45 | .0 | 6 | 22 |
| PICK UP ON | BOTH SIDES | UTAH DR WEST | TO NEVADA ST | 5 | 10:51 | .0 | 10 | 27 |
| PICK UP ON | BOTH SIDES | UTAH DR WEST | TO IOWA ST | 5 | 10:54 | .0 | 6 | 31 |
| PICK UP ON | BOTH SIDES | IOWA ST | TO IDAHO ST | 5 | 11:08 | .2 | 24 | 43 |
| DRIVE ON | | IDAHO ST | TO NEVADA ST | 15 | 11:08 | .1 | | 43 |
| PICK UP ON | BOTH SIDES | NEVADA ST | TO UTAH DR WEST | 5 | 11:24 | .2 | 26 | 56 |
| DRIVE ON | | UTAH DR WEST | TO IOWA ST | 15 | 11:24 | .0 | | 56 |
| PICK UP ON | BOTH SIDES | UTAH DR WEST | TO UTAH DR SOUTH | 5 | 11:31 | .1 | 12 | 63 |
| PICK UP ON | BOTH SIDES | UTAH DR SOUTH | TO IDAHO ST | 5 | 11:43 | .1 | 20 | 73 |
| PICK UP ON | BOTH SIDES | UTAH DR SOUTH | TO GRAHAM RD | 5 | 11:44 | .0 | 2 | 74 |
| DRIVE ON | | UTAH DR SOUTH | TO IDAHO ST | 15 | 11:44 | .0 | | 74 |
| PICK UP ON | BOTH SIDES | IDAHO ST | TO IOWA ST | 5 | 11:48 | .1 | 6 | 77 |
| PICK UP ON | BOTH SIDES | IDAHO ST | TO NEVADA ST | 5 | 11:50 | .1 | 4 | 79 |
| PICK UP ON | BOTH SIDES | IDAHO ST | TO OREGON DR | 5 | 11:54 | .1 | 6 | 82 |
| DRIVE ON | | UTAH DR NORTH | TO GRAHAM RD | 15 | 11:54 | .0 | | 82 |
| DRIVE ON | | GRAHAM RD | TO SUNSET HIGHWAY | 30 | 11:56 | .8 | | 82 |
| DRIVE ON | | SUNSET HIGHWAY | TO | 55 | 12:03 | 7.0 | | 82 |
| BREAK FOR LUNCH | | | | | 12:03 TO 12:33 | | | |
| DRIVE ON | | | TO HALLET ROAD | 45 | 12:38 | 3.2 | | 82 |
| DRIVE ON | | HALLET ROAD | TO HENRY ROAD | 45 | 12:39 | 1.0 | | 82 |
| DRIVE ON | | HENRY ROAD | TO SPOKANE ROAD | 40 | 12:42 | 2.0 | | 82 |
| DRIVE ON | | SPOKANE ROAD | TO LAND FILL | 40 | 12:47 | 3.0 | | 82 |
| UNLOAD | | | | | 12:47 TO 12:57 | | | |
| DRIVE ON | | SPOKANE ROAD | TO HENRY ROAD | 40 | 13:01 | 3.0 | | |
| DRIVE ON | | HENRY ROAD | TO HALLET ROAD | 40 | 13:04 | 2.0 | | |
| DRIVE ON | | HALLET ROAD | TO | 45 | 13:05 | 1.0 | | |
| DRIVE ON | | | TO SUNSET HIGHWAY | 45 | 13:10 | 3.2 | | |
| DRIVE ON | | SUNSET HIGHWAY | TO MITCHELL ST | 55 | 13:16 | 5.9 | | |
| DRIVE ON | | MITCHELL ST | TO FAIRCHILD ST | 30 | 13:16 | .1 | | |
| DRIVE ON | | FAIRCHILD ST | TO 5TH AVE | 30 | 13:17 | .5 | | |
| DRIVE ON | | 5TH AVE | TO GARAGE | 30 | 13:18 | .3 | | |

ROUTE 5 FAIRCHILD AFB 10 CU YD VEHICLE

| ACTION | | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|---|
| LEAVE GARAGE | | | | | 8:00 | | | |
| DRIVE ON | | 5TH AVE | TO FAIRCHILD ST | 30 | 8:01 | .3 | | |
| DRIVE ON | | FAIRCHILD ST | TO MITCHELL ST | 30 | 8:02 | .5 | | |
| DRIVE ON | | MITCHELL ST | TO SUNSET HIGHWAY | 30 | 8:02 | .1 | | |
| DRIVE ON | | SUNSET HIGHWAY | TO | 55 | 8:08 | 5.9 | | |
| DRIVE ON | | | TO MCCRORY AVENUE | 45 | 8:10 | 1.4 | | |
| DRIVE ON | | MCCRORY AVENUE | TO FRIES STREET | 15 | 8:11 | .1 | | |
| PICK UP ON | BOTH SIDES | MCCRORY AVENUE | TO COMMANDERS DRIVE | 5 | 8:18 | .1 | 12 | 6 |
| DRIVE ON | | COMMANDERS DRIVE | TO | 15 | 8:18 | .0 | | 6 |
| DRIVE ON | | | TO | 15 | 8:19 | .0 | | 6 |
| PICK UP ON | BOTH SIDES | | TO | 5 | 8:20 | .0 | 2 | 7 |
| PICK UP ON | | | TO | 5 | 8:21 | .0 | 1 | 7 |
| PICK UP ON | | | TO | 5 | 8:22 | .0 | 1 | 8 |
| DRIVE ON | | | TO | 15 | 8:22 | .0 | | 8 |
| PICK UP ON | BOTH SIDES | | TO COMMANDERS DRIVE | 5 | 8:23 | .0 | 2 | 9 |
| PICK UP ON | BOTH SIDES | COMMANDERS DRIVE | TO | 5 | 8:27 | .1 | 6 | 12 |
| PICK UP ON | BOTH SIDES | | TO | 5 | 8:32 | .1 | 7 | 16 |
| DRIVE ON | | | TO COMMANDERS DRIVE | 15 | 8:32 | .1 | | 16 |
| PICK UP ON | BOTH SIDES | COMMANDERS DRIVE | TO | 5 | 8:34 | .0 | 3 | 17 |
| PICK UP ON | BOTH SIDES | COMMANDERS DRIVE | TO | 5 | 8:36 | .1 | 2 | 18 |
| DRIVE ON | | COMMANDERS DRIVE | TO BUSH STREET | 15 | 8:36 | .1 | | 18 |
| DRIVE ON | | BUSH STREET | TO JORDAN AVENUE | 15 | 8:36 | .1 | | 18 |
| PICK UP ON | BOTH SIDES | JORDAN AVENUE | TO FRIES STREET | 5 | 8:48 | .1 | 20 | 29 |
| DRIVE ON | | FRIES STREET | TO DEL VECCHIO AVENUE | 15 | 8:48 | .1 | | 29 |
| PICK UP ON | BOTH SIDES | DEL VECCHIO AVENUE | TO | 5 | 8:53 | .1 | 8 | 33 |
| PICK UP ON | BOTH SIDES | DEL VECCHIO AVENUE | TO COMMANDERS DRIVE | 5 | 8:59 | .1 | 10 | 38 |
| DRIVE ON | | DEL VECCHIO AVENUE | TO FRIES STREET | 15 | 8:59 | .1 | | 38 |
| DRIVE ON | | FRIES STREET | TO MCCRORY AVENUE | 15 | 9:00 | .1 | | 38 |
| DRIVE ON | | MCCRORY AVENUE | TO | 15 | 9:00 | .1 | | 38 |
| DRIVE ON | | | TO HALLET ROAD | 45 | 9:03 | 1.8 | | 38 |
| DRIVE ON | | HALLET ROAD | TO HENRY ROAD | 45 | 9:04 | 1.0 | | 38 |
| DRIVE ON | | HENRY ROAD | TO ARMSTRONG DRIVE | 40 | 9:04 | .0 | | 38 |
| PICK UP ON | BOTH SIDES | ARMSTRONG DRIVE | TO FANAZICK DRIVE | 5 | 9:06 | .1 | 2 | 39 |
| PICK UP ON | BOTH SIDES | ARMSTRONG DRIVE | TO | 5 | 9:10 | .1 | 8 | 43 |
| PICK UP ON | BOTH SIDES | ARMSTRONG DRIVE | TO JOHN GAY DRIVE | 5 | 9:24 | .2 | 22 | 54 |
| PICK UP ON | BOTH SIDES | JOHN GAY DRIVE | TO EICHENBURGER PLACE | 5 | 9:27 | .1 | 4 | 56 |
| PICK UP ON | BOTH SIDES | EICHENBURGER PLACE | TO WORTMAN PLACE | 5 | 9:29 | .0 | 3 | 58 |
| PICK UP ON | BOTH SIDES | EICHENBURGER PLACE | TO MALSTROM DRIVE | 5 | 9:33 | .1 | 5 | 61 |
| DRIVE ON | | MALSTROM DRIVE | TO HARDER PLACE | 15 | 9:33 | .1 | | 61 |
| PICK UP ON | BOTH SIDES | HARDER PLACE | TO WORTMAN PLACE | 5 | 9:41 | .1 | 14 | 68 |
| PICK UP ON | BOTH SIDES | WORTMAN PLACE | TO EICHENBURGER PLACE | 5 | 9:45 | .1 | 5 | 70 |
| DRIVE ON | | WORTMAN PLACE | TO HARDER PLACE | 15 | 9:45 | .1 | | 70 |
| PICK UP ON | BOTH SIDES | WORTMAN PLACE | TO MALSTROM DRIVE | 5 | 9:50 | .1 | 7 | 74 |
| PICK UP ON | BOTH SIDES | MALSTROM DRIVE | TO JOHN GAY DRIVE | 5 | 9:54 | .1 | 6 | 77 |
| PICK UP ON | BOTH SIDES | JOHN GAY DRIVE | TO SMITH DRIVE | 5 | 9:55 | .0 | 3 | 79 |
| PICK UP ON | BOTH SIDES | JOHN GAY DRIVE | TO ARMSTRONG DRIVE | 5 | 9:58 | .0 | 3 | 80 |
| DRIVE ON | | JOHN GAY DRIVE | TO HENRY ROAD | 15 | 9:59 | .3 | | 80 |
| DRIVE ON | | HENRY ROAD | TO SPOKANE ROAD | 40 | 10:01 | 1.8 | | 80 |

| ACTION | | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|---|
| DRIVE ON | | SPOKANE ROAD | TO LAND FILL | 40 | 10:06 | 3.0 | | 80 |
| UNLOAD | | | | | 10:06 TO 10:16 | | | |
| LEAVE LAND FILL | | | | | 10:16 | | | |
| DRIVE ON | | 5TH AVE | TO FAIRCHILD ST | 30 | 10:17 | .3 | | |
| DRIVE ON | | FAIRCHILD ST | TO MITCHELL ST | 30 | 10:18 | .5 | | |
| DRIVE ON | | MITCHELL ST | TO SUNSET HIGHWAY | 30 | 10:18 | .1 | | |
| DRIVE ON | | SUNSET HIGHWAY | TO | 55 | 10:24 | 5.9 | | |
| DRIVE ON | | | TO HALLET ROAD | 45 | 10:29 | 3.2 | | |
| DRIVE ON | | HALLET ROAD | TO HENRY ROAD | 45 | 10:30 | 1.0 | | |
| DRIVE ON | | HENRY ROAD | TO ARMSTRONG DRIVE | 40 | 10:30 | .0 | | |
| DRIVE ON | | ARMSTRONG DRIVE | TO FANAZICK DRIVE | 15 | 10:30 | .1 | | |
| PICK UP ON BOTH SIDES | | FANAZICK DRIVE | TO SMITH DRIVE | 5 | 10:33 | .1 | 4 | 2 |
| PICK UP ON BOTH SIDES | | FANAZICK DRIVE | TO JOHN GAY DRIVE | 5 | 10:44 | .1 | 20 | 12 |
| PICK UP ON BOTH SIDES | | JOHN GAY DRIVE | TO HENRY ROAD | 5 | 10:47 | .1 | 4 | 14 |
| DRIVE ON | | JOHN GAY DRIVE | TO FANAZICK DRIVE | 15 | 10:47 | .1 | | 14 |
| PICK UP ON BOTH SIDES | | JOHN GAY DRIVE | TO MALSTROM DRIVE | 5 | 11:02 | .2 | 24 | 26 |
| DRIVE ON | | JOHN GAY DRIVE | TO SMITH DRIVE | 15 | 11:02 | .0 | | 26 |
| PICK UP ON BOTH SIDES | | SMITH DRIVE | TO BURNS PLACE | 5 | 11:04 | .0 | 4 | 29 |
| PICK UP ON BOTH SIDES | | SMITH DRIVE | TO BURNS PLACE | 5 | 11:14 | .1 | 16 | 37 |
| PICK UP ON BOTH SIDES | | SMITH DRIVE | TO FANAZICK DRIVE | 5 | 11:16 | .0 | 4 | 39 |
| DRIVE ON | | SMITH DRIVE | TO BURNS PLACE | 15 | 11:17 | .0 | | 39 |
| PICK UP ON BOTH SIDES | | BURNS PLACE | TO | 5 | 11:22 | .1 | 8 | 43 |
| PICK UP ON BOTH SIDES | | BURNS PLACE | TO | 5 | 11:24 | .0 | 4 | 45 |
| PICK UP ON BOTH SIDES | | BURNS PLACE | TO SMITH DRIVE | 5 | 11:32 | .1 | 14 | 52 |
| DRIVE ON | | SMITH DRIVE | TO JOHN GAY DRIVE | 15 | 11:32 | .0 | | 52 |
| DRIVE ON | | JOHN GAY DRIVE | TO MALSTROM DRIVE | 15 | 11:33 | .0 | | 52 |
| DRIVE ON | | MALSTROM DRIVE | TO HORTMAN PLACE | 15 | 11:33 | .1 | | 52 |
| PICK UP ON BOTH SIDES | | MALSTROM DRIVE | TO | 5 | 11:43 | .1 | 17 | 61 |
| PICK UP ON BOTH SIDES | | MALSTROM DRIVE | TO | 5 | 11:45 | .0 | 3 | 63 |
| PICK UP ON BOTH SIDES | | MALSTROM DRIVE | TO HARDER PLACE | 5 | 11:46 | .0 | 2 | 64 |
| PICK UP ON BOTH SIDES | | MALSTROM DRIVE | TO EICHENBURGER PLACE | 5 | 11:50 | .1 | 5 | 66 |
| PICK UP ON BOTH SIDES | | MALSTROM DRIVE | TO | 5 | 11:53 | .1 | 6 | 69 |
| PICK UP ON BOTH SIDES | | MALSTROM DRIVE | TO | 5 | 11:55 | .0 | 3 | 71 |
| PICK UP ON BOTH SIDES | | MALSTROM DRIVE | TO MITCHELL PLACE | 5 | 11:56 | .0 | 2 | 72 |
| PICK UP ON BOTH SIDES | | MALSTROM DRIVE | TO MITCHELL PLACE | 5 | 11:58 | .0 | 2 | 73 |
| PICK UP ON BOTH SIDES | | MITCHELL PLACE | TO MALSTROM DRIVE | 5 | 12:00 | .1 | 3 | 75 |
| DRIVE ON | | MALSTROM DRIVE | TO | 15 | 12:00 | .0 | | 75 |
| BREAK FOR LUNCH | | | | | 12:00 TO 12:30 | | | |
| PICK UP ON | | JOHN GAY DRIVE | TO EICHENBURGER PLACE | 5 | 12:31 | .0 | 1 | 75 |
| DRIVE ON | | JOHN GAY DRIVE | TO HENRY ROAD | 15 | 12:33 | .4 | | 75 |
| DRIVE ON | | HENRY ROAD | TO SPOKANE ROAD | 40 | 12:35 | 1.8 | | 75 |
| DRIVE ON | | SPOKANE ROAD | TO LAND FILL | 40 | 12:40 | 3.0 | | 75 |
| UNLOAD | | | | | 12:40 TO 12:50 | | | |
| DRIVE ON | | SPOKANE ROAD | TO HENRY ROAD | 40 | 12:54 | 3.0 | | |
| DRIVE ON | | HENRY ROAD | TO HALLET ROAD | 40 | 12:57 | 2.0 | | |
| DRIVE ON | | HALLET ROAD | TO | 45 | 12:59 | 1.0 | | |
| DRIVE ON | | | TO SUNSET HIGHWAY | 45 | 13:03 | 3.2 | | |
| DRIVE ON | | SUNSET HIGHWAY | TO MITCHELL ST | 55 | 13:09 | 5.9 | | |
| DRIVE ON | | MITCHELL ST | TO FAIRCHILD ST | 30 | 13:10 | .1 | | |
| DRIVE ON | | FAIRCHILD ST | TO 5TH AVE | 30 | 13:11 | .5 | | |

| ACTION | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|
| DRIVE ON | 5TH AVE | TO GARAGE | 30 | 13:11 | .3 | | |

# APPENDIX B

# ORIGINAL ROUTE MAPS

# FAIRCHILD AFB, WASH.

ROUTE 1 TRIP 1

10 CU YD VEHICLE

TRAVEL

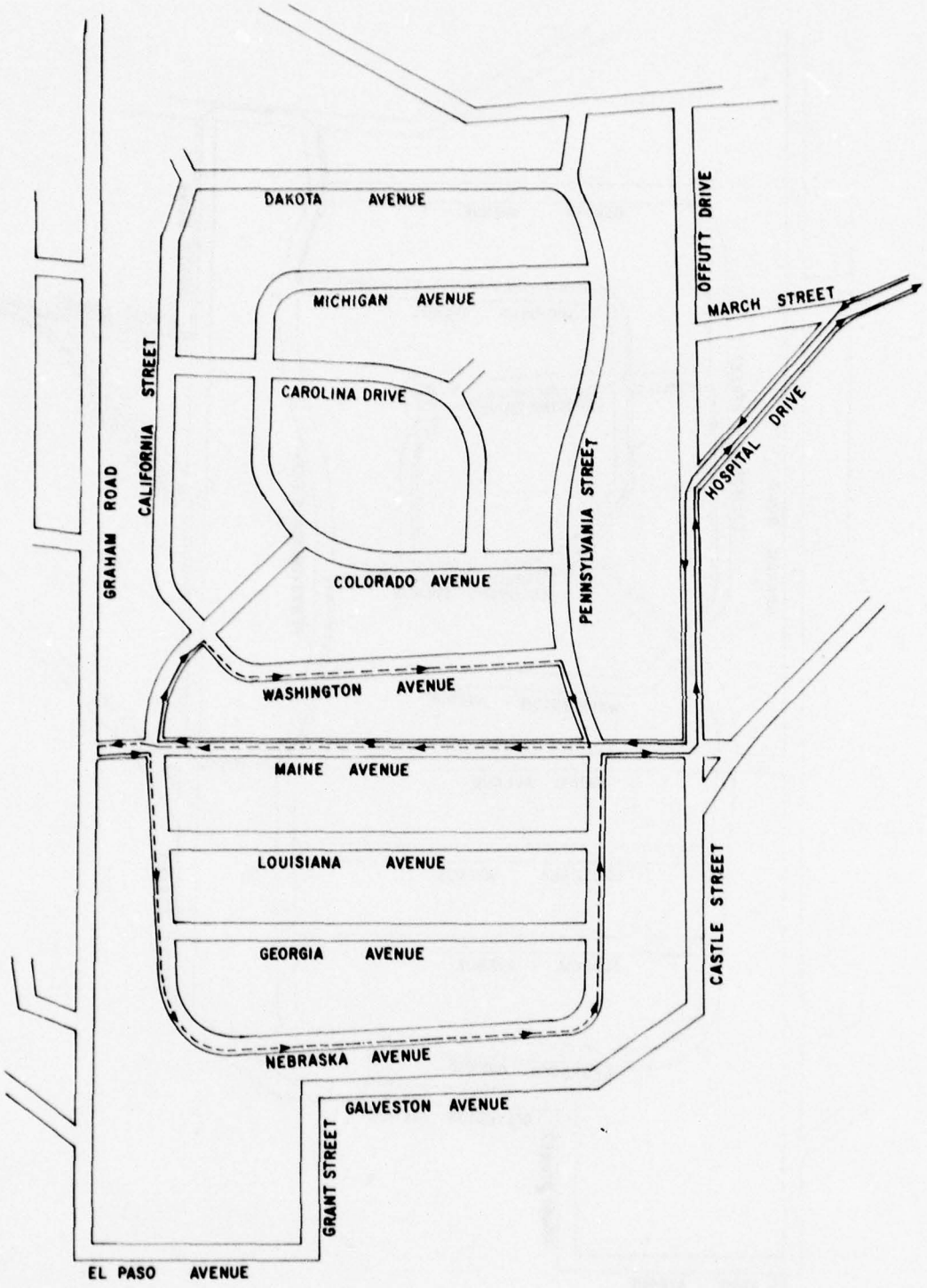
COLLECT BOTH SIDES

COLLECT RIGHT SIDE

## FAIRCHILD AFB, WASH.

ROUTE 1 TRIP 2
10 CU YD VEHICLE

TRAVEL
COLLECT BOTH SIDES
COLLECT RIGHT SIDE




# FAIRCHILD AFB, WASH.

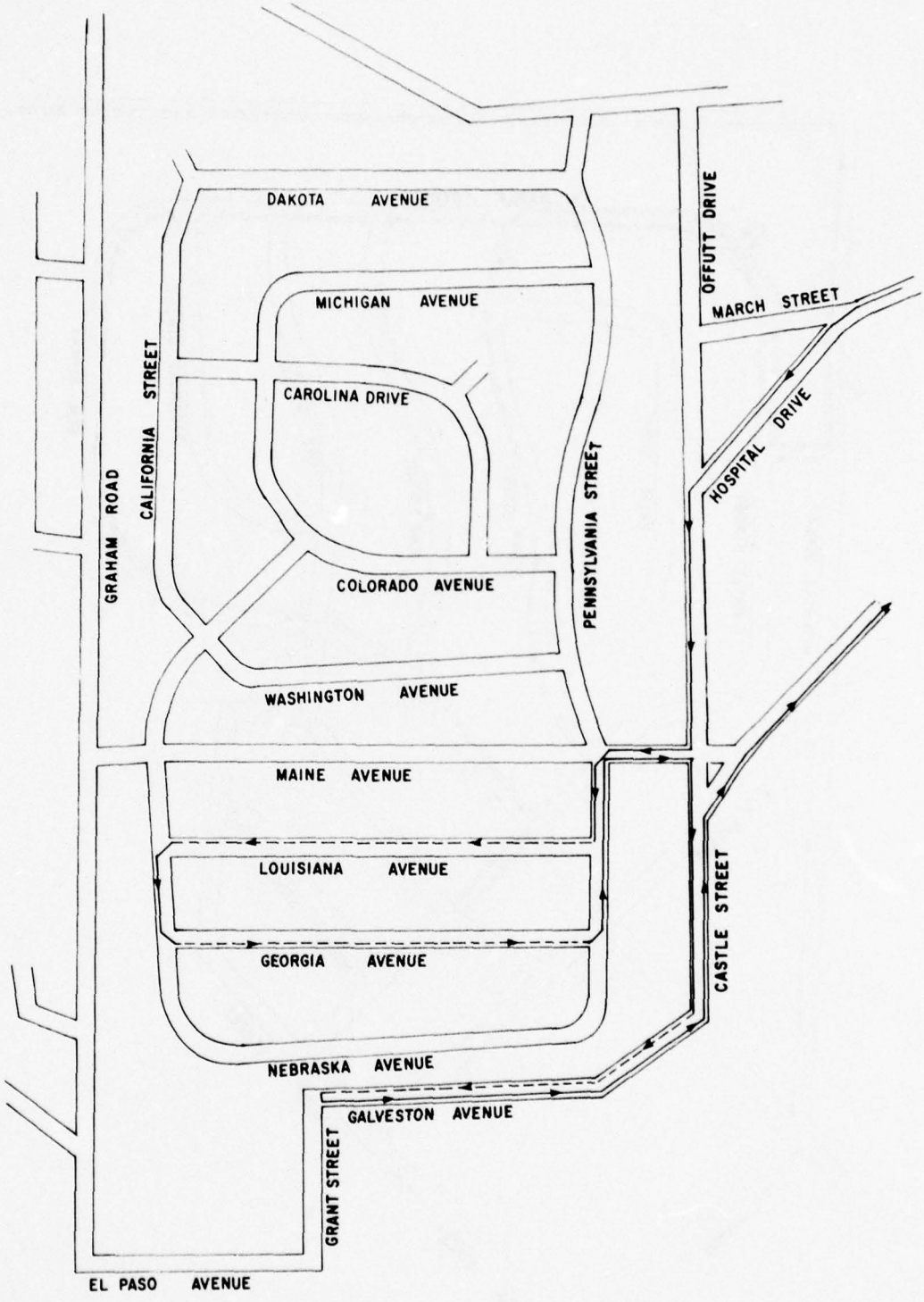
ROUTE 2 TRIP 1

10 CU YD VEHICLE

TRAVEL

COLLECT BOTH SIDES

COLLECT RIGHT SIDE




**FAIRCHILD AFB, WASH.**

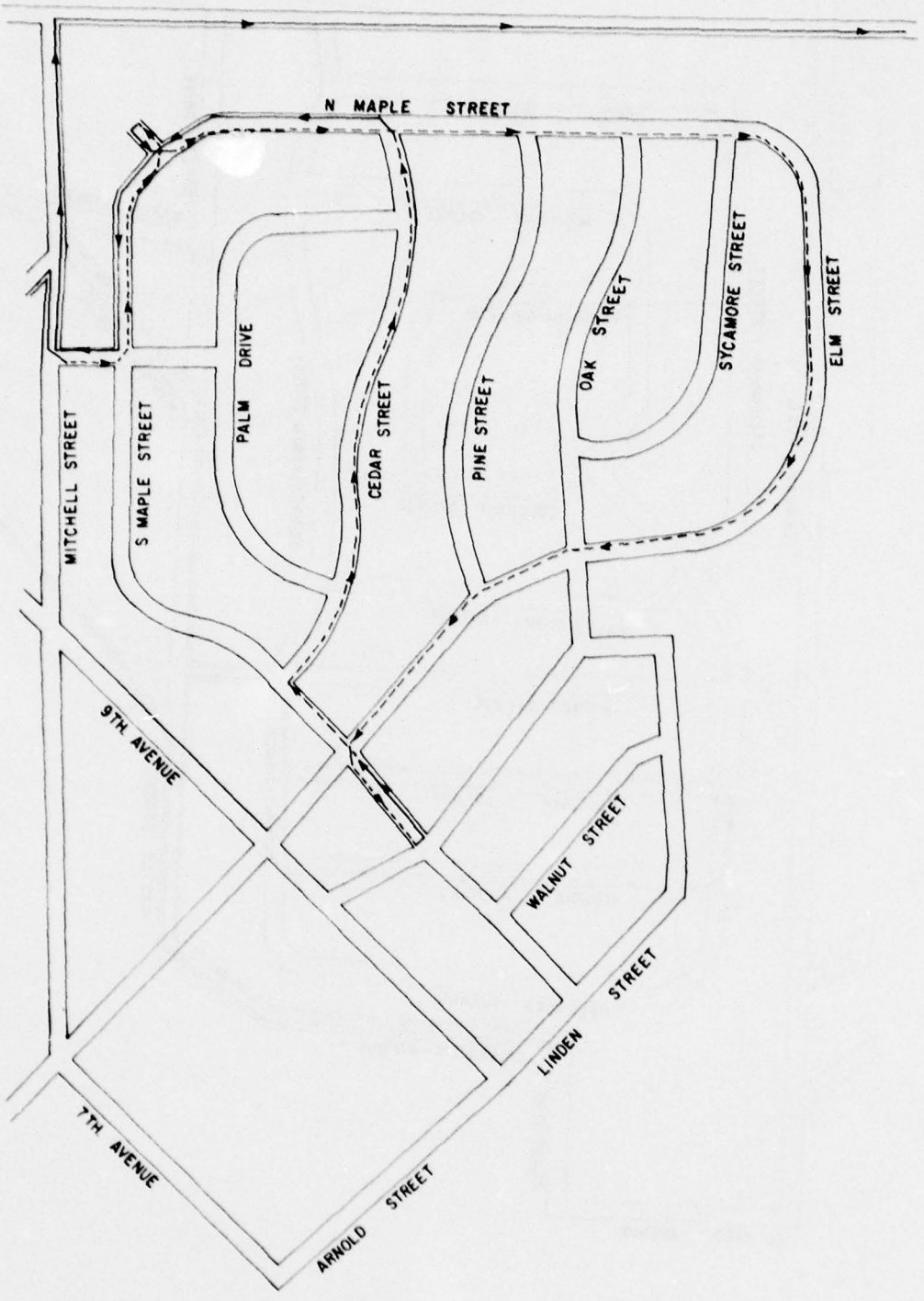
ROUTE 2 TRIP 2

10 CU YD VEHICLE

TRAVEL

COLLECT BOTH SIDES

COLLECT RIGHT SIDE




FAIRCHILD AFB, WASH.

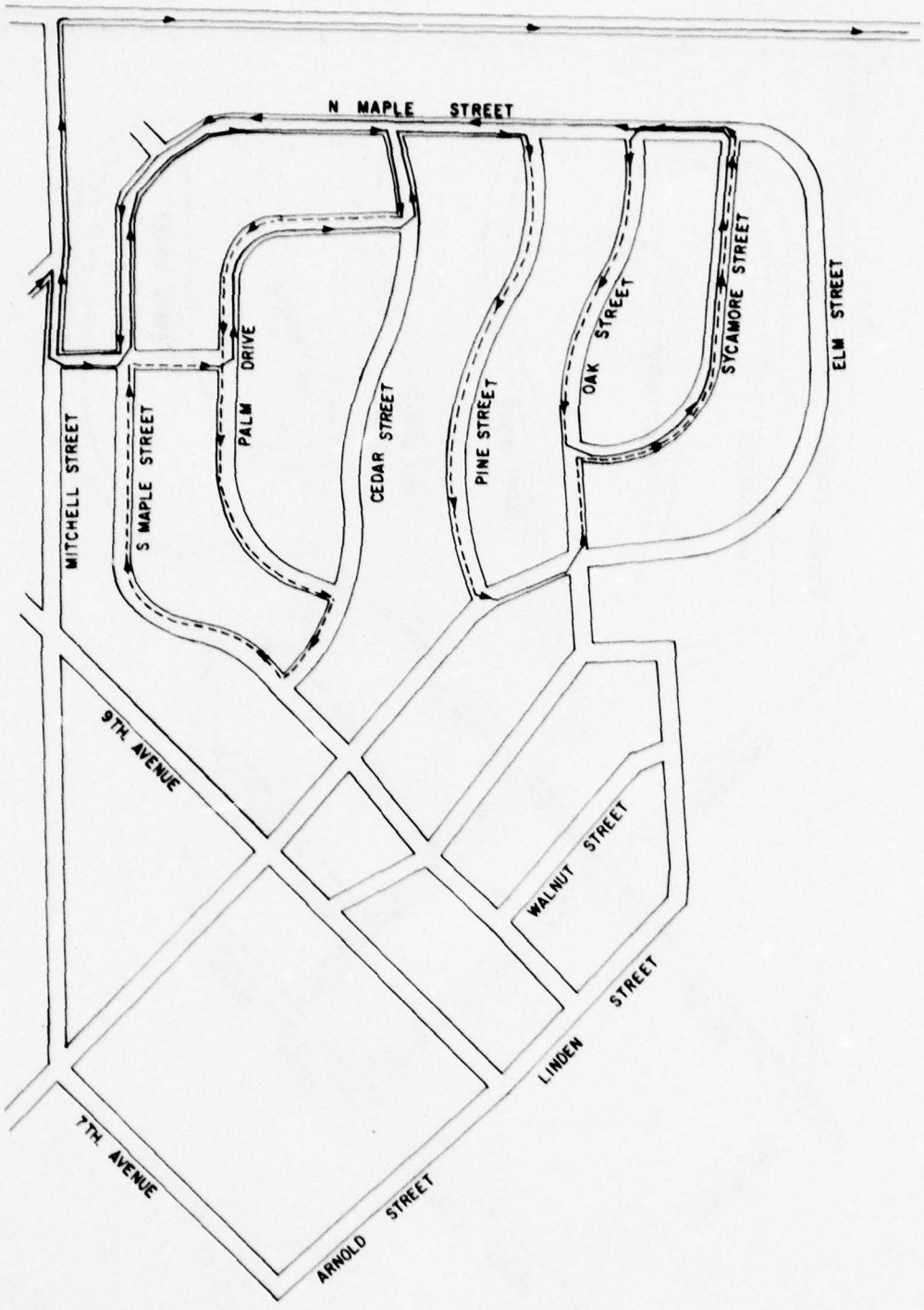
ROUTE 3 TRIP 1

10 CU YD VEHICLE

TRAVEL

COLLECT BOTH SIDES

COLLECT RIGHT SIDE




**FAIRCHILD AFB, WASH.**

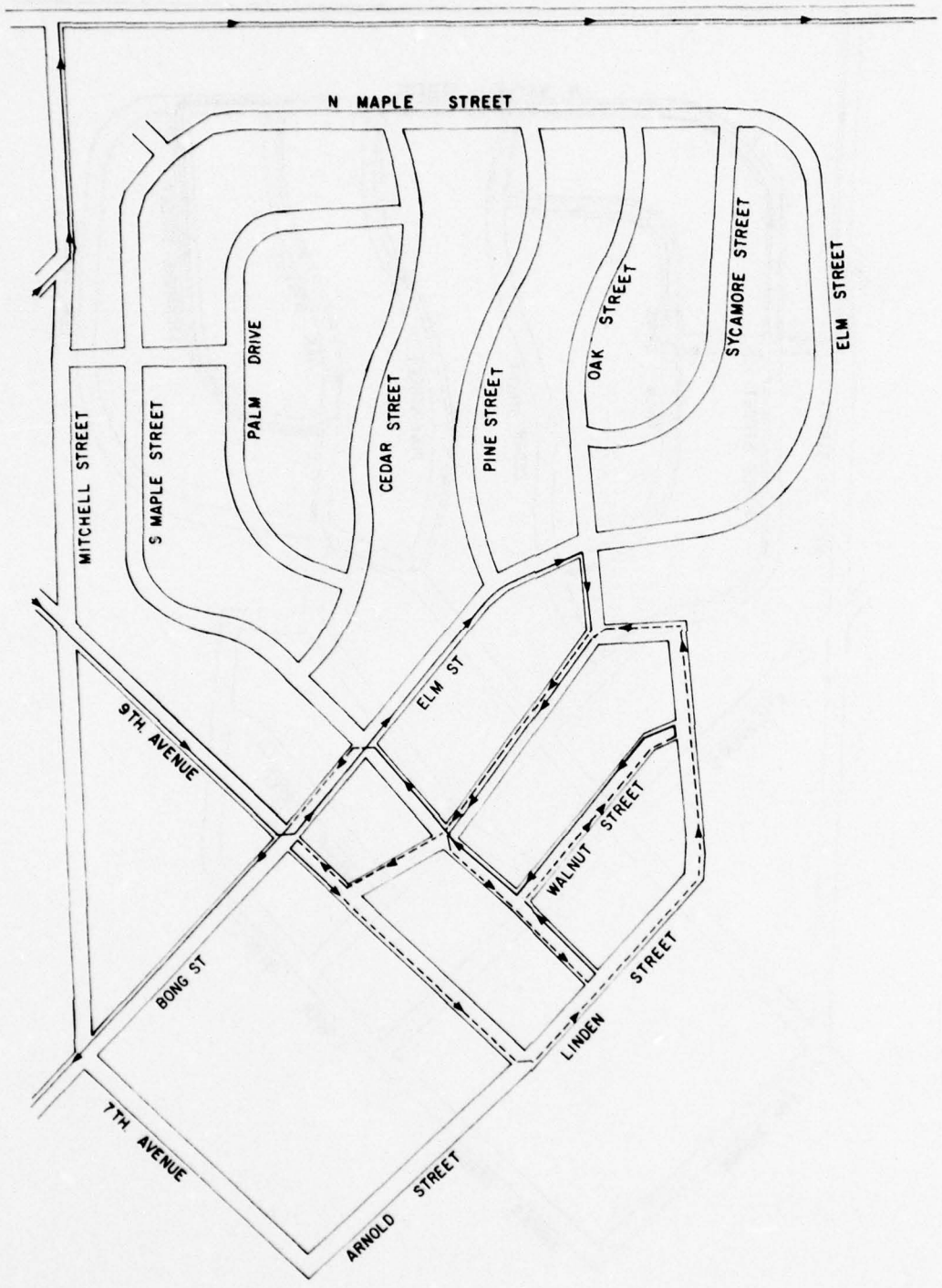
ROUTE 3 TRIP 2

10 CU YD VEHICLE

TRAVEL

COLLECT BOTH SIDES

COLLECT RIGHT SIDE




**FAIRCHILD AFB, WASH.**

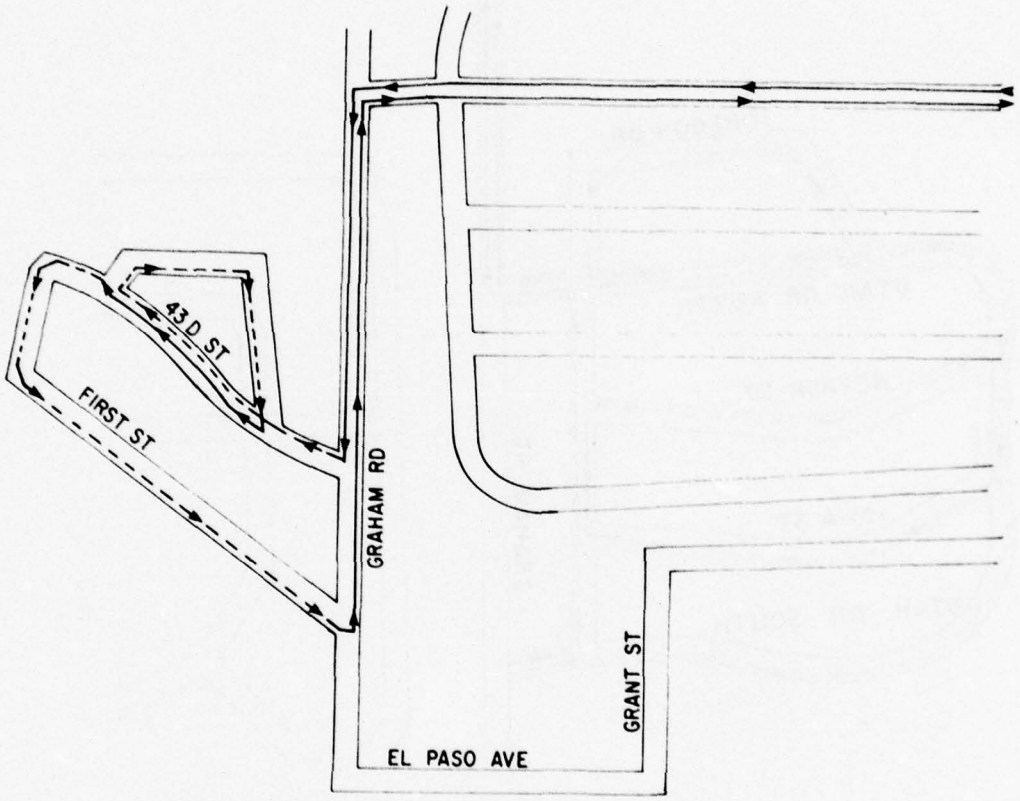
ROUTE 4 TRIP 1

10 CU YD VEHICLE

TRAVEL

COLLECT BOTH SIDES

COLLECT RIGHT SIDE




# FAIRCHILD AFB, WASH.

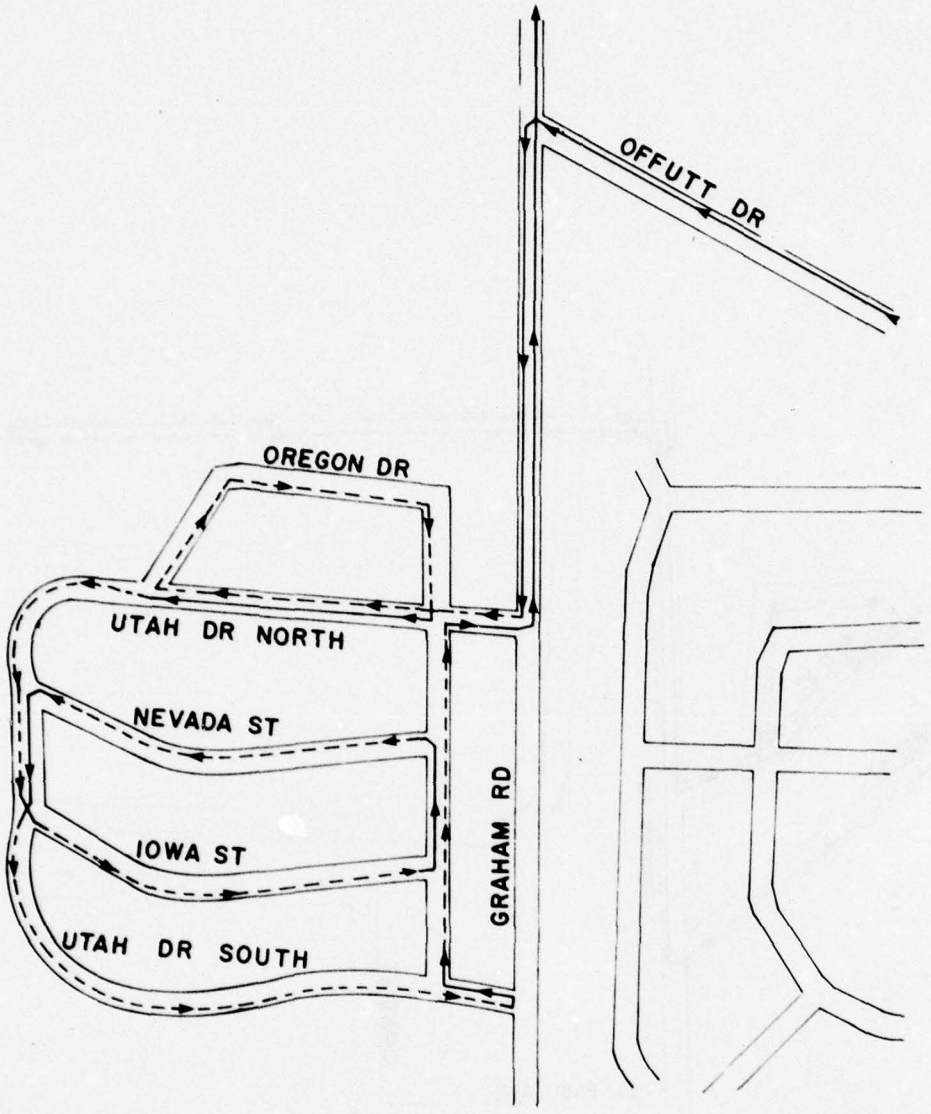
ROUTE 4 TRIP 1

10 CU YD VEHICLE

TRAVEL

COLLECT BOTH SIDES

COLLECT RIGHT SIDE




# FAIRCHILD AFB, WASH.

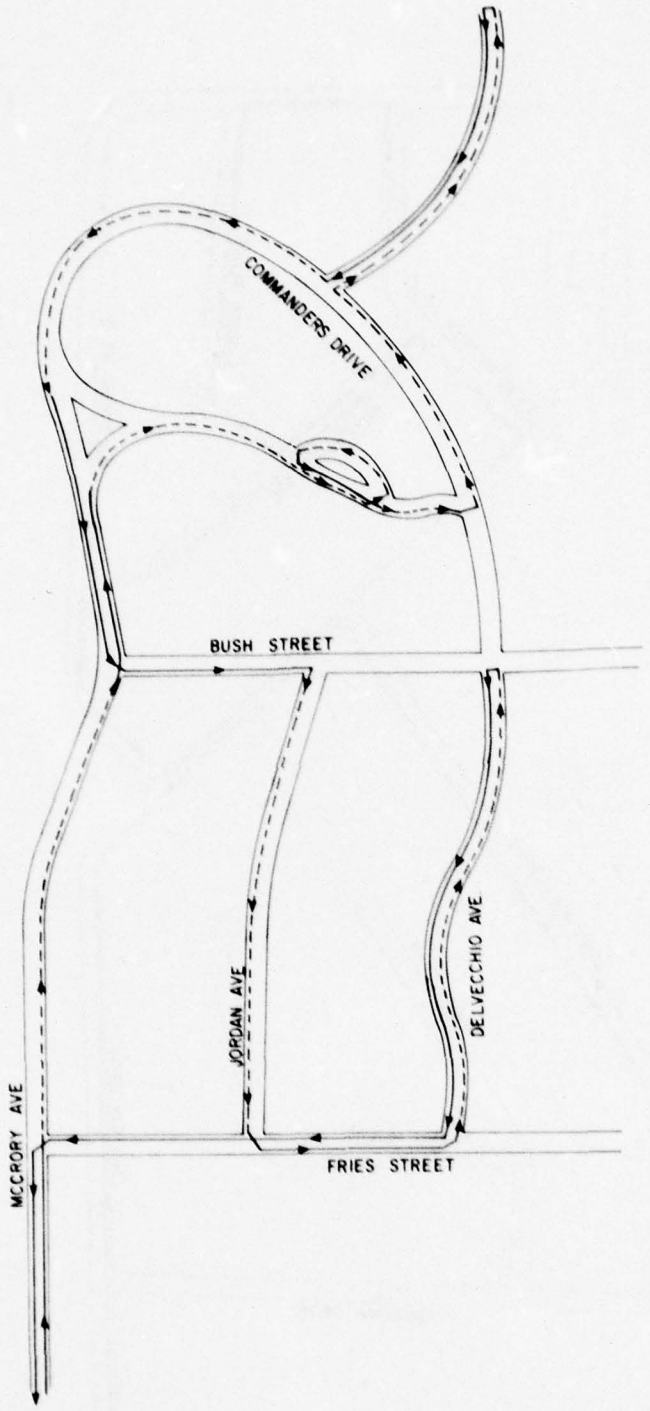
ROUTE 4 TRIP 1

10 CU YD VEHICLE

TRAVEL

COLLECT BOTH SIDES

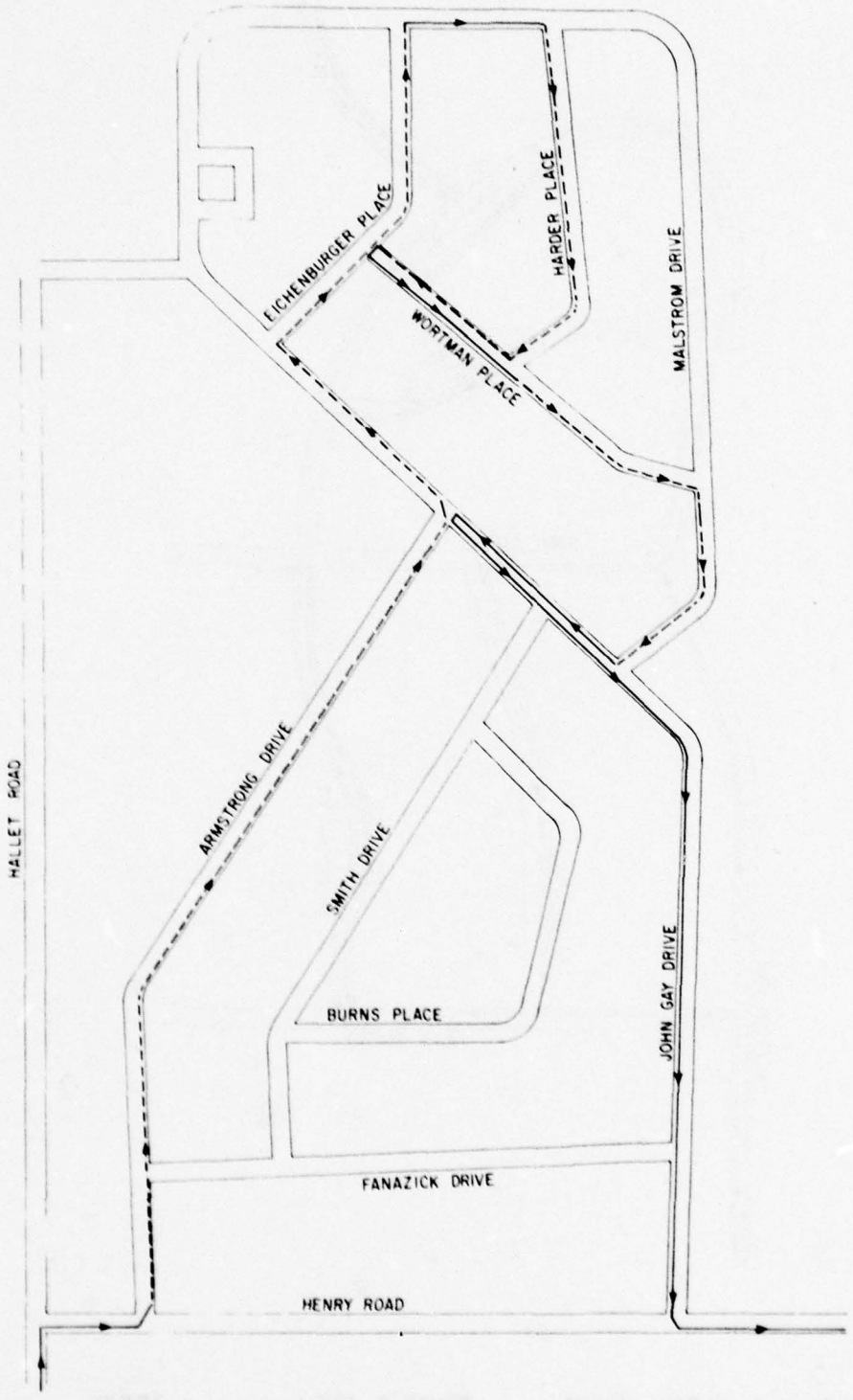
COLLECT RIGHT SIDE




FAIRCHILD AFB, WASH.

ROUTE 6 TRIP 1
10 CU YD VEHICLE

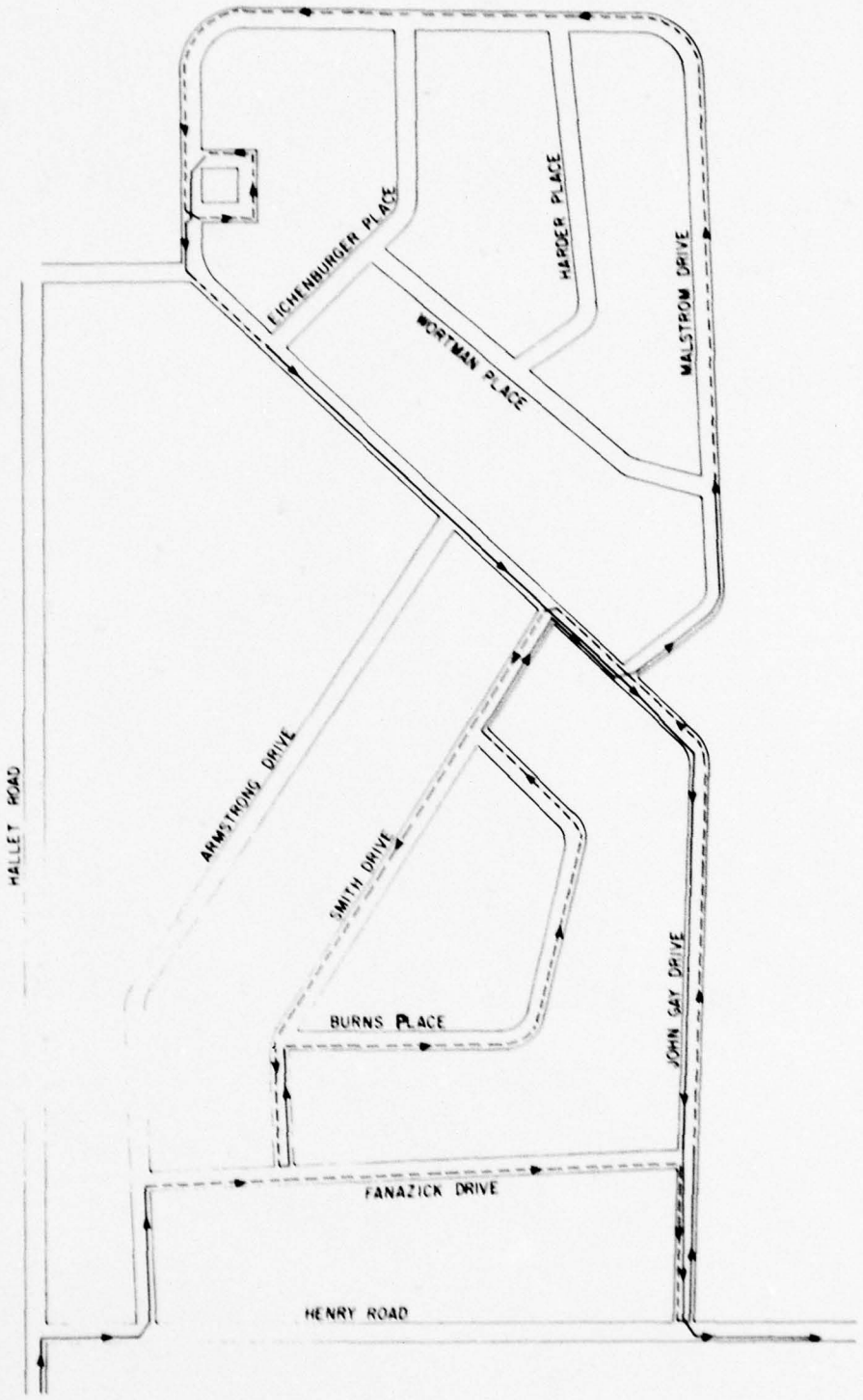
TRAVEL
COLLECT BOTH SIDES
COLLECT RIGHT SIDE




**FAIRCHILD AFB, WASH.**

ROUTE 5 TRIP I
10 CU YD VEHICLE

TRAVEL
COLLECT BOTH SIDES
COLLECT RIGHT SIDE




**FAIRCHILD AFB, WASH.**

ROUTE 5 TRIP 2
10 CU YD VEHICLE

TRAVEL
COLLECT BOTH SIDES
COLLECT RIGHT SIDE



(The reverse of this page is blank)

# APPENDIX C

## RCINPT DATA

FAIRCHILD AFB

| | |
|---|---|
| 1 | SUNSET HIGHWAY |
| 2 | GRAHAM RD |
| 3 | FIRST ST |
| 4 | 43RD ST |
| 5 | ARTILLERY CIRCLE |
| 6 | UTAH DR SOUTH |
| 7 | UTAH DR WEST |
| 8 | UTAH DR NORTH |
| 9 | OREGON DR |
| 10 | IDAHO ST |
| 11 | IOWA ST |
| 12 | NEVADA ST |
| 13 | CALIFORNIA ST |
| 14 | DAKOTA AVE |
| 15 | PENNSYLVANIA ST |
| 16 | NEBRASKA AVE |
| 17 | GEORGIA AVE |
| 18 | LOUISIANA AVE |
| 19 | MAINE AVE |
| 20 | WASHINGTON AVE |
| 21 | MINNESOTA PL |
| 22 | COLORADO AVE |
| 23 | CAROLINA DR |
| 24 | OHIO ST |
| 25 | |
| 26 | MICHIGAN AVE |
| 27 | OFFUTT DR |
| 28 | MARCH ST |
| 29 | FAIRCHILD ST |
| 30 | MITCHELL ST |
| 31 | 9TH AVE |
| 32 | LINDEN ST |
| 33 | WALNUT ST |
| 34 | ELM ST |
| 35 | N MAPLE ST |
| 36 | S MAPLE ST |
| 37 | OAK ST |
| 38 | SYCAMORE ST |

```
39      PINE ST
40      CEDAR ST
41      PALM DR
42      POPLAR AVE
43
44      SPOKANE ROAD
45
46
47
48
49
50       MCCRORY AVENUE
51       COMMANDERS DRIVE
52
53
54
55       BUSH STREET
56       JORDAN AVENUE
57       DEL VECCHIO AVENUE
58
59       JOHN GAY DRIVE
60       ARMSTRONG DRIVE
61       FANAZICK DRIVE
62       SMITH DRIVE
63       BURNS PLACE
64       MALSTROM DRIVE
65       MORTMAN PLACE
66       EICHENBURGER PLACE
67       MITCHELL PLACE
68       HARDER PLACE
70      HOSPITAL DR
71      CASTLE ST
72      6TH AVE
73      BONG ST
74      7TH AVE
75      ARNOLD ST
76      5TH AVE
77      EL PASO AVE
78      GRANT ST
```

```
   79      GALVESTON AVE
   96      FRIES STREET
   97      HALLET ROAC
   98      HENRY ROAD
7/8/9      (END OF RECORD)
 0.         12.        30.        -2.0       6.         20.        10.
 0.8        2.8        20.        3.8        5.3        15.        10.
 8.         8.5        10.        3.5        4.         10.        10.
 9.         9.75       15.        1.5        2.         10.        10.
 0.         12.        30.        0.         10.        25.        10.        2
 0.         12.        30.        0.         6.         15.        10.        3
 0.         8.         20.        0.         4.         10.        10.        4
7/8/9      (END OF RECORD)
 1.         5280.      1.

 1    1400 5. 0.0 20/55 (8.05.5.2) (3.15.5.2)
80    1420 1.8 0.0 1410 1.4 0.0 1400/45 (8.05,1.95)
97    1430 1. 0.0 1420/45 (9.05,1.95)
98 1790 1.77 0.0 2050 .19 0.0 1820 .04 0.0 1430/ 40 (9.05,-.05)
44 1800 3 0.0 1790/ 40 (8,-2.5) RS
7/8/9      (END OF RECORD)
 1.         400.       2.5

1 20 11.6 0.0 110 14.6 0.0 80/55 (11.85.8.1) (1.27,8.1)
2 80 7.8 0.0 90 2.8 0.0 100 2.1 0.0 120 1.6 0.0 130 2.1 0.0 140 .9 0.0 150      +
 .85 0.0 155/30 (,) (1.24,.85)
3 150 2.3  10.11 160/(,) LS (.5,1.75)
4 160 .6 0.4 170 / (,) (.55,2)
4 170 .4 1.2 180 1.2 6.0 190 .5 2.0 140/(,) LS
5 180 .9 1.4 182/(,) L.2 (1.02,2)
5 190 .9 5.2 182
6 200 .5 0.2 120/(1.05.3.05)
6 210 1.9 10.10 200/(.3,3.05) RS
7 210 1.2 4.8 230/(,) LC (.14,3.45)
7 230 .5 2.4 240/(,) (.13,3.72)
7 240 .65 2.8 260 /(,) LC (.2,3.95)
8 260 .5 2.4 270 1.6 8.6 280 .5 0.2 100/(,) RS
9 270 2 8.12 300/(,)  L.8 (1.05,4.15)
9 300 .5 0.2 280
```

```
10 200 .7 4.2 310 .7 4.0 320 .7 4.2 280
11 230 2.4  12.12 310/(.) R.9
12 240 2.4  14.12 320/(.) R1
13 360 .65 1.4 350 .7 0.3 340 .7 2.3 330 /(1.5,1.57) L.25 (1.45,2.4)
13 330 1.0 3.5 370/(.) LC(1.6,2.75)
13 370 2.2 12.17 390/(.) L.5 (1.48,3.58)
13 390 1.45 8.10 410/(.) L1  (1.55,4.15)
14 410 2.9 18.21 450/(.) (2.7,4.15)
15 450 .75 2.6 460 2.25 14.19 470 .75 3.6 480 .75 3.4 490/(.) LS (2.8,2.4)
15 490 .7 2.4 500 .7 0.2 510 .75 1.5 520/(.) L1.9 (2.75,1.55)
16 520 3.2 15.20 360/(.) L2.8
17 350 3.3 18.16 510
18 500 3.3 25.23 340
19 130 .5 2.0 330 3.3 24.24 490 .7 2.2 550 / (.) (3.1,2.4)
19 551 .35 0.0 550/30 (3.23.2.42)
20 480 2.9 16.19 370/(.) L2.5
21 370 1.1 6.3 570 / (.) (1.9,3.05)
22 570 1.35 11.2 590/(.) R.4 (2.42,2.98)
22 590 .7 3.3 470
23 590 1.35 6.6 600/(.) R.9 (2.35,3.5)
23 600 1.45 7.7 620/(.) R.45 (1.78,3.57)
23 620 .7 3.4 390
24 570 1.4 2.10 620/(.) L.6
24 620 .7 2.4 640/(.) L.55 (1.82,3.84)
25 600 .4 4.6 660/(.) (2.45,3.6)
26 640 2.4 16.20 460/(.) L.2
43 410 .3 0.2 710 / (.) (1.5.4.25)
77 155 1.7 0.0 530/(.) (1.93..85)
78 530 1.2 0.0 540/(.) (1.93.1.35)
79 540 3.1 2.0 545/(.) R2.2 (3.1,1.6)
71 545 1.5 0.0 610 .65 0.0 551/(.) L1.5
27 610 .5 0.0 550 2 0.0 670 1.2 0.0 690 1.8 0.0 700/30 (.) (3.05,4.4)
27 700 .8 0.0 1180 4.1 0.0 90/30 (.) L1.6
15 450 .6 2.0 1180
28 691 1.2 0.0 690/30 (3.54,3.75)
70 670 1.8 0.0 691
28 691 2.20 0.0 720/30 (.) RC (4.22,4.28)
29 720 3.7 0.0 724 2.9 0.0 725 2.2 0.0 730 2.0 0.0 740/30 (.) (7.2,7.4)
76 726 3.75 0.0 724/30 (4.17.6.4)
```

```
71 554 6.0 0.0 553 4.2 0.0 551/30 (6.08,5.4)
71 725 2.0 0.0 554/30 (,)
30 110 1.7 0.0 740 .8 0,0 750 2.0 0,0 760 / 30 (,) (7.2,6.3)
31 730 1.9 0.0 760 2.2 0.0 770 .6 0,2 780 1.8 0,8 810/(,) (8.55,5)
72 555 2.7 0.0 554/30 (6.88,4.66)
73 770 2.2 0.0 556 1.3 0.0 555/30 (,)
30 556 3.2 0.0 760 /30
74 557 2.3 0.0 556/30 (7.9,4.41)
75 557 2.2 0.0 810
32 810 .8 4,4 820 2.2 12,9 840/(,) R1.9 (9.04,6)
32 840 1.3 7.2 860/(,) R.7 (8.77,6.27)
33 840 1.85 7,5 1370/(,) R.3 (8.53,5.48)
34 770 .9 4,1 870 1.5 9,7 880 / (,) (8.47,6.42)
34 880 .7 4,2 890 / (,) LC (8.75,6.55)
34 890 1.0 3.2 900 / (,) (9.15,6.6)
34 900 1.3 7,7 910 / (,) RC (9.45,7.0)
34 910 1.6 13,12 920 / (,) (9.42,7.6)
34 920 .7 5,2 930 / (,) RC (9.25,7.8)
35 930 .2 2.0 940 .72 4,3 950 .78 4,3 960 1.0 6,4 970 1.75 11,10 1060/(,) R4    +
 (7.5,7.7)
49 1060 .35 3,3 1080/(,) (7.4,7.8)
35 1060 1.6 8,8 1000/(,) R.45 (7.4,7.1)
36 1000 1.6 8,9 1010/(,) (7.4,6.47)
36 1010 1.5 9,7 1030/(,) RS (7.88,6.15)
36 1030 .7 3.2 870 .9 1,1 1040                .7 4,2 1370 .8 4,1 820
37 780 1.0 0.2 1040/(,) (8.32,5.67)
37 1040 1.9 7,10 860
37 860 .7 0,0 890 .8 3,4 1081 / (,) (8.72,6.87)
37 1081 2.4 13,15 950 / (,) LS (,)
38 940 1.9 13,12 1091 / (,) (9.12,7.05)
38 1091 1.2 4,6 1081 / (,) LC (,)
39 880 2.3 13,17 1380/(,) LC (8.52,7.3)
39 1380 1.29 7,5 960/(,)RC
40 1030 .82 5,1 1100 .82 6,4 1110/(,) RC (8.07,6.75)
40 1110 1.98 13,11 1120/(,) LS (8.23,7.52)
40 1120 .7 3,1 970 / (,) RC
41 1100 .6 1.3 1170 / (,) (7.85,6.50)
41 1170 .75 2,6 1160/(,) LC (7.7,6.75)
41 1160 .85 3,5 1150 .7 2,4 1140 / (,) (7.7,7.4)
```

```
41 1140 .6 3.6 1130 / (,) LC (7.9,7.5)
41 1130 .8 4.4 1120 / (,) (,)
42 750 .6 1.2 1000 .7 1.1 1150
7/8/9      (END OF RECORD)
 1.          100         2.5

97    1430 20    0,0 1810/45 (.3,5.45) (8.3, 5.42)
59 2050 3.1 4,0 2060 9.8 14,10 2090 1.8 1.2 2000 2.6 3,0 1860 4.6 4,0 2100      +
 2.1 1.0 2110/(,) R11 (8.3,4.25)
60 1840 3.4 4,4 1830 2.9 2,0 1820/(2.8,4.7)
60 1840 10.8 14,8 1860/(,) L6.4
61 1830 2.65 4.0 1870 7.4 10.10 2060/(,)
62 1860 2.6 4,0 1870/(2.48,3.62)
62 1880 6.8 8,8 1900 2.6 0,4 2000/(,) L5.4
63 2010 4.1 2,6 1880/(2.5,2.0)
63 2020 1.0 2,2 2010/(2.7,1.7) LC
63 2020 6.2 10,4 1900/(,) R3.5
64 2140 1.6 2,0 2270 1.0 2,0 2240 1.1                  0,0 2110/(9.8,4.25)
64 2150 1.42 2.1 2140/(10.2,3.9) RC
64 2170 1.4 2,0 2161 2.9 4,1 2160 3.15 4.2 2150/(10.15,.95)
64 2180 1.50 2,1 2170/(9.8,0.5)  RC
64 2090 4.4 2,4 2190 7.9 10,7 2180/(,) R2.2
58 1810 3 0.0 2110
66 2100 2.6 2,1 2220 4.6 2,3 2160/(,) R3.6
65 2190 4.4 2,5 2210 3.5 2,3 2220/(,) L1.5
68 2210 7.3 8,6 2161/(,) R1.7
67 2240 3.1 3,0 2270/(,) RR
7/8/9      (END OF RECORD)
 1.          100         2.5

 50 1760 6 0.0 1410/ (1.2,3.5) (-1.2,3.5)
96    1760 2.95 0.0 1660 2.7 0,0 1650 2.5 0.0 1740/    (1.2,3.5) (1.2,0.25)
50 1760 7.2 10,2 1540/(,) L3.8 (4,3.05)
55 1750 2.25 0.0 1600 2.35 0,0 1700 2.8 0,0 1540/(4.03,0.1)
51 1550 2.60 0.0 1540/(5.05,3.22)
51 1560 1.75 0.0 1550/(5.75,3.38)
51 1571 3 2.0 1560/(6.66.2.82) RC
51 1570 2.62 3.0 1571/(6.2,1.9) RC
51 1600 2.20 0.0 1590 3.9[illegible] 6.0 1570/(4.0,1.0) RC
```

```
52 1710 1.70  0.0 1550/(5.42,2.7) RC
52 1710 1.95  0.0 1560/(,) LC
52 1720 1.74  1.1 1710/(5.19,2.06) RC
52 1730 1.3 0.1 1720/(4.95,1.6) LC
52 1730 1.35  2.0 1590/(,) RS
53 1730 1.63  1.0 1720/(,) RC
54 1580 5.1   3.4 1570/(7.85,.98) LC
56 1660 7.15  10.10 1700/(,) L4
57 1650 3.6 4.4 1630/(,)RS (2.62,1.27)
57 1630 3.6 6.4 1600/(,)RC
7/8/9       (END OF RECORD)
7/8/9       (END OF RECORD)
```

# APPENDIX D

## PHASE4 DATA FOR ORIGINAL ROUTES

```
FAIRCHILD AFB
HOUSEHOLDS                    1
 .5                          10.                                        5.
 30.          12.
 193.         10 CU YD VEHICLE
7/8/9         (END OF RECORD)
    1     1 1.10        1.60        12.         3.80        4.55        18.
    2     2 1.10        1.60        12.         3.80        4.55        18.
    3     1 1.10        1.60        12.         3.80        4.55        18.
    4     2 1.10        1.60        12.         3.80        4.55        18.
    5     1 2.25        2.75        12.         4.48        5.22        18.
    6     2 2.25        2.75        12.         4.48        5.22        18.
    7     1 2.25        2.75        12.         4.48        5.22        18.
    7     1 0.9         1.4         12.         3.75        4.15        9.5
    8     2 0.8         1.3         12.         4.2         4.65        10.8
    9     1 8.1         8.5         18.         3.55        3.80        12.
    9     1 9.035       9.535       18.         1.692       1.956       9.5
   10     2 9.035       9.535       18.         1.692       1.956       9.5
7/8/9         (END OF RECORD)
   14
 1800   8T 1790   5T 2050   6T 1820   7T 1430   4T 1420   2T 1410   3T 1400   1T
   20   9T  110  96T  740  91T  730  90T  725  89T  724  92T  726
    7                1       193.0
  726  92T  724  88T  720  87T  691  86T  670  79T  550  59T  490  58T  330
   13                1       193.0
  330  43C  370  44C  390  45C  410  72C  710  72T  410  46C  450  84C 1180  84T
  450  47C  460  48C  470  49C  480  50C  490  59C  550
   17                1       193.0
  550  79T  670  86T  691  87T  720  88T  724  89T  725  90T  730  91T  740  96T
  110   9T   20   1T 1400   3T 1410   2T 1420   4T 1430   7T 1820   6T 2050   5T
 1790   8T 1800
    8                2       193.0
  726  92T  724  88T  720  87T  691  85T  690  81T  700  82T 1180  84T  450  47T
  460
   13                2       193.0
  460  71C  640  69C  620  66C  600  70C  660  70T  600  65C  590  63C  570  62C
  370  44T  390  67C  620  68C  570  63T  590  64C  470
   20                2       193.0
  470  49T  480  50T  490  59T  550  79T  670  86T  691  87T  720  88T  724  89T
```

```
 725  90T  730  91T  740  96T  110   9T   20   1T 1400   3T 1410   2T 1420   4T
1430   7T 1820   6T 2050   5T 1790   8T 1800
   8                3      193.0
 726  92T  724  88T  720  87T  691  86T  670  79T  550  59T  490  58T  330  43T
 370
  12                3      193.0
 370  61C  480  50T  490  58C  330  57C  130  57T  330  42C  340  41C  350  40C
 360  54C  520  53C  510  52C  500  51C  490
  18                3      193.0
 490  59T  550  79T  670  86T  691  87T  720  88T  724  89T  725  90T  730  91T
 740  96T  110   9T   20   1T 1400   3T 1410   2T 1420   4T 1430   7T 1820   6T
2050   5T 1790   8T 1800
   7                4      193.0
 726  92T  724  88T  720  87T  691  86T  670  79T  550  59T  490  51T  500
   9                4      193.0
 500  56C  340  41T  350  55C  510  52T  500  51T  490  59T  550  78T  610  76T
 545  75C  540
  18                4      193.0
 540  75T  545  76T  610  77T  551  94T  553  93T  554  95T  725  90T  730  91T
 740  96T  110   9T   20   1T 1400   3T 1410   2T 1420   4T 1430   7T 1820   6T
2050   5T 1790   8T 1800
   5                5      193.0
 726  92T  724  89T  725  90T  730  91T  740  97T  750
  22                5      193.0
 750 152C 1000 126C 1060 125C 1080 125T 1060 124C  970 123C  960 122C  950 121C
 940 120C  930 119C  920 118C  910 117C  900 116C  890 115C  880 114C  870 130C
1040 130T  870 129C 1030 142C 1100 143C 1110 144C 1120 145C  970
  14                5      193.0
 970 124T 1060 126T 1000 152T  750  97T  740  96T  110   9T   20   1T 1400   3T
1410   2T 1420   4T 1430   7T 1820   6T 2050   5T 1790   8T 1800
   9                6      193.0
 726  92T  724  89T  725  90T  730  91T  740  97T  750 152T 1000 126T 1060 124T
 970 145T 1120
  23                6      193.0
1120 151C 1130 150C 1140 149C 1150 148C 1160 147C 1170 146C 1100 142T 1030 128C
1010 127C 1000 153C 1150 149T 1140 150T 1130 151T 1120 145T  970 123T  960 141C
1380 140C  880 115T  890 136C 1081 139C 1091 138C  940 121T  950 137C 1081
  19                6      193.0
1081 139T 1091 138T  940 121T  950 122T  960 123T  970 124T 1060 126T 1000 152T
```

```
 750  97T  740  96T  110   9T   20   1T 1400   3T 1410   2T 1420   4T 1430   7T
1820   6T 2050   5T 1790   8T 1800
   9                7      193.0
 726  92T  724  89T  725  90T  730  99T  760 100T  770 113T  870 114T  880 115T
 890 135T  860
  35                7      193.0
 860 134C 1040 133C  780 101C  770 101T  780 102C  810 109C  820 110C  840 111C
 860 134T 1040 131C 1370 132C  820 132T 1370 112C  840 112T 1370 131T 1040 130T
 870 113C  770 104T  556 105T  555 103T  554  93T  553  94T  551  60T  550  59T
 490  58T  330  57T  130  15T  140  22C  190  21C  180  23C  182  24C  190  21T
 180  20C  170  19C  160  18C  150
  21                7      193.0
 150  16T  140  15T  130  57T  330  58T  490  59T  550  60T  551  94T  553  93T
 554  95T  725  90T  730  91T  740  96T  110   9T   20   1T 1400   3T 1410   2T
1420   4T 1430   7T 1820   6T 2050   5T 1790   8T 1800
   8                8      193.0
 726  92T  724  88T  720  87T  691  85T  690  81T  700  82T 1180  83T   90  12T
 100
  19                8      193.0
 100  32C  280  31C  270  33C  300  34C  280  31T  270  30C  260  29C  240  28C
 230  38C  310  36T  320  39C  240  28T  230  27C  210  26C  200  25C  120  25T
 200  35C  310  36C  320  37C  280
  13                8      193.0
 280  32T  100  12T   90  11T   80  10T  110   9T   20   1T 1400   3T 1410   2T
1420   4T 1430   7T 1820   6T 2050   5T 1790   8T 1800
   9                9      193.0
 726  92T  724  89T  725  90T  730  91T  740  96T  110   9T   20   1T 1400   3T
1410 189T 1760
  42                9      193.0
1760 193C 1540 197T 1550 203T 1710 205C 1720 206C 1730 208C 1720 206T 1730 207C
1590 202C 1570 209C 1580 209T 1570 200C 1571 199C 1560 198T 1550 197T 1540 196T
1700 210C 1660 191T 1650 211C 1630 212C 1600 212T 1630 211T 1650 191T 1660 190T
1760 189T 1410   2T 1420   4T 1430   7T 1820 162C 1830 161C 1840 163C 1860 159C
2100 183C 2220 184C 2160 177T 2161 187C 2210 186C 2220 186T 2210 185C 2190 180C
2090 157C 2000 158C 1860
   6                9      193.0
1860 158T 2000 157T 2090 156T 2060 155T 2050   5T 1790   8T 1800
  12               10      193.0
 726  92T  724  89T  725  90T  730  91T  740  96T  110   9T   20   1T 1400   3T
```

```
 1410    2T 1420    4T 1430    7T 1820 162T 1830
   28               10      193.0
 1830 164C 1870 165C 2060 155C 2050 155T 2060 156C 2090 157T 2000 168C 1900 167C
 1880 166C 1870 166T 1880 169C 2010 170C 2020 171C 1900 168T 2000 157T 2090 180T
 2190 181C 2180 179C 2170 176C 2161 177C 2160 178C 2150 175C 2140 172C 2270 173C
 2240 188C 2270 173T 2240 174T 2110 160C 2100
    7               10      193.0
 2100 159T 1860 158T 2000 157T 2090 156T 2060 155T 2050    5T 1790    8T 1800
7/8/9      (END OF RECORD)
```



(The reverse of this page is blank.)

# APPENDIX E

## PHASE4 DATA FOR RCSP ROUTES

```
FAIRCHILD AFB
HOUSEHOLDS
  .5                    10.                                        5.
 30.        12.
 193.      10 CU YD VEHICLE
7/8/9      (END OF RECORD)
    1     2 9.035      9.535      18.        1.692      1.956      9.5
    1     2 8.10       8.50       18.        3.592      3.790      9.5
    2     2 2.25       2.75       12.        4.48       5.22       18.
    3     2 2.25       2.75       12.        4.48       5.22       18.
    4     1 2.25       2.75       12.        4.48       5.22       18.
    4     1 1.10       1.60       12.        3.80       4.55       18.
    5     2 0.85       1.75       18.        4.10       4.70       12.
    6     1 0.90       1.60       12.        3.80       4.675      18.
    7     1 1.10       1.60       12.        3.80       4.55       18.
    8     1 1.10       1.60       12.        3.80       4.55       18.
    8     1 9.035      9.535      18.        1.692      1.956      9.5
7/8/9      (END OF RECORD)
   14     16.030
 1800   8T 1790   5T 2050   6T 1820   7T 1430   4T 1420   2T 1410   3T 1400   1T
   20   9T  110  96T  740  91T  730  90T  725  89T  724  92T  726
   10     8.399     1    193.000    188.000
  726  92T  724  89T  725  90T  730  91T  740  96T  110   9T   20   1T 1400   3T
 1410 189T 1760 190T 1660
   52     6.069     1    193.000    188.000
 1660 210C 1700 195T 1600 201T 1590 202C 1570 209C 1580 209T 1570 200C 1571 199C
 1560 204T 1710 205C 1720 206C 1730 208C 1720 206T 1730 207C 1590 201T 1600 212C
 1630 211C 1650 191T 1660 210T 1700 196T 1540 193C 1760 189T 1410   2T 1420   4T
 1430   7T 1820 162C 1830 164C 1870 166C 1880 167C 1900 168C 2000 158C 1860 159C
 2100 183C 2220 183T 2100 160C 2110 174T 2240 173C 2270 188C 2240 173T 2270 172C
 2140 175C 2150 178C 2160 177C 2161 187T 2210 185T 2190 180C 2090 156T 2060 165C
 1870 166T 1880 169C 2010 170C 2020 171C 1900
    6     5.098     1    193.000    188.000
 1900 168T 2000 157T 2090 156T 2060 155T 2050   5T 1790   8T 1800
    3     4.829     1    193.000    188.000
 1800   8T 1790   5T 2050 155T 2060
   59               1    193.000    188.000
 2060 165C 1870 164C 1830 162C 1820   7T 1430   4T 1420   2T 1410 189T 1760 190T
 1660 210C 1700 195T 1600 201T 1590 202C 1570 209C 1580 209T 1570 200C 1571 199C
```

```
1560 204T 1710 205C 1720 206C 1730 208C 1720 206T 1730 207C 1590 201T 1600 212C
1630 211C 1650 191T 1660 210T 1700 196T 1540 193C 1760 189T 1410   2T 1420   4T
1430   7T 1820 162T 1830 164T 1870 166C 1880 167C 1900 171C 2020 170C 2010 169C
1880 167T 1900 168C 2000 158C 1860 159C 2100 183T 2220 183C 2100 160C 2110 174T
2240 173T 2270 188C 2240 173C 2270 172C 2140 175C 2150 178C 2160 177C 2161 176T
2170 179T 2180 181T 2190 180C 2090
   4      5.014     1    193.000    188.000
2090 156T 2060 155T 2050   5T 1790   8T 1800
  10      1.140     2    193.000    190.000
 726  92T  724  89T  725  90T  730  91T  740  97T  750 152T 1000 153T 1150 149T
1140 150T 1130 151T 1120
  21      1.728     2    193.000    190.000
1120 144C 1110 143C 1100 142T 1030 129T  870 114T  880 140C 1380 141C  960 122C
 950 121C  940 120C  930 119C  920 118C  910 117C  900 116C  890 136T 1081 139C
1091 138C  940 121T  950 122T  960 123C  970 145C 1120
  16     15.526     2    193.000    190.000
1120 151T 1130 150T 1140 149T 1150 153T 1000 152T  750  97T  740  96T  110   9T
  20   1T 1400   3T 1410   2T 1420   4T 1430   7T 1820   6T 2050   5T 1790   8T
1800
  16     15.526     2    193.000    190.000
1800   8T 1790   5T 2050   6T 1820   7T 1430   4T 1420   2T 1410   3T 1400   1T
  20   9T  110  96T  740  97T  750 152T 1000 153T 1150 149T 1140 150T 1130 151T
1120
  21      1.728     2    193.000    190.000
1120 144C 1110 143C 1100 142T 1030 129T  870 114T  880 140C 1380 141C  960 122C
 950 121C  940 120C  930 119C  920 118C  910 117C  900 116C  890 136T 1081 139C
1091 138C  940 121T  950 122T  960 123C  970 145C 1120
  16     15.526     2    193.000    190.000
1120 151T 1130 150T 1140 149T 1150 153T 1000 152T  750  97T  740  96T  110   9T
  20   1T 1400   3T 1410   2T 1420   4T 1430   7T 1820   6T 2050   5T 1790   8T
1800
   6      1.125     3    193.000    190.000
 726  92T  724  89T  725  95T  554 103T  555 105T  556 104T  770
  33      2.757     3    193.000    190.000
 770 101C  780 133C 1040 131C 1370 112C  840 110C  820 109C  810 102C  780 101T
 770 113C  870 130C 1040 131T 1370 132C  820 110T  840 111C  860 134C 1040 130T
 870 114C  880 115C  890 136C 1081 137C  950 121T  940 138T 1091 139T 1081 136T
 890 115T  880 114T  870 129C 1030 142C 1100 146C 1170 147C 1160 148C 1150 153C
1000 152C  750
```

```
  11     15.268     3    193.000    190.000
 750   97T  740   96T   110    9T    20    1T 1400    3T 1410    2T 1420    4T 1430    7T
1820    6T 2050    5T 1790    8T 1800
  11     15.268     3    193.000    190.000
1800    8T 1790    5T 2050    6T 1820    7T 1430    4T 1420    2T 1410    3T 1400    1T
  20    9T  110   96T  740   97T  750
  32      2.719     3    193.000    190.000
 750 152C 1000 153C 1150 148C 1160 147C 1170 146C 1100 142C 1030 129C  870 114C
 880 115C  890 136C 1081 137C  950 121T  940 138T 1091 139T 1081 136T  890 115T
 880 114T  870 130C 1040 133C  780 102C  810 109C  820 110C  840 112C 1370 131C
1040 134C  860 111C  840 110T  820 132C 1370 131T 1040 133T  780 101C  770 113C
 870
  14     15.655     3    193.000    190.000
 870 113T  770 100T  760   98T  750   97T  740   96T  110    9T    20    1T 1400    3T
1410    2T 1420    4T 1430    7T 1820    6T 2050    5T 1790    8T 1800
   6      1.019     4    193.000    178.000
 726   92T  724   88T  720   87T  691   85T  690   81T  700   82T 1180
  33      3.223     4    193.000    178.000
1180   84C  450   47C  460   48C  470   64T  590   65C  600   70C  660   70T  600   66C
 620   68T  570   63T  590   64T  470   49T  480   50T  490   59T  550   60T  551   94T
 553   93T  554  103T  555  105T  556  104T  770  113T  870  129T 1030  128C 1010  127C
1000  153T 1150  149C 1140  150C 1130  151C 1120  145T  970  124C 1060  125C 1080  125T
1060  126C 1000
  12     15.314     4    193.000    178.000
1000  152T  750   97T  740   96T  110    9T    20    1T 1400    3T 1410    2T 1420    4T
1430    7T 1820    6T 2050    5T 1790    8T 1800
  14     15.548     4    193.000    178.000
1800    8T 1790    5T 2050    6T 1820    7T 1430    4T 1420    2T 1410    3T 1400    1T
  20    9T  110   96T  740   97T  750  152T 1000  127T 1010  128T 1030
  29      2.784     4    193.000    178.000
1030  128C 1010  127C 1000  153T 1150  149C 1140  150C 1130  151C 1120  145T  970  124C
1060  125C 1080  125T 1060  126C 1000  152T  750   97T  740   91T  730   90T  725   89T
 724   88T  720   87T  691   85T  690   81T  700   82T 1180   84C  450   47C  460   48C
 470   64T  590   65C  600   70C  660   70T  600   66C  620
  22     16.817     4    193.000    178.000
 620   69T  640   71T  460   47T  450   84T 1180   82T  700   81T  690   85T  691   87T
 720   88T  724   89T  725   90T  730   91T  740   96T  110    9T    20    1T 1400    3T
1410    2T 1420    4T 1430    7T 1820    6T 2050    5T 1790    8T 1800
   9      1.231     5    193.000    186.000
```

```
 726  92T  724  88T  720  87T  691  85T  690  80T  670  79T  550  59T  490  50T
 480  49T  470
  21     1.670     5     193.000     186.000
 470  64C  590  63C  570  68C  620  67C  390  45C  410  72C  710  72T  410  46C
 450  47T  460  71C  640  69C  620  67T  390  44C  370  43T  330  57T  130  14T
 120  25T  200  35C  310  36C  320  37C  280  32C  100
  12     16.988     5     193.000     186.000
 100  12T   90  11T   80  10T  110   9T   20   1T 1400   3T 1410   2T 1420   4T
1430   7T 1820   6T 2050   5T 1790   8T 1800
  12     16.988     5     193.000     186.000
1800   8T 1790   5T 2050   6T 1820   7T 1430   4T 1420   2T 1410   3T 1400   1T
  20   9T  110  10T   80  11T   90  12T  100
  21     1.784     5     193.000     186.000
 100  32C  280  37C  320  36C  310  35C  200  25T  120  14T  130  57T  330  43T
 370  44C  390  67C  620  68C  570  63C  590  64C  470  48T  460  71C  640  69C
 620  67T  390  45C  410  72T  710  72C  410  46C  450
  19     16.526     5     193.000     186.000
 450  84T 1180  82T  700  81T  690  85T  691  87T  720  88T  724  89T  725  90T
 730  91T  740  96T  110   9T   20   1T 1400   3T 1410   2T 1420   4T 1430   7T
1820   6T 2050   5T 1790   8T 1800
   8     1.216     6     193.000     192.000
 726  92T  724  88T  720  87T  691  85T  690  80T  670  79T  550  78T  610  76T
 545
  30     2.795     6     193.000     192.000
 545  75C  540  74T  530  73T  155  17T  150  18C  160  19C  170  20C  180  21C
 190  24C  182  23C  180  21T  190  22C  140  15T  130  14T  120  25C  200  26C
 210  27C  230  28C  240  29C  260  30C  270  31C  280  37T  320  36T  310  38C
 230  28T  240  39C  320  37T  280  31T  270  33C  300  34C  280
  13     17.026     6     193.000     192.000
 280  32T  100  12T   90  11T   80  10T  110   9T   20   1T 1400   3T 1410   2T
1420   4T 1430   7T 1820   6T 2050   5T 1790   8T 1800
  15     17.132     6     193.000     192.000
1800   8T 1790   5T 2050   6T 1820   7T 1430   4T 1420   2T 1410   3T 1400   1T
  20   9T  110  10T   80  11T   90  12T  100  32T  280  37T  320  36T  310
  34     3.367     6     193.000     192.000
 310  38C  230  28C  240  29C  260  30C  270  31C  280  34C  300  33C  270  31T
 280  37T  320  39C  240  28T  230  27C  210  26C  200  25C  120  14T  130  15T
 140  22C  190  24C  182  23C  180  20C  170  19C  160  18C  150  17T  155  73T
 530  74T  540  75C  545  75T  540  74T  530  73T  155  17T  150  18T  160  19T
```

```
 170   20T   180   21C   190
  16     17.465     6     193.000     192.000
 190   22T   140   15T   130   14T   120   13T   100   12T    90   11T    80   10T   110    9T
  20    1T 1400    3T 1410    2T 1420    4T 1430    7T 1820    6T 2050    5T 1790    8T
1800
   7     1.117     7     193.000     192.000
 726   92T   724   88T   720   87T   691   85T   690   80T   670   79T   550   59T   490
  12     1.417     7     193.000     192.000
 490   51C   500   52C   510   53C   520   54C   360   40C   350   41C   340   56C   500   52T
 510   55C   350   41T   340   42C   330   58C   490
  17     16.530     7     193.000     192.000
 490   59T   550   60T   551   94T   553   93T   554   95T   725   90T   730   91T   740   96T
 110    9T    20    1T 1400    3T 1410    2T 1420    4T 1430    7T 1820    6T 2050    5T
1790    8T 1800
  17     16.530     7     193.000     192.000
1800    8T 1790    5T 2050    6T 1820    7T 1430    4T 1420    2T 1410    3T 1400    1T
  20    9T   110   96T   740   91T   730   90T   725   95T   554   93T   553   94T   551   60T
 550   59T   490
  12     1.417     7     193.000     192.000
 490   51C   500   52C   510   53C   520   54C   360   40C   350   41C   340   56C   500   52T
 510   55C   350   41T   340   42C   330   58C   490
  17     16.530     7     193.000     192.000
 490   59T   550   60T   551   94T   553   93T   554   95T   725   90T   730   91T   740   96T
 110    9T    20    1T 1400    3T 1410    2T 1420    4T 1430    7T 1820    6T 2050    5T
1790    8T 1800
   6     1.064     8     193.000     188.000
 726   92T   724   88T   720   87T   691   85T   690   80T   670   79T   550
  44     14.070     8     193.000     188.000
 550   59C   490   50C   480   49C   470   64T   590   63T   570   62C   370   43C   330   57C
 130   57T   330   43T   370   61C   480   50T   490   59T   550   60T   551   94T   553   93T
 554   95T   725   90T   730   91T   740   96T   110    9T    20    1T 1400    3T 1410    2T
1420    4T 1430    7T 1820 162T 1830 161C 1840 163C 1860 158T 2000 157C 2090 180T
2190 181C 2180 179C 2170 176C 2161 187C 2210 186C 2220 184C 2160 177T 2161 187T
2210 185C 2190 180T 2090 156C 2060 155C 2050
   2     4.770     8     193.000     188.000
2050    5T 1790    8T 1800
   2     4.770     8     193.000     188.000
1800    8T 1790    5T 2050
  42     13.960     8     193.000     188.000
```

```
2050 155C 2060 156C 2090 180T 2190 181C 2180 179C 2170 176C 2161 187C 2210 186C
2220 184C 2160 177T 2161 187T 2210 185C 2190 180T 2090 157C 2000 158T 1860 163C
1840 161C 1830 162T 1820   7T 1430   4T 1420   2T 1410   3T 1400   1T   20   9T
 110  96T  740  91T  730  90T  725  95T  554  93T  553  94T  551  60T  550  59C
 490  50C  480  61C  370  43C  330  57C  130  57T  330  43T  370  62C  570  63T
 590  64T  470  49C  480
  18    16.586    8   193.000   188.000
 480  50T  490  59T  550  60T  551  94T  553  93T  554  95T  725  90T  730  91T
 740  96T  110   9T   20   1T 1400   3T 1410   2T 1420   4T 1430   7T 1820   6T
2050   5T 1790   8T 1800
7/8/9     (END OF RECORD)
```



(The reverse of this page is blank.)

# APPENDIX F

## RCSP SCHEDULE

| SECTION | TRIP | DISTANCE (MILES) | TIME (MINUTES) | HOUSEHOLDS | CAPACITY (HOUSEHOLDS | LOAD ) |
|---|---|---|---|---|---|---|
| 1 | 1 | 19.6 | 146.4 | 188 | 193.0 | 188.0 |
| 1 | 2 | 18.9 | 147.0 | 188 | 193.0 | 188.0 |
| 2 | 1 | 18.4 | 136.2 | 190 | 193.0 | 190.0 |
| 2 | 2 | 32.8 | 154.4 | 190 | 193.0 | 190.0 |
| 3 | 1 | 19.2 | 143.4 | 190 | 193.0 | 190.0 |
| 3 | 2 | 33.6 | 162.2 | 190 | 193.0 | 190.0 |
| 4 | 1 | 19.6 | 131.0 | 178 | 193.0 | 178.0 |
| 4 | 2 | 35.2 | 151.7 | 178 | 193.0 | 178.0 |
| 5 | 1 | 19.9 | 134.7 | 186 | 193.0 | 186.0 |
| 5 | 2 | 35.3 | 154.8 | 186 | 193.0 | 186.0 |
| 6 | 1 | 21.0 | 146.2 | 192 | 193.0 | 192.0 |
| 6 | 2 | 38.0 | 169.5 | 192 | 193.0 | 192.0 |
| 7 | 1 | 19.1 | 137.0 | 192 | 193.0 | 192.0 |
| 7 | 2 | 34.5 | 157.2 | 192 | 193.0 | 192.0 |
| 8 | 1 | 19.9 | 142.0 | 188 | 193.0 | 188.0 |
| 8 | 2 | 35.3 | 162.2 | 188 | 193.0 | 188.0 |

ONLY HALF OF THESE TRIPS WILL BE USED.

FINAL ROUTE SUMMARY FAIRCHILD AFB

| ROUTE | VEHICLE IDENTIFICATION | VEHICLE CAPACITY (HOUSEHOLDS) | SECTION(S) TRIP1 | SECTION(S) TRIP2 | DISTANCE (MILES) | TIME (HR:MIN) | HOUSEHOLDS SERVICED | REFUSE QUANTITY (HOUSEHOLDS) |
|---|---|---|---|---|---|---|---|---|
| 1 | 10 CU YD VEHICLE | 193.0 | 4 | 3 | 69.2 | 5:35 | 368 | 368.0 |
| 2 | 10 CU YD VEHICLE | 193.0 | 7 | 5 | 70.4 | 5:34 | 378 | 378.0 |
| 3 | 10 CU YD VEHICLE | 193.0 | 8 | 2 | 68.7 | 5:38 | 378 | 378.0 |
| 4 | 10 CU YD VEHICLE | 193.0 | 6 | 1 | 56.0 | 5:35 | 380 | 380.0 |
| | | | | TOTALS | 264.3 | 22:22 | 1504 | 1504.0 |

ROUTE 1 FAIRCHILD AFB 10 CU YD VEHICLE

| ACTION | | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|---|
| LEAVE GARAGE | | | | | 8:00 | | | |
| DRIVE ON | | 5TH AVE | TO FAIRCHILD ST | 30 | 8:01 | .3 | | |
| DRIVE ON | | FAIRCHILD ST | TO MARCH ST | 30 | 8:01 | .3 | | |
| DRIVE ON | | MARCH ST | TO OFFUTT DR | 30 | 8:02 | .3 | | |
| DRIVE ON | | OFFUTT DR | TO PENNSYLVANIA ST | 30 | 8:02 | .2 | | |
| PICK UP ON | BOTH SIDES | PENNSYLVANIA ST | TO DAKOTA AVE | 5 | 8:04 | .0 | 2 | 1 |
| PICK UP ON | BOTH SIDES | PENNSYLVANIA ST | TO MICHIGAN AVE | 5 | 8:08 | .1 | 8 | 5 |
| PICK UP ON | BOTH SIDES | PENNSYLVANIA ST | TO COLORADO AVE | 5 | 8:27 | .2 | 33 | 22 |
| DRIVE ON | | COLORADO AVE | TO CAROLINA DR | 15 | 8:27 | .1 | | 22 |
| PICK UP ON | BOTH SIDES | CAROLINA DR | TO | 5 | 8:34 | .1 | 12 | 28 |
| PICK UP ON | BOTH SIDES | | TO | 5 | 8:40 | .0 | 10 | 33 |
| DRIVE ON | | | TO CAROLINA DR | 15 | 8:40 | .0 | | 33 |
| PICK UP ON | BOTH SIDES | CAROLINA DR | TO OHIO ST | 5 | 8:48 | .1 | 14 | 40 |
| DRIVE ON | | OHIO ST | TO COLORADO AVE | 15 | 8:48 | .1 | | 40 |
| DRIVE ON | | COLORADO AVE | TO PENNSYLVANIA ST | 15 | 8:49 | .2 | | 40 |
| DRIVE ON | | PENNSYLVANIA ST | TO MAINE AVE | 15 | 8:50 | .1 | | 40 |
| DRIVE ON | | MAINE AVE | TO OFFUTT DR | 15 | 8:50 | .1 | | 40 |
| DRIVE ON | | MAINE AVE | TO CASTLE ST | 30 | 8:50 | .0 | | 40 |
| DRIVE ON | | CASTLE ST | TO 6TH AVE | 30 | 8:51 | .8 | | 40 |
| DRIVE ON | | 6TH AVE | TO BONG ST | 30 | 8:52 | .2 | | 40 |
| DRIVE ON | | BONG ST | TO ELM ST | 30 | 8:52 | .3 | | 40 |
| DRIVE ON | | ELM ST | TO S MAPLE ST | 15 | 8:53 | .1 | | 40 |
| DRIVE ON | | S MAPLE ST | TO CEDAR ST | 15 | 8:53 | .1 | | 40 |
| PICK UP ON | BOTH SIDES | S MAPLE ST | TO | 5 | 9:02 | .1 | 16 | 49 |
| PICK UP ON | BOTH SIDES | S MAPLE ST | TO POPLAR AVE | 5 | 9:12 | .1 | 17 | 58 |
| DRIVE ON | | POPLAR AVE | TO PALM DR | 15 | 9:12 | .1 | | 58 |
| PICK UP ON | BOTH SIDES | PALM DR | TO | 5 | 9:16 | .1 | 6 | 61 |
| PICK UP ON | BOTH SIDES | PALM DR | TO | 5 | 9:21 | .0 | 9 | 65 |
| PICK UP ON | BOTH SIDES | PALM DR | TO CEDAR ST | 5 | 9:26 | .1 | 8 | 69 |
| DRIVE ON | | CEDAR ST | TO N MAPLE ST | 15 | 9:26 | .1 | | 69 |
| PICK UP ON | BOTH SIDES | N MAPLE ST | TO | 5 | 9:38 | .1 | 21 | 80 |
| PICK UP ON | BOTH SIDES | | TO | 5 | 9:41 | .0 | 6 | 83 |
| DRIVE ON | | | TO N MAPLE ST | 15 | 9:41 | .0 | | 83 |
| PICK UP ON | BOTH SIDES | N MAPLE ST | TO POPLAR AVE | 5 | 9:51 | .1 | 16 | 92 |
| DRIVE ON | | POPLAR AVE | TO MITCHELL ST | 15 | 9:51 | .0 | | 92 |
| DRIVE ON | | MITCHELL ST | TO SUNSET HIGHWAY | 30 | 9:51 | .2 | | 92 |
| DRIVE ON | | SUNSET HIGHWAY | TO | 55 | 9:58 | 5.9 | | 92 |
| DRIVE ON | | | TO HALLET ROAD | 45 | 10:02 | 3.2 | | 92 |
| DRIVE ON | | HALLET ROAD | TO HENRY ROAD | 45 | 10:03 | 1.0 | | 92 |
| DRIVE ON | | HENRY ROAD | TO SPOKANE ROAD | 40 | 10:06 | 2.0 | | 92 |
| DRIVE ON | | SPOKANE ROAD | TO LAND FILL | 40 | 10:11 | 3.0 | | 92 |
| UNLOAD | | | | | 10:11 TO 10:21 | | | |
| LEAVE LAND FILL | | | | | 10:21 | | | |
| DRIVE ON | | SPOKANE ROAD | TO HENRY ROAD | 40 | 10:25 | 3.0 | | |
| DRIVE ON | | HENRY ROAD | TO HALLET ROAD | 40 | 10:28 | 2.0 | | |
| DRIVE ON | | HALLET ROAD | TO | 45 | 10:30 | 1.0 | | |
| DRIVE ON | | | TO SUNSET HIGHWAY | 45 | 10:34 | 3.2 | | |
| DRIVE ON | | SUNSET HIGHWAY | TO MITCHELL ST | 55 | 10:40 | 5.9 | | |

| ACTION | | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|---|
| DRIVE ON | | MITCHELL ST | TO POPLAR AVE | 30 | 10:41 | .2 | | |
| PICK UP ON | BOTH SIDES | POPLAR AVE | TO S MAPLE ST | 5 | 10:43 | .0 | 3 | 1 |
| PICK UP ON | BOTH SIDES | POPLAR AVE | TO PALM DR | 5 | 10:45 | .1 | 2 | 2 |
| PICK UP ON | BOTH SIDES | PALM DR | TO | 5 | 10:49 | .1 | 8 | 6 |
| PICK UP ON | BOTH SIDES | PALM DR | TO | 5 | 10:54 | .1 | 8 | 10 |
| PICK UP ON | BOTH SIDES | PALM DR | TO CEDAR ST | 5 | 10:57 | .0 | 4 | 12 |
| PICK UP ON | BOTH SIDES | CEDAR ST | TO S MAPLE ST | 5 | 11:00 | .1 | 6 | 16 |
| PICK UP ON | BOTH SIDES | S MAPLE ST | TO ELM ST | 5 | 11:03 | .1 | 5 | 18 |
| PICK UP ON | BOTH SIDES | ELM ST | TO PINE ST | 5 | 11:13 | .1 | 16 | 26 |
| PICK UP ON | BOTH SIDES | ELM ST | TO OAK ST | 5 | 11:16 | .1 | 6 | 30 |
| PICK UP ON | BOTH SIDES | OAK ST | TO SYCAMORE ST | 5 | 11:21 | .1 | 7 | 33 |
| PICK UP ON | BOTH SIDES | OAK ST | TO N MAPLE ST | 5 | 11:37 | .2 | 28 | 48 |
| DRIVE ON | | N MAPLE ST | TO SYCAMORE ST | 15 | 11:37 | .1 | | 48 |
| DRIVE ON | | SYCAMORE ST | TO OAK ST | 15 | 11:38 | .2 | | 48 |
| DRIVE ON | | OAK ST | TO ELM ST | 15 | 11:38 | .1 | | 48 |
| DRIVE ON | | ELM ST | TO S MAPLE ST | 15 | 11:39 | .2 | | 48 |
| PICK UP ON | BOTH SIDES | S MAPLE ST | TO OAK ST | 5 | 11:41 | .1 | 2 | 49 |
| PICK UP ON | BOTH SIDES | OAK ST | TO 9TH AVE | 5 | 11:43 | .1 | 2 | 50 |
| PICK UP ON | BOTH SIDES | 9TH AVE | TO LINDEN ST | 5 | 11:48 | .1 | 8 | 54 |
| PICK UP ON | BOTH SIDES | LINDEN ST | TO S MAPLE ST | 5 | 11:53 | .1 | 8 | 58 |
| PICK UP ON | BOTH SIDES | LINDEN ST | TO WALNUT ST | 5 | 12:06 | .2 | 21 | 69 |
| BREAK FOR LUNCH | | | | | 12:06 TO 12:36 | | | |
| PICK UP ON | BOTH SIDES | WALNUT ST | TO S MAPLE ST | 5 | 12:43 | .1 | 12 | 75 |
| PICK UP ON | BOTH SIDES | S MAPLE ST | TO OAK ST | 5 | 12:47 | .1 | 6 | 78 |
| PICK UP ON | BOTH SIDES | OAK ST | TO LINDEN ST | 5 | 12:57 | .1 | 17 | 87 |
| PICK UP ON | BOTH SIDES | LINDEN ST | TO WALNUT ST | 5 | 13:03 | .1 | 9 | 92 |
| DRIVE ON | | LINDEN ST | TO S MAPLE ST | 15 | 13:03 | .2 | | 92 |
| PICK UP ON | BOTH SIDES | S MAPLE ST | TO WALNUT ST | 5 | 13:07 | .1 | 5 | 94 |
| DRIVE ON | | S MAPLE ST | TO OAK ST | 15 | 13:07 | .1 | | 94 |
| DRIVE ON | | OAK ST | TO 9TH AVE | 15 | 13:07 | .1 | | 94 |
| PICK UP ON | BOTH SIDES | 9TH AVE | TO ELM ST | 5 | 13:09 | .0 | 2 | 95 |
| PICK UP ON | BOTH SIDES | ELM ST | TO S MAPLE ST | 5 | 13:12 | .1 | 5 | 98 |
| DRIVE ON | | ELM ST | TO BONG ST | 15 | 13:12 | .1 | | 98 |
| DRIVE ON | | 9TH AVE | TO MITCHELL ST | 15 | 13:13 | .2 | | 98 |
| DRIVE ON | | MITCHELL ST | TO SUNSET HIGHWAY | 30 | 13:14 | .3 | | 98 |
| DRIVE ON | | SUNSET HIGHWAY | TO | 55 | 13:20 | 5.9 | | 98 |
| DRIVE ON | | | TO HALLET ROAD | 45 | 13:24 | 3.2 | | 98 |
| DRIVE ON | | HALLET ROAD | TO HENRY ROAD | 45 | 13:26 | 1.0 | | 98 |
| DRIVE ON | | HENRY ROAD | TO SPOKANE ROAD | 40 | 13:29 | 2.0 | | 98 |
| DRIVE ON | | SPOKANE ROAD | TO LAND FILL | 40 | 13:33 | 3.8 | | 98 |
| UNLOAD | | | | | 13:33 TO 13:43 | | | |
| DRIVE ON | | SPOKANE ROAD | TO HENRY ROAD | 40 | 13:48 | 3.8 | | |
| DRIVE ON | | HENRY ROAD | TO HALLET ROAD | 40 | 13:51 | 2.0 | | |
| DRIVE ON | | HALLET ROAD | TO | 45 | 13:52 | 1.0 | | |
| DRIVE ON | | | TO SUNSET HIGHWAY | 45 | 13:56 | 3.2 | | |
| DRIVE ON | | SUNSET HIGHWAY | TO MITCHELL ST | 55 | 14:03 | 5.9 | | |
| DRIVE ON | | MITCHELL ST | TO FAIRCHILD ST | 30 | 14:03 | .1 | | |
| DRIVE ON | | FAIRCHILD ST | TO 5TH AVE | 30 | 14:04 | .5 | | |
| DRIVE ON | | 5TH AVE | TO GARAGE | 30 | 14:05 | .3 | | |

ROUTE 2 FAIRCHILD AFB 10 CU YD VEHICLE

| ACTION | | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|---|
| LEAVE GARAGE | | | | | 8:00 | | | |
| DRIVE ON | | 5TH AVE | TO FAIRCHILD ST | 30 | 8:01 | .3 | | |
| DRIVE ON | | FAIRCHILD ST | TO MARCH ST | 30 | 8:01 | .3 | | |
| DRIVE ON | | MARCH ST | TO OFFUTT DR | 30 | 8:02 | .3 | | |
| DRIVE ON | | OFFUTT DR | TO MAINE AVE | 30 | 8:02 | .2 | | |
| DRIVE ON | | MAINE AVE | TO PENNSYLVANIA ST | 15 | 8:02 | .1 | | |
| PICK UP ON | BOTH SIDES | PENNSYLVANIA ST | TO LOUISIANA AVE | 5 | 8:06 | .1 | 6 | 3 |
| PICK UP ON | BOTH SIDES | PENNSYLVANIA ST | TO GEORGIA AVE | 5 | 8:08 | .1 | 2 | 4 |
| PICK UP ON | BOTH SIDES | PENNSYLVANIA ST | TO NEBRASKA AVE | 5 | 8:11 | .1 | 6 | 7 |
| PICK UP ON | BOTH SIDES | NEBRASKA AVE | TO CALIFORNIA ST | 5 | 8:32 | .2 | 35 | 25 |
| PICK UP ON | BOTH SIDES | CALIFORNIA ST | TO GEORGIA AVE | 5 | 8:35 | .0 | 5 | 27 |
| PICK UP ON | BOTH SIDES | CALIFORNIA ST | TO LOUISIANA AVE | 5 | 8:37 | .1 | 3 | 29 |
| PICK UP ON | BOTH SIDES | LOUISIANA AVE | TO PENNSYLVANIA ST | 5 | 9:04 | .3 | 48 | 54 |
| DRIVE ON | | PENNSYLVANIA ST | TO GEORGIA AVE | 15 | 9:04 | .1 | | 54 |
| PICK UP ON | BOTH SIDES | GEORGIA AVE | TO CALIFORNIA ST | 5 | 9:24 | .3 | 34 | 72 |
| DRIVE ON | | CALIFORNIA ST | TO LOUISIANA AVE | 15 | 9:24 | .1 | | 72 |
| PICK UP ON | BOTH SIDES | CALIFORNIA ST | TO MAINE AVE | 5 | 9:27 | .1 | 5 | 74 |
| PICK UP ON | BOTH SIDES | MAINE AVE | TO PENNSYLVANIA ST | 5 | 9:54 | .3 | 48 | 99 |
| DRIVE ON | | MAINE AVE | TO OFFUTT DR | 15 | 9:55 | .1 | | 99 |
| DRIVE ON | | MAINE AVE | TO CASTLE ST | 30 | 9:55 | .0 | | 99 |
| DRIVE ON | | CASTLE ST | TO FAIRCHILD ST | 30 | 9:57 | .9 | | 99 |
| DRIVE ON | | FAIRCHILD ST | TO MITCHELL ST | 30 | 9:57 | .3 | | 99 |
| DRIVE ON | | MITCHELL ST | TO SUNSET HIGHWAY | 30 | 9:57 | .1 | | 99 |
| DRIVE ON | | SUNSET HIGHWAY | TO | 55 | 10:04 | 5.9 | | 99 |
| DRIVE ON | | | TO MALLET ROAD | 45 | 10:08 | 3.2 | | 99 |
| DRIVE ON | | MALLET ROAD | TO HENRY ROAD | 45 | 10:10 | 1.0 | | 99 |
| DRIVE ON | | HENRY ROAD | TO SPOKANE ROAD | 40 | 10:13 | 2.0 | | 99 |
| DRIVE ON | | SPOKANE ROAD | TO LAND FILL | 40 | 10:17 | 3.0 | | 99 |
| UNLOAD | | | | | 10:17 TO 10:27 | | | |
| LEAVE LAND FILL | | | | | 10:27 | | | |
| DRIVE ON | | SPOKANE ROAD | TO HENRY ROAD | 40 | 10:32 | 3.0 | | |
| DRIVE ON | | HENRY ROAD | TO MALLET ROAD | 40 | 10:35 | 2.0 | | |
| DRIVE ON | | MALLET ROAD | TO | 45 | 10:36 | 1.0 | | |
| DRIVE ON | | | TO SUNSET HIGHWAY | 45 | 10:40 | 3.2 | | |
| DRIVE ON | | SUNSET HIGHWAY | TO GRAHAM RD | 55 | 10:48 | 7.0 | | |
| DRIVE ON | | GRAHAM RD | TO UTAH DR NORTH | 30 | 10:49 | .8 | | |
| PICK UP ON | BOTH SIDES | UTAH DR NORTH | TO IDAHO ST | 5 | 10:51 | .0 | 2 | 1 |
| PICK UP ON | BOTH SIDES | IDAHO ST | TO NEVADA ST | 5 | 10:54 | .1 | 6 | 4 |
| PICK UP ON | BOTH SIDES | IDAHO ST | TO IOWA ST | 5 | 10:57 | .1 | 4 | 6 |
| PICK UP ON | BOTH SIDES | IDAHO ST | TO UTAH DR SOUTH | 5 | 11:01 | .1 | 6 | 9 |
| DRIVE ON | | UTAH DR SOUTH | TO GRAHAM RD | 15 | 11:01 | .0 | | 9 |
| DRIVE ON | | GRAHAM RD | TO MAINE AVE | 30 | 11:01 | .1 | | 9 |
| DRIVE ON | | MAINE AVE | TO CALIFORNIA ST | 15 | 11:01 | .0 | | 9 |
| DRIVE ON | | CALIFORNIA ST | TO MINNESOTA PL | 15 | 11:02 | .1 | | 9 |
| PICK UP ON | BOTH SIDES | CALIFORNIA ST | TO CAROLINA DR | 5 | 11:18 | .2 | 29 | 24 |
| PICK UP ON | BOTH SIDES | CAROLINA DR | TO OHIO ST | 5 | 11:22 | .1 | 7 | 27 |
| PICK UP ON | BOTH SIDES | OHIO ST | TO COLORADO AVE | 5 | 11:29 | .1 | 12 | 34 |
| PICK UP ON | BOTH SIDES | COLORADO AVE | TO CAROLINA DR | 5 | 11:37 | .1 | 13 | 40 |

| ACTION | | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|---|
| PICK UP ON BOTH SIDES | COLORADO AVE | TO | PENNSYLVANIA ST | 5 | 11:41 | .1 | 6 | 44 |
| DRIVE ON | PENNSYLVANIA ST | TO | MICHIGAN AVE | 15 | 11:42 | .2 | | 44 |
| PICK UP ON BOTH SIDES | MICHIGAN AVE | TO | OHIO ST | 5 | 12:02 | .2 | 36 | 62 |
| BREAK FOR LUNCH | | | | | 12:02 TO 12:32 | | | |
| PICK UP ON BOTH SIDES | OHIO ST | TO | CAROLINA DR | 5 | 12:35 | .1 | 6 | 65 |
| DRIVE ON | CAROLINA DR | TO | CALIFORNIA ST | 15 | 12:36 | .1 | | 65 |
| PICK UP ON BOTH SIDES | CALIFORNIA ST | TO | | 5 | 12:46 | .1 | 18 | 75 |
| DRIVE ON | | TO | | 15 | 12:46 | .0 | | 75 |
| PICK UP ON BOTH SIDES | | TO | DAKOTA AVE | 5 | 12:47 | .0 | 2 | 76 |
| PICK UP ON BOTH SIDES | DAKOTA AVE | TO | PENNSYLVANIA ST | 5 | 13:09 | .2 | 39 | 96 |
| DRIVE ON | PENNSYLVANIA ST | TO | OFFUTT DR | 15 | 13:10 | .0 | | 96 |
| DRIVE ON | OFFUTT DR | TO | MARCH ST | 30 | 13:10 | .2 | | 96 |
| DRIVE ON | MARCH ST | TO | FAIRCHILD ST | 30 | 13:10 | .3 | | 96 |
| DRIVE ON | FAIRCHILD ST | TO | MITCHELL ST | 30 | 13:12 | .8 | | 96 |
| DRIVE ON | MITCHELL ST | TO | SUNSET HIGHWAY | 30 | 13:12 | .1 | | 96 |
| DRIVE ON | SUNSET HIGHWAY | TO | | 55 | 13:19 | 5.9 | | 96 |
| DRIVE ON | | TO | MALLET ROAD | 45 | 13:23 | 3.2 | | 96 |
| DRIVE ON | MALLET ROAD | TO | HENRY ROAD | 45 | 13:24 | 1.0 | | 96 |
| DRIVE ON | HENRY ROAD | TO | SPOKANE ROAD | 40 | 13:27 | 2.0 | | 96 |
| DRIVE ON | SPOKANE ROAD | TO | LAND FILL | 40 | 13:32 | 3.0 | | 96 |
| UNLOAD | | | | | 13:32 TO 13:42 | | | |
| DRIVE ON | SPOKANE ROAD | TO | HENRY ROAD | 40 | 13:46 | 3.0 | | |
| DRIVE ON | HENRY ROAD | TO | MALLET ROAD | 40 | 13:49 | 2.0 | | |
| DRIVE ON | MALLET ROAD | TO | | 45 | 13:51 | 1.0 | | |
| DRIVE ON | | TO | SUNSET HIGHWAY | 45 | 13:55 | 3.2 | | |
| DRIVE ON | SUNSET HIGHWAY | TO | MITCHELL ST | 55 | 14:01 | 5.9 | | |
| DRIVE ON | MITCHELL ST | TO | FAIRCHILD ST | 30 | 14:02 | .1 | | |
| DRIVE ON | FAIRCHILD ST | TO | 5TH AVE | 30 | 14:03 | .5 | | |
| DRIVE ON | 5TH AVE | TO | GARAGE | 30 | 14:03 | .3 | | |

ROUTE 3 FAIRCHILD AFB 10 CU YD VEHICLE

| ACTION | | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|---|
| LEAVE GARAGE | | | | | 8:00 | | | |
| DRIVE ON | | 5TH AVE | TO FAIRCHILD ST | 30 | 8:01 | .3 | | |
| DRIVE ON | | FAIRCHILD ST | TO MARCH ST | 30 | 8:01 | .3 | | |
| DRIVE ON | | MARCH ST | TO OFFUTT DR | 30 | 8:02 | .3 | | |
| DRIVE ON | | OFFUTT DR | TO MAINE AVE | 30 | 8:02 | .2 | | |
| PICK UP ON | BOTH SIDES | MAINE AVE | TO PENNSYLVANIA ST | 5 | 8:05 | .1 | 4 | 2 |
| PICK UP ON | BOTH SIDES | PENNSYLVANIA ST | TO WASHINGTON AVE | 5 | 8:09 | .1 | 7 | 5 |
| PICK UP ON | BOTH SIDES | PENNSYLVANIA ST | TO COLORADO AVE | 5 | 8:14 | .1 | 9 | 10 |
| DRIVE ON | | COLORADO AVE | TO OHIO ST | 15 | 8:15 | .2 | | 10 |
| PICK UP ON | BOTH SIDES | MINNESOTA PL | TO WASHINGTON AVE | 5 | 8:20 | .1 | 9 | 15 |
| PICK UP ON | BOTH SIDES | CALIFORNIA ST | TO MAINE AVE | 5 | 8:25 | .1 | 8 | 19 |
| PICK UP ON | BOTH SIDES | MAINE AVE | TO GRAHAM RD | 5 | 8:27 | .0 | 2 | 20 |
| DRIVE ON | | MAINE AVE | TO CALIFORNIA ST | 15 | 8:27 | .0 | | 20 |
| DRIVE ON | | CALIFORNIA ST | TO MINNESOTA PL | 15 | 8:27 | .1 | | 20 |
| PICK UP ON | BOTH SIDES | WASHINGTON AVE | TO PENNSYLVANIA ST | 5 | 8:47 | .2 | 35 | 38 |
| DRIVE ON | | PENNSYLVANIA ST | TO MAINE AVE | 15 | 8:47 | .1 | | 38 |
| DRIVE ON | | MAINE AVE | TO OFFUTT DR | 15 | 8:48 | .1 | | 38 |
| DRIVE ON | | MAINE AVE | TO CASTLE ST | 30 | 8:48 | .0 | | 38 |
| DRIVE ON | | CASTLE ST | TO FAIRCHILD ST | 30 | 8:50 | .9 | | 38 |
| DRIVE ON | | FAIRCHILD ST | TO MITCHELL ST | 30 | 8:50 | .3 | | 38 |
| DRIVE ON | | MITCHELL ST | TO SUNSET HIGHWAY | 30 | 8:50 | .1 | | 38 |
| DRIVE ON | | SUNSET HIGHWAY | TO | 55 | 8:57 | 5.9 | | 38 |
| DRIVE ON | | | TO HALLET ROAD | 45 | 9:01 | 3.2 | | 38 |
| DRIVE ON | | HALLET ROAD | TO HENRY ROAD | 45 | 9:02 | 1.0 | | 38 |
| DRIVE ON | | HENRY ROAD | TO ARMSTRONG DRIVE | 40 | 9:03 | .0 | | 38 |
| DRIVE ON | | ARMSTRONG DRIVE | TO FANAZICK DRIVE | 15 | 9:03 | .1 | | 38 |
| PICK UP ON | BOTH SIDES | ARMSTRONG DRIVE | TO | 5 | 9:08 | .1 | 8 | 42 |
| PICK UP ON | BOTH SIDES | ARMSTRONG DRIVE | TO JOHN GAY DRIVE | 5 | 9:21 | .2 | 22 | 53 |
| DRIVE ON | | JOHN GAY DRIVE | TO SMITH DRIVE | 15 | 9:21 | .0 | | 53 |
| PICK UP ON | BOTH SIDES | JOHN GAY DRIVE | TO MALSTROM DRIVE | 5 | 9:23 | .0 | 3 | 55 |
| DRIVE ON | | MALSTROM DRIVE | TO WORTMAN PLACE | 15 | 9:23 | .1 | | 55 |
| PICK UP ON | BOTH SIDES | MALSTROM DRIVE | TO | 5 | 9:34 | .1 | 17 | 64 |
| PICK UP ON | BOTH SIDES | MALSTROM DRIVE | TO | 5 | 9:36 | .0 | 3 | 65 |
| PICK UP ON | BOTH SIDES | MALSTROM DRIVE | TO HARDER PLACE | 5 | 9:37 | .0 | 2 | 66 |
| PICK UP ON | BOTH SIDES | HARDER PLACE | TO WORTMAN PLACE | 5 | 9:46 | .1 | 14 | 74 |
| PICK UP ON | BOTH SIDES | WORTMAN PLACE | TO EICHENBURGER PLACE | 5 | 9:49 | .1 | 5 | 76 |
| PICK UP ON | BOTH SIDES | EICHENBURGER PLACE | TO MALSTROM DRIVE | 5 | 9:52 | .1 | 5 | 79 |
| DRIVE ON | | MALSTROM DRIVE | TO HARDER PLACE | 15 | 9:53 | .1 | | 79 |
| DRIVE ON | | HARDER PLACE | TO WORTMAN PLACE | 15 | 9:53 | .1 | | 79 |
| PICK UP ON | BOTH SIDES | WORTMAN PLACE | TO MALSTROM DRIVE | 5 | 9:58 | .1 | 7 | 82 |
| DRIVE ON | | MALSTROM DRIVE | TO JOHN GAY DRIVE | 15 | 9:58 | .1 | | 82 |
| PICK UP ON | BOTH SIDES | JOHN GAY DRIVE | TO FANAZICK DRIVE | 5 | 10:12 | .2 | 24 | 95 |
| PICK UP ON | BOTH SIDES | JOHN GAY DRIVE | TO HENRY ROAD | 5 | 10:15 | .1 | 4 | 97 |
| DRIVE ON | | HENRY ROAD | TO SPOKANE ROAD | 40 | 10:18 | 1.8 | | 97 |
| DRIVE ON | | SPOKANE ROAD | TO LAND FILL | 40 | 10:22 | 3.0 | | 97 |
| UNLOAD | | | | | 10:22 TO 10:32 | | | |
| LEAVE LAND FILL | | | | | 10:32 | | | |
| DRIVE ON | | SPOKANE ROAD | TO HENRY ROAD | 40 | 10:37 | 3.0 | | |

| ACTION | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|
| DRIVE ON | HENRY ROAD | TO HALLET ROAD | 40 | 10:40 | 2.0 | | |
| DRIVE ON | HALLET ROAD | TO | 45 | 10:41 | 1.0 | | |
| DRIVE ON | | TO SUNSET HIGHWAY | 45 | 10:45 | 3.2 | | |
| DRIVE ON | SUNSET HIGHWAY | TO MITCHELL ST | 55 | 10:52 | 5.9 | | |
| DRIVE ON | MITCHELL ST | TO POPLAR AVE | 30 | 10:52 | .2 | | |
| DRIVE ON | POPLAR AVE | TO PALM DR | 15 | 10:52 | .1 | | |
| DRIVE ON | PALM DR | TO CEDAR ST | 15 | 10:53 | .2 | | |
| PICK UP ON BOTH SIDES | CEDAR ST | TO | 5 | 11:07 | .2 | 24 | 12 |
| PICK UP ON BOTH SIDES | CEDAR ST | TO PALM DR | 5 | 11:13 | .1 | 10 | 17 |
| DRIVE ON | CEDAR ST | TO S MAPLE ST | 15 | 11:13 | .1 | | 17 |
| DRIVE ON | S MAPLE ST | TO ELM ST | 15 | 11:13 | .1 | | 17 |
| DRIVE ON | ELM ST | TO PINE ST | 15 | 11:13 | .1 | | 17 |
| PICK UP ON BOTH SIDES | PINE ST | TO | 5 | 11:31 | .2 | 30 | 33 |
| PICK UP ON BOTH SIDES | PINE ST | TO N MAPLE ST | 5 | 11:38 | .1 | 12 | 39 |
| PICK UP ON BOTH SIDES | N MAPLE ST | TO OAK ST | 5 | 11:42 | .1 | 7 | 43 |
| PICK UP ON BOTH SIDES | N MAPLE ST | TO SYCAMORE ST | 5 | 11:46 | .1 | 7 | 46 |
| PICK UP ON BOTH SIDES | N MAPLE ST | TO ELM ST | 5 | 11:47 | .0 | 2 | 47 |
| PICK UP ON BOTH SIDES | ELM ST | TO | 5 | 11:51 | .1 | 7 | 51 |
| PICK UP ON BOTH SIDES | ELM ST | TO | 5 | 12:05 | .1 | 25 | 64 |
| BREAK FOR LUNCH | | | | 12:05 TO 12:35 | | | |
| PICK UP ON BOTH SIDES | ELM ST | TO | 5 | 12:44 | .1 | 14 | 71 |
| PICK UP ON BOTH SIDES | ELM ST | TO OAK ST | 5 | 12:47 | .1 | 5 | 74 |
| DRIVE ON | OAK ST | TO SYCAMORE ST | 15 | 12:47 | .1 | | 74 |
| PICK UP ON BOTH SIDES | SYCAMORE ST | TO | 5 | 12:53 | .1 | 10 | 79 |
| PICK UP ON BOTH SIDES | SYCAMORE ST | TO N MAPLE ST | 5 | 13:06 | .1 | 23 | 91 |
| DRIVE ON | N MAPLE ST | TO PINE ST | 15 | 13:07 | .1 | | 91 |
| PICK UP ON BOTH SIDES | N MAPLE ST | TO CEDAR ST | 5 | 13:13 | .1 | 10 | 96 |
| PICK UP ON BOTH SIDES | CEDAR ST | TO PALM DR | 5 | 13:15 | .1 | 4 | 98 |
| DRIVE ON | PALM DR | TO POPLAR AVE | 15 | 13:16 | .2 | | 98 |
| DRIVE ON | POPLAR AVE | TO MITCHELL ST | 15 | 13:17 | .1 | | 98 |
| DRIVE ON | MITCHELL ST | TO SUNSET HIGHWAY | 30 | 13:17 | .2 | | 98 |
| DRIVE ON | SUNSET HIGHWAY | TO | 55 | 13:23 | 5.9 | | 98 |
| DRIVE ON | | TO HALLET ROAD | 45 | 13:28 | 3.2 | | 98 |
| DRIVE ON | HALLET ROAD | TO HENRY ROAD | 45 | 13:29 | 1.0 | | 98 |
| DRIVE ON | HENRY ROAD | TO SPOKANE ROAD | 40 | 13:32 | 2.0 | | 98 |
| DRIVE ON | SPOKANE ROAD | TO LAND FILL | 40 | 13:36 | 3.0 | | 98 |
| UNLOAD | | | | 13:36 TO 13:46 | | | |
| DRIVE ON | SPOKANE ROAD | TO HENRY ROAD | 40 | 13:51 | 3.0 | | |
| DRIVE ON | HENRY ROAD | TO HALLET ROAD | 40 | 13:54 | 2.0 | | |
| DRIVE ON | HALLET ROAD | TO | 45 | 13:55 | 1.0 | | |
| DRIVE ON | | TO SUNSET HIGHWAY | 45 | 14:00 | 3.2 | | |
| DRIVE ON | SUNSET HIGHWAY | TO MITCHELL ST | 55 | 14:06 | 5.9 | | |
| DRIVE ON | MITCHELL ST | TO FAIRCHILD ST | 30 | 14:06 | .1 | | |
| DRIVE ON | FAIRCHILD ST | TO 5TH AVE | 30 | 14:07 | .5 | | |
| DRIVE ON | 5TH AVE | TO GARAGE | 30 | 14:08 | .3 | | |

ROUTE 4 FAIRCHILD AFB 10 CU YD VEHICLE

| ACTION | | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|---|
| LEAVE GARAGE | | | | | 8:00 | | | |
| DRIVE ON | | 5TH AVE | TO FAIRCHILD ST | 30 | 8:01 | .3 | | |
| DRIVE ON | | FAIRCHILD ST | TO MARCH ST | 30 | 8:01 | .3 | | |
| DRIVE ON | | MARCH ST | TO OFFUTT DR | 30 | 8:02 | .3 | | |
| DRIVE ON | | OFFUTT DR | TO CASTLE ST | 30 | 8:02 | .3 | | |
| DRIVE ON | | CASTLE ST | TO GALVESTON AVE | 15 | 8:03 | .1 | | |
| PICK UP ON | BOTH SIDES | GALVESTON AVE | TO GRANT ST | 5 | 8:06 | .2 | 2 | 1 |
| DRIVE ON | | GRANT ST | TO EL PASO AVE | 15 | 8:07 | .1 | | 1 |
| DRIVE ON | | EL PASO AVE | TO GRAHAM RD | 15 | 8:07 | .1 | | 1 |
| DRIVE ON | | GRAHAM RD | TO FIRST ST | 30 | 8:07 | .1 | | 1 |
| PICK UP ON | BOTH SIDES | FIRST ST | TO 43RD ST | 5 | 8:20 | .2 | 21 | 11 |
| PICK UP ON | BOTH SIDES | 43RD ST | TO | 5 | 8:23 | .0 | 4 | 13 |
| PICK UP ON | BOTH SIDES | 43RD ST | TO ARTILLERY CIRCLE | 5 | 8:24 | .0 | 3 | 15 |
| PICK UP ON | BOTH SIDES | 43RD ST | TO ARTILLERY CIRCLE | 5 | 8:29 | .1 | 6 | 18 |
| PICK UP ON | BOTH SIDES | ARTILLERY CIRCLE | TO | 5 | 8:33 | .1 | 7 | 22 |
| PICK UP ON | BOTH SIDES | ARTILLERY CIRCLE | TO 43RD ST | 5 | 8:36 | .1 | 5 | 24 |
| DRIVE ON | | 43RD ST | TO ARTILLERY CIRCLE | 15 | 8:37 | .1 | | 24 |
| PICK UP ON | BOTH SIDES | 43RD ST | TO GRAHAM RD | 5 | 8:38 | .0 | 2 | 25 |
| DRIVE ON | | GRAHAM RD | TO UTAH DR SOUTH | 30 | 8:39 | .3 | | 25 |
| PICK UP ON | BOTH SIDES | UTAH DR SOUTH | TO IDAHO ST | 5 | 8:40 | .0 | 2 | 26 |
| PICK UP ON | BOTH SIDES | UTAH DR SOUTH | TO UTAH DR WEST | 5 | 8:52 | .1 | 20 | 37 |
| PICK UP ON | BOTH SIDES | UTAH DR WEST | TO IOWA ST | 5 | 8:59 | .1 | 12 | 43 |
| PICK UP ON | BOTH SIDES | UTAH DR WEST | TO NEVADA ST | 5 | 9:02 | .0 | 6 | 46 |
| PICK UP ON | BOTH SIDES | UTAH DR WEST | TO UTAH DR NORTH | 5 | 9:08 | .0 | 10 | 51 |
| PICK UP ON | BOTH SIDES | UTAH DR NORTH | TO OREGON DR | 5 | 9:11 | .0 | 6 | 54 |
| PICK UP ON | BOTH SIDES | UTAH DR NORTH | TO IDAHO ST | 5 | 9:20 | .1 | 14 | 62 |
| DRIVE ON | | IDAHO ST | TO IOWA ST | 15 | 9:20 | .1 | | 62 |
| PICK UP ON | BOTH SIDES | IOWA ST | TO UTAH DR WEST | 5 | 9:34 | .2 | 24 | 74 |
| DRIVE ON | | UTAH DR WEST | TO NEVADA ST | 15 | 9:35 | .0 | | 74 |
| PICK UP ON | BOTH SIDES | NEVADA ST | TO IDAHO ST | 5 | 9:50 | .2 | 28 | 88 |
| DRIVE ON | | IDAHO ST | TO OREGON DR | 15 | 9:50 | .1 | | 88 |
| DRIVE ON | | UTAH DR NORTH | TO OREGON DR | 15 | 9:50 | .1 | | 88 |
| PICK UP ON | BOTH SIDES | OREGON DR | TO | 5 | 10:02 | .2 | 20 | 98 |
| PICK UP ON | BOTH SIDES | OREGON DR | TO IDAHO ST | 5 | 10:04 | .0 | 2 | 99 |
| DRIVE ON | | UTAH DR NORTH | TO GRAHAM RD | 15 | 10:04 | .0 | | 99 |
| DRIVE ON | | GRAHAM RD | TO SUNSET HIGHWAY | 30 | 10:05 | .8 | | 99 |
| DRIVE ON | | SUNSET HIGHWAY | TO | 55 | 10:13 | 7.0 | | 99 |
| DRIVE ON | | | TO HALLET ROAD | 45 | 10:17 | 3.2 | | 99 |
| DRIVE ON | | HALLET ROAD | TO HENRY ROAD | 45 | 10:19 | 1.0 | | 99 |
| DRIVE ON | | HENRY ROAD | TO SPOKANE ROAD | 40 | 10:22 | 2.0 | | 99 |
| DRIVE ON | | SPOKANE ROAD | TO LAND FILL | 40 | 10:26 | 3.0 | | 99 |
| UNLOAD | | | | | 10:26 TO 10:36 | | | |
| LEAVE LAND FILL | | | | | 10:36 | | | |
| DRIVE ON | | SPOKANE ROAD | TO HENRY ROAD | 40 | 10:41 | 3.0 | | |
| DRIVE ON | | HENRY ROAD | TO JOHN GAY DRIVE | 40 | 10:43 | 1.8 | | |
| DRIVE ON | | JOHN GAY DRIVE | TO FANAZICK DRIVE | 15 | 10:44 | .1 | | |
| PICK UP ON | BOTH SIDES | FANAZICK DRIVE | TO SMITH DRIVE | 5 | 10:55 | .1 | 20 | 10 |
| PICK UP ON | BOTH SIDES | FANAZICK DRIVE | TO ARMSTRONG DRIVE | 5 | 10:58 | .1 | 4 | 12 |

| ACTION | | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|---|
| PICK UP ON BOTH SIDES | ARMSTRONG DRIVE | TO | HENRY ROAD | 5 | 11:00 | .1 | 2 | 13 |
| DRIVE ON | HENRY ROAD | TO | HALLET ROAD | 40 | 11:00 | .0 | | 13 |
| DRIVE ON | HALLET ROAD | TO | | 45 | 11:01 | 1.0 | | 13 |
| DRIVE ON | | TO | MCCRORY AVENUE | 45 | 11:03 | 1.8 | | 13 |
| DRIVE ON | MCCRORY AVENUE | TO | FRIES STREET | 15 | 11:04 | .1 | | 13 |
| DRIVE ON | FRIES STREET | TO | JORDAN AVENUE | 15 | 11:04 | .1 | | 13 |
| PICK UP ON BOTH SIDES | JORDAN AVENUE | TO | BUSH STREET | 5 | 11:16 | .1 | 20 | 23 |
| DRIVE ON | BUSH STREET | TO | DEL VECCHIO AVENUE | 15 | 11:16 | .0 | | 23 |
| DRIVE ON | COMMANDERS DRIVE | TO | | 15 | 11:16 | .0 | | 23 |
| PICK UP ON BOTH SIDES | COMMANDERS DRIVE | TO | | 5 | 11:20 | .1 | 6 | 26 |
| PICK UP ON BOTH SIDES | | TO | | 5 | 11:25 | .1 | 7 | 30 |
| DRIVE ON | | TO | COMMANDERS DRIVE | 15 | 11:25 | .1 | | 30 |
| PICK UP ON BOTH SIDES | COMMANDERS DRIVE | TO | | 5 | 11:27 | .0 | 3 | 32 |
| PICK UP ON BOTH SIDES | COMMANDERS DRIVE | TO | | 5 | 11:29 | .1 | 2 | 33 |
| DRIVE ON | | TO | | 15 | 11:29 | .0 | | 33 |
| PICK UP ON BOTH SIDES | | TO | | 5 | 11:30 | .0 | 2 | 34 |
| PICK UP ON | | TO | | 5 | 11:31 | .0 | 1 | 34 |
| PICK UP ON | | TO | | 5 | 11:32 | .0 | 1 | 35 |
| DRIVE ON | | TO | | 15 | 11:32 | .0 | | 35 |
| PICK UP ON BOTH SIDES | | TO | COMMANDERS DRIVE | 5 | 11:33 | .0 | 2 | 36 |
| DRIVE ON | COMMANDERS DRIVE | TO | DEL VECCHIO AVENUE | 15 | 11:33 | .0 | | 36 |
| PICK UP ON BOTH SIDES | DEL VECCHIO AVENUE | TO | | 5 | 11:39 | .1 | 10 | 41 |
| PICK UP ON BOTH SIDES | DEL VECCHIO AVENUE | TO | FRIES STREET | 5 | 11:44 | .1 | 8 | 45 |
| DRIVE ON | FRIES STREET | TO | JORDAN AVENUE | 15 | 11:44 | .1 | | 45 |
| DRIVE ON | JORDAN AVENUE | TO | BUSH STREET | 15 | 11:45 | .1 | | 45 |
| DRIVE ON | BUSH STREET | TO | COMMANDERS DRIVE | 15 | 11:45 | .1 | | 45 |
| PICK UP ON BOTH SIDES | MCCRORY AVENUE | TO | FRIES STREET | 5 | 11:53 | .1 | 12 | 51 |
| DRIVE ON | MCCRORY AVENUE | TO | | 15 | 11:53 | .1 | | 51 |
| DRIVE ON | | TO | HALLET ROAD | 45 | 11:56 | 1.8 | | 51 |
| DRIVE ON | HALLET ROAD | TO | HENRY ROAD | 45 | 11:57 | 1.0 | | 51 |
| DRIVE ON | HENRY ROAD | TO | ARMSTRONG DRIVE | 40 | 11:57 | .0 | | 51 |
| DRIVE ON | ARMSTRONG DRIVE | TO | FANAZICK DRIVE | 15 | 11:57 | .1 | | 51 |
| DRIVE ON | FANAZICK DRIVE | TO | SMITH DRIVE | 15 | 11:57 | .1 | | 51 |
| PICK UP ON BOTH SIDES | SMITH DRIVE | TO | BURNS PLACE | 5 | 12:00 | .0 | 4 | 53 |
| PICK UP ON BOTH SIDES | SMITH DRIVE | TO | BURNS PLACE | 5 | 12:10 | .1 | 16 | 62 |
| BREAK FOR LUNCH | | | | | 12:10 TO 12:40 | | | |
| PICK UP ON BOTH SIDES | BURNS PLACE | TO | | 5 | 12:48 | .1 | 14 | 69 |
| PICK UP ON BOTH SIDES | BURNS PLACE | TO | | 5 | 12:50 | .0 | 4 | 71 |
| PICK UP ON BOTH SIDES | BURNS PLACE | TO | SMITH DRIVE | 5 | 12:55 | .1 | 8 | 75 |
| DRIVE ON | SMITH DRIVE | TO | BURNS PLACE | 15 | 12:56 | .1 | | 75 |
| PICK UP ON BOTH SIDES | SMITH DRIVE | TO | JOHN GAY DRIVE | 5 | 12:58 | .0 | 4 | 77 |
| PICK UP ON BOTH SIDES | JOHN GAY DRIVE | TO | ARMSTRONG DRIVE | 5 | 13:00 | .0 | 3 | 79 |
| PICK UP ON BOTH SIDES | JOHN GAY DRIVE | TO | EICHENBURGER PLACE | 5 | 13:03 | .1 | 4 | 81 |
| DRIVE ON | EICHENBURGER PLACE | TO | WORTMAN PLACE | 15 | 13:04 | .0 | | 81 |
| PICK UP ON BOTH SIDES | EICHENBURGER PLACE | TO | JOHN GAY DRIVE | 5 | 13:06 | .0 | 3 | 82 |
| PICK UP ON | JOHN GAY DRIVE | TO | | 5 | 13:07 | .0 | 1 | 83 |
| DRIVE ON | MALSTROM DRIVE | TO | MITCHELL PLACE | 15 | 13:07 | .0 | | 83 |
| PICK UP ON BOTH SIDES | MITCHELL PLACE | TO | MALSTROM DRIVE | 5 | 13:09 | .1 | 3 | 84 |
| PICK UP ON BOTH SIDES | MALSTROM DRIVE | TO | MITCHELL PLACE | 5 | 13:10 | .0 | 2 | 86 |
| PICK UP ON BOTH SIDES | MALSTROM DRIVE | TO | | 5 | 13:12 | .0 | 2 | 87 |

| ACTION | | | SPEED (MPH) | TIME (HR:MIN) | DISTANCE (MILES) | HOUSEHOLDS SERVICED | LOAD (PCT) |
|---|---|---|---|---|---|---|---|
| PICK UP ON BOTH SIDES | MALSTROM DRIVE | TO | 5 | 13:13 | .0 | 3 | 88 |
| PICK UP ON BOTH SIDES | MALSTROM DRIVE | TO EICHENBURGER PLACE | 5 | 13:17 | .1 | 6 | 91 |
| PICK UP ON BOTH SIDES | MALSTROM DRIVE | TO HARDER PLACE | 5 | 13:20 | .1 | 5 | 94 |
| DRIVE ON | MALSTROM DRIVE | TO HORTMAN PLACE | 15 | 13:21 | .2 | | 94 |
| PICK UP ON BOTH SIDES | MALSTROM DRIVE | TO JOHN GAY DRIVE | 5 | 13:25 | .1 | 6 | 97 |
| DRIVE ON | JOHN GAY DRIVE | TO HENRY ROAD | 15 | 13:26 | .2 | | 97 |
| DRIVE ON | HENRY ROAD | TO SPOKANE ROAD | 40 | 13:29 | 1.8 | | 97 |
| DRIVE ON | SPOKANE ROAD | TO LAND FILL | 40 | 13:33 | 3.0 | | 97 |
| UNLOAD | | | | 13:33 TO 13:43 | | | |
| DRIVE ON | SPOKANE ROAD | TO HENRY ROAD | 40 | 13:48 | 3.0 | | |
| DRIVE ON | HENRY ROAD | TO HALLET ROAD | 40 | 13:51 | 2.0 | | |
| DRIVE ON | HALLET ROAD | TO | 45 | 13:52 | 1.0 | | |
| DRIVE ON | | TO SUNSET HIGHWAY | 45 | 13:56 | 3.2 | | |
| DRIVE ON | SUNSET HIGHWAY | TO MITCHELL ST | 55 | 14:03 | 5.9 | | |
| DRIVE ON | MITCHELL ST | TO FAIRCHILD ST | 30 | 14:03 | .1 | | |
| DRIVE ON | FAIRCHILD ST | TO 5TH AVE | 30 | 14:04 | .5 | | |
| DRIVE ON | 5TH AVE | TO GARAGE | 30 | 14:05 | .3 | | |

# APPENDIX G

## RCSP ROUTE MAPS

**FAIRCHILD AFB, WASH.**

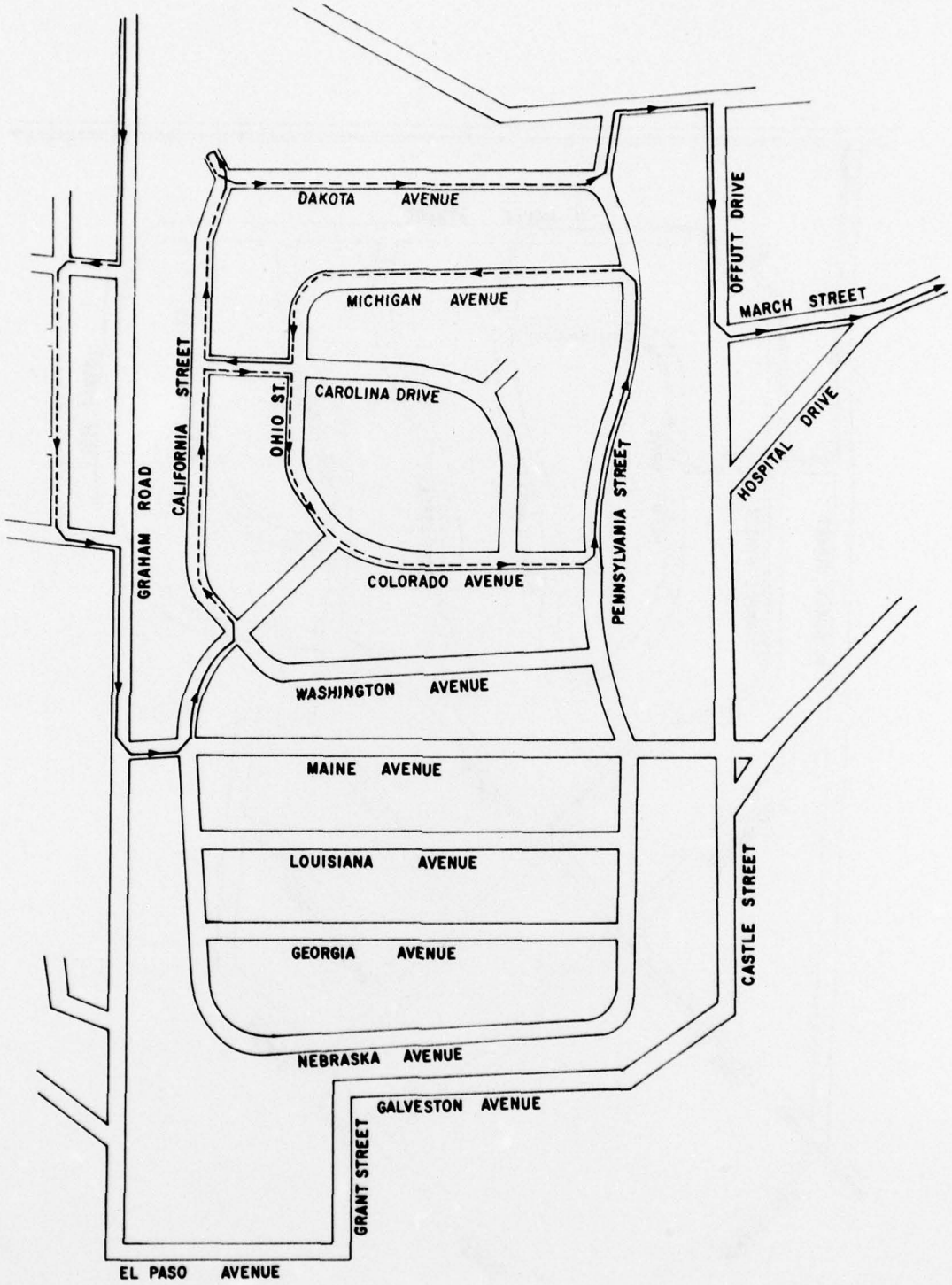
ROUTE 1 TRIP 1

10 CU YD VEHICLE

TRAVEL

COLLECT BOTH SIDES

COLLECT RIGHT SIDE




## FAIRCHILD AFB, WASH.

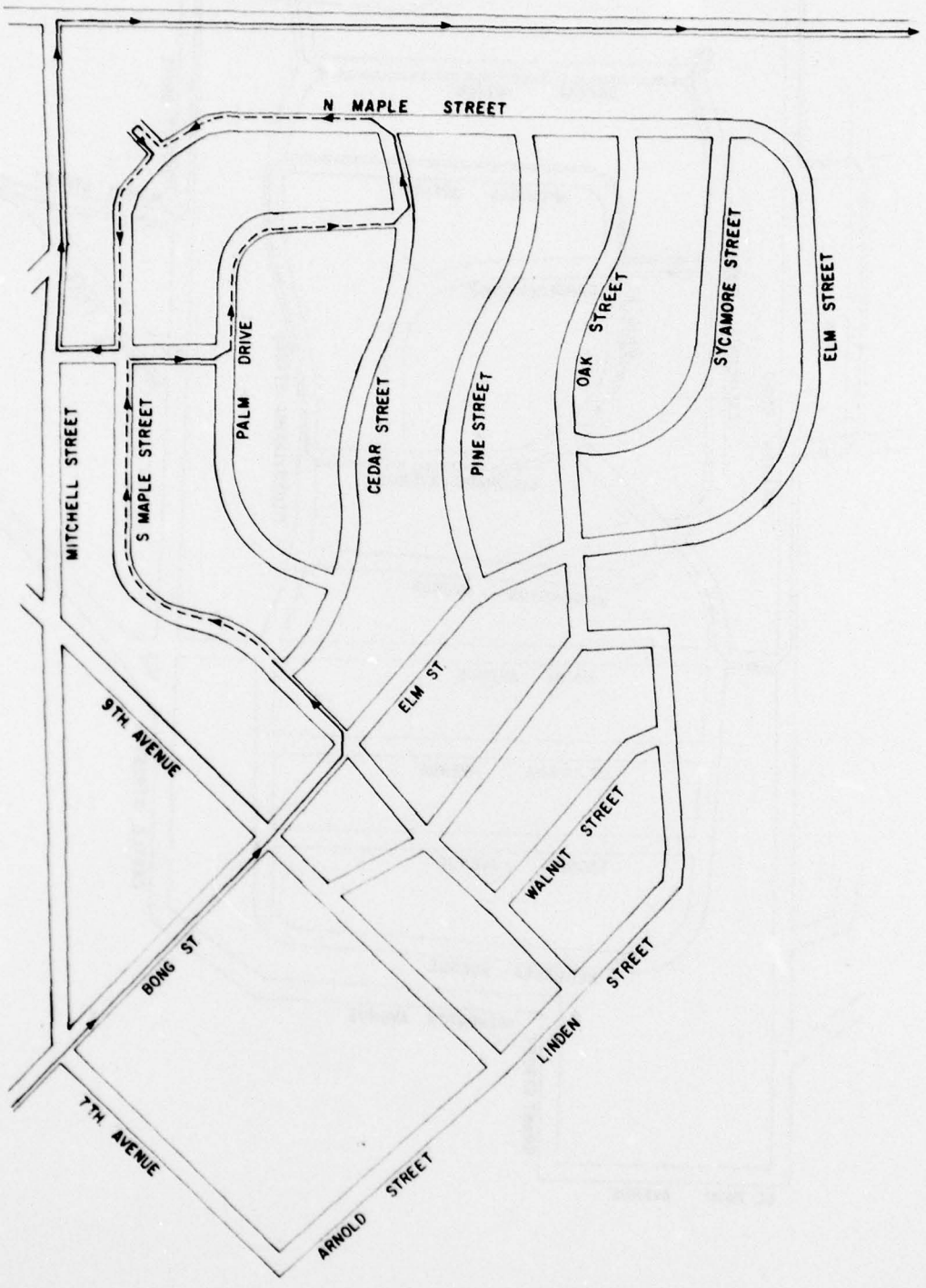
ROUTE 1 TRIP 2

10 CU YD VEHICLE

TRAVEL

COLLECT BOTH SIDES

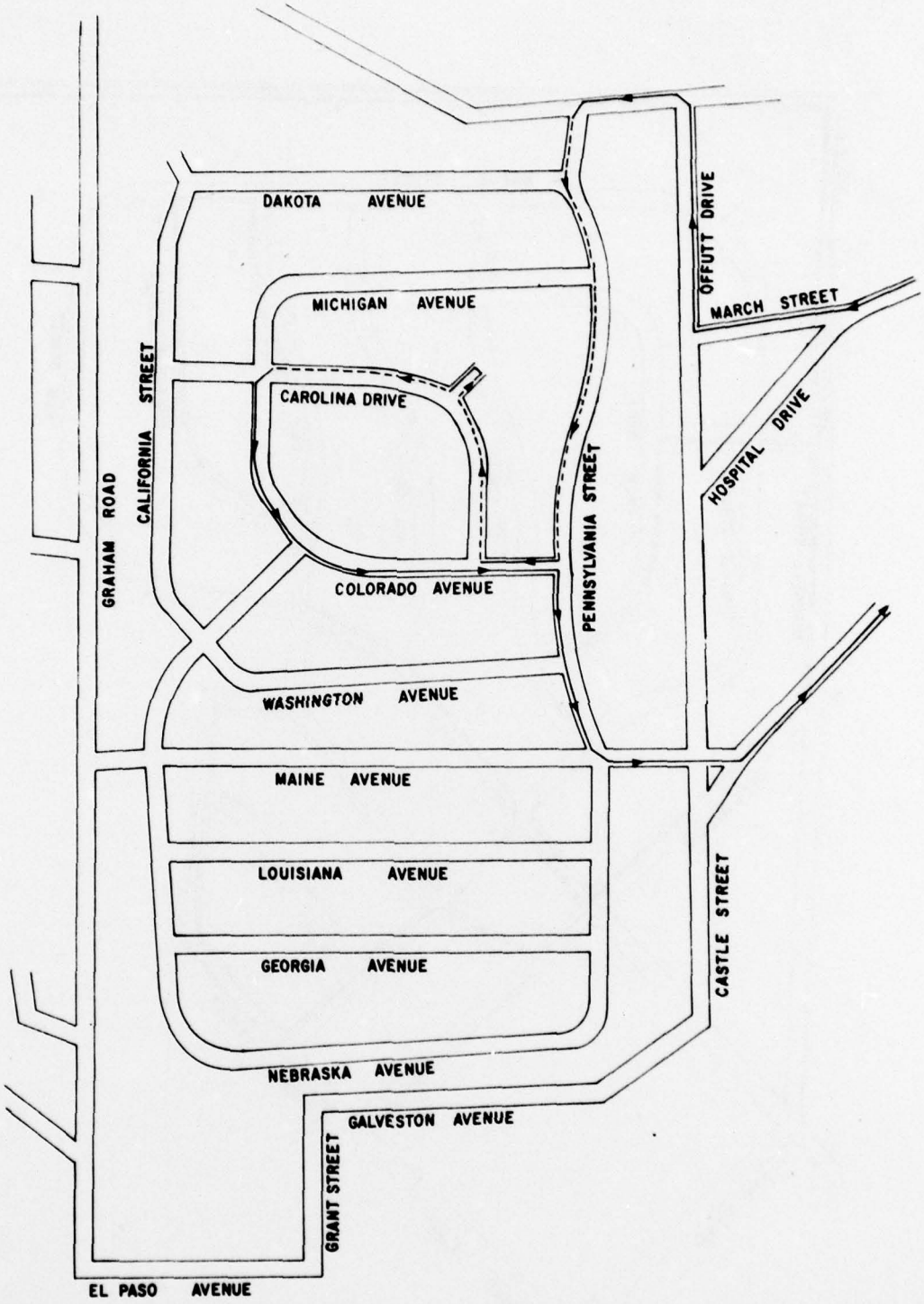
COLLECT RIGHT SIDE




**FAIRCHILD AFB, WASH.**

ROUTE 2 TRIP 1
10 CU YD VEHICLE

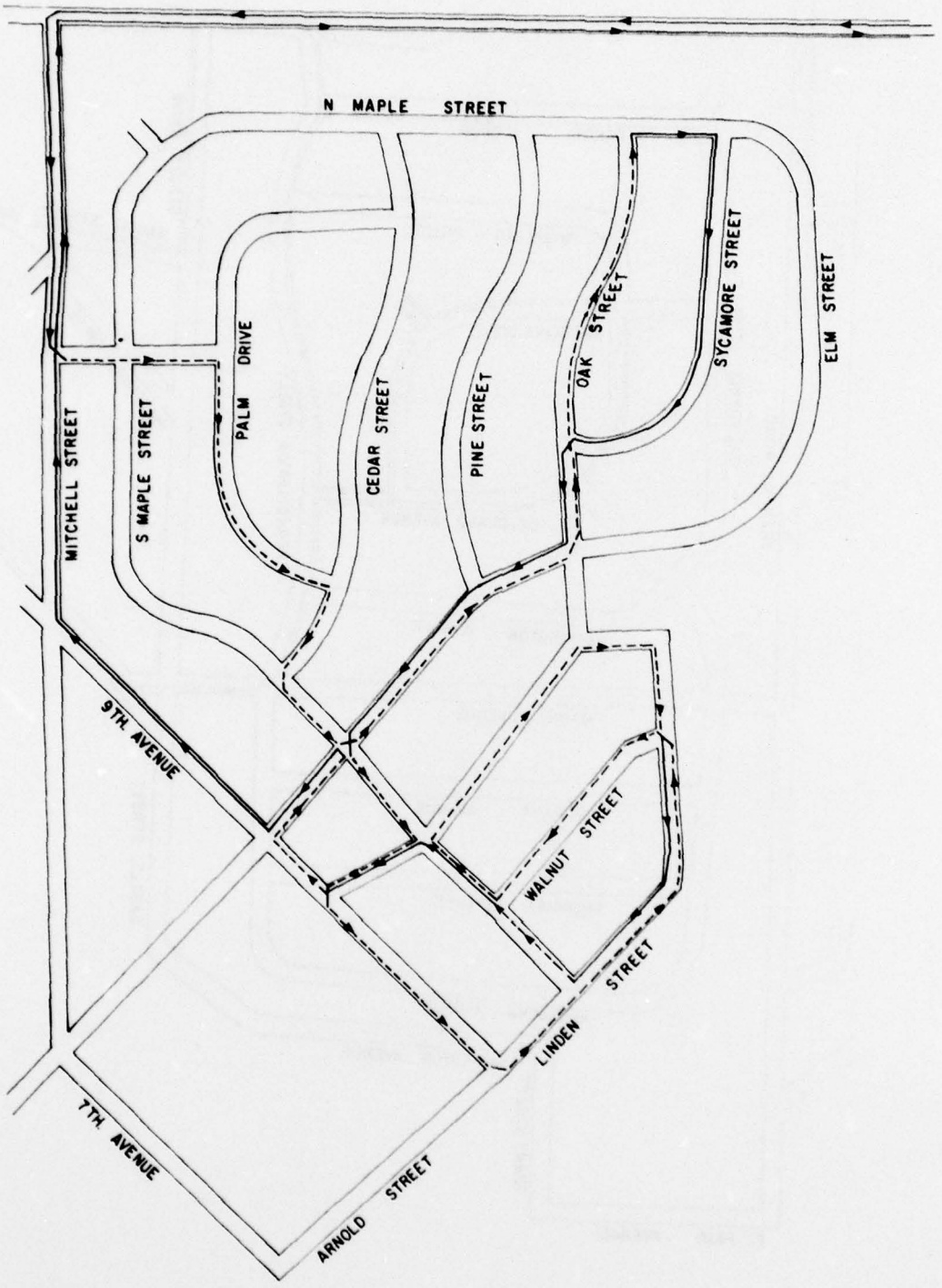
TRAVEL
COLLECT BOTH SIDES
COLLECT RIGHT SIDE




# FAIRCHILD AFB, WASH.

ROUTE 2 TRIP 1
10 CU YD VEHICLE

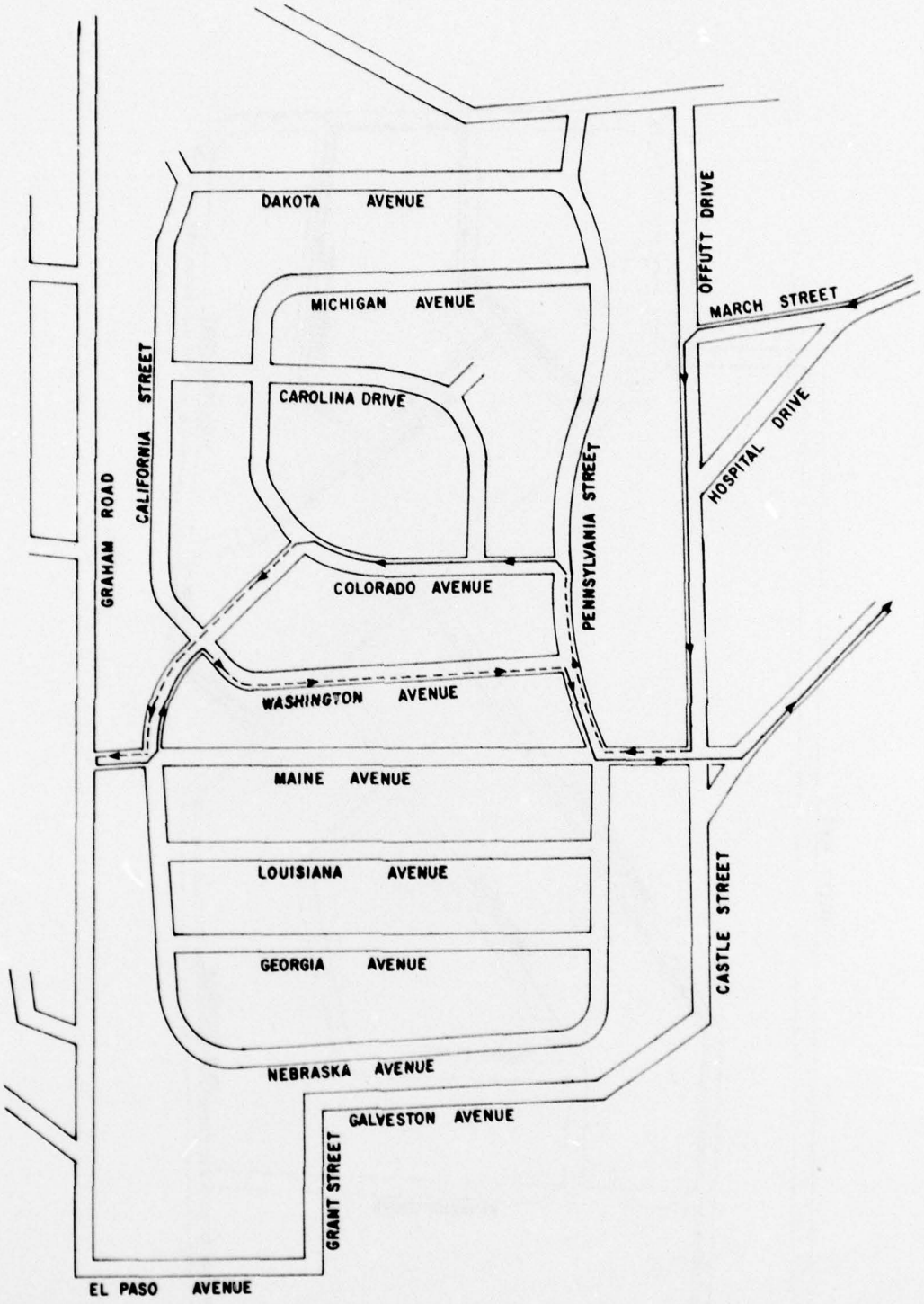
TRAVEL
COLLECT BOTH SIDES
COLLECT RIGHT SIDE




**FAIRCHILD AFB, WASH.**

ROUTE 2 TRIP 2
10 CU YD VEHICLE

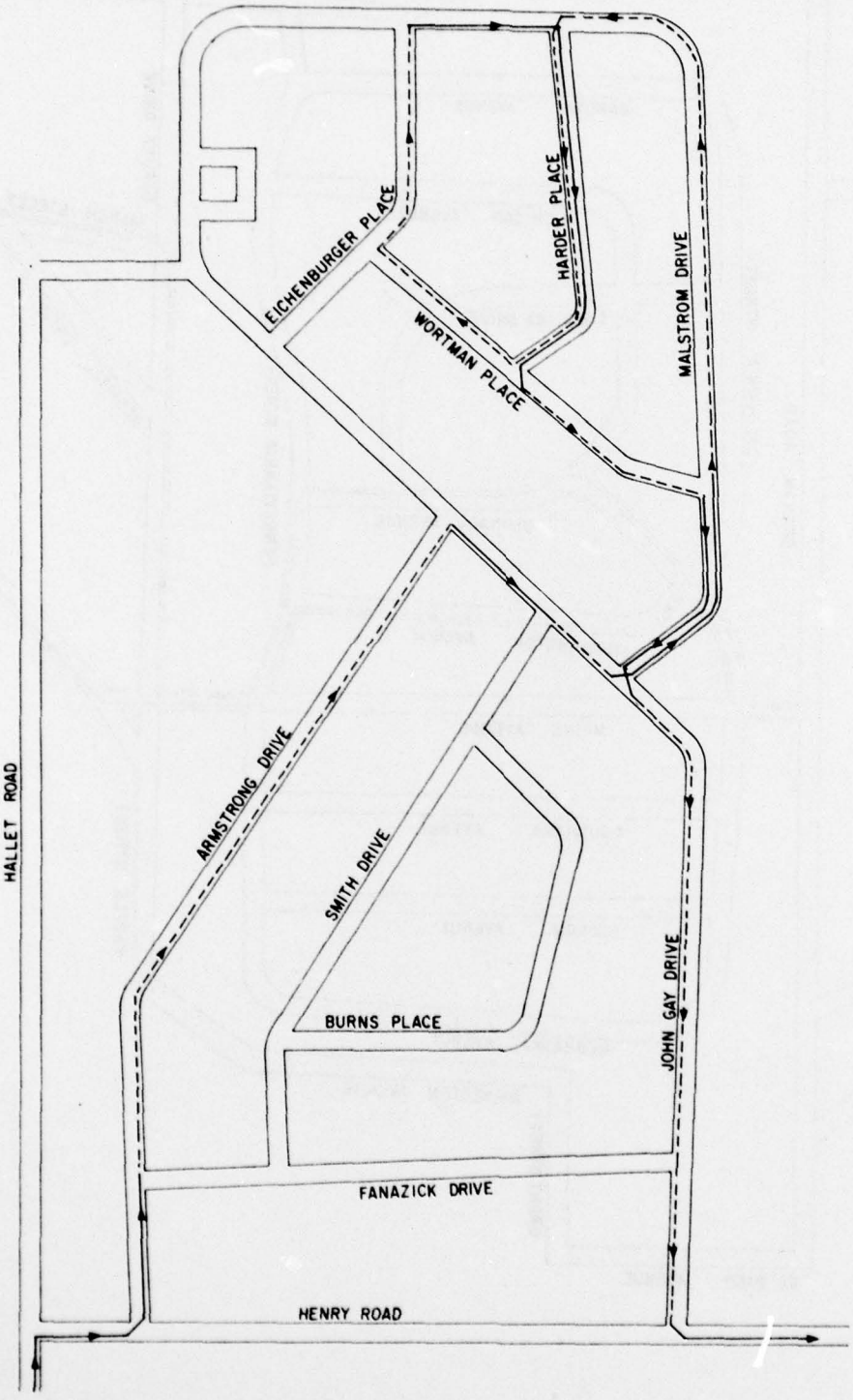
TRAVEL
COLLECT BOTH SIDES
COLLECT RIGHT SIDE




**FAIRCHILD AFB, WASH.**

ROUTE 3 TRIP 1
10 CU YD VEHICLE

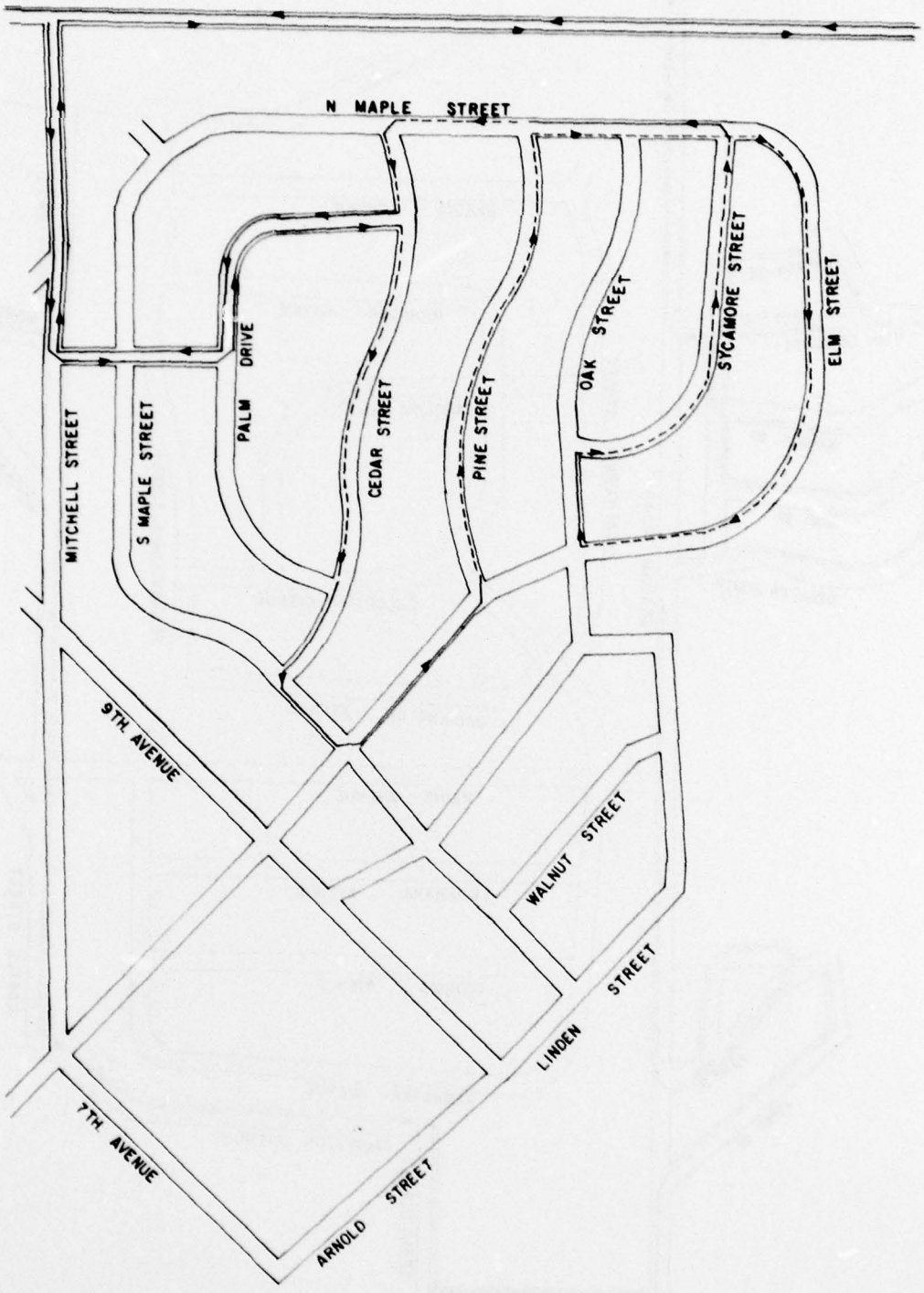
TRAVEL
COLLECT BOTH SIDES
COLLECT RIGHT SIDE




**FAIRCHILD AFB, WASH.**

ROUTE 3 TRIP 1
10 CU YD VEHICLE

TRAVEL
COLLECT BOTH SIDES
COLLECT RIGHT SIDE




FAIRCHILD AFB, WASH.

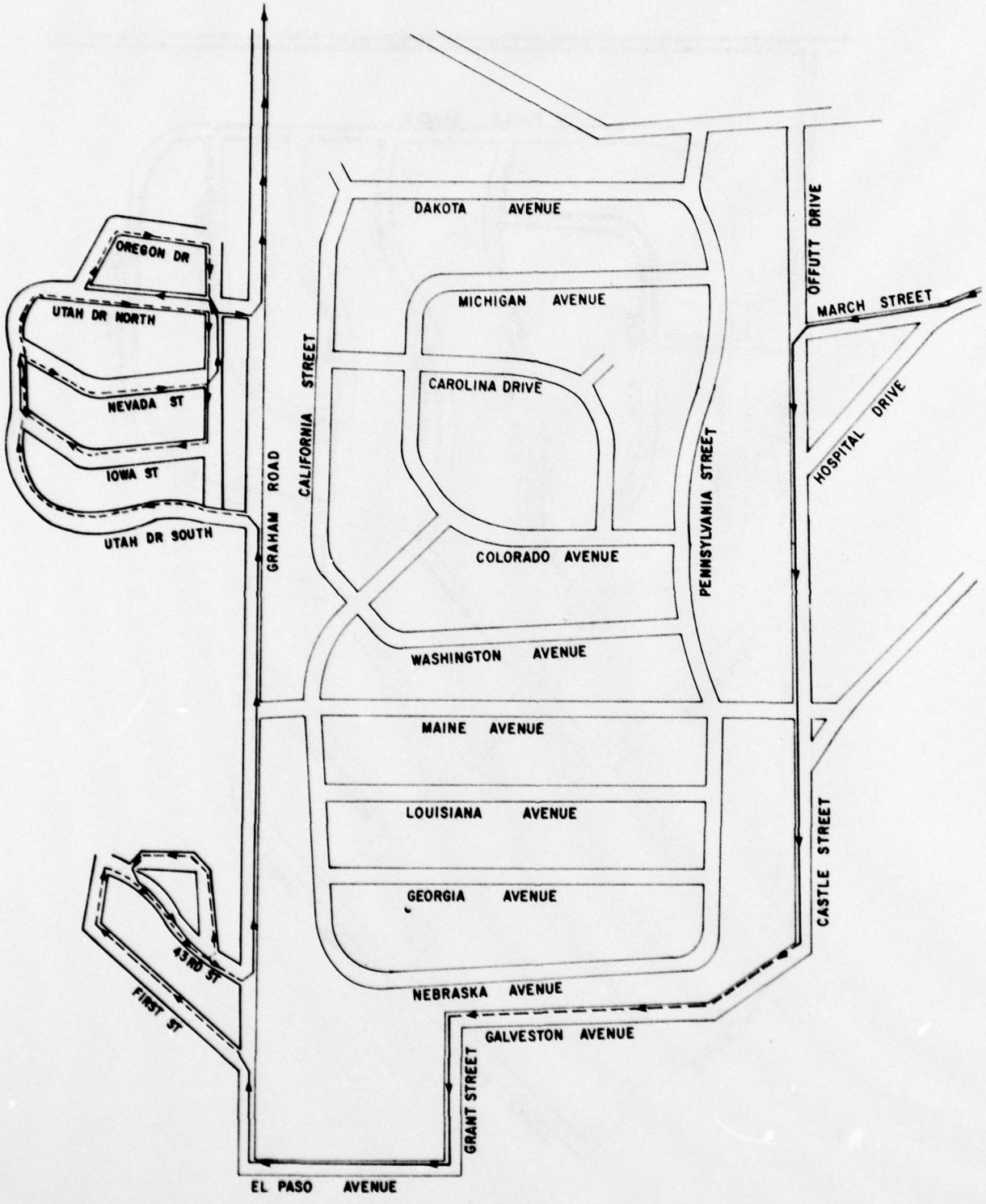
ROUTE 3 TRIP 2

10 CU YD VEHICLE

TRAVEL

COLLECT BOTH SIDES

COLLECT RIGHT SIDE




**FAIRCHILD AFB, WASH.**

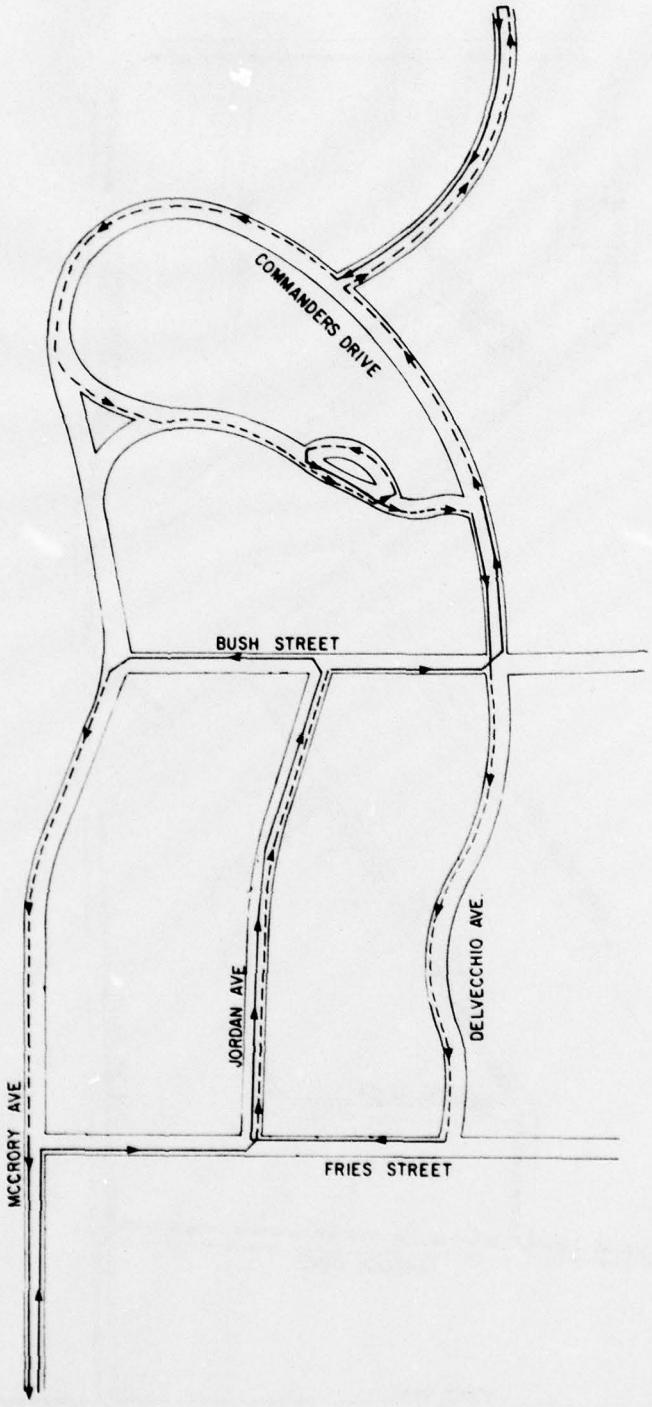
ROUTE 4 TRIP 1

10 CU YD VEHICLE

TRAVEL

COLLECT BOTH SIDES

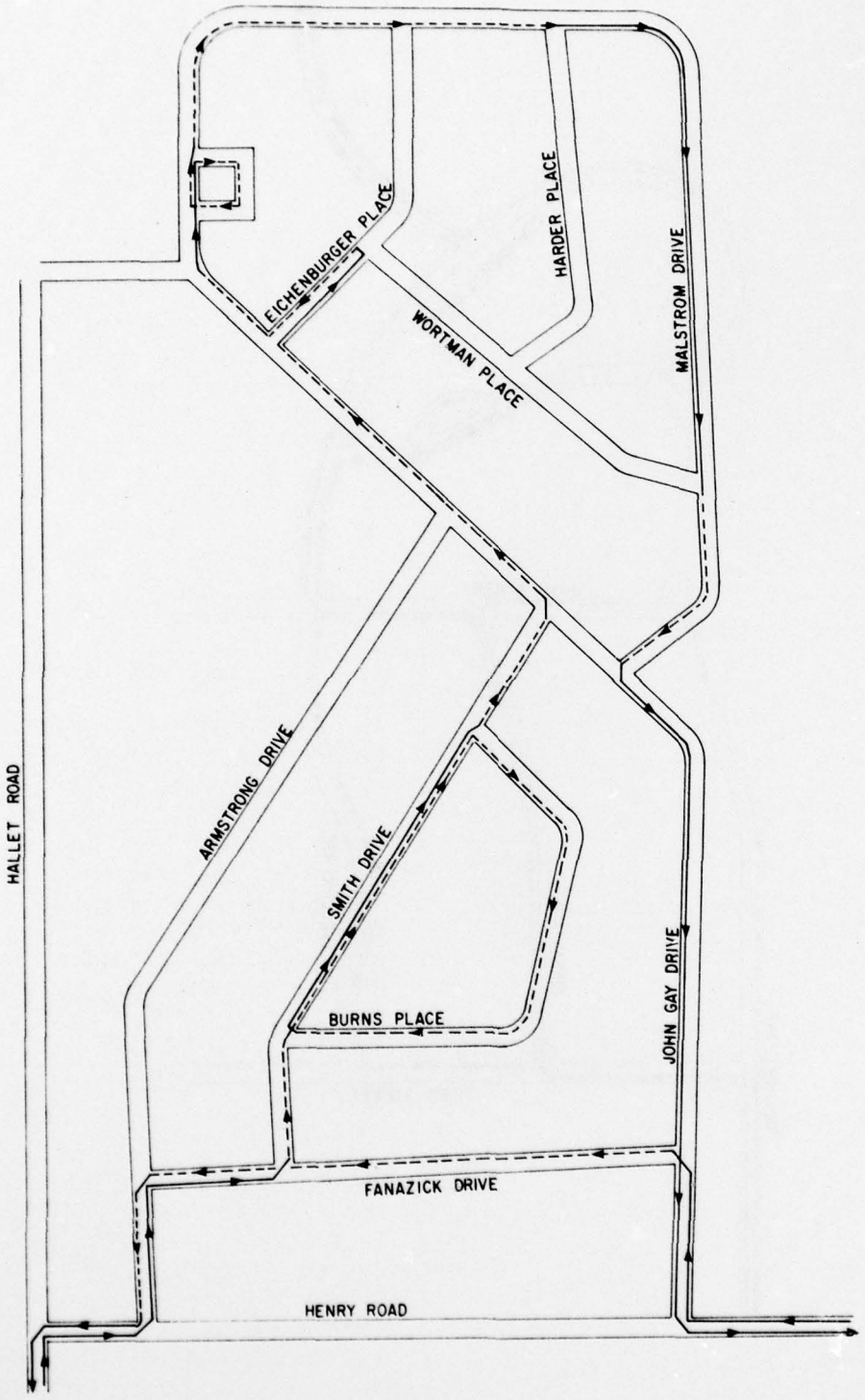
COLLECT RIGHT SIDE




FAIRCHILD AFB, WASH.

ROUTE 4 TRIP 2
10 CU YD VEHICLE

TRAVEL
COLLECT BOTH SIDES
COLLECT RIGHT SIDE




**FAIRCHILD AFB, WASH.**

ROUTE 4 TRIP 2
10 CU YD VEHICLE

TRAVEL
COLLECT BOTH SIDES
COLLECT RIGHT SIDE

## INITIAL DISTRIBUTION

| | | | |
|---|---|---|---|
| Hq USAF/PREE | 1 | SAMSO/DEC | 1 |
| Hq USAF/PREVP | 1 | ADTC/CSV | 1 |
| Hq USAF/PREVX | 1 | ADTC/DLODL | 1 |
| Hq USAF/RDPS | 2 | AFFTC/DE | 1 |
| Hq USAF/SAFOI | 1 | AFETR/DER | 1 |
| Hq USAF/SGPA | 1 | ESD/DE | 1 |
| Hq COMD USAF/DEE | 1 | USAF Rgn Civ Engrg/ER | 1 |
| CINCAD/DEEV | 2 | USAF Rgn Civ Engrg/WR | 1 |
| CINCAD/DEECV | 1 | USAF Rgn Civ Engrg/CR | 1 |
| AFCS/DEEE | 1 | SAMMA/MAGCB | 1 |
| AFLC/DEPV | 1 | USAFSO/DEE | 1 |
| AFLC/MAUT | 1 | DDC/TCA | 2 |
| AFLC/MMRF | 1 | DR&E/AD/E&LS | 1 |
| AFSC/DE | 1 | OASD (I&L)/ES | 1 |
| AFSC/SD | 1 | USA Environ Hygn Agency | 1 |
| AFSC/DEV | 1 | Ch of Engrg/ENGMC-RD | 1 |
| AFSC/DLCAM | 2 | Dir, USA WW Exp Sta | 1 |
| ATC/DEPV | 1 | USA CERL | 1 |
| AAC/DEV | 1 | Dir, USA Engrg R&D Lab/MERDC | 1 |
| MAC/DEEE | 1 | Ch of R&D | |
| MAC/DEMP | 1 | Dept of the Army/DARD-ARE-E | 1 |
| CINCPACAF/DEMU | 2 | Ch of Naval Op | 1 |
| CINCSAC/DEPA | 2 | NESO, Code 25111 | 1 |
| CINCSAC/DEVQ | 1 | NCEL, Code L08A | 1 |
| TAC/DE | 1 | Naval Ship R&D Ctr/Code 3021 | 1 |
| TAC/DEEV | 1 | Technical Applications Ctr/UNM | 1 |
| USAFSS/DEE | 1 | Technology Transfer Staff/EPA | 1 |
| USAFSS/DEMM | 1 | Office of R&D/EPA | 1 |
| CINCUSAFE/DEPV | 2 | National Science Foundation | 1 |
| AFISC/SES | 1 | US Army Med Bioengrg R&D Lab | 1 |
| AFRES/DEEE | 1 | Det 1 Hq ADTC/EC | 1 |
| USAFA/DEV | 1 | Det 1 Hq ADTC/ECW | 4 |
| 3800 ABW/DEE | 1 | Det 1 Hq ADTC/PRL | 1 |
| AFIT/DEM | 1 | AFCEC/DE | 1 |
| AU/LDG | 1 | AFCEC/DEVP | 2 |
| AUL | 1 | SAF/MIQ | 1 |
| AFOSR | 1 | AFIT/Library | 1 |
| AFML/DO (Library) | 1 | USA Chief, R&D/EQ | 1 |
| OEHL/CC | 1 | USAFSAM/EDE | 1 |
| OEHL/OL-AA | 1 | 1 MSEW | 1 |
| OEHL/OL-AB | 1 | OUSDRE | 1 |
| AFWL/SUL | 1 | USAF Hospital, Wiesbaden | 1 |
| AFRPL/Library | 1 | USN Chief, R&D/EQ | 1 |
| ASD/DEF | 1 | | |
| RADC/DOT | 1 | | |
| AEDC/DEE | 1 | | |
| SAMTEC/SEH | 1 | | |



(The reverse of this page is blank)