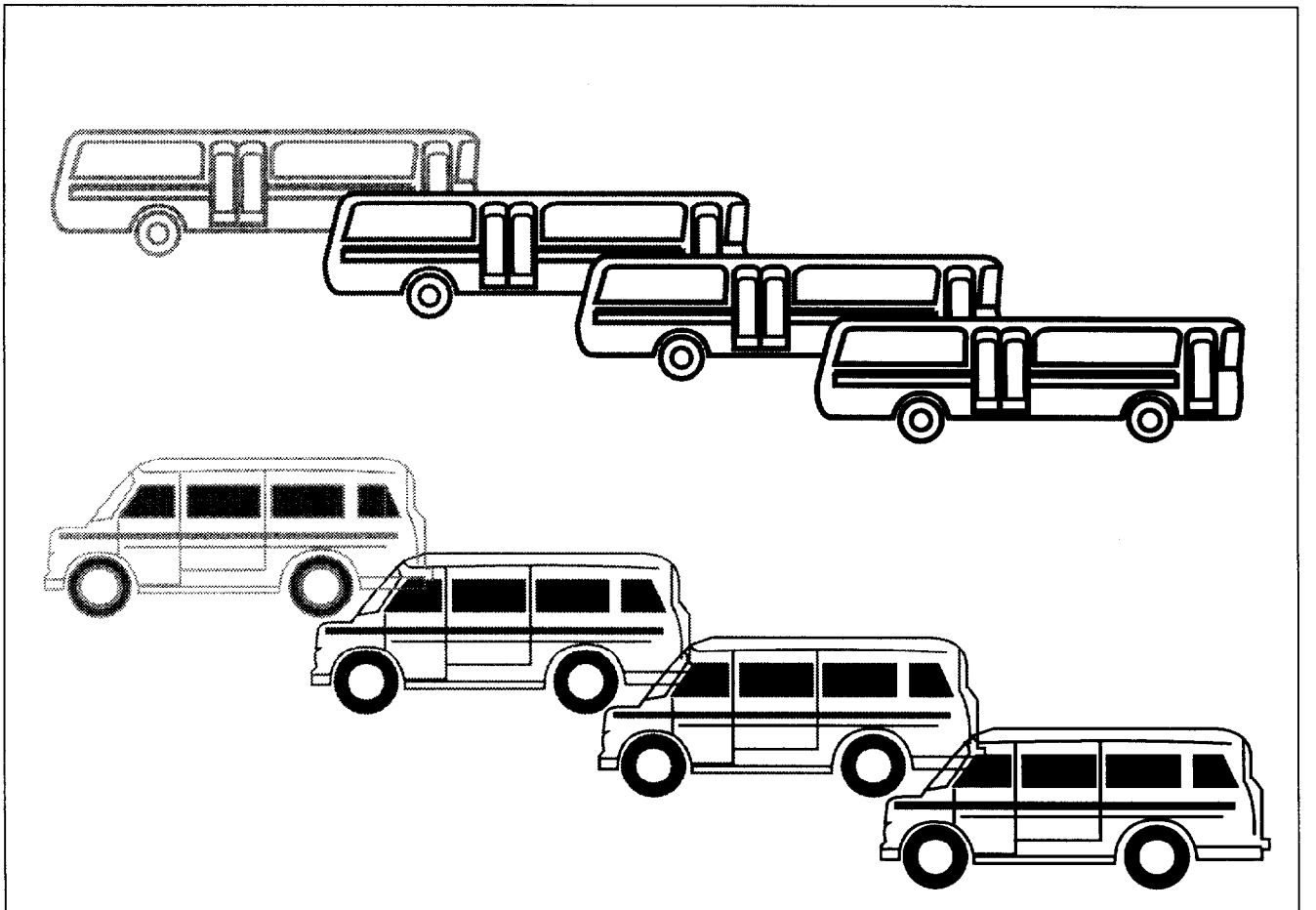
U.S. Department
of Transportation
**Federal Transit
Administration**

Mobility Match Study in Prince George's County, Maryland

November 1994 FTA-MD-26-0005-94-1



Office of Technical Assistance and Safety

MOBILITY MATCH STUDY IN PRINCE GEORGE'S COUNTY, MARYLAND

FINAL REPORT
November 1994

Prepared by

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In Association With

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Prepared for

Maryland-National Capital Park & Planning Commission
14741 Governor Oden Bowie Drive
Upper Marlboro, MD 20772

Available from

Federal Transit Administration
Office of Technical Assistance, TTS-5
400 7th Street, SW, Room 6100
Washington, DC 20590

Report Number

TECHNICAL REPORT DOCUMENTATION PAGE

1. Report No.	2. Government Accession No. (NTIS)	3. Information System
FTA-MD-26-0005-94-1		

4. Title and Subtitle	5. Report Date
Mobility Match Study in Prince George's County, Maryland	**November 1994**
	6. DOT Report Number

7. Author(s)	8. Performing Organization Report No.
J. Sajovec, A. Lerner, D. Freidenfeld, F. Fravel & M. Bower	

9. Performing Organization Name and Address	10. Grant or Project No.
JHK & Associates, Inc. **1900 N. Beauregard Street** **Suite 300** **Alexandria, Virginia 22311-1811** **In Association With** **Ecosometrics, Inc.**	**MD-26-0005**
	11. Contract No.

12. Sponsoring Agency Name and Address	13. Type of Report and Period Covered
Maryland-National Capital Park & Planning Commission **14741 Governor Oden Bowie Drive** **Upper Marlboro, Maryland 20772**	**Final Report**
	14. Sponsoring Agency Code

15. Supplementary Notes

Maryland National Capital Park & Planning Commission
Project Director: George Cardwell

16. Abstract

The primary focus of this study was to develop non-traditional transit alternatives to better serve the residents of Prince George's County. The study identified the transportation needs of the area, evaluated the applicability of traditional and non-traditional transit options and developed an implementation plan for the selected transportation services. The project selected likely destination areas for non-traditional transit services in the County using census demographic data; information on location of major employment, retail, and educational centers; and an inventory of available transit service in the County. The potential number of users of non-traditional transit was estimated on the basis of the distance from employee residences to employment clusters, accessibility via existing transit service, and assessed need and non-traditional transit potential of residential communities.

A range of non-traditional transit options was developed to serve the needs of several key areas in the County. Detailed operating and implementation plans were developed for three of the options. One of the recommended options is the a shuttle, operated with small buses, developed to serve the needs of the Prince George's Plaza/Hyattsville areas. This option would improve the livability of these communities. A second option provides a connection between a major hospital (currently unserved by transit) with nearby residential communities and a major shopping center in the County. This service would be operated as fixed route during the peak periods and route deviated service during off-peak hours. The third recommended service is another community-oriented bus that provides frequent connections between a newly developed residential community, metro stations and retail establishments. The study recommends the implementation of the three options to evaluate the applicability of the proposed non-traditional transit in serving the needs of suburban communities.

17. Key Words	18. Document availability - Available to the public through the National Technical Information Service (NTIS), 5285 Port Royal Road; Springfield, Virginia 22161. -telephone 703/487-4650
Transit Planning, Non-Traditional Transit, Demand Estimation, Suburban Mobility Options	

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price (NTIS)
Unclassified	**Unclassified**	**179**	

METRIC / ENGLISH CONVERSION FACTORS

ENGLISH TO METRIC

LENGTH (APPROXIMATE)

1 inch (in) = 2.5 centimeters (cm)
1 foot (ft) = 30 centimeters (cm)
1 yard (yd) = 0.9 meter (m)
1 mile (mi) = 1.6 kilometers (km)

AREA (APPROXIMATE)

1 square inch (sq in, in^2) = 6.5 square centimeters (cm^2)
1 square foot (sq ft, ft^2) = 0.09 square meter (m^2)
1 square yard (sq yd, yd^2) = 0.8 square meter (m^2)
1 square mile (sq mi, mi^2) = 2.6 square kilometers (km^2)
1 acre = 0.4 hectares (he) = 4,000 square meters (m^2)

MASS - WEIGHT (APPROXIMATE)

1 ounce (oz) = 28 grams (gr)
1 pound (lb) = .45 kilogram (kg)
1 short ton = 2,000 pounds (lb) = 0.9 tonne (t)

VOLUME (APPROXIMATE)

1 teaspoon (tsp) = 5 milliliters (ml)
1 tablespoon (tbsp) = 15 milliliters (ml)
1 fluid ounce (fl oz) = 30 milliliters (ml)
1 cup (c) = 0.24 liter (l)
1 pint (pt) = 0.47 liter (l)
1 quart (qt) = 0.96 liter (l)
1 gallon (gal) = 3.8 liters (l)
1 cubic foot (cu ft, ft^3) = 0.03 cubic meter (m^3)
1 cubic yard (cu yd, yd^3) = 0.76 cubic meter (m^3)

TEMPERATURE (EXACT)

[(x - 32) (5/9)] °F = y °C

METRIC TO ENGLISH

LENGTH (APPROXIMATE)

1 millimeter (mm) = 0.04 inch (in)
1 centimeter (cm) = 0.4 inch (in)
1 meter (m) = 3.3 feet (ft)
1 meter (m) = 1.1 yards (yd)
1 kilometer (km) = 0.6 mile (mi)

AREA (APPROXIMATE)

1 square centimeter (cm^2) = 0.16 square inch (sq in, in^2)
1 square meter (m^2) = 1.2 square yards (sq yd, yd^2)
1 square kilometer (km^2) = 0.4 square mile (sq mi, mi^2)
1 hectare (he) = 10,000 square meters (m^2) = 2.5 acres

MASS - WEIGHT (APPROXIMATE)

1 gram (gr) = 0.036 ounce (oz)
1 kilogram (kg) = 2.2 pounds (lb)
1 tonne (t) = 1,000 kilograms (kg) = 1.1 short tons

VOLUME (APPROXIMATE)

1 milliliter (ml) = 0.03 fluid ounce (fl oz)
1 liter (l) = 2.1 pints (pt)
1 liter (l) = 1.06 quarts (qt)
1 liter (l) = 0.26 gallon (gal)
1 cubic meter (m^3) = 36 cubic feet (cu ft, ft^3)
1 cubic meter (m^3) = 1.3 cubic yards (cu yd, yd^3)

TEMPERATURE (EXACT)

[(9/5) y + 32] °C = x °F

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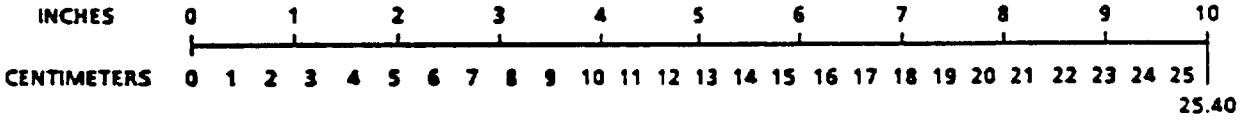

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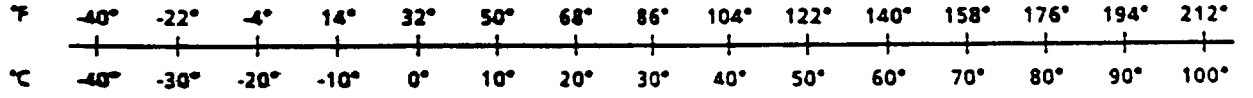


For more exact and/or other conversion factors, see NBS Miscellaneous Publication 286, Units of Weights and Measures. Price $2.50. SD Catalog No. C13 10 286.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF FIGURES (continued)

LIST OF FIGURES (continued)

LIST OF TABLES

LIST OF TABLES (continued)

1.0 EXECUTIVE SUMMARY

The primary focus of this study was to develop non-traditional transit alternatives to better serve the residents of Prince George's County. The study identified the transportation needs of the area, evaluated the applicability of traditional and non-traditional transit options and developed an implementation plan for the selected transportation services. Throughout the study, one of the major goals was to identify options that improved the accessibility of community residents and employees to community resources, transportation facilities, shopping and employment centers.

The work plan for this study consisted of the following six tasks:

- Task 1 - Identification of Concentrations of Potential Transit Service Users
- Task 2 - Identification of Trip Volumes and Purposes for Candidate Transit Service Areas
- Task 3 - Identification of the Potential Non-Traditional Market Share of Trips
- Task 4 - Evaluation of Potential Non-Traditional Transit Modes
- Task 5 - Evaluation of Cost Effectiveness of Non-Traditional Transit Modes
- Task 6 - Development of Implementation Plan and Final Report

1.1 Non-Traditional Transit Service Potential

In Task 1, the Project Team identified areas identified areas in Prince George's County with concentrations of residents that have the potential for the development of non-traditional transit services, and identified areas in the County that would be likely destinations for such services, primarily employment concentrations.

In order to accomplish Task 1, three kinds of information were considered. One is 1990 Census demographics to locate areas that may have a higher probability of supporting new types of transit services, based on a needs analysis, density thresholds, or on the fact that there are large numbers of bus users, taxi users, and persons with a long journey to work times. Generally, the census demographic information was analyzed at the census tract level. A second kind of information is the location of land uses that are likely to be destinations for transit users. This includes concentrations of employment, shopping centers, medical, and educational facilities. The third type of information is an inventory of available transit routes, which reveals areas of need or potential that are not now served by conventional transit, but that could be addressed by non-traditional modes.

1.1.1 Identification of Residential Concentrations

The first step in identifying areas with high potential transit demand was to locate areas in the region that might contain people who are most likely to use transit. In identifying these areas, two types of riders were considered, transit-dependent riders, and potential riders who are persons with access to an automobile.

The identification of the trip origin areas of these types of potential riders was performed in two steps:

1. Identify high need areas using demographic data that indicates potential need for transit. The factors used included; households living below the poverty level, zero-car households, median household income, unemployment, and female headed households, high density of housing and population. An analysis was performed for each Census Tract in the region. Each tract was ranked by the total transit-dependent population.

2. Identify areas of high potential - high bus and taxi use, and long journey to work. An analysis was conducted to identify areas where there are concentration of persons that are currently using either bus transit or taxis for journeys to work, and where there are large numbers of people with very long journeys to work, in terms of travel time.

Figure E-1 presents the results of the analysis of residential concentrations with high need and high potential. The tracts ranking as high on the needs analysis are all included, as are all the areas ranking as having a high potential for nontraditional transit ridership. In many cases a Census Tract was high on both analyses, and these are shaded in a different way to delineate the tracts that scored high on both.

1.1.2 Potential Transit Destinations

In order to locate unserved or underserved potential transit destinations, the Project Team identified major employers (200 or more employees), colleges/universities, hospitals, concentrations of office/commercial space, and shopping centers. The information about potential destinations was used to select the principal targets to be served by the recommended non-traditional transit services. These target areas are shown in Figure E-2.

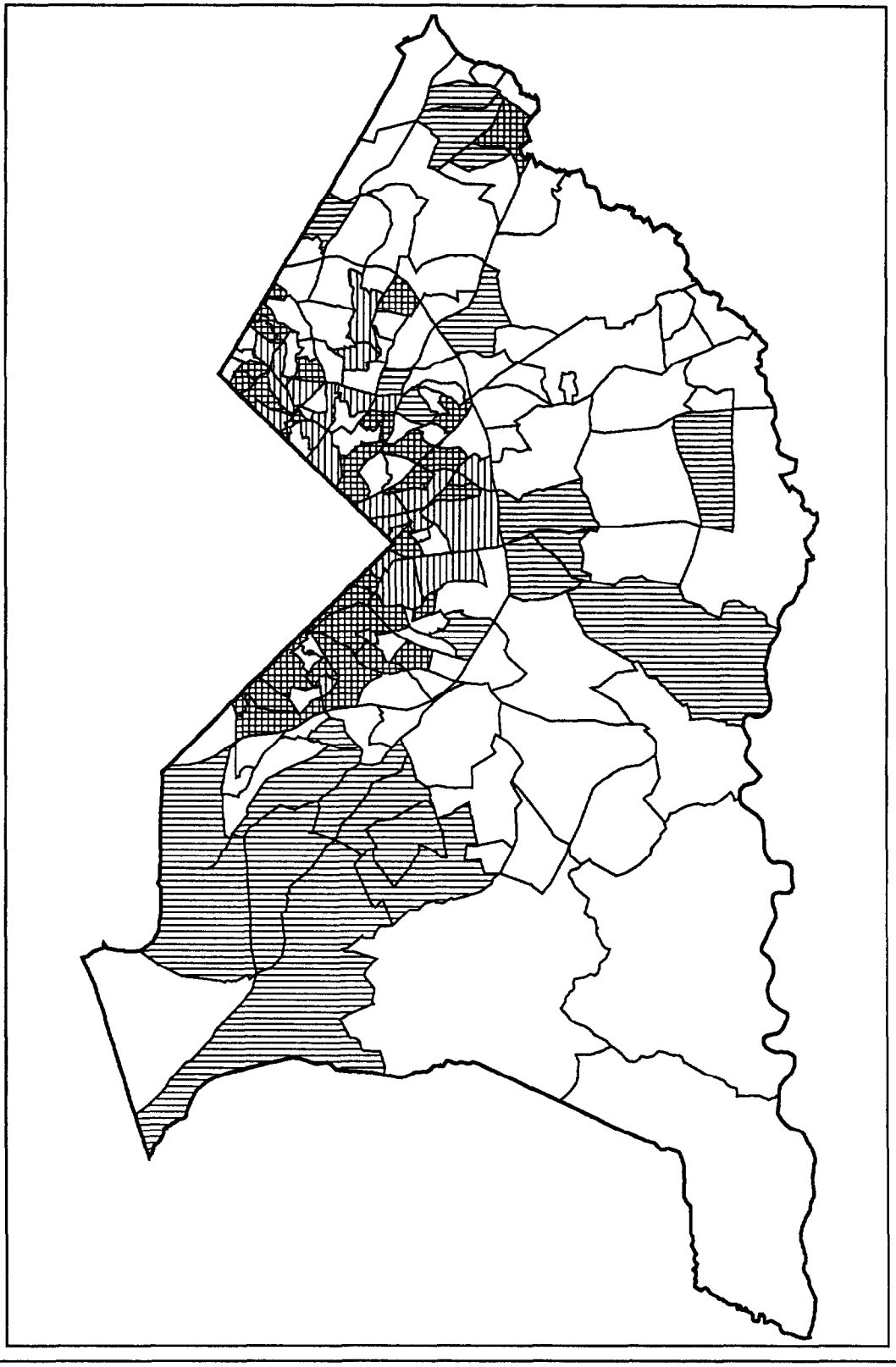
1.2 Non-Traditional Transit Trip Generation and Distribution

In Tasks 2 and 3 the Project Team estimated the number of non-traditional transit trips that could potentially be generated by the employment concentrations and residential areas selected in Task 1 and identified the residential concentrations of employees associated with the selected employment clusters.

1.2.1 Identification of Trip Volumes and Purposes for Candidate Transit Service Areas

The Project Team identified the number of trips attracted to each of the key employment concentrations and the number of trips generated by the candidate residential clusters identified in Task 1. The Project Team estimated employment at each of the employment clusters using data provided by MNCPPC and Prince George's County, and verified the accuracy of the data received through field investigation and surveys of major employers. These employment figures were used to estimate the number of daily and peak period work trips generated by the major employers in the selected clusters. Table E-1 shows that the estimated number of peak period work trips for the selected employment clusters (shown in Figure E-1) ranged from 369 trips to over 12,729 trips.

Figure E-1 - High Need and High Potential Census Tracts



Legend:

Census Tract

N

Classification

High Need

High Potential

High Need & High Potential

Prince George's County
Mobility Match Program

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Commission

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Miles

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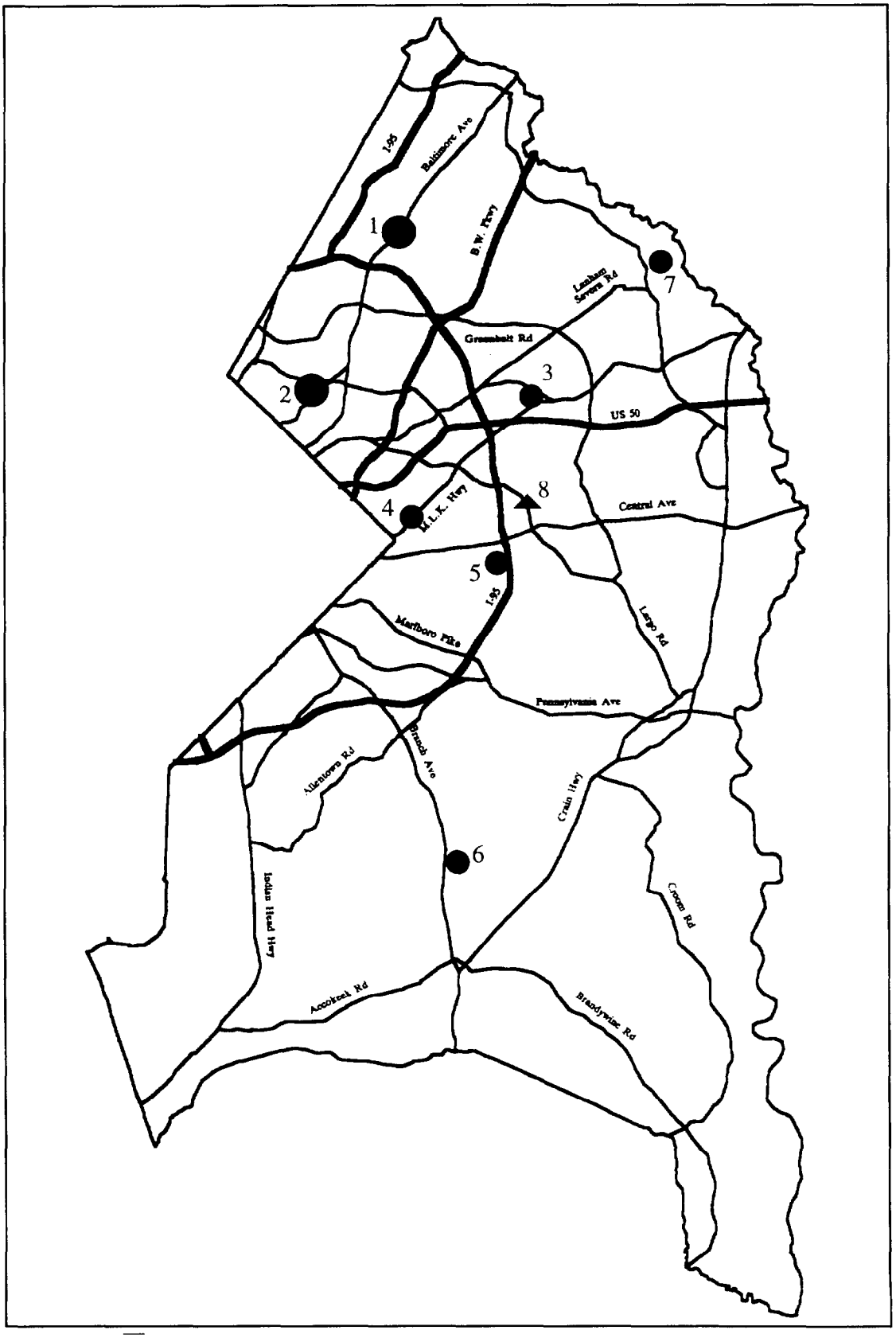
Figure E-2 - Recommended Employment Clusters



Legend:

- Arterial
- Highway
- Employment Cluster
- Office Development Cluster

N

1 Beltsville

2 Hyattsville
Prince George's Plaza

3 Washington and Hanson
Palmer Business Parks

4 Columbia Park Road
Industrial Center

5 Hampton Business Park

6 Southern Maryland
Hospital/Clinton

7 Bowie State University

8 Inglewood Office Complex
USAir Arena

Prince George's County
Mobility Match Program

Prepared for:
Maryland-National Capital
Park and Planning
Commission

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0 2 4

Table E-1

Estimated Number of Daily Employment and Work Trips

Cluster	Estimated Daily Employment[1]	Estimated Number of AM Peak Work Trips
Beltsville	14,699	12,729
Hyattsville	7,319	5,964
Washington and Hanson Palmer Business Parks	6,082	5,470
Columbia Park Road Business Center	6,354	4,330
Hampton Business Park	6,938	4,837
Southern Maryland Hospital	1,561	983
Bowie State University	369	369
Inglewood Office Complex	5,228	4,649
TOTAL	48,550	39,331

[1] Represents only employment at major employers, those with 50 or more employees, and employees in major buildings. The estimate does not represent total employment in the cluster.

In addition, using information from surveys, the Project Team determined the place of residence of employees of the target employment centers. The Project Team selected the residential areas that have large concentrations of employees, associated with the selected employment clusters, and that were also classified as high need and/or high potential in Task 1 to use as the base for estimating potential non-traditional transit usage.

1.2.2 Identification of the Potential Non-Traditional Market Share of Trips

The purpose of Task 3 was to calculate the number of trips identified in Task 2 that are likely to use non-traditional transit services. The employee residential data and the population of high need/high potential residential clusters, collected in Task 2, were used to estimate the number of potential non-traditional transit users for each census tract in the County. Based on the distance of residential locations from employment clusters, the accessibility via transit to the employment sites and the ranking of the employment area in the evaluation of need/potential, the potential number of users of non-traditional transit was calculated for the key residential areas. Table E-2, which summarizes the total estimated potential number of peak period work trip non-traditional transit users[1], indicates that

[1] These preliminary estimates were not used to estimate ridership for selected non-traditional transit options, instead they were used to gauge the relative potential of the selected employment clusters and to identify the locations of the key residential areas associated with each of the employment clusters.

Beltsville, Hyattsville/Prince George's Plaza, Washington Hanson Palmer Business Park, Columbia Park Road Industrial Center, and Inglewood Office Complex have the most significant concentrations of potential non-traditional transit users. Bowie State University shows such low potential that it could only be served with non-dedicated options developed in conjunction with service to some of the other employment clusters. In the case of Southern Maryland Hospital, the potential was low. However, since the area has no transit service at present, an option that provides for work trips to the employment cluster and general transit service to the nearby residential and commercial areas was considered to be viable.

Table E-2

Estimated Peak Period Work Trip Non-Traditional Transit Users[1]

Cluster	Peak Period Work Trip Non-Traditional Transit Users
Beltsville	349
Hyattsville	142
Washington and Hanson Palmer Business Parks	189
Columbia Park Road Business Center	106
Southern Maryland Hospital	48
Bowie State University	Negligible
Inglewood Office Complex	148
TOTAL	982

[1] In Task 2, the Project Team eliminated the Hampton Business Park from further detailed examination of its non-traditional transit potential because of lack of adequate data as well as a determination that the type of employment in this cluster cannot be easily served by non-traditional transit options.

1.3 Identification and Evaluation of Non-Traditional Transit Options

The information on non-traditional transit potential was used in the next tasks of this project (Tasks 4 and 5) to identify areas with potential for fixed route and non-fixed route services, evaluate service options to meet work trip needs, and assess the overall potential of non-work trip options within high need/high potential residential areas. The range of non-traditional options investigated included the following:

- Subscription bus
- Carpool programs
- Vanpool programs
- Community circulators
- Fixed route feeder services
- Demand responsive feeder services
- Use of small transit vehicles

- Route deviation
- User-side subsidy/taxi programs

Each of the employment clusters listed above was matched with one or more non-traditional transit modes based on the trip patterns identified for each cluster and the characteristics of the individual modes. Table E-3 summarizes the different options selected to serve the needs of the target employment clusters. The options presented in Table E-3 include modifications to existing fixed routes. These fixed route modifications were not included in the detailed evaluation of proposed options. Instead, the Project Team recommended that the proposed new fixed routes and modifications to fixed routes be analyzed thoroughly in the development of the County's Transit Development Plan update.

The Project Team developed the criteria to evaluate the proposed options, prepared an evaluation matrix and conducted a working session with the Technical Working Group to select three options for the analysis of cost effectiveness, Task 5 of the study. In this task, the Project Team conducted a detailed evaluation of the cost effectiveness of each of the recommended non-traditional transit options.

1.3.1 Summary of Evaluation Results

The Project Team conducted the evaluation of the preliminary non-traditional transit options, shown in Table 3, by assigning a score (from 1 to 10) for each of the factors shown in Table E-4. Furthermore, based on an assessment of the goals and objectives of the project, weights were assigned to each of the factors selected for the analysis. The highest scoring options were associated with Hyattsville/Prince George's Plaza, Southern Maryland Hospital and the Columbia Park Road Industrial Center. The lowest scoring options are in the Beltsville and the Inglewood/USAIR Arena clusters. Using the ranking of options as a tool for the selection process and after a discussion on each of the proposed options, the Technical Working Group and the Project Team made a preliminary selection of three options for further evaluation and the preparation of an implementation plan. The three alternatives were recommended not only on the basis of the results of the evaluation procedure, but also through the incorporation of qualitative assessments expressed during the working session with the Technical Working Group. The selected options are not exactly the same as proposed in the preliminary phase. Modifications that could improve the possibility of success were incorporated into the alternatives as part of the preliminary evaluation process.

1.4 Selected Options

At the conclusion of Task 5, the Project Team recommended that the following three options be carried over to the next phase of the project, the development of a detailed implementation plan:

1) Hyattsville/Prince George's Plaza Circulator Services,
2) Southern Maryland Hospital Fixed Route/Route Deviated Service to Iverson Mall,
3) Columbia Park Road Industrial Center - Subsidized Taxi Around the Addison Road Metro Station.

Table E-3

Summary of Options

Area	Option
Beltsville	Bowie Subscription Service
	Beltsville Circulator
	Modifications to Existing Bus Routes
	WMATA Route 83/86
	Connect-A-Ride Route G
Hyattsville/Prince George's Plaza	Peak Period/Lunch Hour Circulator
	Subscription Service to Bowie
Washington and Hanson Palmer Business Parks	Route Deviated Service to Bowie
	Modifications to Existing Bus Routes
	WMATA Route C28
	WMATA Route B23/B24
	WMATA Route B21/B22
Columbia Park Road Industrial Center	Vanpool/Carpool
	Southwestern Prince George's County Subscription/Fixed Route Service
	Subscription Service to Bowie
	Four-Mile Service Area around Cheverly or Addison Road Metro Stations
	Modification to Existing Bus Route
	WMATA Route A12/A15
Southern Maryland Hospital	Subsidized Taxi/Jitney Service
	Fixed Route/Route Deviates Service to Iverson Mall
	Fixed Route to Addison Road Metro
	Modification to Existing Bus Route
	WMATA Route C21/22/29
Inglewood/USAIR Arena	On Demand Service to Addison Road Metro
	Route Deviated Bus to Tantallon
	Fixed Route to Landover Station
	Modification to Existing Bus Route
	WMATA Route C21/22/29

Table E-4. Transit Service Concepts Evaluation

Criteria	Factors
Effectiveness	
	Service area potential
	Modal diversion/SOV reduction
	Ease of use
	Ease of implementation
	Reliability
Market Niche	
	Marketability/packaging
	Unmet needs
	Neighborhood coverage
	Opportunity to support other transit services
Public/private sector support	
	Degree to which it supports Livable Communities Initiative
	Potential private sector support
	Potential community support
Cost	
	Farebox recovery
	Cost per hour
	Cost per day
	Capital cost
	Vehicle requirements (number of vehicles)

However, in a working session with the Technical Working Group at the conclusion of Task 5 a new option was evaluated. Because this new option would provide needed transit service to a large residential community under development (naval housing), the Technical Working Group and the Project Team concluded that this new option, the Brightseat Road, would have a higher priority than the Columbia Park Road Industrial Center Subsidized Taxi option. Therefore, the Brightseat Road option was selected for the next phase of the project and the Columbia Park Road option was eliminated from further consideration.

1.4.1 Option A - Hyattsville/Prince George's Plaza Circulator Services

In the Hyattsville area two route alternatives are recommended. Both are neighborhood circulators designed to enhance community connections by linking residential areas with area shopping, social services, day care, schools, and local employment centers as well as facilitating connections to the regional transportation network. These services are designed to address the need to provide local transit connections to destinations in the immediate area,

building a sense of identity in the community while improving local mobility. The objectives of this option are consistent with those stated in the Livable Communities Initiative of the United States Department of Transportation Federal Transit Administration.

1.4.1.1 Option A-1

Option A-1 will link several apartment complexes with a community center, a community park, several community shopping centers, an elementary school, and the West Hyattsville Metrorail Station. Service will be provided Monday through Friday from 6:00 AM through 7:00 PM on headways of 15 minutes utilizing two vehicles.

Figure E-3 shows the proposed route for Option A-1. This route will provide easier and more direct access to bus service for residents and employees in the service area, it will especially benefit residents of Cypress Creek Apartments, Overlook Apartments, and employees of Washington Gas Light. The following are key characteristics of the proposed route:

- Number of Daily Passengers: 284
- Annual Ridership: 71,284
- Route Length (roundtrip): 4.4 Miles
- Annual Net Deficit
  - Contracted Services With Vehicles Provided by Private Provider: $ 246,000
  - Contracted Services With Vehicles Provided by Prince George's County: $ 171,000
  - County Operated Service: $ 132,000

1.4.1.2 Option A-2

This route is also a neighborhood connector linking a regional mall, downtown Hyattsville, and Metrorail at both the West Hyattsville and the Prince George's Plaza Metrorail Stations with residential areas that are currently served by Metrobus only peripherally. Service will be provided Monday through Friday from 6:00 AM through 7:00 PM on headways of 15 minutes utilizing four vehicles during peak hours and on headways of 30 minutes utilizing two vehicles during off-peak times.

Figure E-4 shows the proposed routing for Option A-2. This option provides service to portions of 42nd Avenue, along which lie a nursing home and apartment complex, and the community of Queens Chapel Manor, both of which are currently unserved. It would also provide a more direct means of travelling between East Hyattsville (County Services Building and Justice Center) and Prince George's Plaza. By improving accessibility of residents and employees to community resources, this option supports the Livable Communities Initiative of the United States Department of Transportation Federal Transit Administration. The following are key characteristics of the proposed route:

- Number of Daily Passengers: 518
- Annual Ridership: 130,018
- Route Length (roundtrip): 4.4 Miles
- Annual Net Deficit
  - Contracted Services With Vehicles Provided by Private Provider: $ 359,000
  - Contracted Services With Vehicles Provided by Prince George's County: $ 246,000
  - County Operated Service: $ 210,000

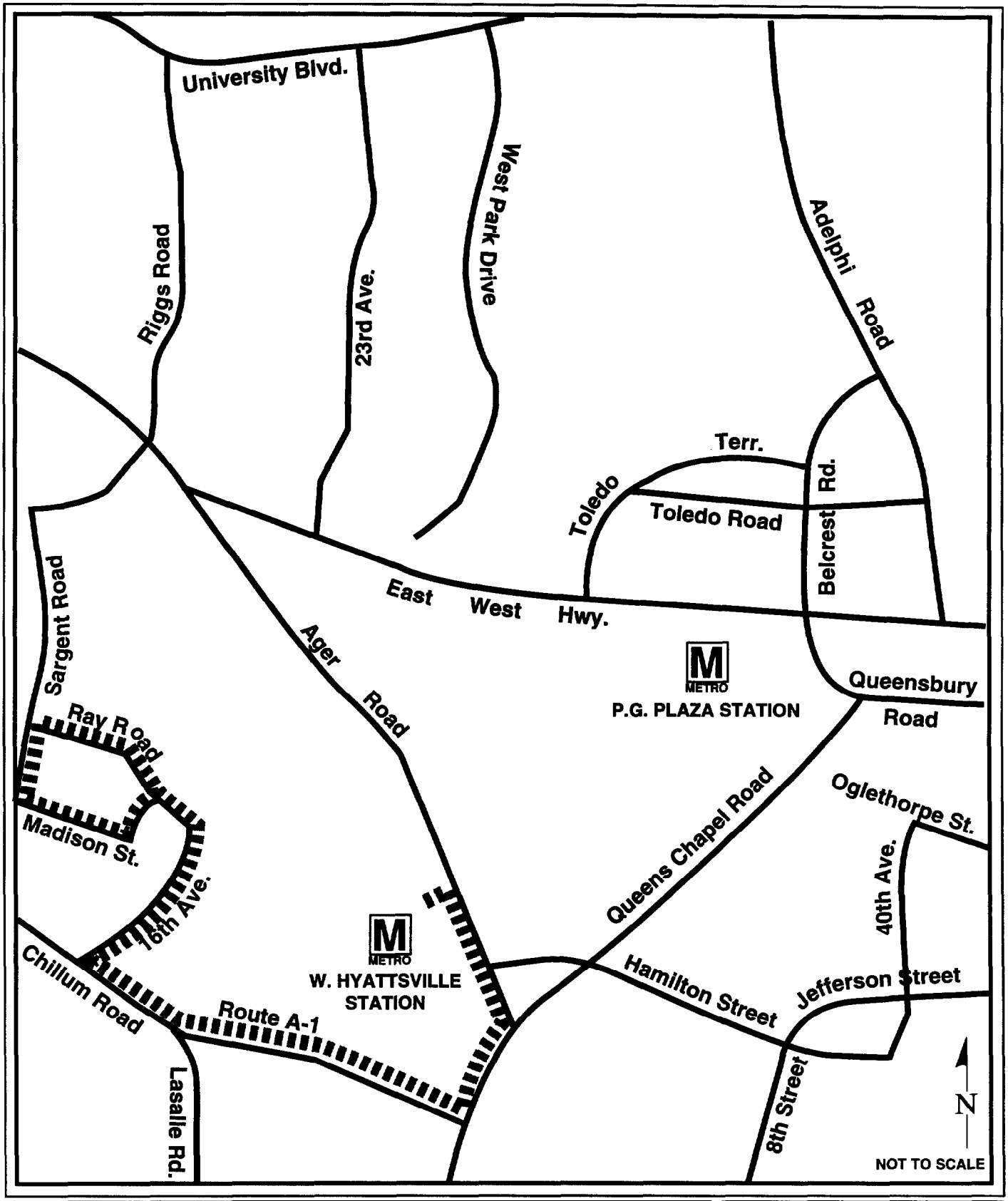

Figure E-3. Hyattsville/Prince George's Plaza County Option A-1

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LEGEND
Proposed bus route

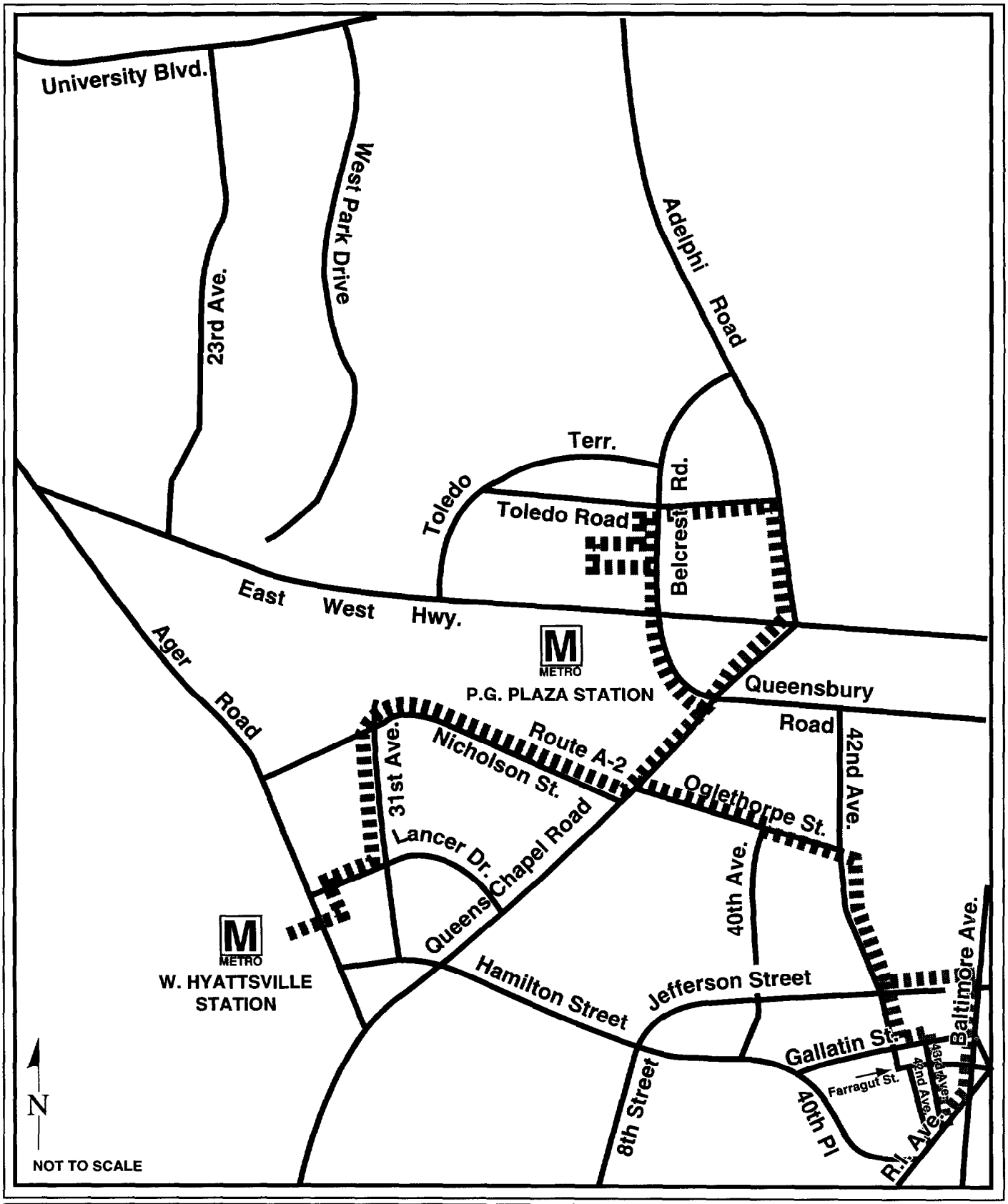

Figure E-4. Hyattsville/Prince George's Plaza County Option A-2

JHK & Associates
An SAIC Company

LEGEND
Proposed bus route

1.4.2 Option B - Southern Maryland Hospital Fixed Route/Route Deviated Service to Iverson Mall

This route is proposed as a means of linking currently unserved communities between Iverson Mall and Southern Maryland Hospital Center in Clinton. Southern Maryland Hospital Center is both an employment center and a medical services provider, and it currently is not served by any kind of fixed-route transit service. Peak hour only Metrobus service which operates on Branch Avenue comes only as close as a park and ride lot at Woodyard Road, some distance from the Hospital. The intention of this service is to offer fixed-route service in the peak-hour, with route deviation available during the off-peak as a means of providing a connection between the residential areas, shopping, and medical facilities. Service will be provided Monday through Friday from 6:00 AM through 10:00 PM on headways of 25 minutes during peak hours and on headways of 90 minutes during off-peak hours. The last trip from Iverson Mall is scheduled at about 10:00 PM to allow store employees a means of returning home by transit.

Route deviation involves vehicles traveling along a prescribed route at scheduled times just as fixed route service does. However, with route deviation, the route may vary depending upon passenger's requests. Passengers may access the route at fixed stops or by calling in advance for service. Service would be provided to the latter via requests to a dispatcher and within a specified radius from the fixed portion of the route. In general, the route deviation corridor would be at least 3/4 mile on either side of the basic route, to meet ADA requirements. Depending on the number of deviations, additional areas could possibly be served. Implementing this Southern Maryland Hospital route as a route-deviation service with scheduled stops at time-points along with route could demonstrate several of the vehicle dispatch strategies that are part of the FTA's Advanced Public Transportation Systems (APTS) program under the Departmental IVHS Initiative. Use of digital technology to communicate with the driver, and a means of knowing the vehicle location would allow the route deviations to be scheduled with little advance notice.

Figure E-5 shows the proposed routing for Option B. This option would provide service to Southern Maryland Hospital Center, a key destination and a major employer in the County which is currently unserved. Additional areas that are currently unserved, but which would receive service under this option, include Woodyard Road between Branch Avenue and Temple Hill Road, and Temple Hill Road between Woodyard Road and Allentown Road, and between Brinkley Road and Fisher Road. Additional areas off of these route segments would receive service from the route-deviation operations. By improving accessibility of residents and employees to community resources, this option supports the Livable Communities Initiative of the United States Department of Transportation Federal Transit Administration. The following are key characteristics of the proposed route:

- Number of Daily Passengers: 502
- Annual Ridership: 126,000
- Route Length (roundtrip): 22.1 Miles
- Annual Net Deficit
  - Contracted Services With Vehicles Provided by Private Provider: $ 243,000
  - Contracted Services With Vehicles Provided by Prince George's County: $ 157,000
  - County Operated Service: $ 129,000

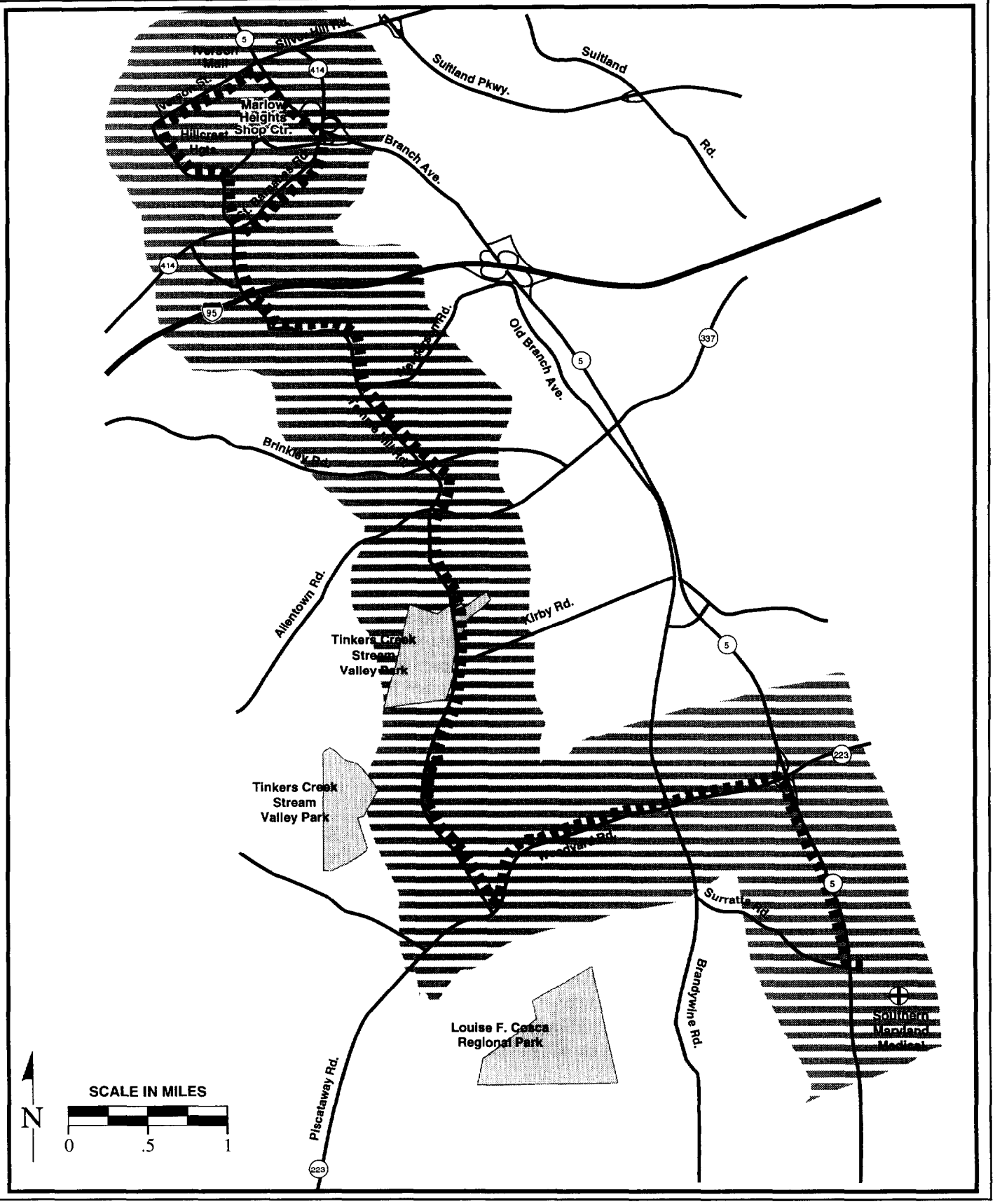

Figure E-5. Southern Maryland Hospital Route

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LEGEND

- Proposed bus route
- Route Deviation Service Area

1.4.3 Brightseat Road Service

This service provides a critical link between the Summerfield military housing complex (under construction), Landover Mall and nearby shopping, several official light industrial parks, and Metrorail service. Community linkages to the regional transit service and to shopping and other services will be provided by this route. This route will also link employment sites along Brightseat Road with the Metrorail system and shopping areas. Service will be provided Monday through Friday from 6:00 AM through 6:00 PM on headways of 15 minutes.

Figure E-6 shows the proposed routing for the Brightseat Road Service. This option would give residents of the Landover Mall area and those residing just south of Landover Road along Brightseat Road more direct access to the Addison Road Metrorail Station than that which currently exists and would also provide service along a portion of Brightseat Road not currently served. The portions of existing service along Brightseat Road would be eliminated and replaced by this option. Like the other recommended options, this one supports the objectives of accessibility of residents and employees to the Livable Communities Initiative. The following are key characteristics of the proposed route:

- Number of Daily Passengers: 600
- Annual Ridership: 150,600
- Route Length (roundtrip): 13.3 Miles
- Annual Net Deficit
  - Contracted Services With Vehicles Provided by Private Provider: $ 445,000
  - Contracted Services With Vehicles Provided by Prince George's County: $ 305,000
  - County Operated Service: $ 264,000

2.0 IMPLEMENTATION PLAN

The proposed options will need final evaluation and review prior to implementation, including a process that will solicit public and community input.

2.1 Recommended Routes

The four routes selected for final implementation will enhance community connections by linking residential areas with area shopping, social services, day care, schools, and local employment centers as well as facilitate connections to the regional transportation network. The selected services are:

- Hyattsville/Prince George's Plaza Circulator Services:
  - Option A-1: West Hyattsville Metrorail Station to Sargent Road
  - Option A-2: West Hyattsville Metrorail Station, Prince George's Plaza and Metrorail Station, to East Hyattsville/Rhode Island Avenue.

- Southern Maryland Hospital Fixed Route/Route Deviated Service to Iverson Mall.

- Brightseat Road: Landover Mall to Addison Road Metrorail Station

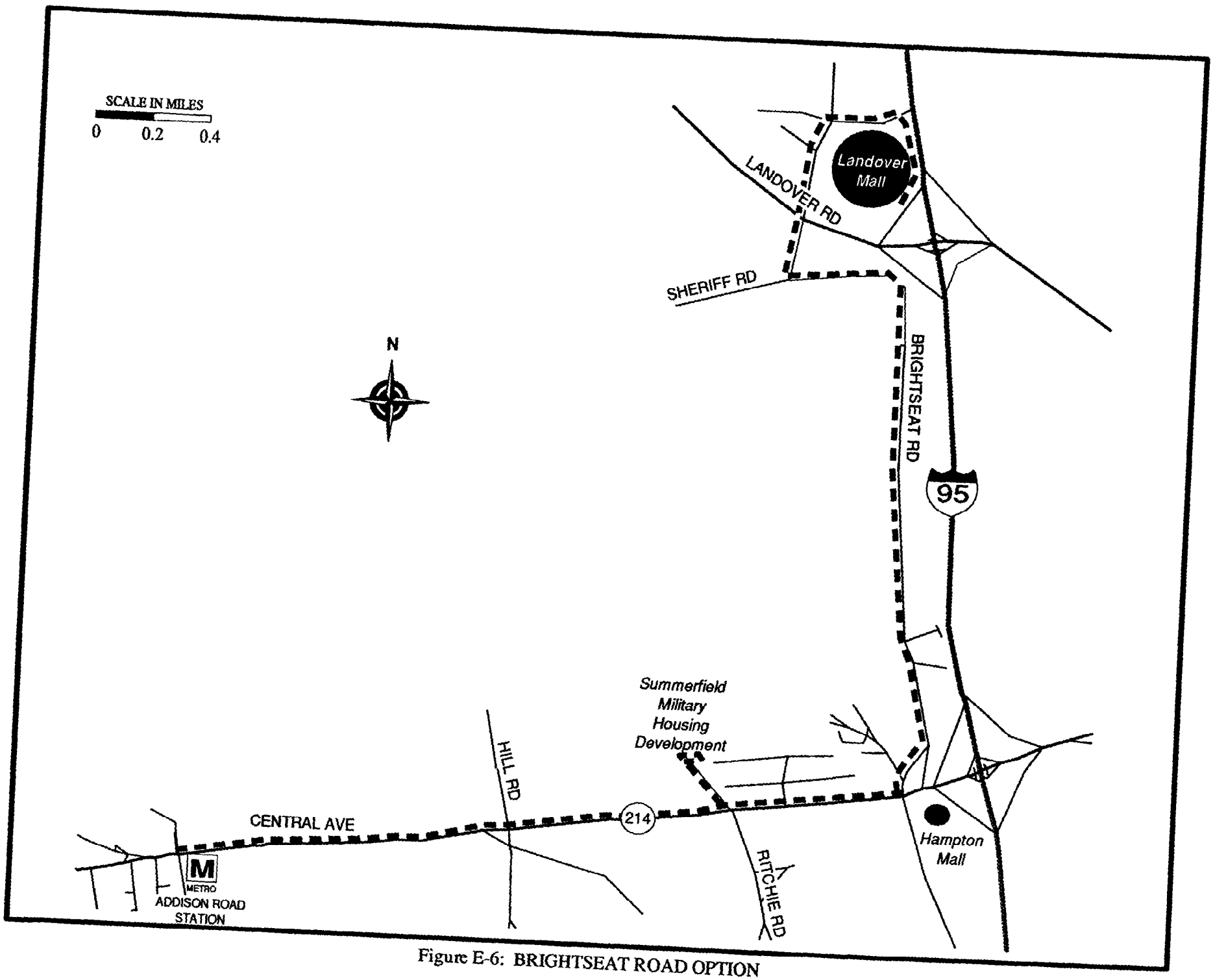


Figure E-6: BRIGHTSEAT ROAD OPTION

2.2 Implementation Plan

The Prince George's County Department of Public Works and Transportation (DPW&T) is the project applicant to FTA, and will operate or contract for the services. The Maryland-National Capital Park and Planning Commission-Prince George's (M-NCPPC-PG) will prepare the grant application.

There will be eight months of start-up work prior to the initiation of service, followed by two years of operations under the demonstration. In addition, during the last six months of the two-year operating demonstration there will also be additional evaluation activities.

It is anticipated that the Federal funding source for this demonstration will be the Livable Communities Initiative, with local share provided from non-federal sources which could potentially include state "Ride-On" funding, County funds or even private contributions. The total cost of the two-year demonstration is approximately $2,874,000 for contracted service. If the services are successful at the end of the demonstration period, continuation would be under the County's transit program with its combination of federal and state "Ride-On" funding.

The implementation plan includes on-going monitoring and specific evaluation of the proposed services. At the end of the project a final report will be prepared.

1.0 INTRODUCTION

This document represents the final report for the Prince George's County Mobility Match Study sponsored by the Maryland-National Capital Park and Planning Commission (MNCPPC). JHK & Associates and Ecosometrics Incorporated (the Project Team) conducted this study under the direction of MNCPPC, Prince George's County staff, and the Technical Working Group.

1.1 Description of the Project

The primary focus of this study was to develop non-traditional transit alternatives to better serve the residents of Prince George's County. The study identified the transportation needs of the area, evaluated the applicability of traditional and non-traditional transit options and developed an implementation plan for the selected transportation services.

1.2 Description of Study Tasks and Report Objectives

The work plan for this study consisted of the following six tasks:

- Task 1 - Identification of Concentrations of Potential Transit Service Users
- Task 2 - Identification of Trip Volumes and Purposes for Candidate Transit Service Areas
- Task 3 - Identification of the Potential Non-Traditional Market Share of Trips
- Task 4 - Evaluation of Potential Non-Traditional Transit Modes
- Task 5 - Evaluation of Cost Effectiveness of Non-Traditional Transit Modes
- Task 6 - Development of Implementation Plan and Final Report

This report summarizes the findings of the different tasks of this study. The report presents a summary of relevant information collected to identify target areas for the implementation of non-traditional transit services. It describes the methodology utilized to estimate non-traditional transit potential of the selected target areas. It includes a section that describes all non-traditional transit options initially considered to be potentially implementable in the County. The report presents the results of the evaluation of options and includes an implementation plan for the four selected service alternatives. The work conducted for this study is summarized below:

1.2.1 Task 1 - Identification of Concentrations of Potential Transit Service Users

The purpose of Task 1 was to identify areas in Prince George's County with concentrations of residents that have the potential for the development of non-traditional transit services, and to identify areas in the County that would be likely destinations areas for such services, primarily employment concentrations. This task was conducted using 1990 census demographic data, information on location of major employment, retail and educational centers, and an inventory of available transit service in the County. At the conclusion of

Task 1, the Project Team identified areas with high potential for non-traditional transit service as well as areas with high need.

1.2.2 Task 2 - Identification of Trip Volumes and Purposes for Candidate Transit Service Areas

The purpose of Task 2 was to identify the number of trips attracted to each of the key employment concentrations and the number of trips generated by the candidate residential clusters identified in Task 1. The Project Team estimated employment at each of the employment clusters using data provided by MNCPPC and Prince George's County, and verified the accuracy of the data received through field investigation and surveys of major employers. These employment figures were used to estimate the number of daily and peak period work trips generated by the major employers in the selected clusters. Using information from surveys, the Project Team determined the place of residence of employees of the target employment centers. The Project Team selected the residential areas that have large concentrations of employees, associated with the selected employment clusters, and that were also classified as high need and/or high potential in Task 1 to use as the base for estimating potential non-traditional transit usage.

1.2.3 Task 3 - Identification of the Potential Non-Traditional Market Share of Trips

The purpose of Task 3 was to calculate the number of trips identified in Task 2 that are likely to use non-traditional transit services. The employee residential data and the population of high need/high potential residential clusters, collected in Task 2, were used to estimate the number of potential non-traditional transit users for each census tract in the County.

1.2.4 Task 4 - Evaluation of Potential Non-Traditional Transit Modes

The purpose of Task 4 was to develop feasible traditional and non-traditional transit options that could serve the target areas identified in Tasks 2 and 3 of the study. The Project Team developed preliminary options. These options were classified into two major subgroups:

- Traditional: includes new fixed route alternatives and modifications to existing fixed routes.

- Non-traditional: includes all new services that are not operated with a traditional fixed route large bus.

No detailed analysis was conducted on the traditional transit options. The non-traditional transit options were evaluated in detail. At the conclusion of Task 4, the Project Team prepared a summary of the evaluation results of the selected non-traditional transit options and presented it to the Technical Working Group. The Project Team in conjunction with the Technical Working Group selected three options for the analysis of cost effectiveness, Task 5 of the study.

1.2.5 Task 5 - Evaluation of Cost Effectiveness of Non-Traditional Transit Modes

As Task 5, the Project Team conducted detailed evaluation of the cost effectiveness of the three selected non-traditional transit options. After presenting the results of Tasks 4 and 5,

the Project Team and the Technical Working Group selected the options to be carried to the next step of the study, the development of a detailed implementation plan.

1.2.6 Task 6 - Development of Implementation Plan and Final Report

Using the information collected in the first five tasks of this study, the Project Team developed a plan that describes the operational framework, financial considerations, administrative/management details and an implementation program for each of the four selected non-traditional transit options.

1.3 Description of the Report

This report summarizes the results of the six tasks of this study. Chapter 2 summarizes the results of Task 1. It presents a description of the methodology used to select target employment clusters and residential areas. Chapter 3 summarizes the findings of Tasks 2 and 3. It describes the findings of the trip generation estimation for the key employment and residential areas, and the estimation of non-traditional transit usage for these areas. Chapter 4 presents the results of Tasks 4 and 5. It presents the preliminary options proposed for Prince George's County, the evaluation of the options, and the selected options for the development of an implementation plan. Chapter 5 includes the implementation plan for the options recommended for implementation.

2.0 NON-TRADITIONAL TRANSIT SERVICE POTENTIAL

This chapter identifies areas in Prince George's County with concentrations of residents that have the potential for the development of non-traditional transit services, and identifies areas in the County that would be likely destinations for such services, primarily employment concentrations. It is Step 1 in the methodology outlined in Developing a Comprehensive Service Strategy to Meet a Range of Suburban Travel Needs[1]. It was the first step in a multi-step process which led to the development of proposals for non-traditional transit services that address the growing needs for mobility in the county. It should be noted that the range of services considered was primarily non-traditional, but many of the data sources, populations to be served, and trip needs are similar to those that would be addressed in an assessment of the need for traditional transit. For Prince George's County, planning for fixed-route services will be addressed in a separate study to update the County's Transit Development Plan. This project addresses the need to provide mobility in areas of lower density, or to meet suburb-to-suburb, community oriented, and reverse commute types of trips through innovative services.

In order to accomplish Task 1, three kinds of information were considered. One is 1990 Census demographics to locate areas that may have a higher probability of supporting new types of transit services, based on a needs analysis, density thresholds, or on the fact that there are large numbers of bus users, taxi users, and persons with a long journey to work times. A second kind of information documents the location of land uses that are likely to be destinations for transit users. This includes concentrations of employment, shopping centers, medical, and educational facilities. The third type of information is an inventory of available transit routes, which reveals areas of need or potential that are not now served by conventional transit, but that could be addressed by non-traditional modes.

Areas with high potential for non-traditional transit services were identified by:

- identifying locations in Prince George's County where people live who are likely to use transit. This includes the identification of Census Tracts which are classified as high "need" areas because they have a high density of population which may be transit-dependent. It also includes the identification of areas with high potential demand because they have high density housing or large numbers of multiple housing units. Finally, this section includes a comparison of where people live (particularly the transit-dependent) with the availability of transit services.

- identifying locations in Prince George's County where there are concentrations of persons who now use buses or taxis for their journey to work, and where there are large numbers of persons who have journey to work times above 60 minutes.

- identifying major destinations that might be served by transit. This includes the citing and location of major trip attractors and a review of the availability of transit to serve those destinations.

---

[1] Rosenbloom, Sandra; Graduate Program in Community and Regional Planning, School of Architecture, University of Texas, Final Report - Developing a Comprehensive Service Strategy to Meet a Range of Suburban Travel Needs, May 1990. Austin, Texas.

- examining current services to identify areas with no or low levels of transit services that contain either potential users or destinations,

This analysis takes the current land use pattern as a given (unless significant changes are thought to be likely -- such as major new shopping or office complexes).

2.1 Context

There are several factors that are crucial to understanding the need or potential for non-traditional transit in Prince George's County. The most crucial of these factors is the employment growth which has occurred in the lower density suburban portions of the County where traditional forms of transit are expensive to provide.

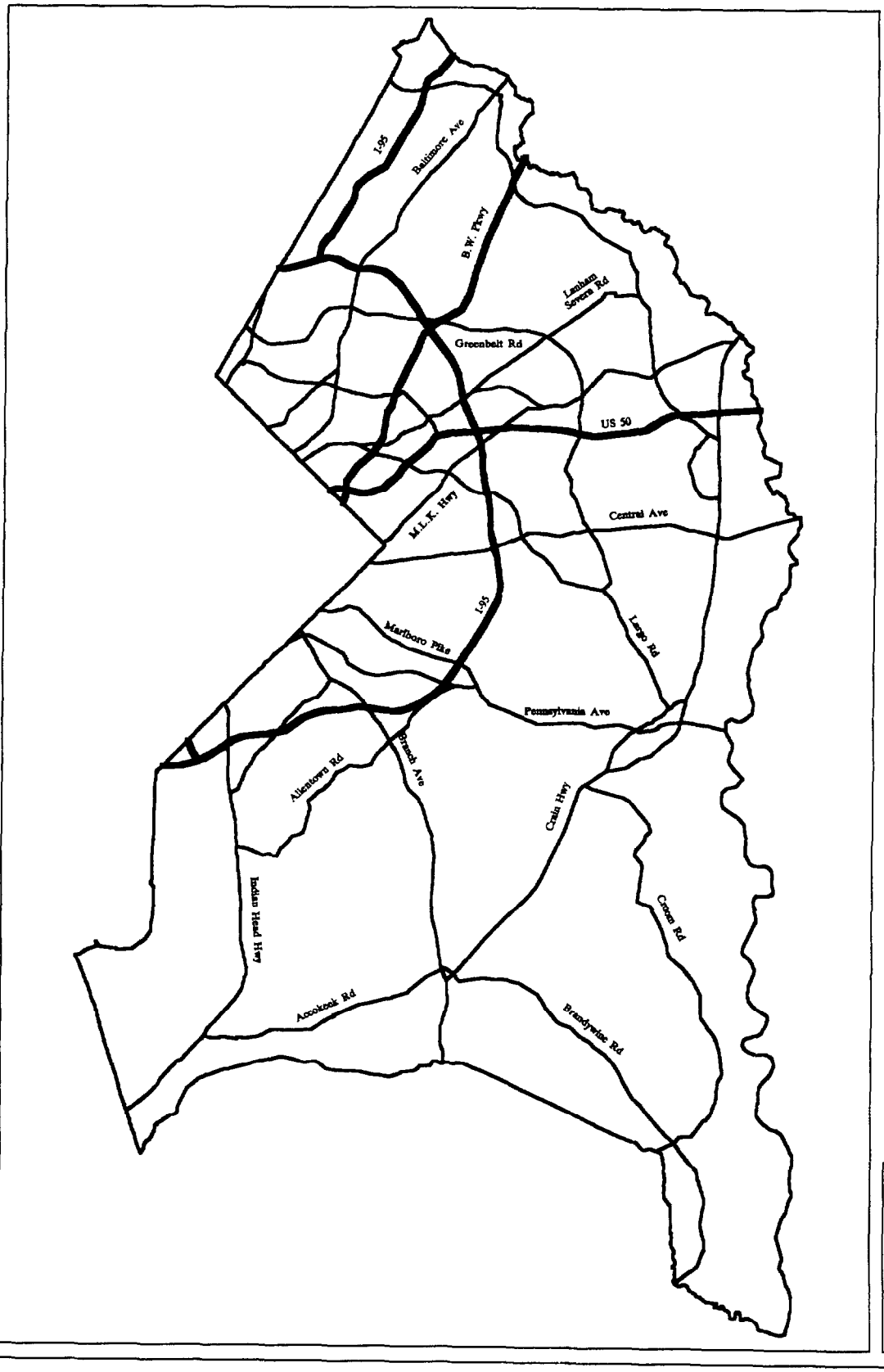
In recent years, much of the employment growth, particularly office and commercial, has occurred in lower density suburban areas of the County east and north of the Capital Beltway. Figure 1 depicts major roads. Industrial areas such as Beltsville and Landover have grown and added multipurpose spaces incorporating office and other uses, such as the Ammendale Business Campus. New office spaces such as the Capital Office Park in Greenbelt, along Greenbelt Road east of the NASA Goddard Space Flight Center (Glenn Dale Business Campus and Maryland Corporate Center), New Carrollton (Metro East Office Park), the Forbes Boulevard area in Lanham, Inglewood Business Community, the Northampton Business Park, and other new office parks have added employment locations, and there is more potential in planned developments such as the Bowie New Town Center, the International Renaissance Center, and the University of Maryland Science and Technology Center in Bowie.

At the same time, the County has experienced population growth with residential development spreading outside of the Beltway, in Bowie, Upper Marlboro, Greenbelt, Glenn Dale, Collington, Mitchellville, Largo, Kettering, along Route 301, and along the Indian Head Highway corridor. While the County has experienced significant new development in both employment and residential sectors over the last decade, this growth has not been concentrated in a particular corridor that would be easy to serve with conventional transit. There has been some concentration of office space near Metro stations at New Carrollton and in advance of the Greenbelt station opening, but in many cases the linkage between much of the new residential development and the additional employment in the County has yet to be made.

2.2 Data used in the Analysis

Data were collected from a variety of sources including the Maryland-National Capital Park and Planning Commission (MNCPPC) staff, the Department of Public Works and Transportation (DPW&T), the Prince George's County Economic Development Office, and the Chamber of Commerce. Information on current services were obtained from DPW&T. Data on where people who are likely to take transit live, where they travel to, and anticipated trends or changes in these characteristics were obtained from the MNCPPC and are based on the U.S. Census for 1990.

Figure 1 - Prince George's County



Legend:

Arterial

Highway

N

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Much of the population data are based on the U.S. Census and were analyzed using the 172 Census Tracts in the area (see Figure 2). Most of the detailed demographic data used to describe who is "transit dependent" is based on 1990 Census data. The information used is from the sample count included in the Summary Tape File 3A and the analysis of the location of transit-dependent populations is performed at the tract level.

Data on the location of potential destinations and travel trends were collected from various publications and inventories produced by MNCPPC, the Chambers of Commerce, the telephone book, and other miscellaneous sources. MNCPPC and DPW&T staff also supplied information on potential destinations and on requests for service.

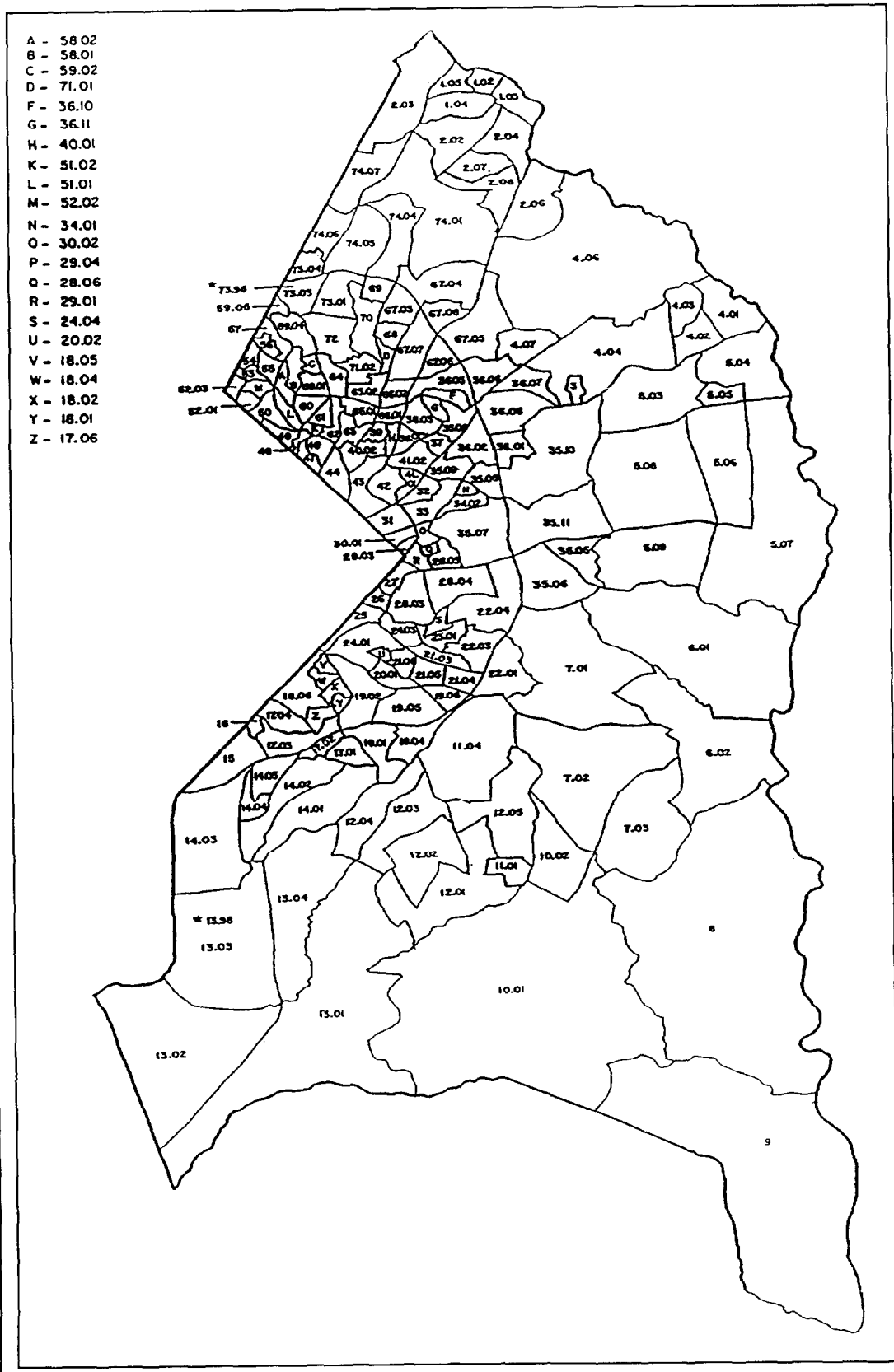
2.3 Transit System Coverage

Transit services provided by the Washington Metropolitan Area Transit Authority (WMATA) provide broad coverage inside the Capital Beltway, with much more limited services provided by WMATA, DPW&T (THE BUS), and Laurel Connect-a-Ride within and to locations outside of the Beltway. The University of Maryland operates an extensive network of routes in the College Park area serving the campus and nearby student housing areas, and these services are open to faculty, staff, and students. The WMATA transit system is both radially oriented from the District of Columbia as well as cross county. Additionally, Metrorail service is provided to the County on the Orange and Blue Lines and MARC service is provided in the northern portion of the County on the Camden and Penn Lines. In December, 1993 Metrorail stations were opened on the Green Line, adding service at the West Hyattsville, Prince George's Plaza, College Park-University of Maryland, and Greenbelt stations. At the same time many of the Metrobus routes operated in the County were altered to feed the Metro at those stations, and to provide additional cross-county and inter-jurisdictional services. The Metrobus changes are known collectively as the "Turnback" plan, and the routes and service changes were used as a basis for examining transit service coverage. This includes the changes to the plan following the public hearings.

Service is provided along most major roads within the Beltway and most of the services have headways of 15 minutes or less during peak hours on heavily used routes, or 30 to 60 minutes during non-peak hour and on routes with lower traffic levels. Transit service outside the Beltway is primarily limited to the major radial corridors including Indian Head Highway, Branch Avenue, Pennsylvania Avenue, Central Avenue, Route 50, Route 450, and Route 1, half of which is peak hour only. It should be noted that there are a number of routes and route extensions that do not operate on every trip, allowing some additional coverage by the same route. THE BUS operates two routes linking Metrorail and Upper Marlboro.

Public paratransit service is operated by the DPW&T under three programs: Call A Bus (demand-responsive accessible bus service), Call A Cab (taxi voucher program), and Senior Transportation Services (STS). No certification is needed for Call A Bus, while the Department of Aging certifies the need for nutrition trips for the seniors. Other STS services require only that age and residency requirements be met. Call A Bus and STS serve the entire County, and STS also provides some limited out of County services to medical destinations. Call A Cab service is somewhat limited by the jurisdictions in which individual participating cab companies can operate. In addition, there are vans operated to serve human service agency needs in a number of the cities in the County, primarily serving senior citizens for local trips on an advance reservation basis. Table 1 presents a listing of these local van services.

Figure 2 - Census Tracts



Legend:

4.06 Census Tract

N

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Table 1

MUNICIPAL CALL-A-BUS SERVICES IN PRINCE GEORGE'S COUNTY

Municipality	No. of Vehicles	Estimated Monthly Ridership	Service Focus
Town of Berwyn Heights	2	267	SSTAP*
City of Bowie	5	1,934	SSTAP
Town of Capitol Heights	3	60	SSTAP
Town of Cheverly Town of Landover Hills	1	112	SSTAP
City of College Park	1	294	---
Town of Fairmount Heights	1	30	SSTAP
Town of Glenarden	1	18	SSTAP
City of Greenbelt	2	606	SSTAP
City of Hyattsville	1	82	SSTAP
City of Laurel	4	956	SSTAP
City of Mount Rainier	1	88	---
City of New Carrollton	2	92	SSTAP
City of Seat Pleasant	1	---	SSTAP
Town of Colmar Manor	2	152	SSTAP

*SSTAP (Statewide Specialized Transportation Assistance Program) is a Maryland state funded program to provide transportation to elderly and disabled persons with no limitation on trip purpose.

As a first step in the identification of areas with potential for transit services, the current fixed route system, including WMATA, DPW&T, MARC, and Laurel routes, was examined and areas without service were identified. Because Census Tracts in some areas are large, the service areas of existing routes were defined as being 1/4 mile coverage (either side of the route).[1] The purpose was locating areas with no service within a relatively convenient walking distance.

Figure 3 presents the route configuration of fixed-route transit services in the County, and Figure 4 the coverage of current bus routes with the "full service" routes shown as solid lines and the limited service routes as dashed lines. This map indicates the transit coverage sheds for the existing system. Of particular interest is the fact that most areas with very low levels of service or no service are areas with little population, which means that there is some level of transit service in most areas with significant amounts of population and employment. Therefore the issues in this study involved primarily the level, direction, and schedule of services, rather than simply providing service to unserved areas. A comprehensive comparison of service levels with location of high density trip origins and destinations is presented in the following sections.

2.4 Identification of Residential Concentrations

The first step in identifying areas with high potential transit demand was to identify areas in the region that might contain people who are most likely to use transit. In identifying these areas, two types of riders were considered:

- Transit-dependent riders who fall into one or more of the following categories; households in poverty, zero car households, unemployment, female heads of households, or low median household income.

- Potential riders who are persons with access to an automobile, often with higher incomes, who might find transit to be more convenient than commuting by auto.

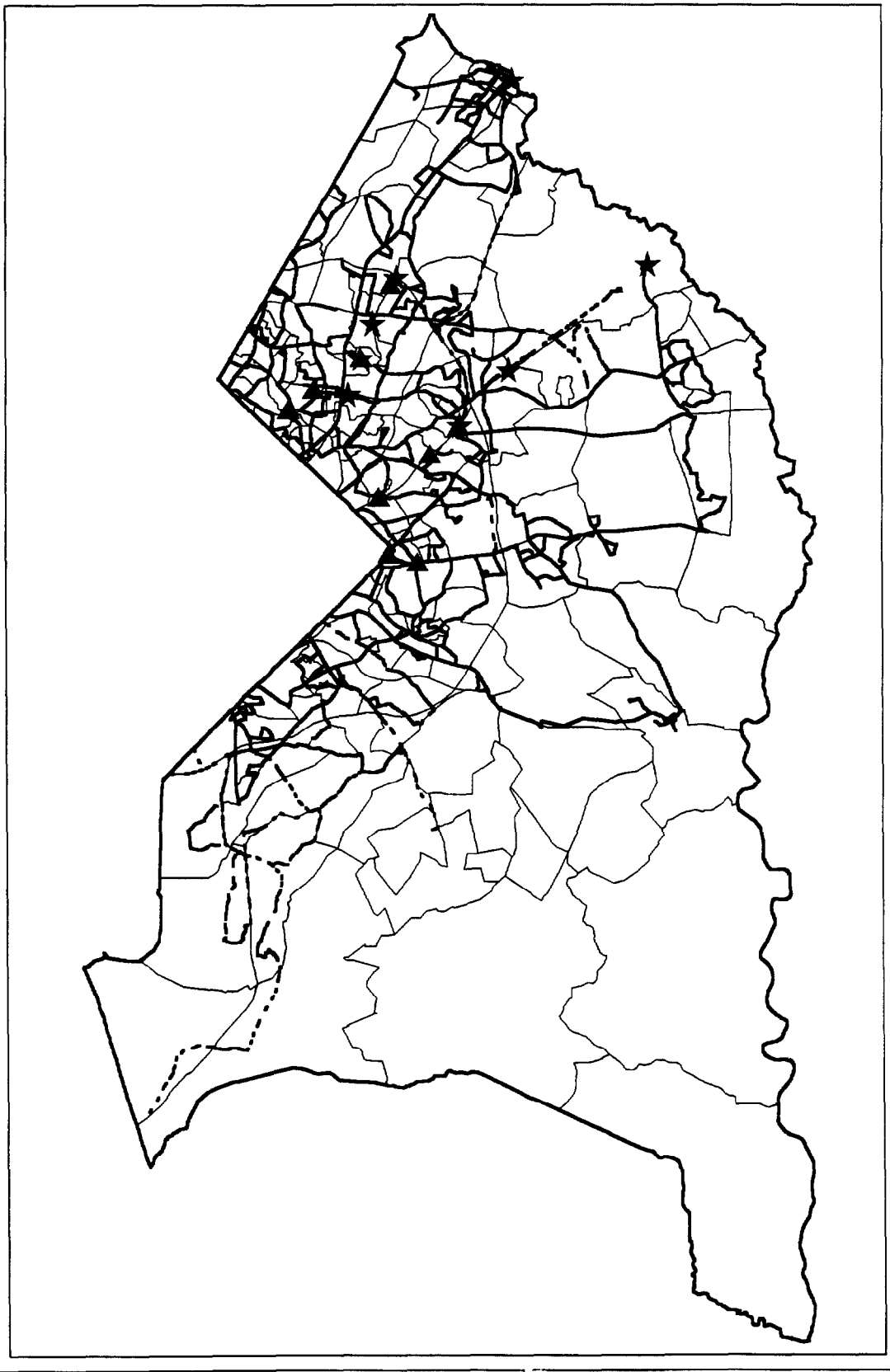
The identification of the trip origin areas of these types of potential riders was performed in two steps:

1. Identify high need areas using demographic data that indicates potential need for transit. The factors used included; households living below the poverty level, zero-car households, median household income, unemployment, and female headed households. This is the traditional transit-dependent population. An analysis was performed for each Census Tract in the region. Each tract was ranked by the total transit-dependent population. Since zero-car households is the best indicator of transit use, the rankings were performed again using only this variable to verify the results.

2. Identify areas of high density of general population and high density housing. Fixed route transit service functions best in areas of high density. Where possible, transit directs service to areas of higher density because the higher the density, the greater

[1]Standards published by the Transportation Research Board, in Bus Route and Schedule Planning Guidelines, NCHRP 69, 1980.

Figure 3 - Transit Routes



Legend:

- Census Tract
- Base Bus Route
- Peak Bus Route
- Metro Station
- MARC Station

N

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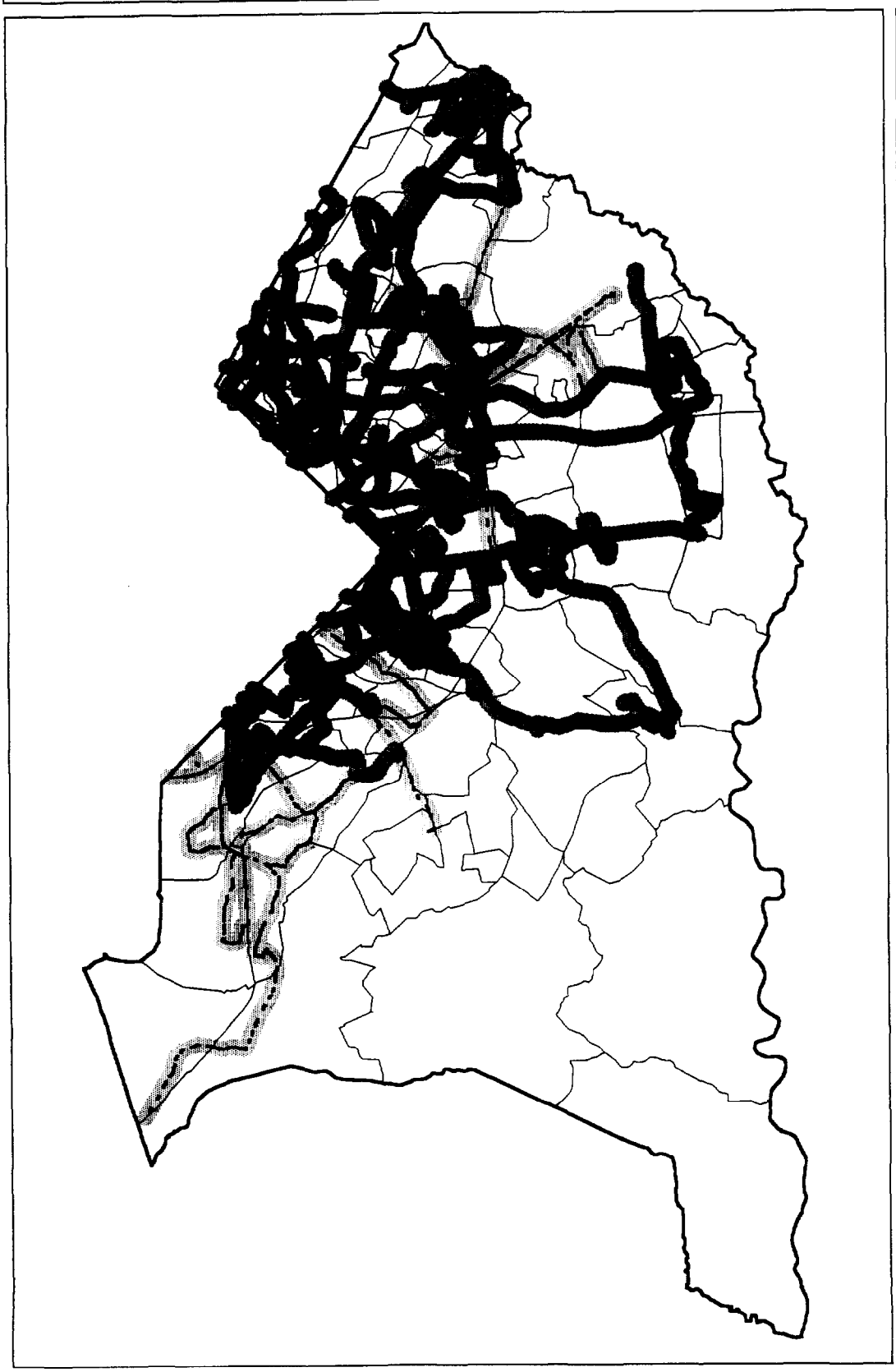
Figure 4 - Bus Transit Coverage



Legend:

- Census Tract
- Base Service Coverage
- Peak Service Coverage
- Base Bus Route
- Peak Bus Route

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the potential, for transit use. High density housing has been identified by location within the region, and compared to current system coverage. It is anticipated that most of the riders who have autos available will come from these higher density areas.

2.4.1 Identification of High Need Areas (Likely Origins of Transit-Dependent Riders)

Region-wide transportation needs are defined, in part, by identifying the relative size and location of those sub-populations most likely to be dependent on some form of transportation service. In order to accomplish this, Census data is used to identify and locate the populations with these characteristics. However, because Census data is only available for Census-defined areas such as Census Tracts or Blocks, this process deals only with these areas. However, the inclusion or exclusion of a Census Tract on a ranking does not necessarily imply that any services that are subsequently developed would serve only the area with the tract boundaries, and that similar neighborhoods in an adjacent tract or on streets traveling through a tract would not be served.

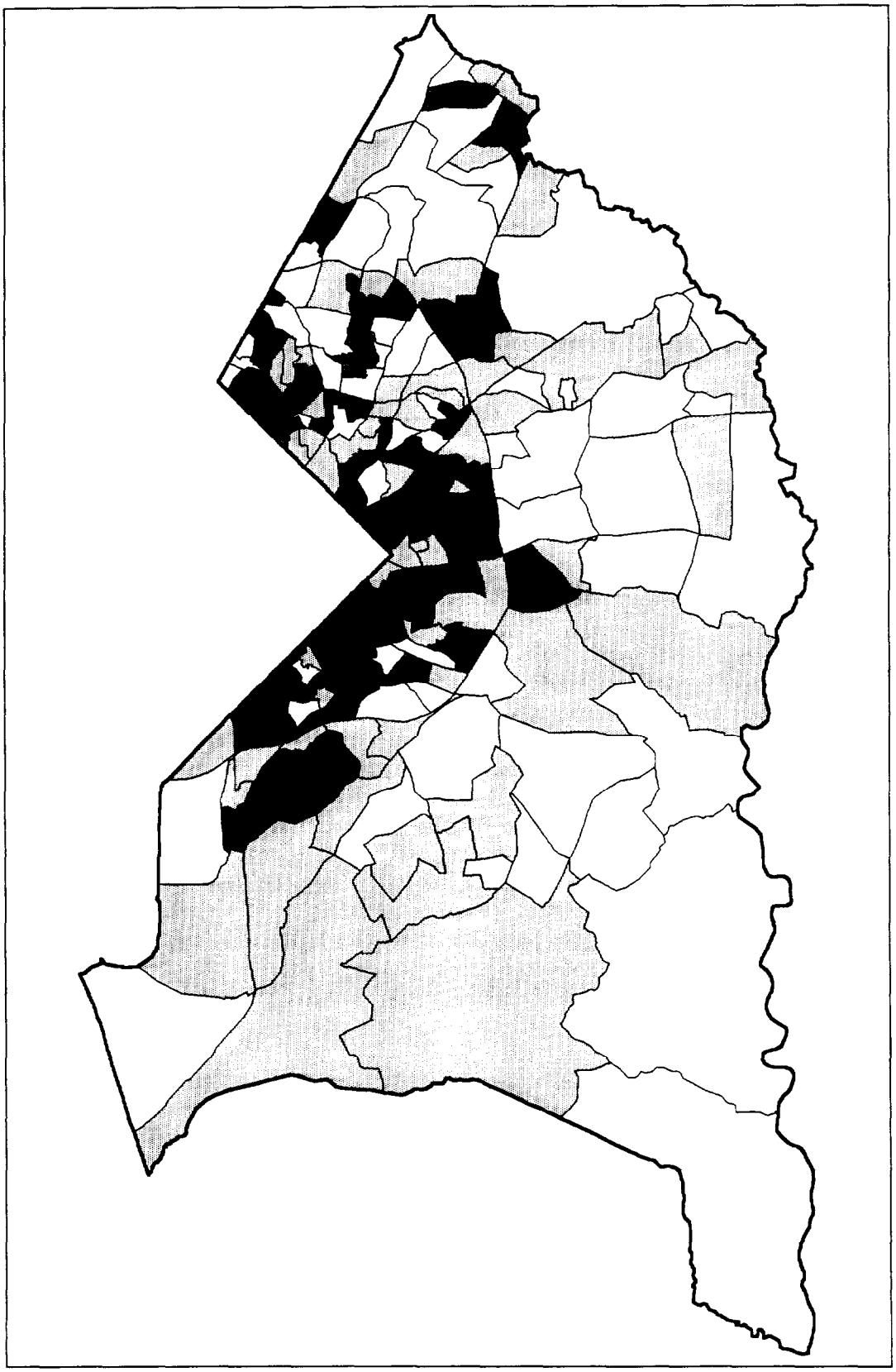
This step classifies the potentially transit-dependent by five non-mutually exclusive categories:

- low income households (below the poverty level),
- households living in housing units with no car available,
- median household income,
- unemployment, and
- female headed households (with and without children).

Census data were collected by each category for all Census Tracts in the County. First, for each category the total population in each category by Census Tract was calculated. Each Census Tract was ranked relative to the other Census Tracts for each population category. The ranks for each category were then summed and the Census Tracts were reranked. The lower the rank, the greater the need. This produced an overall ranking of Census Tracts by transit-dependent persons. The relative need was categorized by high need (the top 1/3), moderate need and low. This information was then displayed on a map indicating high potential need (Figure 5). The actual census data and the ranking of each census tract for each of the five categories are included in Appendix A on Table A1. The process was repeated using data on the percentage of transit-dependent persons residing in a Census Tract. Figure 6 presents a map indicating areas of "high need" based on the ranking by percentage. Finally, a ranking was done on a combination of total population and percentage of transit-dependent persons. Figure 7 present the results of this ranking. Tables A2 and A3 present the detailed data.

It is important to distinguish between areas that have a high number of people in need and areas that have a high percentage of people in need. Areas with a high number are ones that may be able to support a high frequency of service, while areas that have a high percentage of people in need may need service, but at a lower frequency or with a more specialized service design, depending on the population of that area. This comparison should not be used as a prediction of the number of trips an area will generate, but rather as an indicator of those areas of Prince George's County with relatively high need.

Figure 5 - Classification of Census Tracts Based on Rankings of the Number of Persons with High Need Characteristics



Legend:

Census Tract

N

Ranking

Low

Medium

High

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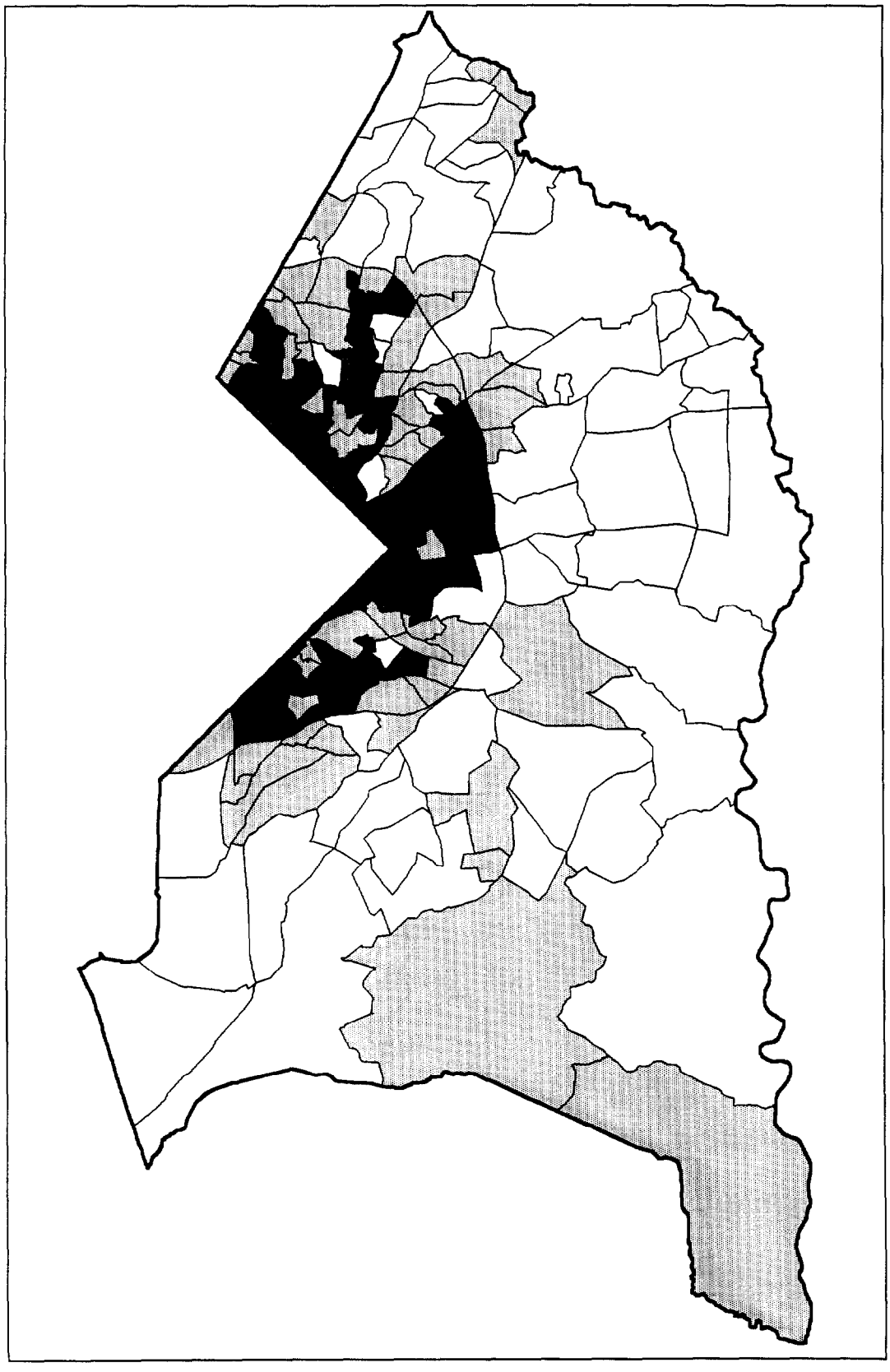
Figure 6 - Classification of Census Tracts Based on Rankings of the Percentage of Persons with High Need Charactcristics



Legend:

Census Tract

Ranking

Low

Medium

High

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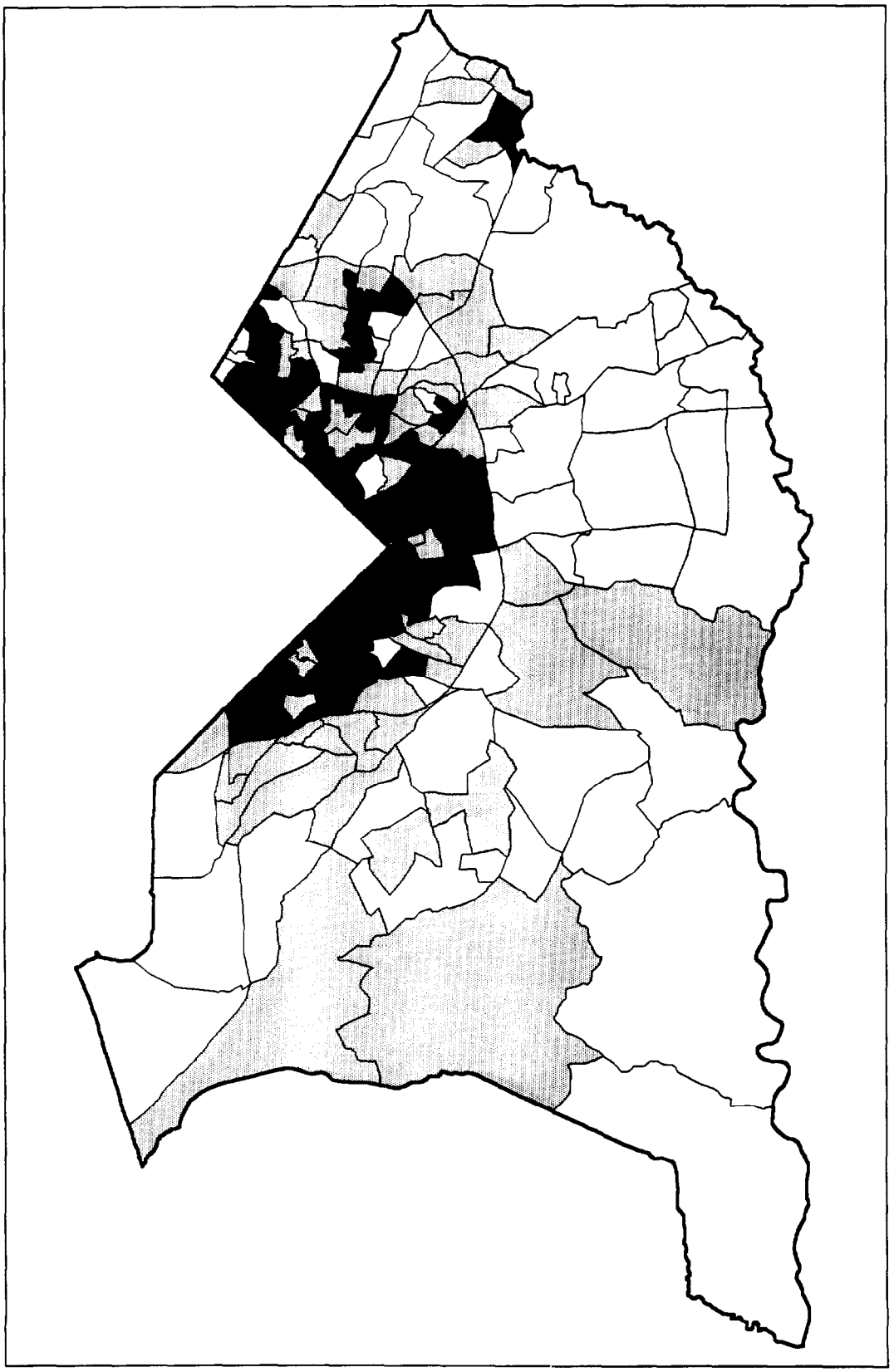
Figure 7 - Classification of Census Tracts Based on Rankings of the Number and Percentage of Persons with High Need Charactcristics



Legend:

Census Tract

Ranking

Low

Medium

High

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One of the most accurate indicators of transit potential is the number of zero car households in a Census Tract. Examination of this factor also serves as another indicator of need and provides confirmation of the results found in the earlier analysis. Figure 8 illustrates areas with a high percentage of zero car households. Table A4 provides the detailed data on zero car households by census tract.

The ranking of Census Tracts by total number of those with transportation need characteristics reveals that, with the exception of the Laurel area, the tracts with the greatest need are concentrated either inside or just outside the Beltway. The highest need areas in terms of persons with transit dependency (Figure 5) include most of the area inside the Beltway as well as the Oxon Hill area, the Largo area, Greenbelt (eastern portion), Powder Mill area (west of the Route 95), and parts of Laurel.

The analysis of zero car households (Figure 8) confirms the findings from the analysis of the location of populations with high need characteristics. As with the analysis of the location of populations with high need characteristics, the zero car household analysis indicates that Census Tracts with the largest percentage of autoless households lie primarily within the Beltway.

The analysis of the percentage of persons with transit-dependency by Census Tract again reveals that the areas with the highest need lie within the Beltway. The areas outside of the Beltway, which were revealed to have high numbers of transit-dependent persons, have only moderate or low need from the standpoint of percentage of population. Figure 6 illustrates that the areas in which the percentage of the population that is transit-dependent is high are located inside the Beltway.

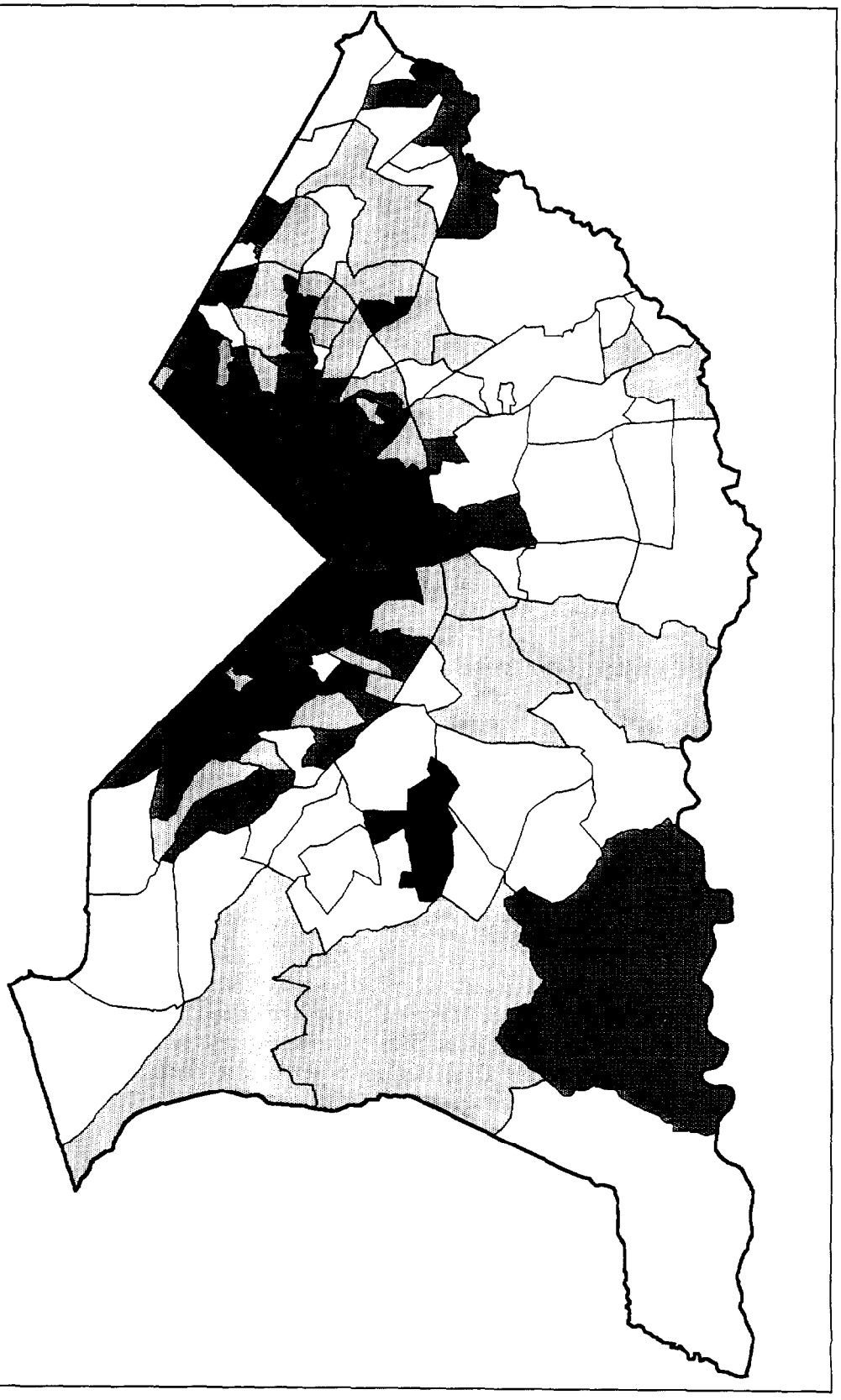
2.4.2 Comparison of Transit Dependent Needs with Transit Service Availability

This step examines the locations of potential transit users and compares this with current transit services offered in the County. Comparing areas of high need by the transit-dependent with transit system coverage in Figure 4, it appears that the current services serve all areas with high need. The majority of transit dependent riders in the region's service area live inside the Beltway and are relatively well-served by the existing transit services provided they need to travel within the Beltway.

2.4.3 Overall Population Density and Potential for Different Types of Transit

In addition to identifying the location of potential riders who have high needs for transit services, the overall population density in Prince George's County was examined to determine the level and type of potential transit services that might be appropriate. The County's Transit Development Plan identifies minimum acceptable standards for evaluating existing service and for introducing new services. These standards are:

Figure 8 - Percent of Autoless Households



Legend:

Census Tract

N

% Autoless Households

Less than 2%

2% to 5%

5% to 10%

10% to 15%

More than 15%

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Density	Route Coverage
Over 6,000 persons per square mile	Fixed route service at 1/2 mile intervals
Between 4,000 and 5,999 persons per square mile	Fixed route service at 3/4 mile intervals
Between 2,000 and 3,999 persons per square mile	Fixed route service at 1 mile intervals
Below 2,000 persons per square mile	Evaluate fixed route applicability or provide dial-a-ride service

Figure 9 illustrates the location of census tracts falling into each of these four density ranges. Under the Prince George's County service standards, densities over 2,000 persons per square mile generally call for fixed route services with the spacing between routes decreasing as density increases. Areas with population density below 2,000 persons per square mile are candidates for some type of non-traditional fixed-route services or demand-responsive service. Looking at overall density, the areas inside the Beltway as well as the Bowie and Laurel areas show up with moderate and higher density levels. Table A5 provides a ranking of all county census tracts by population density.

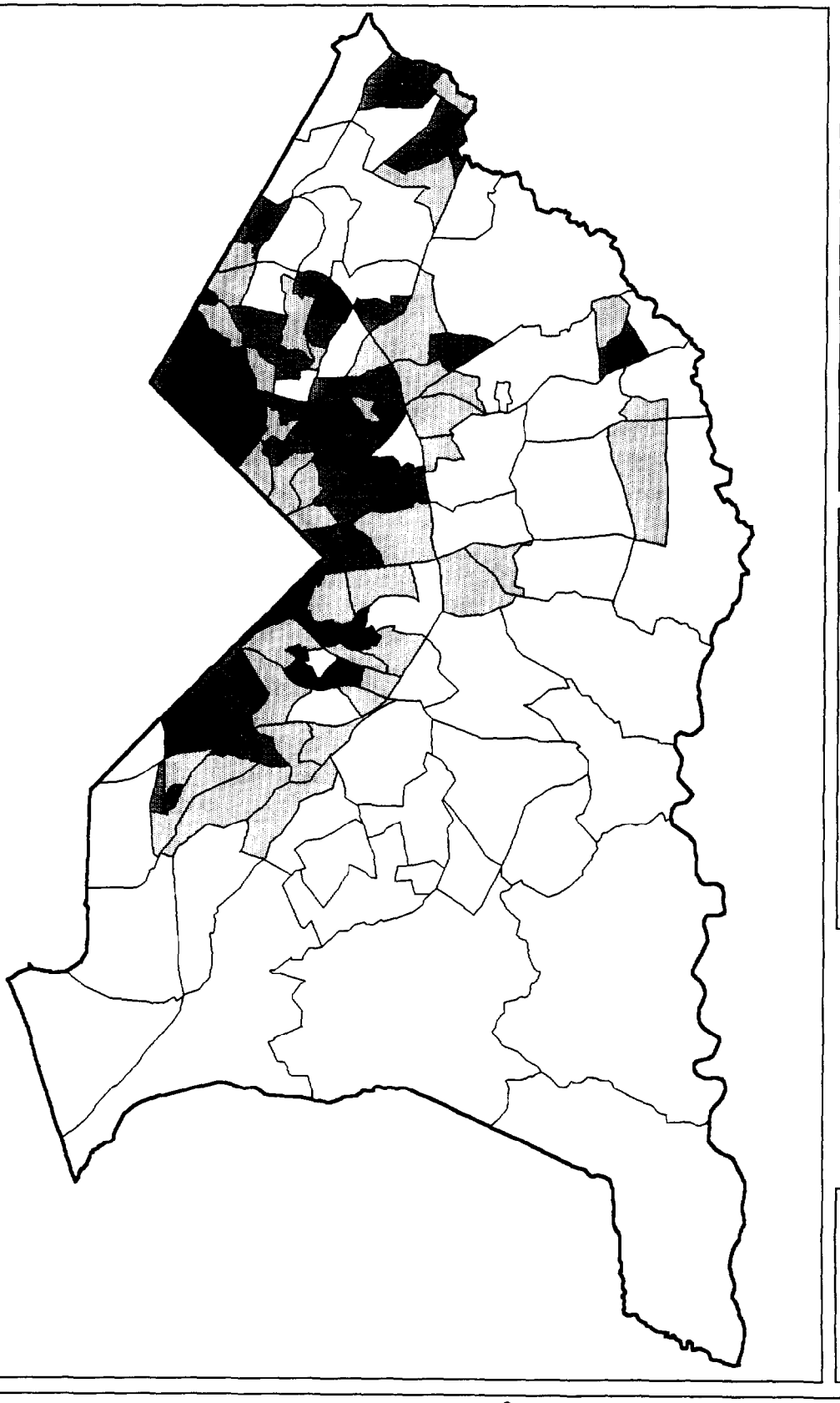
When considering the total population density, it is interesting to note that the higher density areas usually mirror the population density of the transit-dependent. This indicates that riders who have auto alternatives can be served on many of the same routes as those without the auto option (although services may have to be changed since it will be more difficult to entice riders who have other alternatives). Again, the comparison of current services to the high potential areas for fixed-route services indicates that the transit system currently serves the areas with densities above 2,000 persons per square mile. The task of evaluating and planning for any needed service changes to these fixed-route services is part of the update of the Transit Development Plan, while this study focused primarily at the potential for non-traditional services.

An additional step was taken to see if there had been significant changes in density since the 1980 Census. Tract-level data was used to compare changes in density from 1980 to 1990. A number of tracts were divided or combined and a number of boundaries were altered, making a direct comparison difficult. However, there were some major changes resulting from new development in:

- Laurel Lakes
- Upper Marlboro
- Lake Arbor
- Kettering

It is understood that the Mitchellville area should also be included, but that it probably did not show up given that a great portion of this area's development has occurred since 1990 and is still occurring. The only major decrease in density resulted from the closing of the Glenn Dale Hospital on Route 450, which was a residential care facility (group quarters in

Figure 9 - Population Density



Legend:

Census Tract

N

Population Density

Less than 2,000

2,000 to 3,999

4,000 to 6,000

More than 6,000

Units: Persons/Sq. Mile

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Census definitions). Table A6 presents the detailed comparison of 1980 and 1990 population densities.

2.4.4 Identification of Higher Density Housing

Fixed route transit service is most effective when serving high density origins and destinations. For this reason, the density of structures with more than two units was analyzed and compared with transit services in the County. Figure 10 illustrates the location of areas with a high density of structures with multiple units. The map shows that the Census Tracts with significant densities of multi-unit structures are in areas that are well served by the current transit system. The details are shown in Table A7 in the appendix.

2.4.5 Analysis of Areas with High Bus and Taxi Use and Long Journeys to Work

An additional analysis was conducted to try and address areas where there are concentrations of persons that are currently using either bus transit or taxis for journeys to work, and where there are large numbers of people with very long journeys to work, in terms of travel time. The available 1990 Census data include information on mode used and travel time for work trips, and so the following variables were used in this analysis:

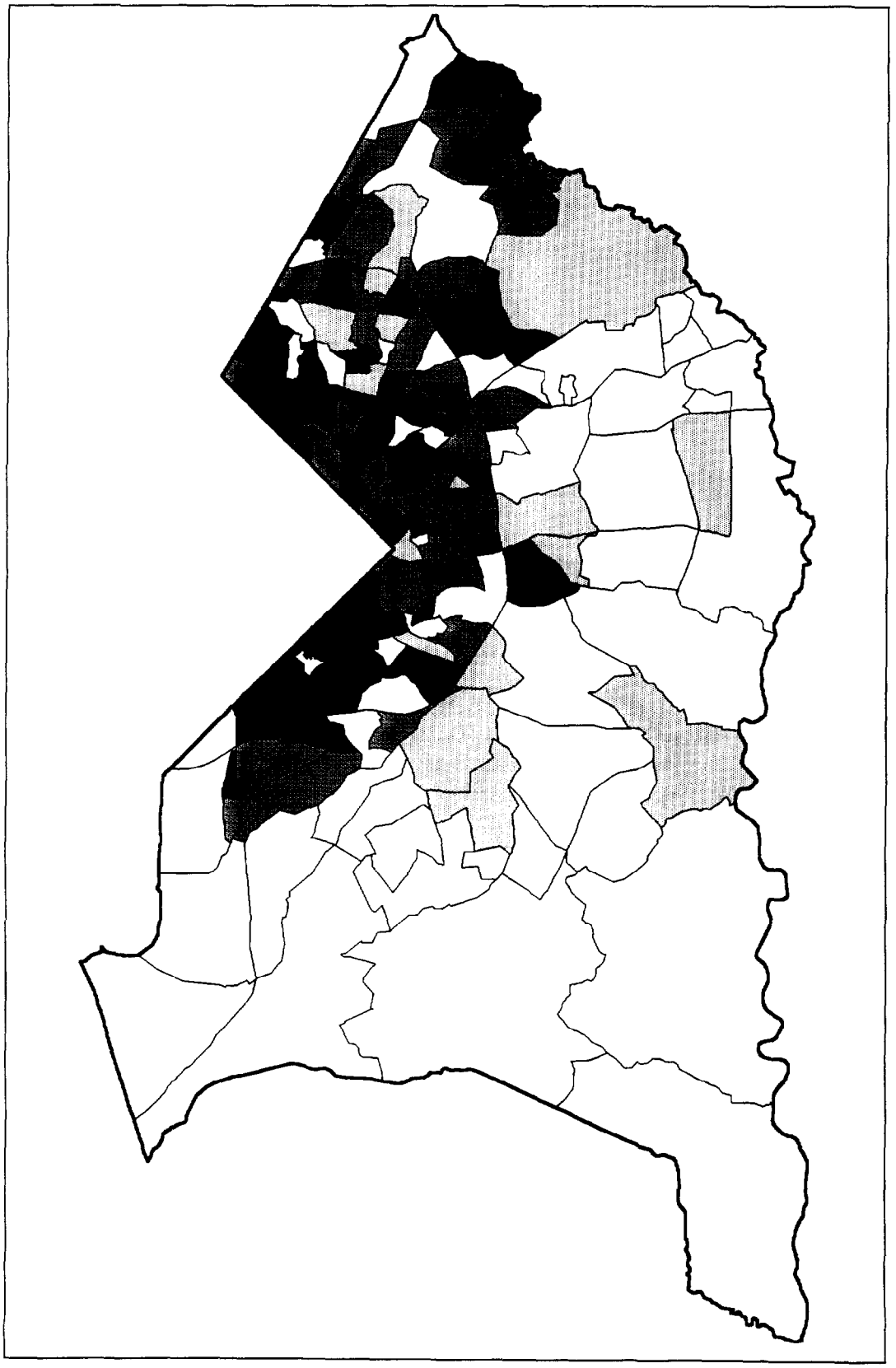
- Total Population of Persons Using Buses for Journey to Work Trips
- Total Population of Persons Using Taxis for Journey to Work Trips
- Total Population of Persons with Journey to Work Travel Times of 60-89 Minutes
- Total Population of Persons with Journey to Work Travel Times 90 Minutes or More

From the available Census data it is not known whether or not the bus and taxi users are the persons with the long travel times for work trips, and it is not known where any of these persons are going on their work trips. But by combining high rankings for all three of these, it is likely that areas with a high potential for nontraditional transit use will be identified, and such areas have been termed "high potential" areas. Data on the total population of bus users was ranked, and the results mapped to show areas of high bus transit usage as shaded areas (Figure 11). A similar process was conducted for the number of persons using taxis for work trips, with the results mapped on Figure 12. Figure 13 presents a map depicting the areas where there are large numbers of persons with journey to work times in excess of 60 minutes. The rankings were summed and then ranked again, and Figure 14 presents the results. The details of this journey to work data by Census Tract are shown in the appendix in Tables A8 through A11.

2.4.6 Combined Ranking to Determine Residential Concentrations

Figure 15 presents the combination of 1) the analysis of residential concentrations with high need and 2) the residential concentrations with high rankings of bus, taxi, and long journey to work times. These two types of analyses are presented on the one map. The tracts ranking as high on the needs analysis are <u>all</u> included, as are <u>all</u> the areas ranking as having a high potential for nontraditional transit ridership. In many cases a Census Tract was high on both analyses, and these are shaded in a different way to delineate the tracts that scored high on both. The tracts are listed in Table 2, with columns marked to show in which ranking each tract was included as a highly ranked tract.

Figure 10 - Multi-Unit Density



Legend:

Census Tract

N

Multi-Unit Density

Less than 10

10 to 99

100 to 499

500 to 1,000

More than 1,000

Units: Multi-Unit Structures/Sq. Mile

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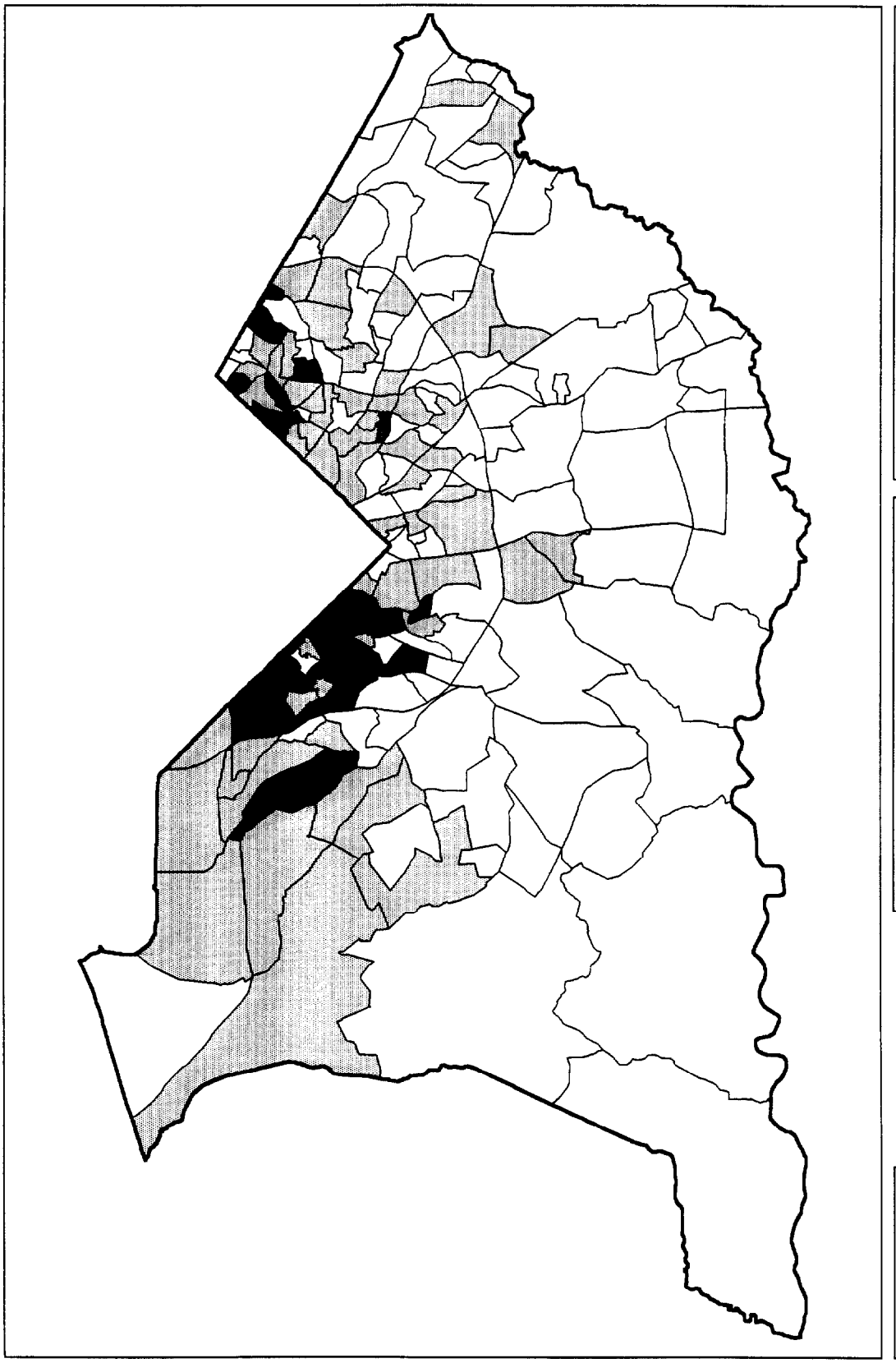
Figure 11 - Bus Users



Legend:

Census Tract

N

Bus Users

Less Than 100

Between 100 and 300

More Than 300

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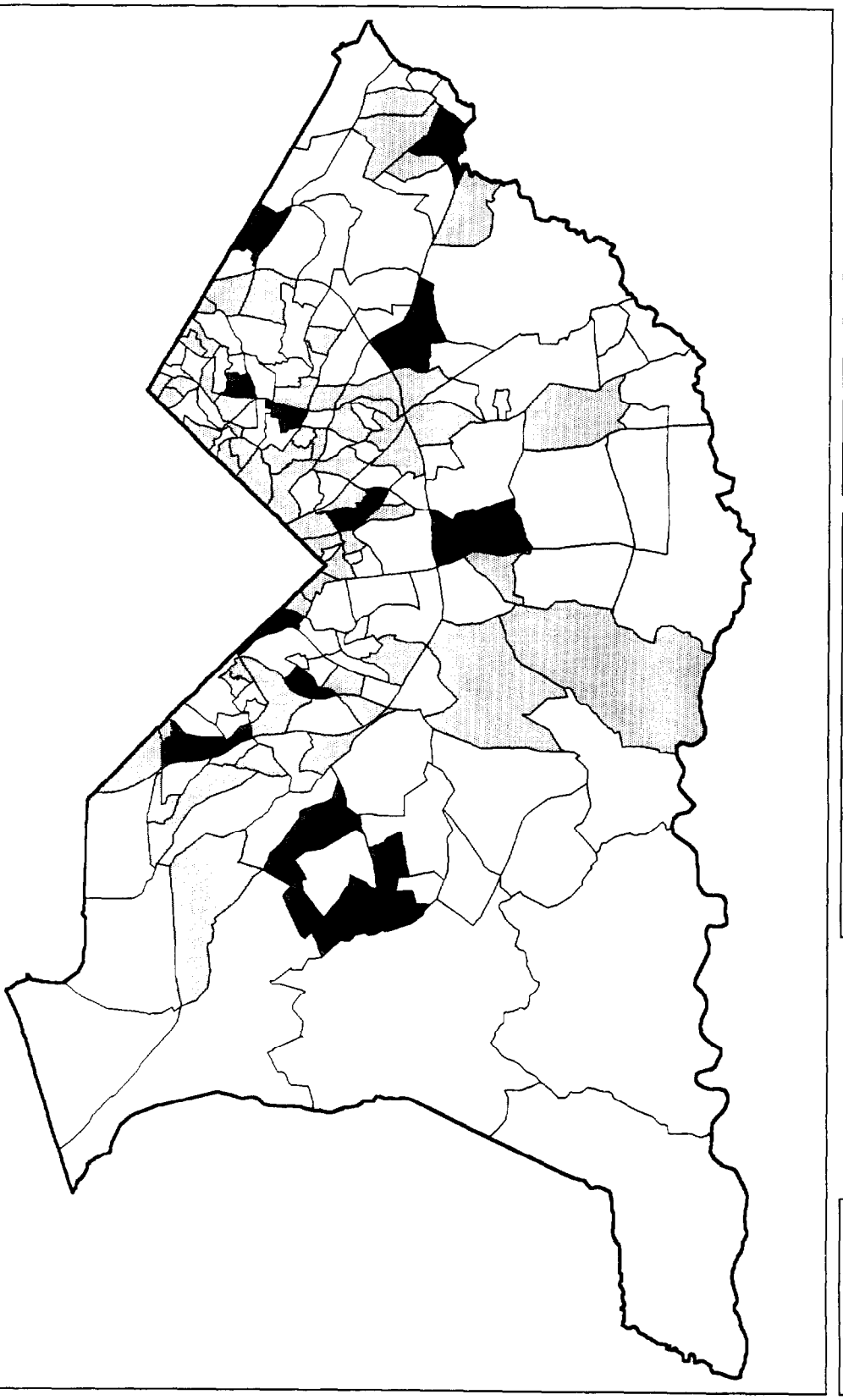
Figure 12 - Taxi Users



Legend:

Census Tract

N

Taxi Users

None

Between 1 and 20

More Than 20

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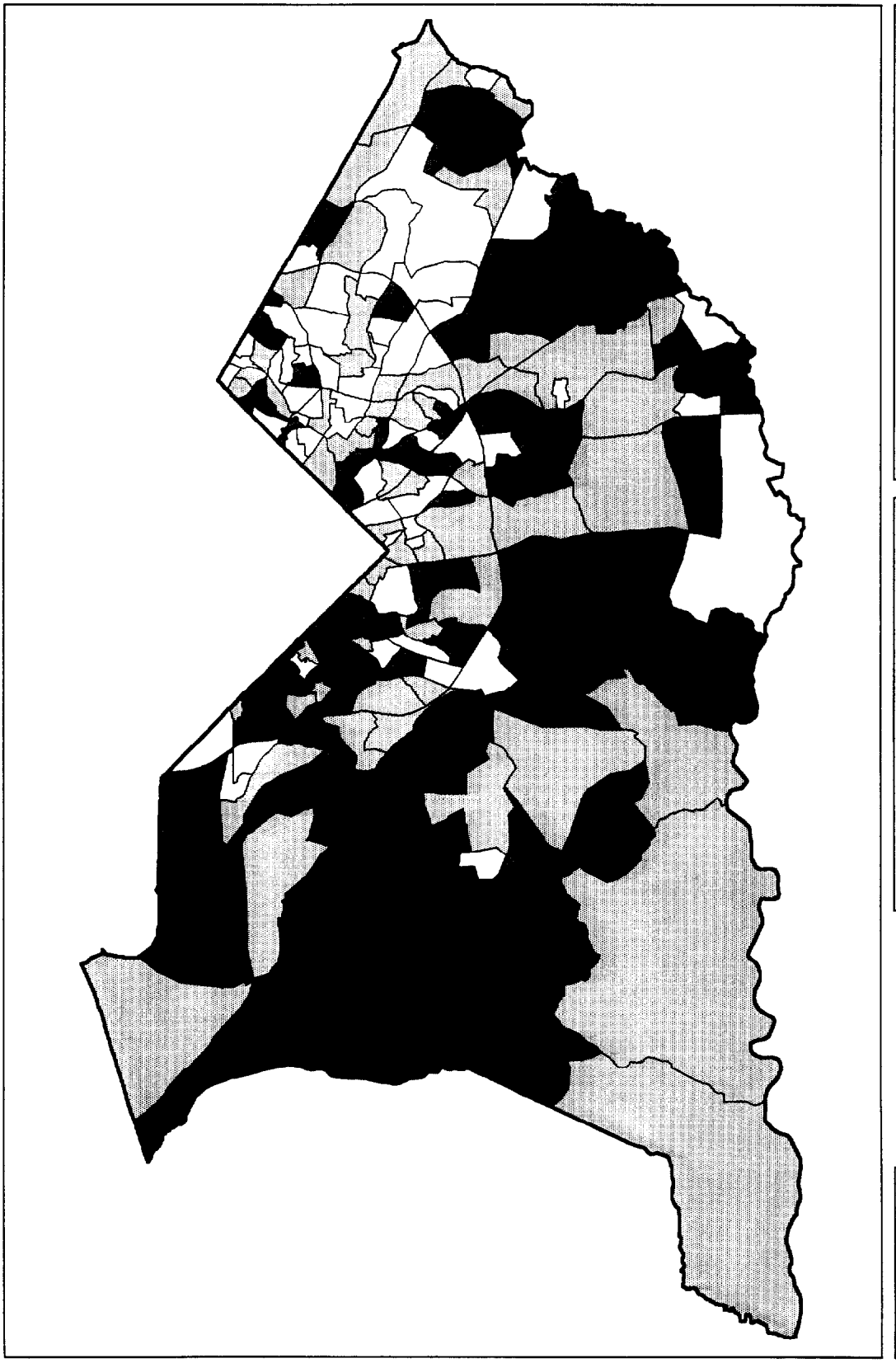
Figure 13 - Ranking of Census Tracts Based on Number of Persons Whose Journey to Work is Greater than 60 Minutes



Legend:

Census Tract

N

Ranking

Low

Medium

High

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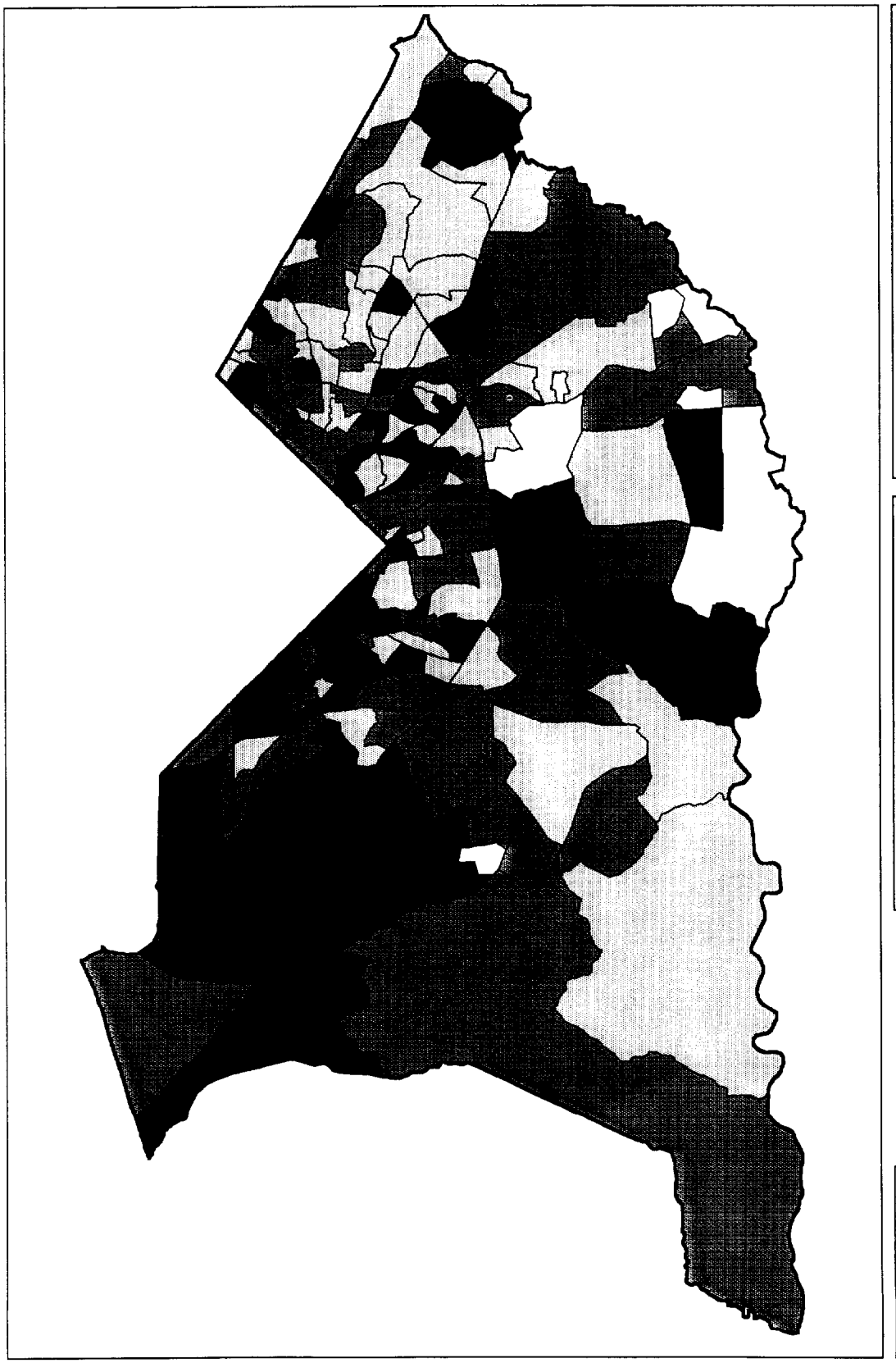
Figure 14 - Ranking of Census Tracts Based on Bus Users, Taxi Users, and Travel Time to Work



Legend:

Census Tract

N

Ranking

No Bus or Taxi Use

Low

Medium

High

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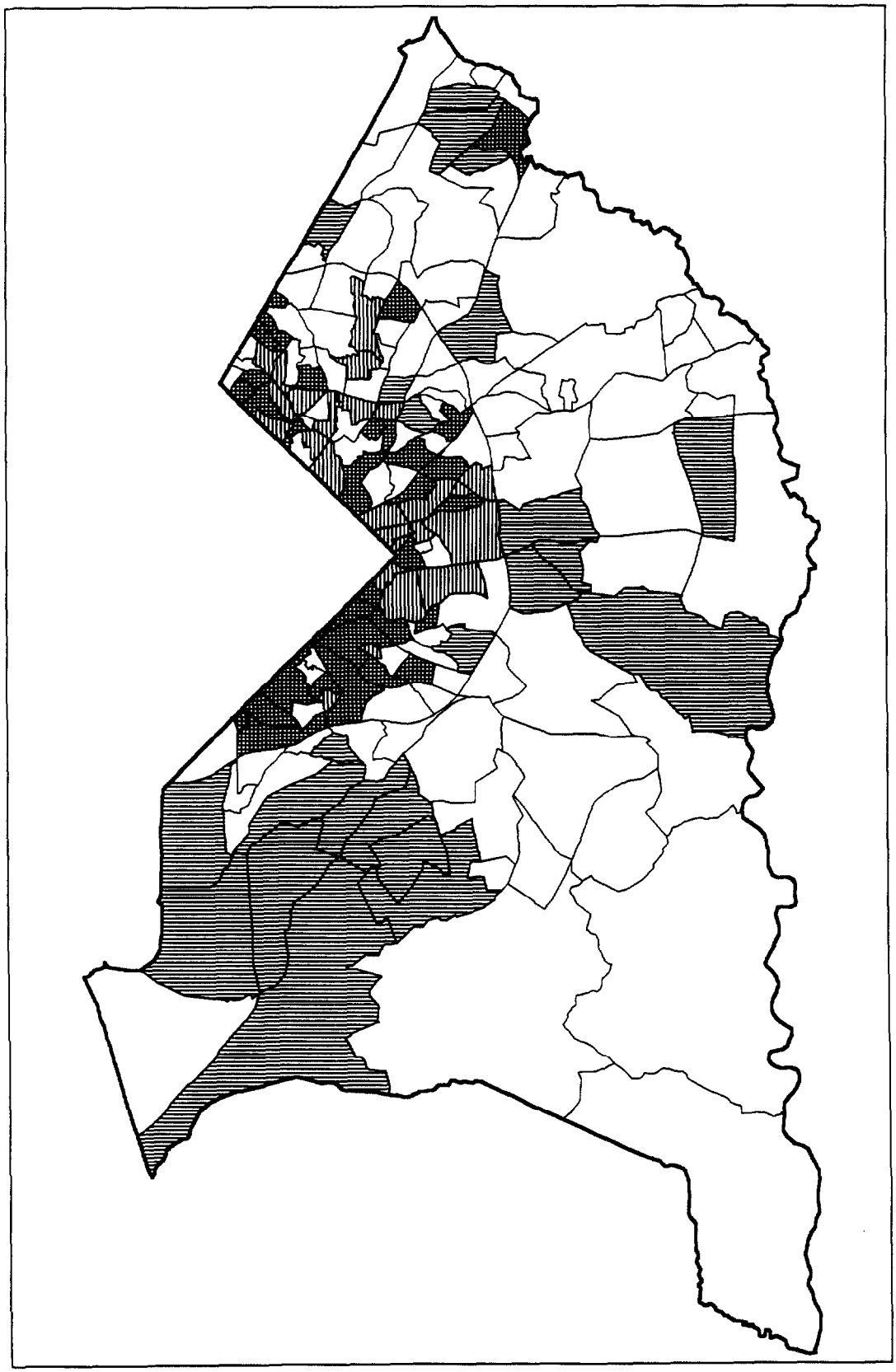
Figure 15 - High Need and High Potential Census Tracts



Legend:

Census Tract

N

Classification

High Need

High Potential

High Need & High Potential

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Table 2

LIST OF HIGH NEED AND HIGH POTENTIAL
CENSUS TRACTS
(SHADED AREAS OF FIGURE 15)

Census Tract	High Need	High Potential
1.04		o
2.02		o
2.04	o	o
2.07		o
5.06		o
6.01		o
12.01		o
12.02		o
12.03		o
12.04		o
13.01		o
13.03		o
13.04		o
14.01		o
14.03		o
16.00	o	o
17.01		o
17.03	o	o
17.04	o	o
18.01	o	
18.02	o	o
18.06	o	o
19.02	o	o
20.01	o	o
20.02	o	
21.05	o	o
22.03		o
24.01	o	o
24.03	o	o
24.04	o	o
25.00	o	o
26.00	o	o
27.00	o	
28.03	o	
28.04	o	
29.01	o	o
29.03	o	
30.01	o	

Table 2

LIST OF HIGH NEED AND HIGH POTENTIAL
CENSUS TRACTS
(SHADED AREAS OF FIGURE 15)

Census Tract	High Need	High Potential
30.02	o	
31.00	o	
32.00	o	o
33.00	o	
34.01	o	
34.02	o	o
35.05		o
35.06		o
35.07	o	
35.08	o	
35.09	o	o
35.11		o
36.09	o	o
38.03		o
39.00	o	o
40.01	o	o
41.02	o	o
43.00	o	o
44.00	o	
46.00	o	
48.00	o	o
49.00	o	
50.00	o	o
51.01	o	
52.01	o	o
52.02	o	o
55.00	o	
56.00	o	o
57.00	o	o
58.02	o	
59.01	o	o
59.05	o	o
60.00	o	
62.00	o	
65.01	o	
66.01	o	
66.02		o
67.03	o	o
67.05		o
70.00	o	
71.02	o	
74.06		o

2.5 Potential Transit Destinations

The first step in the identification of unserved potential destinations was to locate major destinations. These were then reviewed in light of current services to determine which destinations are not served. Included in the review are:

- major employers (200 or more employees),
- colleges/universities,
- hospitals,
- concentrations of office/commercial space, and
- shopping centers.

2.5.1 Major Employers

Using an inventory of major employers supplied by MNCPPC, regional employment clusters were identified within the County. Additionally, employment concentrations and density by Census Tract were identified. Regional employment clusters were identified by first mapping the locations of employers with more than 200 employees. Clusters of more than 1,000 employees within roughly a one mile radius were then identified and mapped. Secondly, the Census Tracts with the largest concentrations and density of employees at locations with 50 or more employees were determined. Figure 16 presents a ranking of Census Tracts indicating densities of employees. With the exception of areas along Branch Avenue outside the Beltway, especially beyond Woodyard Road (Southern Maryland Hospital), each employment cluster or concentration is at a minimum covered by peak hour service. Table A12 lists the total employment and employment density for each tract.

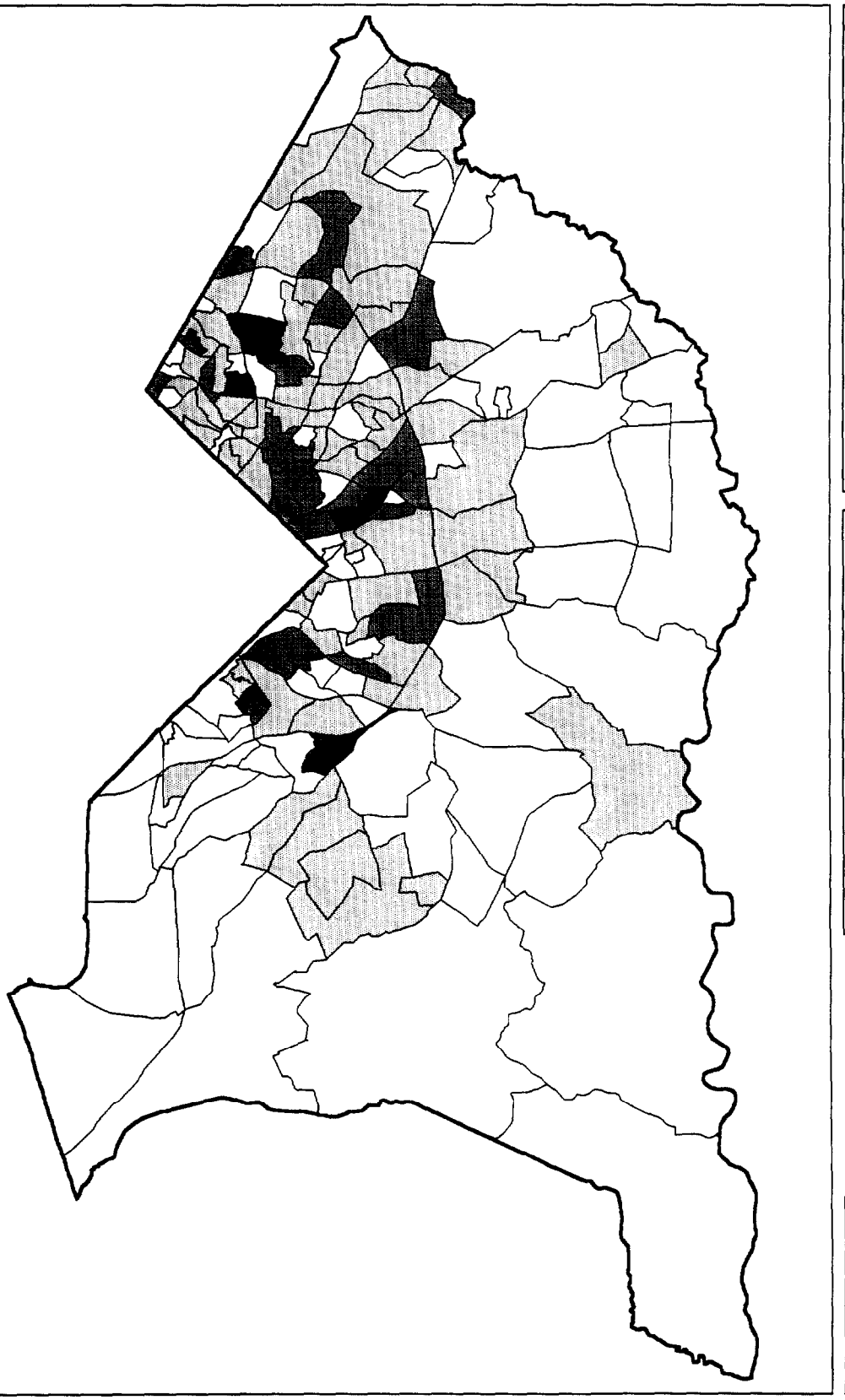
From the employment clusters identified in this process, a number of employment clusters were selected for further analysis in the subsequent steps of the study. Figure 17 presents a map showing the employment clusters recommended for further analysis. A list of possible clusters was developed by the consulting team, and then DPW&T and T&PFPD staff developed the list mapped in Figure 17. Three criteria were used to develop this list:

- Area traffic congestion on facilities supporting development in these clusters,
- Employee density within the clusters, and
- Parking demand in excess of available supply.

The list consists of the following employment clusters:

1. The Beltsville area,
2. The Hyattsville/Prince George's Plaza area,
3. The Washington Business Park/Hanson Palmer Business Park,
4. The Columbia Park Road Industrial Center,
5. The Hampton Business Park,
6. Southern Maryland Hospital/Clinton, and
7. Bowie State University.
8. The Inglewood Office Complex/USAir Arena,

Figure 16 - Employment Density



Legend:

Census Tract

N

Employment Density

Less than 200

200 to 1,499

1,500 to 4,000

More than 4,000

Units: Employees/Sq. Mile

Note: Employment density was calculated using only employment sites with more than 50 employees.

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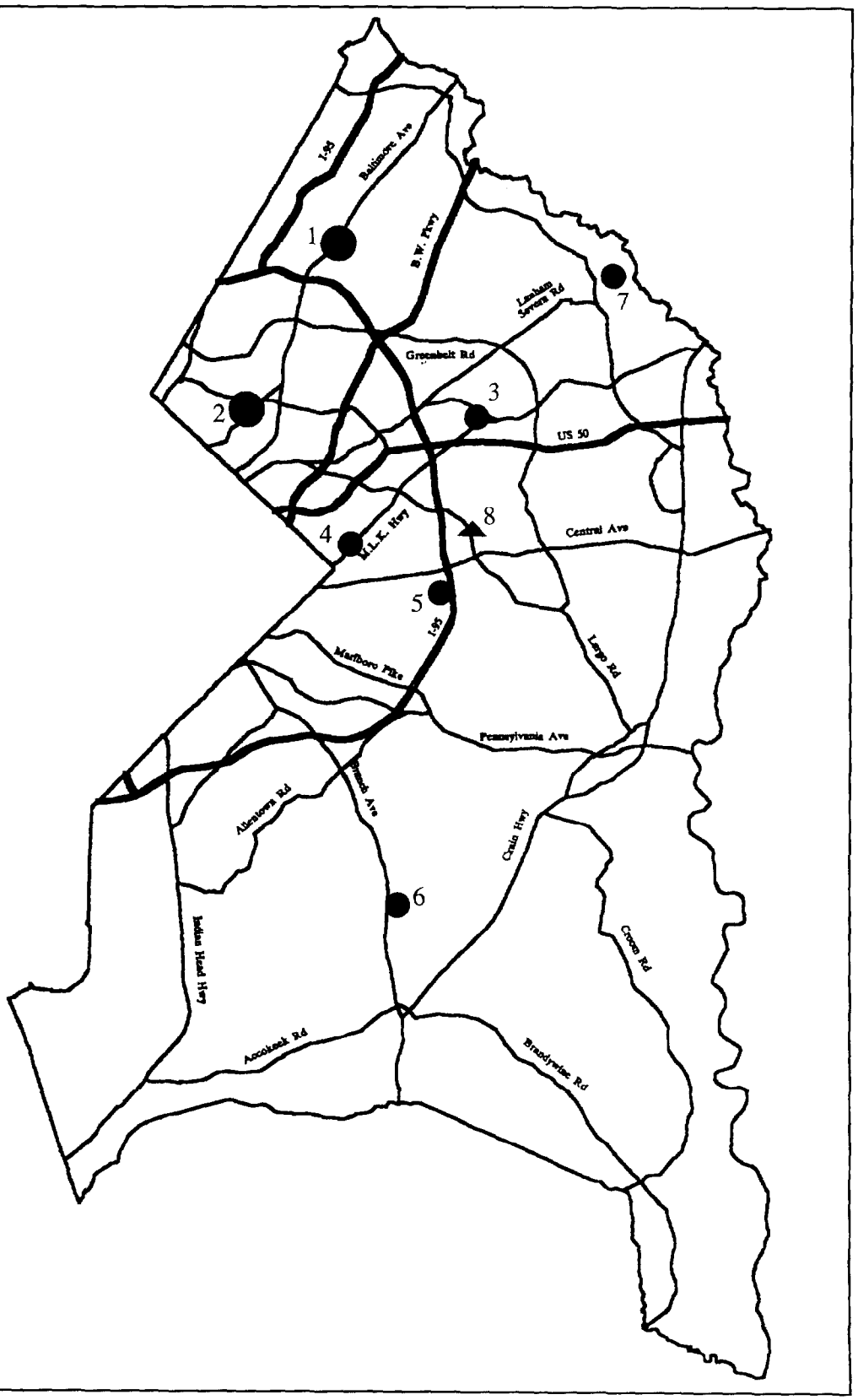
Figure 17 - Recommended Employment Clusters



Legend:

- Arterial
- Highway
- Employment Cluster
- Office Development Cluster

N

1 Beltsville

2 Hyattsville
Prince George's Plaza

3 Washington and Hanson Palmer Business Parks

4 Columbia Park Road Industrial Center

5 Hampton Business Park

6 Southern Maryland Hospital/Clinton

7 Bowie State University

8 Inglewood Office Complex
USAir Arena

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2.5.2 Shopping Center Locations

Most of the major shopping centers in the County and immediately adjacent areas are served by current transit services. Table 3 presents a list of the major shopping centers in the county, their location, and whether or not they are served by transit. The locations of the shopping centers are shown in Figure 18. Again, there are shopping centers in outlying areas that are not served.

2.5.3 Junior and Senior High Schools

Table 4 presents a listing of Junior (and Middle) and Senior High Schools in Prince George's County and whether or not they are served by transit, and Figure 19 shows the location of the schools in relation to current transit services. Most schools in the County are served by transit, with the majority of those that are not served located in the south central portion of the County. School students may be another transit market that could be addressed by new services, not only for students in after-school activities but for transportation to and from schools.

As shown in Figure 15, the Census Tracts that show concentrations of persons classified as having either high need or high potential can be found in different parts of the County. Most of the tracts that are both high need and have high bus, taxi, or long journey to work characteristics are found within the Beltway, scattered somewhat in the north County area, and clustered along the District line further south. There is one such tract in the Laurel area. There are a number of high need areas that are also high potential (in terms of high bus or taxi use and long journeys to work) -- these are inside the Beltway, scattered in an arc from just south of Central Avenue (Capitol Heights area) around to the west through the College Park and Hyattsville areas. The areas that were ranked with the highest level of potential, but not high in the needs ranking are found largely outside the Beltway, in Laurel, Calverton, Greenbelt, Bowie, Largo, Upper Marlboro, Clinton, and the Indian Head Highway corridor; though there are a few such tracts scattered inside the Beltway.

It should be noted that a number of the more rural areas, primarily in the southern and eastern parts of the County are not shaded, reflecting the fact that they did not score in the highest third on either the ranking of needs or potential. Several of these areas do show a medium level of need ranking considering only the population with high need characteristics. However, these areas already have available the Call A Bus and Senior Transportation Services demand-responsive service provided by the County, and the numbers of persons with high need characteristics are quite small. While it is entirely possible that a higher level of demand-responsive service might be desirable for these areas, they are unlikely to provide the concentrations of potential riders that even non-traditional services might require.
Comparison of Figure 15 with Figures 3 and 4 indicates that, generally, the current fixed-route transit services provided by WMATA, Laurel Connect-a-Ride, and THE BUS, provide coverage in the areas of high need or potential. The high numbers of persons with very long journey to work times and high bus or taxi use in these areas with transit coverage suggests that traditional transit may be limited in its ability to meet diverse trip needs, suggesting a role for non-traditional modes even in these areas that already have some traditional transit available.

Table 3: PRINCE GEORGE'S COUNTY SHOPPING MALLS AND CENTERS

Shopping Center	Address	City	Zip Code	Served By Transit
Adelphi Plaza	University Blvd.	Adelphi	20783	Yes
Allentown Outlet Mall	Allentown Road & Branch Avenue	Camp Springs	20746	Yes
Allentown Way Shopping Center	Allentown Way	Camp Springs	20748	Yes
Andrews Manor	Allentown Road	Camp Springs	20746	Peak Only
Beltway Plaza Mall	Greenbelt Road	Greenbelt	20770	Yes
Bowie Plaza	Laurel Bowie Road	Bowie	20715	Yes
Branchwood Shopping Center	Woodyard Road	Clinton	20735	Peak Only
Capital Plaza Mall	6200 Annapolis Road	Landover Hills	20784	Yes
Cipriano Springs Shopping Center	Cipriano Road	Lanham	20706	Yes
Clinton Park Shopping Center	Branch Avenue & Woodyard Road	Clinton	20735	Peak Only
Clinton Plaza	Woodyard Road	Clinton	20735	Peak Only
Clinton Shopping Center	Stuart Lane	Clinton	20735	Peak Only
College Park Shopping Center	U.S. Route #1	College Park	20740	Yes
Defense Shopping Center	Annapolis Road	New Carrollton	20706	Yes
Dodge Park	Landover Road	Landover	20785	Yes
Eastgate Shopping Center	Glen Dale Blvd.	Glendale	20769	Peak Only
Eastover Shopping Center	Sachem Drive	Forest Heights	20745	Yes
Enterprise	Annapolis Road	Lanham	20706	Yes
Forestville Plaza	Forestville Road	Forestville	20747	Yes
Forest Village Park Mall	Pennsylvania Avenue	Forestville	20747	Yes
Fort Washington Forest Shopping Center	Old Fort Wash. Lane & Indian Head Hwy.	Fort Washington	20744	Peak Only
Fort Washington Shopping Center	Fort Wash. Road & Indian Head Hwy.	Fort Washington	20744	Peak Only
Freestate Shopping Center	15528 Annapolis Road	Bowie	20715	Yes
Gorman Shopping Center	Gorman Avenue & 2nd Street	Laurel	20707	Yes
Great Eastern Plaza	Marlboro Pike	Suitland	20747	Yes

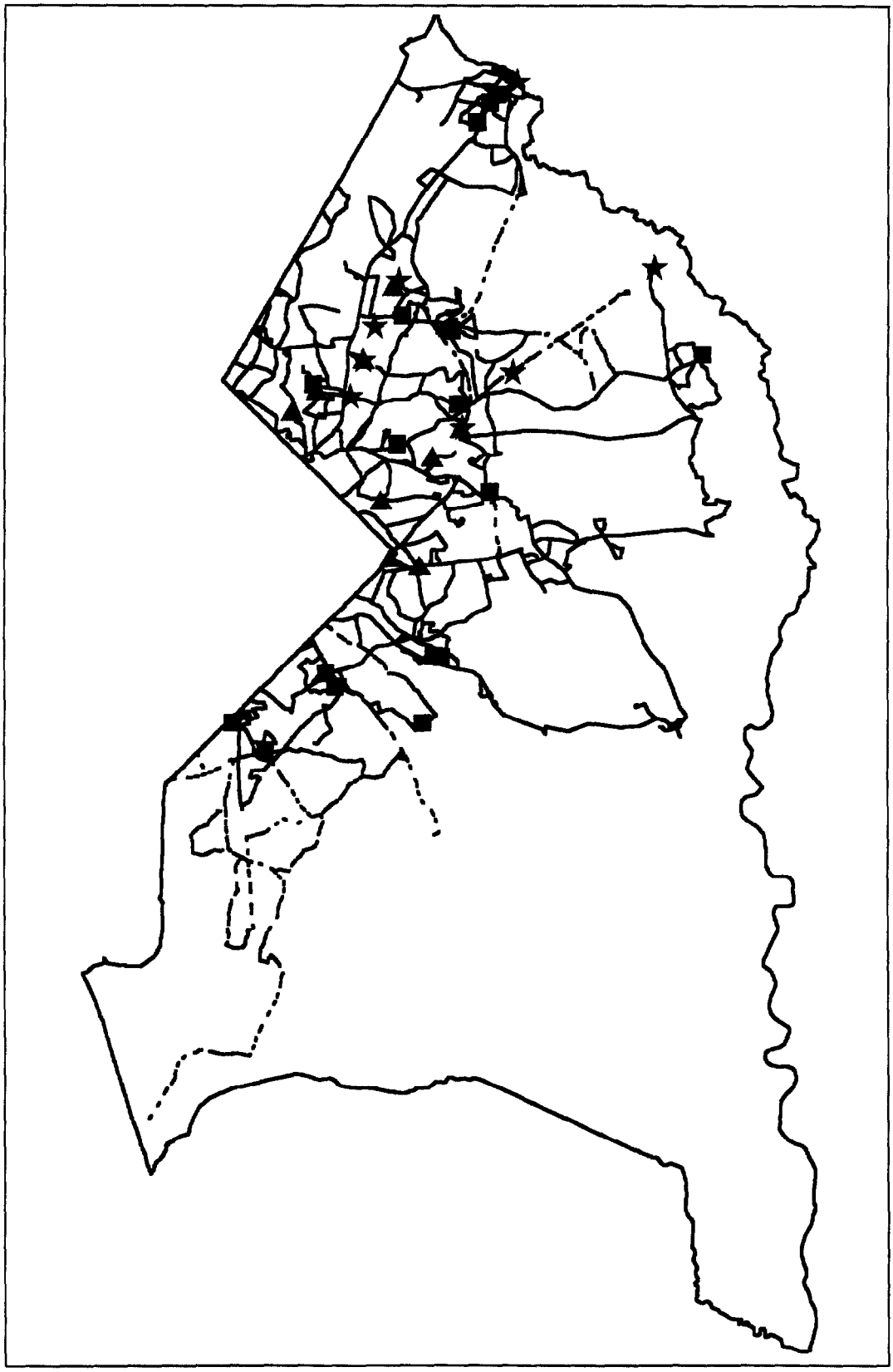
Table 3: PRINCE GEORGE'S COUNTY SHOPPING MALLS AND CENTERS

Shopping Center	Address	City	Zip Code	Served By Transit
Greenway Center	Greenbelt Road	Greenbelt	20770	Yes
Hampton Mall	Central Avenue	Landover	20743	Yes
Hechinger Mall	Riggs Road & University Blvd.	Langley Park	20783	Yes
Hilltop Plaza	Annapolis Road & Race Track Road	Bowie	20715	No
Iverson Mall	3737 Branch Avenue	Hillcrest Heights	20748	Yes
Kettering Shopping Center	Central Avenue	Largo	20772	Yes
Landover Mall	Landover Road	Landover	20785	Yes
Langley Park Shopping Center	8020 New Hampshire Avenue	Langley Park	20783	Yes
Lanham Shopping Center	Lanham–Severn Road	Lanham	20706	Yes
Laurel Center	14828 Baltimore–Washington Blvd.	Laurel	20707	Yes
Laurel Lakes Centre	14390 Baltimore Avenue	Laurel	20707	Yes
Livingston Square Shopping Center	Livingston Road & Old Fort Road	Fort Washington	20744	Peak Only
Marlboro Square Shopping Center	Route #301	Upper Marlboro	20772	No
Marlow Heights	3901–A Branch Avenue	Marlow Heights	20748	Yes
Marlton Plaza	Route #301	Upper Marlboro	20772	No
New Carrollton Shopping Center	Annapolis Road & Riverdale Road	New Carrollton	20784	Yes
New Carrollton Mall	Riverdale Road	New Carrollton	20784	Yes
New Hampshire Center	New Hampshire Ave. & Ethan Allen Ave.	Takoma Park	20912	Yes
Old Forte Vill Shopping Center	Livingston Road	Fort Washington	20744	Peak Only
Osborne Shopping Center	Route #301 & S. Osborne Road	Upper Marlboro	20772	No
Oxon Hill Plaza	Oxon Hill Rd. & Livingston Road	Oxon Hill	20745	Yes
Padgetts Corner Shopping Center	Allentown Rd. & Temple Hills Rd.	Temple Hills	20748	Yes
Parkland Shopping Center	Marlboro Pike	Suitland	20747	Yes
Penn–Mar	Pennsylvania Avenue	Forestville	20747	Yes
Plaza 30 Shopping Center	Annapolis Road	New Carrollton	20784	Yes

Table 3: PRINCE GEORGE'S COUNTY SHOPPING MALLS AND CENTERS

Shopping Center	Address	City	Zip Code	Served By Transit
Pointer Ridge Plaza	Route #301 & Pointer Ridge Drive	Bowie	20716	No
Potomac Shopping Center	Livingston Road	Fort Washington	20744	Peak Only
Prince George's Plaza	3500 East West Highway	Hyattsville	20782	Yes
Riggs Plaza	Queens Chapel & Eastern Ave.	Mount Rainier	20712	Yes
Riggs Plaza Shopping Center	Riggs Road & Chillum Road	Chillum	20782	Yes
Riggs Sargent	Riggs Road & Sargent Road	Chillum	20782	Yes
Riverdale Plaza Shopping Center	Kenilworth Ave. & East West Highway	Riverdale	20737	Yes
Rosecroft Shopping Center	Brinkley Road	Temple Hills	20744	Yes
Seabrook Shopping Center	Lanham Severn Road	Seabrook	20706	Peak Only
Silver Hill Plaza	Silver Hill Road & Marlboro Pike	Suitland	20747	Yes
Southern Avenue Shopping Center	Southview Drive	Forest Heights	20745	Yes
The Market Place	Annapolis Road	Bowie	20715	Yes
Towne Center Shopping Center	Laurel Bowie Road	Laurel	20708	Yes
Watkins Park Plaza	Central Avenue	Kettering	20772	Yes
West Lanham Shopping Center	Annapolis Road	West Lanham Hills	20784	Yes

Figure 18 - Major Shopping Centers



Legend:

- Shopping Center
- Base Bus Route
- Peak Bus Route
- Metro Station
- MARC Station

N

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Table 4: PRINCE GEORGE'S COUNTY MIDDLE & HIGH SCHOOLS

School	Address	City	Zip Code	Served By Transit
Andrew Jackson Middle School	3500 Regency Parkway	Suitland	20747	Yes
Benjamin Stoddert Middle School	2501 Olson Street	Temple Hills	20748	Yes
Benjamin Tasker Middle School	4901 Collington Road	Bowie	20715	Yes
Bishop McNamara High School	6800 Marlboro Pike	Forestville	20747	Yes
Bladensburg High School	5610 Tilden Road	Bladensburg	20710	Yes
Bowie High School	15200 Annapolis Road	Bowie	20715	Yes
Central High School	200 Cabin Branch Road	Capitol Height:	20743	Yes
Charles Carroll Middle School	6130 Lamont Drive	New Carrolltor	20784	Yes
Concordia Lutheran School	3705 Longfellow Street	Hyattsville	20782	Yes
Crossland High School	6901 Temple Hills Road	Temple Hills	20744	Yes
DeMatha Catholic High School	4313 Madison Street	Hyattsville	20781	Yes
Duval High School	9880 Good Luck Road	Lanham	20706	Yes
Dwight D. Eisenhower Middle School	13725 Briarwood Drive	Laurel	20708	Yes
Eleanor Roosevelt High School	7601 Hanover Parkway	Greenbelt	20770	Yes
Elizabeth Seaton High School	5715 Emerson Street	Bladensburg	20710	Yes
Eugene Burroughs Middle School	14400 Berry Road	Accokeek	20607	Peak Only
Fairmont Heights High School	5601 North Engelwood Drive	Fairmont Heigl	20743	Yes
Forestville High School	7001 Beltz Drive	Forestville	20747	No
Francis Scott Key Middle School	2301 Scott Key Drive	District Height:	20747	Yes
Friendly High School	10000 Allentown Road	Fort Washingtc	20744	Peak Only
G. Gardner Shugart	200 Callaway Street	Temple Hills	20748	Yes
Greenbelt Middle School	8950 Edmonston Road	Greenbelt	20770	Yes
Gwynn Park High School	13800 Brandywine Road	Brandywine	20613	No
Gwynn Park Middle School	8000 Dyson Road	Brandywine	20613	No
High Point High School	3601 Powder Mill Road	Beltsville	20705	Yes
Hyattsville Middle School	6001 42nd Avenue	Hyattsville	20781	Yes

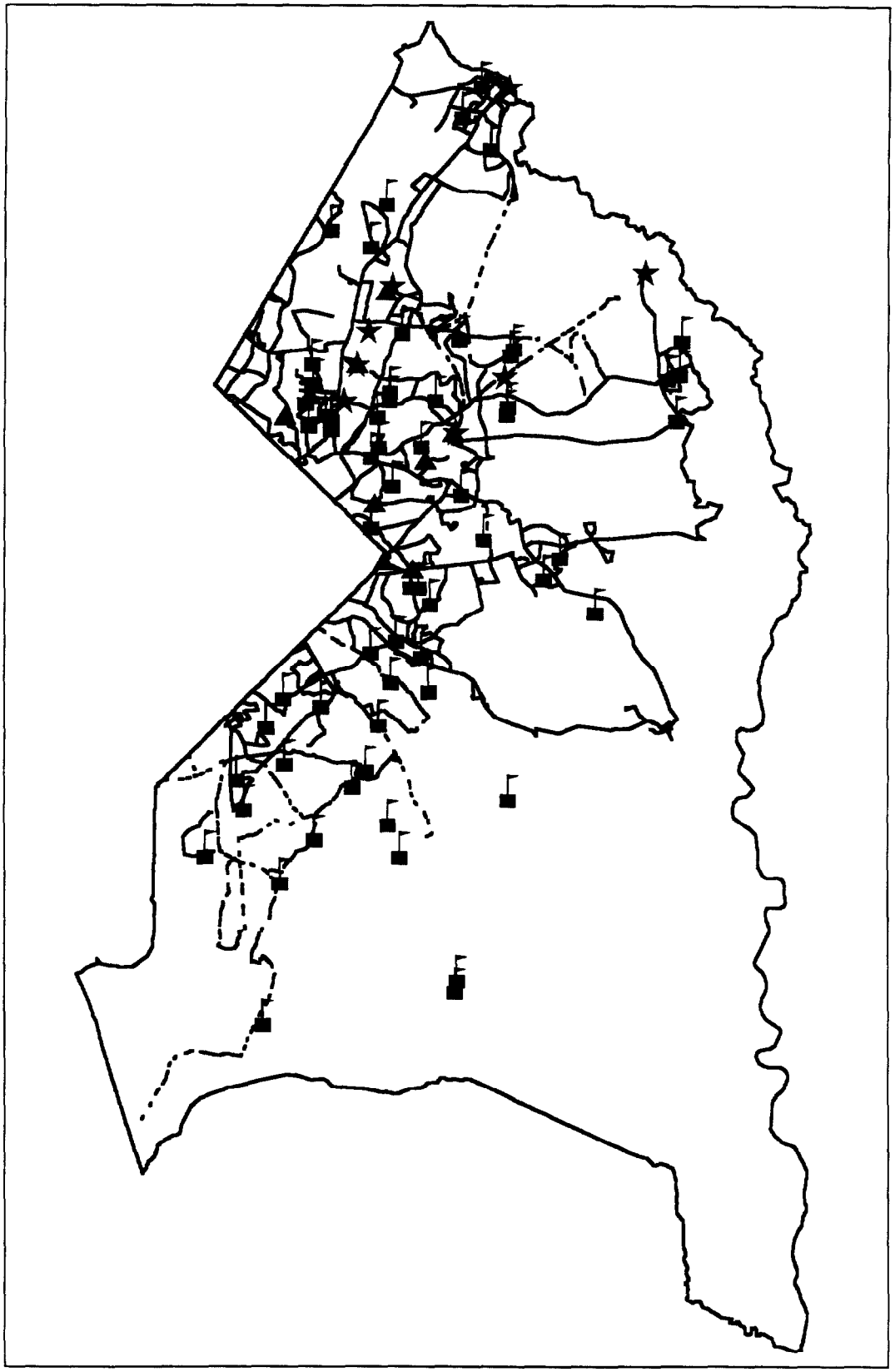
Table 4: PRINCE GEORGE'S COUNTY MIDDLE & HIGH SCHOOLS

School	Address	City	Zip Code	Served By Transit
James Madison Middle School	7300 Woodyard Road	Upper Marlbor	20772	No
Kenmoor Middle School	2500 Kenmoor Drive	Landover	20785	Yes
Kettering Middle School	65 Herrington Drive	Upper Marlbor	20772	Yes
Largo High School	505 Largo Road	Upper Marlbor	20772	Yes
Laurel High School	800 Cherry Lane	Laurel	20707	Yes
Lord Baltimore Middle School	8700 Allentown Road	Fort Washingtc	20744	Peak Only
Martin Luther King Middle School	4545 Amendale Road	Beltsville	20705	No
Nicholas Orem Middle School	6100 Editors Park Drive	Hyattsville	20782	Yes
Northwestern High School	7000 Adelphi Road	Hyattsville	20782	Yes
Oxon Hill High School	6701 Leyte Drive	Fort Washingtc	20745	Yes
Oxon Hill Middle School	9570 Fort Foote Road	Fort Washingtc	20744	Peak Only
Pallotti High School	8th & Montgomery Streets	Laurel	20707	Yes
Parkdale High School	6001 Good Luck Road	Riverdale	20737	Yes
Potomac High School	5211 Boydell Avenue	Oxon Hill	20745	Yes
Riverdale Baptist	1133 Largo Road	Upper Marlbor	20772	Yes
Robert Goddard Middle School	9850 Good Luck Road	Seabrook	20706	Yes
Roger B. Taney Middle School	4909 Brinkley Road	Temple Hills	20748	Yes
St. Ambrose School	6310 Jason	Cheverly	20785	Yes
St. Bernards	5809 Riverdale Road	Riverdale	20737	Yes
St. Columbia	7800 Livingston Road	Oxon Hill	20744	Yes
St. Ignatius	2317 Brinkley Road	Oxon Hill	20744	Yes
St. Jeromes	5207 42nd Place	Hyattsville	20781	Yes
St. Josephs	11011 Montgomery Street	Beltsville	20705	Yes
St. Margarets	410 Addison Road South	Seat Pleasant	20743	Yes
St. Marks	7501 Adelphi Road	Hyattsville	20783	Yes
St. Marys	7207 Annapolis Road	Landover Hills	20784	Yes

Table 4: PRINCE GEORGE'S COUNTY MIDDLE & HIGH SCHOOLS

School	Address	City	Zip Code	Served By Transit
St. Mathias	9473 Annapolis Road	Lanham	20706	Yes
St. Phillips	5414 Henderson Way	Camp Springs	20746	Peak Only
St. Pius X	3300 Mary Lane	Bowie	20715	Yes
Samuel Ogle Middle School	4111 Chelmont Lane	Bowie	20715	No
Stephen Decatur Middle School	8200 Pinewood Drive	Clinton	20735	No
Suitland High School	5200 Silver Hill Road	Suitland	20747	Yes
Surratsville High School	6101 Garden Drive	Clinton	20735	No
Thomas G. Pullen Middle School	700 Brightseat Road	Landover	20785	Peak Only
Thomas Johnson Middle School	5401 Barker Place	Lanham	20706	Yes
Walker Mill Middle School	800 Karen Boulevard	Capitol Height:	20743	Yes
William Wirt Middle School	62nd Place & Tuckerman	Riverdale	20737	No

Figure 19 - Middle and High Schools



Legend:

- School
- Base Bus Route
- Peak Bus Route
- Metro Station
- MARC Station

N

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For that reason, all of the areas shaded in Figure 15 were carried into the next task as potential residential service origin areas. In the next steps of the analysis, the Project Team investigated the linkage between these residential concentrations and the employment clusters identified as the destinations of these work trips.

2.5.4 Identification of Employment Concentrations

In addition to identifying residential concentrations that are potential origin areas for trips on non-traditional transit modes, employment concentrations were defined as potential destinations for such services. Figure 17 presented a map showing the employment clusters recommended for further analysis.

These employment areas were carried forward into the next stages of the project for further analysis of potential for non-traditional transit services to meet employee trip needs. Other employment clusters not included in this list may be addressed in the County's Transit Development Plan which will deal with fixed-route transit solutions. This list of employment clusters represents a number of diverse types of land use, including industrial/warehouse areas, office parks, a hospital, and a university. Also, the existing level and type of fixed-route transit services varies considerably from nearby Metrorail service, to MARC commuter rail service, limited fixed-route bus services, and in some cases no transit service. This diversity of employment centers allowed for the development of a variety of non-traditional transit service solutions for the target clusters.

3.0 NON-TRADITIONAL TRANSIT TRIP GENERATION AND DISTRIBUTION

This Chapter summarizes the findings of Tasks 2 and 3 of the Prince George's County Mobility Match Study. It presents the results of the estimation of the number of non-traditional transit trips that could potentially be generated by the selected employment concentrations and residential areas. It also shows where there are residential concentrations of employees associated with each of the selected employment clusters.

3.1 Purpose and Methodology of Tasks 2 and 3

The purpose of Task 2 was to identify the number of trips attracted to each of the key employment concentrations and the number of trips generated by the candidate residential areas identified in Task 1. The purpose of Task 3 was to calculate the number of trips identified in Task 2 that are likely to use non-traditional transit services. This section describes the overall methodology for Tasks 2 and 3. More detailed description of the methodology is provided in the following sections of this Chapter.

As stated above, the employment and residential areas to be used as the focus of this study were identified in Task 1. In the first step of Task 2, The Project Team estimated employment at each of the employment clusters using data provided by MNCPPC and Prince George's County, and verified the accuracy of the data received through field investigations and surveys of major employers. These employment figures were used to estimate the number of daily and peak period work trips generated by the major employers in the selected clusters.

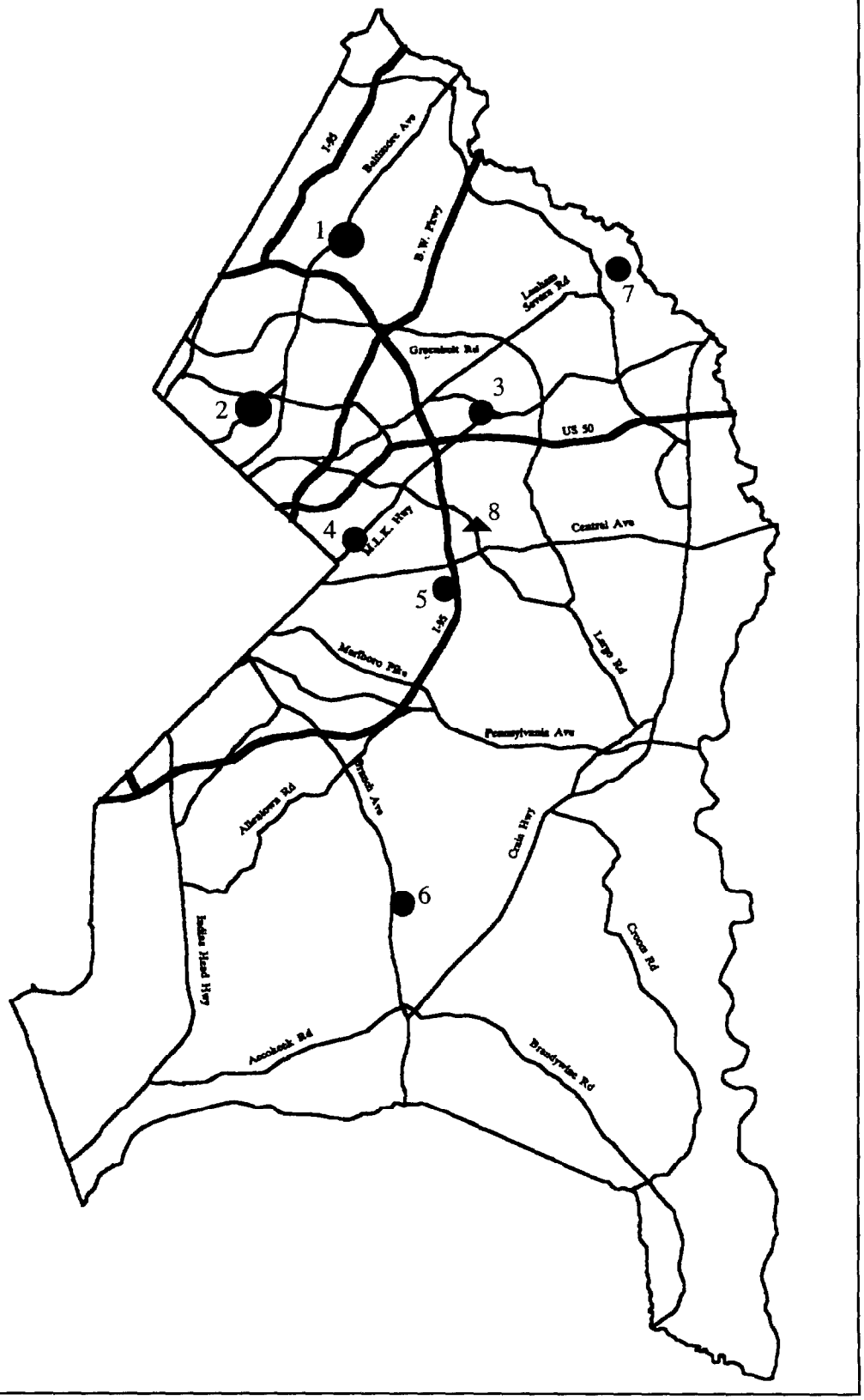
The next step in the development of Tasks 2 and 3 was to determine the place of residence of employees working for employers in the key employment clusters. This step was conducted using the information on zip code place of residence taken from employer surveys distributed throughout the County. The Project Team selected the residential areas that have large concentrations of employees, associated with the selected employment clusters, and that were also classified as high need and/or high potential in Task 1 to use as the base for estimating potential non-traditional transit usage. The potential of each residential area was calculated on the basis of the estimated number of trips expected to travel from key residential areas to the selected employment clusters.

3.2 Trip Generation

The evaluation of non-traditional trip generation was focused on the employment clusters and residential areas selected in Task One as having high need/high potential. The selection of focus areas was described in Chapter 2. Figures 20 and 21 show that the selected key employment clusters and residential areas are widely dispersed throughout the County insuring that non-traditional transit options are evaluated for a wide diversity of areas. Moreover, this diversity warrants the need for the investigation of a wide variety of non-traditional transit services.

The number of employees and population were the two factors utilized to estimate trip generation for each of the key employment and residential clusters. This chapter describes the methodology used to calculate employment and population and presents the findings of this task.

Figure 20 - Recommended Employment Clusters



Legend:

- Arterial
- Highway
- Employment Cluster
- Office Development Cluster

N

1 Beltsville

2 Hyattsville
Prince George's Plaza

3 Washington and Hanson
Palmer Business Parks

4 Columbia Park Road
Industrial Center

5 Hampton Business Park

6 Southern Maryland
Hospital/Clinton

7 Bowie State University

8 Inglewood Office Complex
USAir Arena

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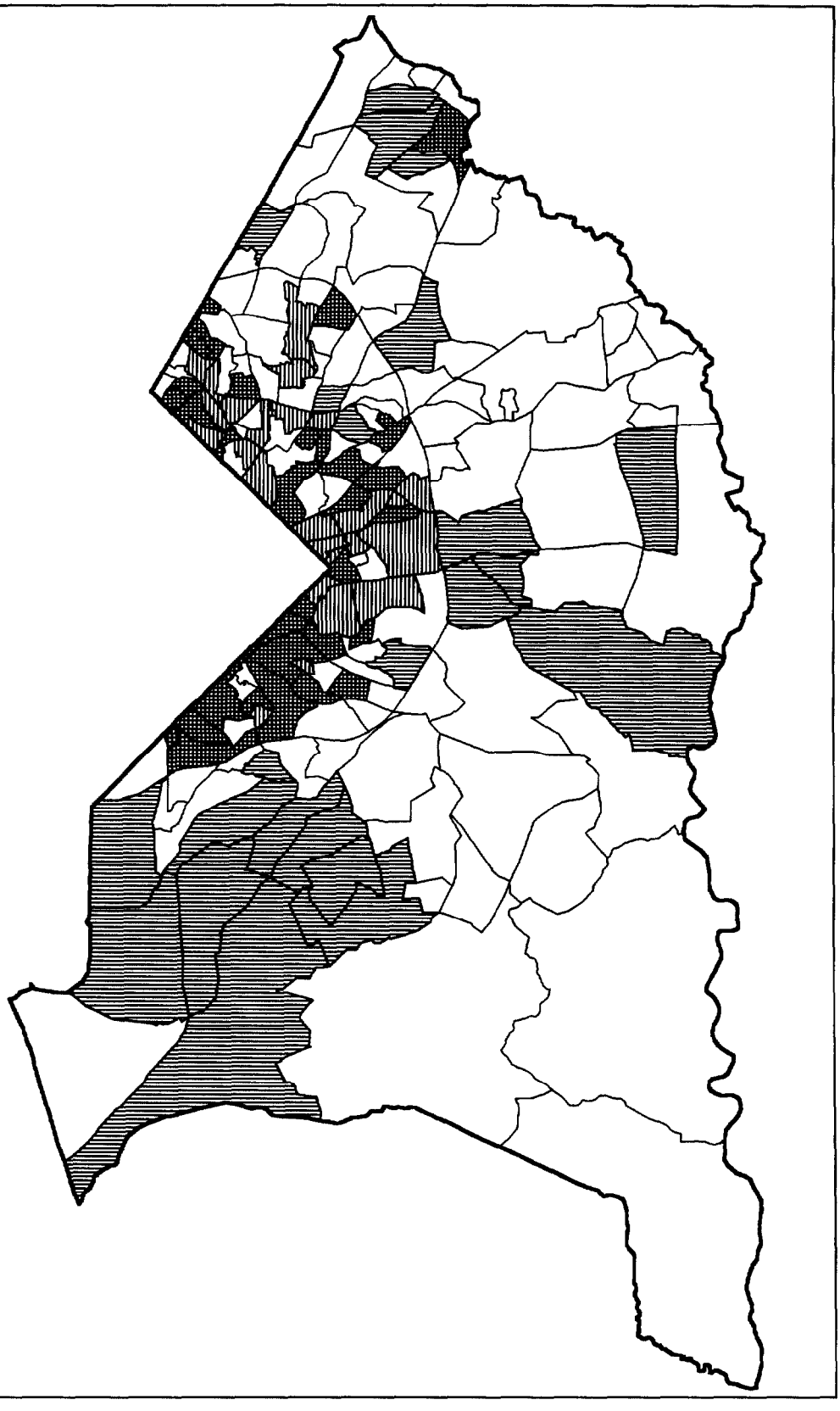
Figure 21 - High Need and High Potential Census Tracts



Legend:

Census Tract

N

Classification

- High Need
- High Potential
- High Need & High Potential

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3.2.1 Employment at Selected Employment Clusters

The assessment of potential trip generation for the employment clusters requires the estimation of employment for each of the clusters. It should be noted, though, that for this study the estimate of employment for a cluster includes only **major** employers, those with 50 or more employees, and employers in **major** buildings. The estimate does not intend to represent the **total** employment in the cluster. Therefore, employment data for major employers and office space in major buildings comprise the two most important elements of this procedure.

The sections that follow explain the methodology used to estimate employment at key employment clusters and present the resulting employment figures for each of these clusters.

3.2.1.1 Employment Estimation Methodology

The first step in the estimation of employment was to conduct a field investigation to become more familiar with the employment clusters. During the field visit, major employers and major office buildings were identified. The number of employers in each building and each building's general vacancy status were also recorded.

A list of major employers with 50 or more employees, provided by Prince George's County, was then used to obtain a roster of major employers in each cluster. This employment data was then updated based upon information from the employer surveys, as well as telephone conversations with other major employers.

Several sources, including the 1991 Priority Projects Spring Bus Tour[1], the 1991 Blacks Listing Guide[2], Selected Statistics for Prince George's County[3], and the field investigation were then used to compile total and vacant square footage of each major building in the clusters. Next, using employee densities for various types of building uses from the 1991 ITE Trip Generation Manual[4], the number of employees for each major building (accounting for vacancy rates) was estimated. These estimates were then refined based upon the information regarding the employers with 50 or more employees. For example, if the employment for a major building was estimated to be 1,000, but data for the two employers located in the building was given to be 850, then the latter number was used. The number of employees (calculated/reported) were then summed to obtain the total employment in major buildings. The remainder of major employers not located in major buildings in the cluster were then added to this figure to obtain a total employment figure for the cluster.

In order to examine the reasonableness of the employment estimates, Round 4.1 Cooperative Round Forecast, 1990 and 1995 employment data from Prince George's County at the Policy

---

[1] Prince George's County Economic Development Corporation, *Prince George's County Priority Projects Spring Bus Tour*, 1991.

[2] Black's Guide, *Prince George's 1991*, 1991.

[3] Prince George's County Economic Development Corporation, *Selected Statistics for Prince George's County Maryland*, 1993.

[4] Institute of Transportation Engineers, *Trip Generation*, 1991.

Analysis Zone (PAZ) level for each cluster was compiled[1]. In some instances, because the cluster boundary did not match the PAZ boundaries, a percentage of the PAZ employment was used. The Project Team's estimated figure was expected to be lower than the PAZ figure, as the estimated figure attempts to quantify employment for **major** employers and in **major** buildings, whereas the PAZ number is an estimate of **total** employment.

3.2.1.2 Estimated Employment

The results of the employment estimation analyses are presented in Table 5. The majority of the employment estimates for the clusters appear to correlate well with those from the PAZ analysis. The only employment estimate that is substantially higher than the PAZ figures is the Inglewood Office Complex/USAir Arena. This imbalance can be explained by the fact that this area has recently experienced significant employment growth. Because of their overall reasonableness, the estimated numbers were used throughout the remainder of the study.

Table 5
Estimated and PAZ Cluster Employment

Cluster	Estimate	PAZ 1990	PAZ 1995
Beltsville	14,699	20,316	21,102
Hyattsville	7,319	10,047	9,923
Washington and Hanson Palmer Business Parks	6,082	4,751	5,203
Columbia Park Road Business Center	6,354	7,510	7,672
Hampton Business Park	6,938	8,651	8,865
Southern Maryland Hospital	1,561	1,437	1,529
Bowie State University	369	332	333
Inglewood Office Complex	5,228	1,596	2,311
TOTAL	48,550	54,640	56,938

3.2.2 Number of Work Trips to the Employment Clusters

For the purpose of estimating demand for work trip non-traditional transit, the Project Team estimated daily and peak period work trips for each of the employment clusters.

[1] At the time this study was conducted, Round 401 was the most recently adopted official forecast by the Metropolitan Washington Council of Governments.

3.2.2.1 Daily Work Trips

The Project Team assumed that the total number of daily trips to/from the clusters from/to the place of residence is equivalent to twice the total number of employees working in each employment concentration. Table 6 summarizes the estimated total number of daily work trips for each of the selected employment concentrations.

Table 6
Estimated Number of Daily Work Trips

Cluster	Daily Trips
Beltsville	29,398
Hyattsville	14,638
Washington and Hanson Palmer Business Parks	12,164
Columbia Park Road Business Center	12,708
Hampton Business Park	13,876
Southern Maryland Hospital	3,122
Bowie State University	738
Inglewood Office Complex	10,456
TOTAL	97,044

3.2.2.2 Peak Period Work Trips

The computed number of daily "home based-work" trips was used in conjunction with the survey information on employment shifts to estimate peak period trip generation. It should be noted that the employer surveys represent only a sample of all of the employers in each cluster. Also, a large proportion of the employers that responded to the survey failed to provide detailed information on work shifts. Therefore, the Project Team reviewed the complete list of major employers for each cluster to identify companies that may operate shifts that start and end outside of the AM and PM peak windows and made assumptions, based on professional judgement, about work shifts for the employers for which the data was unavailable[1]. Table 7 summarizes the computed number of work trips that are anticipated to occur during the morning peak period (6:00 AM - 9:00 AM) and afternoon peak period (3:00 PM - 6:00 PM).

[1] Approximately 30 major employers that did not initially respond to the survey were contacted by telephone to get information on the hours of operation and principal work shifts. Most of these employers were contacted on multiple occasions. Some provided the information on work hours over the telephone. Even though 18 of these employers indicated that they would complete the survey form, only 11 returned completed survey forms to the Project Team.

Table 7
Estimated Number of Peak Period Work Trips

Cluster	AM Peak Work Trips
Beltsville	12,729
Hyattsville	5,964
Washington and Hanson Palmer Business Parks	5,470
Columbia Park Road Business Center	4,330
Hampton Business Park	4,837
Southern Maryland Hospital	983
Bowie State University	369
Inglewood Office Complex	4,649
TOTAL	39,331

3.2.3 Residential Clusters

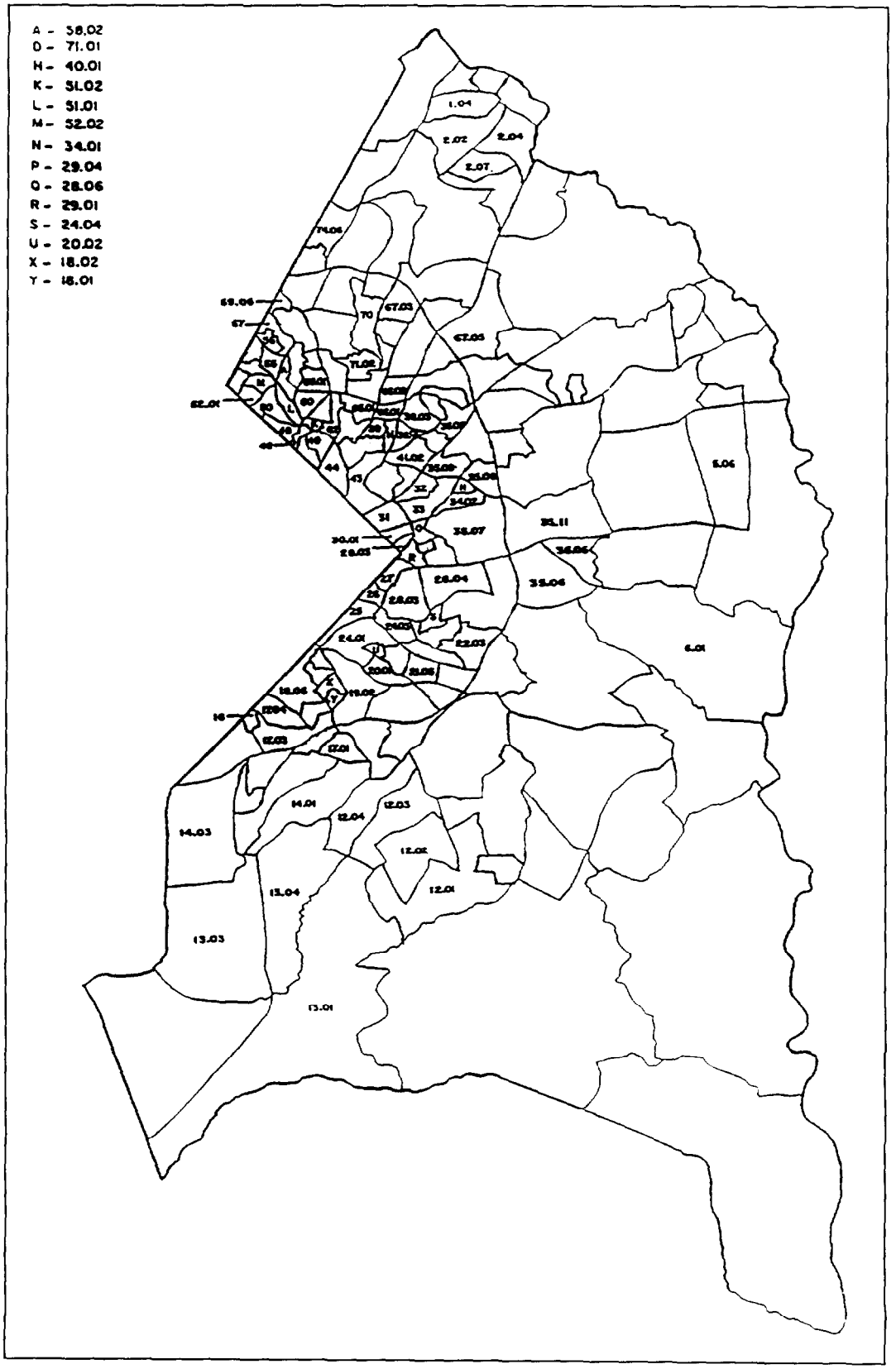
On the residential side, the project team selected the high need/high potential clusters shown in Figure 22 as the focus of this study[1]. While some of the non-traditional transit options implemented would serve work trips between the high need/high potential residential clusters and the key employment concentrations, other options may be designed to provide expanded service for non-work transportation needs.

The Project Team used population to assess the overall maximum potential of each residential cluster to support non-traditional transit services for non-work trips. Table 8 shows the population for each of the High Need/High Potential census tracts. Areas with high need include those with large concentrations of households:

- in poverty
- with zero cars
- below median family income
- with large numbers of unemployed
- headed by a female

[1] This map shows the census tract number for the high need and high potential census tracts (shaded areas in Figure 21).

Figure 22 - High Need and High Potential Census Tracts



Legend:

5.06 Census Tract

N

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Table 8
Population of High Need/High Potential Census Tracts

Census Tract	High Need	High Potential	Population
1.04		•	8,388
2.02		•	4,249
2.04	•	•	9,473
2.07		•	5,100
5.06		•	13,268
6.01		•	6,667
12.01		•	7,864
12.02		•	6,190
12.03		•	5,874
12.04		•	6,992
13.01		•	6,384
13.03		•	10,648
13.04		•	9,222
14.01		•	8,341
14.03		•	6,545
16.00	•	•	3,603
17.01		•	4,471
17.03	•	•	10,258
17.04	•	•	5,436
18.01	•		2,171
18.02	•	•	4,316
18.06	•	•	8,676
19.02	•	•	6,373
20.01	•	•	5,878

Table 8 (Continued)
Population of High Need/High Potential Census Tracts

Census Tract	High Need	High Potential	Population
20.02	•		2,767
21.05 •	•	•	7,858
22.03		•	5,112
24.01	•	•	7,113
24.03	•	•	5,021
24.04	•	•	4,825
25.00	•	•	6,488
26.00	•	•	3,790
27.00	•		3,130
28.03	•		3,900
28.04	•		6,398
29.01	•	•	3,205
29.03	•		1,409
30.01	•		2,382
30.02	•		2,916
31.00	•		2,935
32.00	•	•	3,276
33.00	•		4,691
34.01	•		1,799
34.02	•	•	5,220
35.05		•	5,878
35.06		•	9,475
35.07	•		6,789
35.08	•		3,953

Table 8 (Continued)
Population of High Need/High Potential Census Tracts

Census Tract	High Need	High Potential	Population
35.09	•	•	4,892
35.11		•	4,894
36.09	•	•	6,867
38.03		•	5,265
39.00	•	•	3,518
40.01	•	•	4,522
41.02	•	•	5,440
43.00	•	•	3,413
44.00	•		2,485
46.00	•		2,988
48.00	•	•	4,413
49.00	•		3,746
50.00	•	•	4,887
51.01	•		3,420
52.01	•	•	3,439
52.02	•	•	3,438
55.00	•		3,881
56.00	•	•	9,661
57.00	•	•	4,684
58.02	•		3,193
59.01	•	•	4,159
59.05	•	•	5,994
60.00	•		3,720
62.00	•		3,828

Table 8 (Continued)
Population of High Need/High Potential Census Tracts

Census Tract	High Need	High Potential	Population
65.01	•		3,444
66.01	•		3,726
66.02		•	3,627
67.03	•	•	6,315
67.05		•	10,803
70.00	•		4,942
71.02	•		4,032
74.06		•	6,176
TOTAL			426,529

Areas with high potential are those with large numbers of persons:

- using buses for journey to work trips
- using taxis for journey to work trips
- with journey to work trips greater than 60 minutes

The overall population coverage for each of the particular non-traditional transit options developed later in the study was dependent upon the routing and type of service to be implemented.

The number of users from each tract, which ranges from zero to a maximum of two percent of the residents of the tract, could be determined on the basis of the level of existing transit service in the tract. In a telephone conversation, Dr. Roger Teal of the University of California indicated that generally two percent of the "target" population is the maximum number of potential users that can be anticipated to use a non-traditional transit mode of a demand-responsive nature. Dr. Teal's research was conducted in suburban areas in California with demographic, socio-economic and travel pattern characteristics similar to those encountered in Prince George's County. The two percent, therefore, represents the maximum potential ridership for non-work trips if a demand responsive type of service were to be implemented in Prince George's County. As Table 8 shows, there are 426,529 people residing in these tracts, and two percent, or 8,532, represents the overall potential for non-traditional, demand-responsive, transit usage in these areas. Once preliminary routings and service options were developed, the number of users from each tract served was summed to determine the total population that could potentially be served by each option.

3.3 Trip Distribution

This section describes the methodology that was used to identify the place of residence of workers that work in companies located in the key employment clusters and presents a summary of the results.

3.3.1 Methodology to Identify the Place of Residence of Employees of the Selected Employment Clusters

In order to identify where employees of the selected employment clusters live, questions about the place of residence of employees were incorporated into the survey distributed among the major employers in Prince George's County. The information on place of residence of employees was requested at the zip code level. The Project Team contacted several major employers in the selected clusters that did not return the survey in the initial requests. This follow-up task was conducted to insure that a representative sample from each of the selected employment clusters was available for the analysis. The zip code data that was received was then expanded to estimate the overall daily residential distribution of the total employment for each cluster. Information on work shifts, provided by the employers, was used to determine how many employees from each zip code begin work during the morning peak period (6:00 AM - 9:00 AM).

The Project Team summarized the information on the place of residence of employees for each cluster by zip code. In addition, with the assistance of a computerized Geographical Information System (GIS), the Project Team estimated the percentage of residential development associated with each of the census tracts, shown in Figure 23, within each of the zip code areas shown in Figure 24.[1] The Project Team used these estimated percentages to allocate the estimated number of workers by zip code to each census tract in Prince George's County. For example, it was estimated that Census Tract 5.06, shown in Figure 25, contains 87 percent of the residential development in Zip Code 20716. Similarly, Census Tract 5.07 was estimated to contain the remaining 13 percent of the residential development in Zip Code 20716. While the areas of these two census tracts within the zip code boundaries are approximately the same, the level of development differs. Thus, the number of employees that were estimated to have their place of residence in Zip Code 20716 were allocated at the rates of 87 and 13 percent to Census Tracts 5.06 and 5.07 respectively. This methodology was used to estimate, for each cluster, the number of employees that live in each census tract in Prince George's County. These estimates are summarized in the following sections of this chapter and a table with a summary of these results is presented in Appendix 1.[2]

3.3.2 Place of Residence of Employees

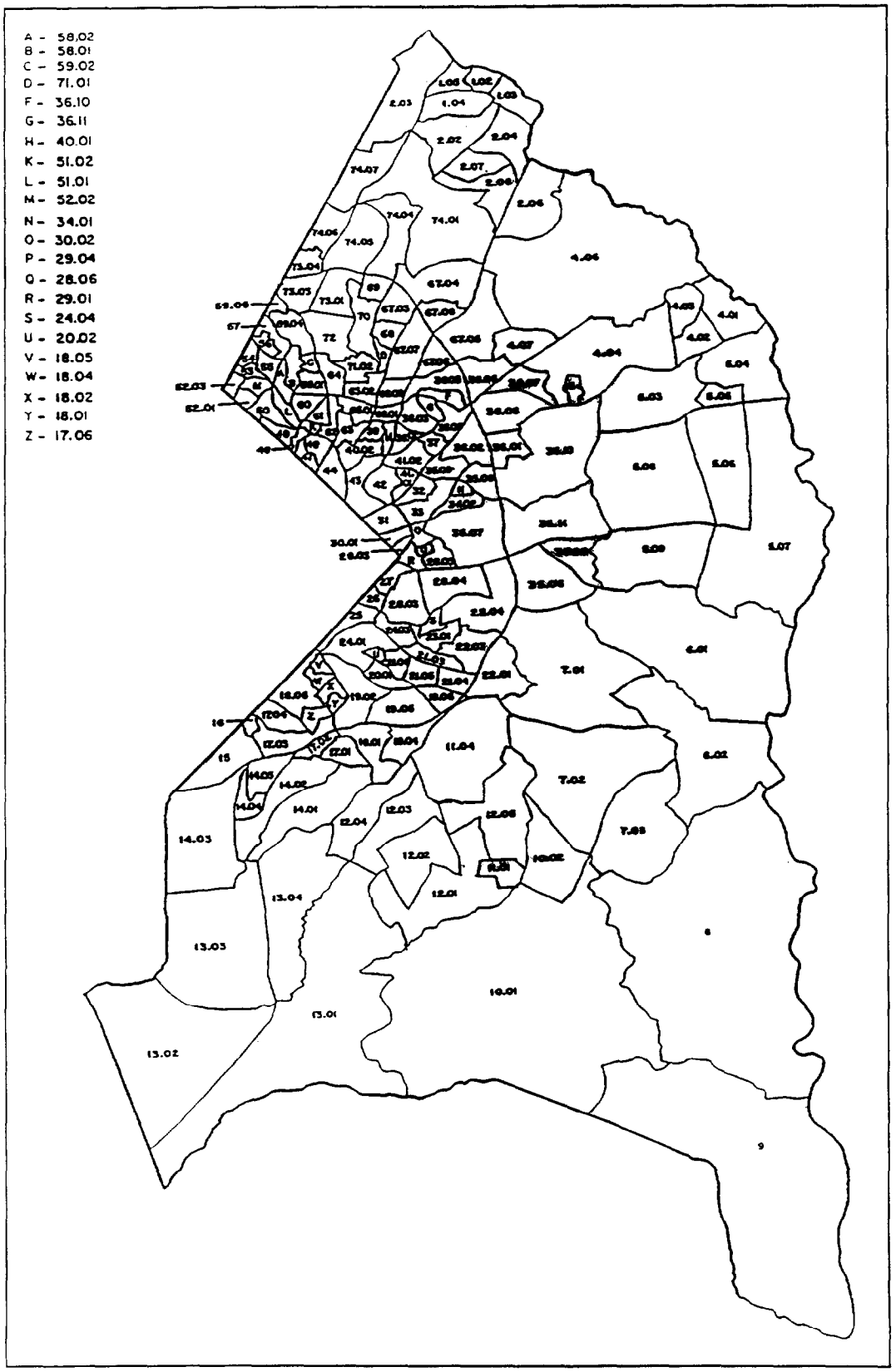
With only one exception, the Project Team collected representative zip code information from all of the selected employment clusters. This section summarizes the information on employee place of residence for each cluster. Two summary maps are included for each employment cluster, one depicting the total number of daily employees that commute to the corresponding employment cluster, and one showing the number of peak period employees.

---

[1] Where the boundaries of a census tract did not coincide with the boundaries of the zip code area, the Project Team made adjustments to improve the accuracy of the allocation process.

[2] The methodology used to develop the peak period data was described in a previous section of this chapter.

Figure 23 - Census Tracts



Legend:

4.06 Census Tract

N

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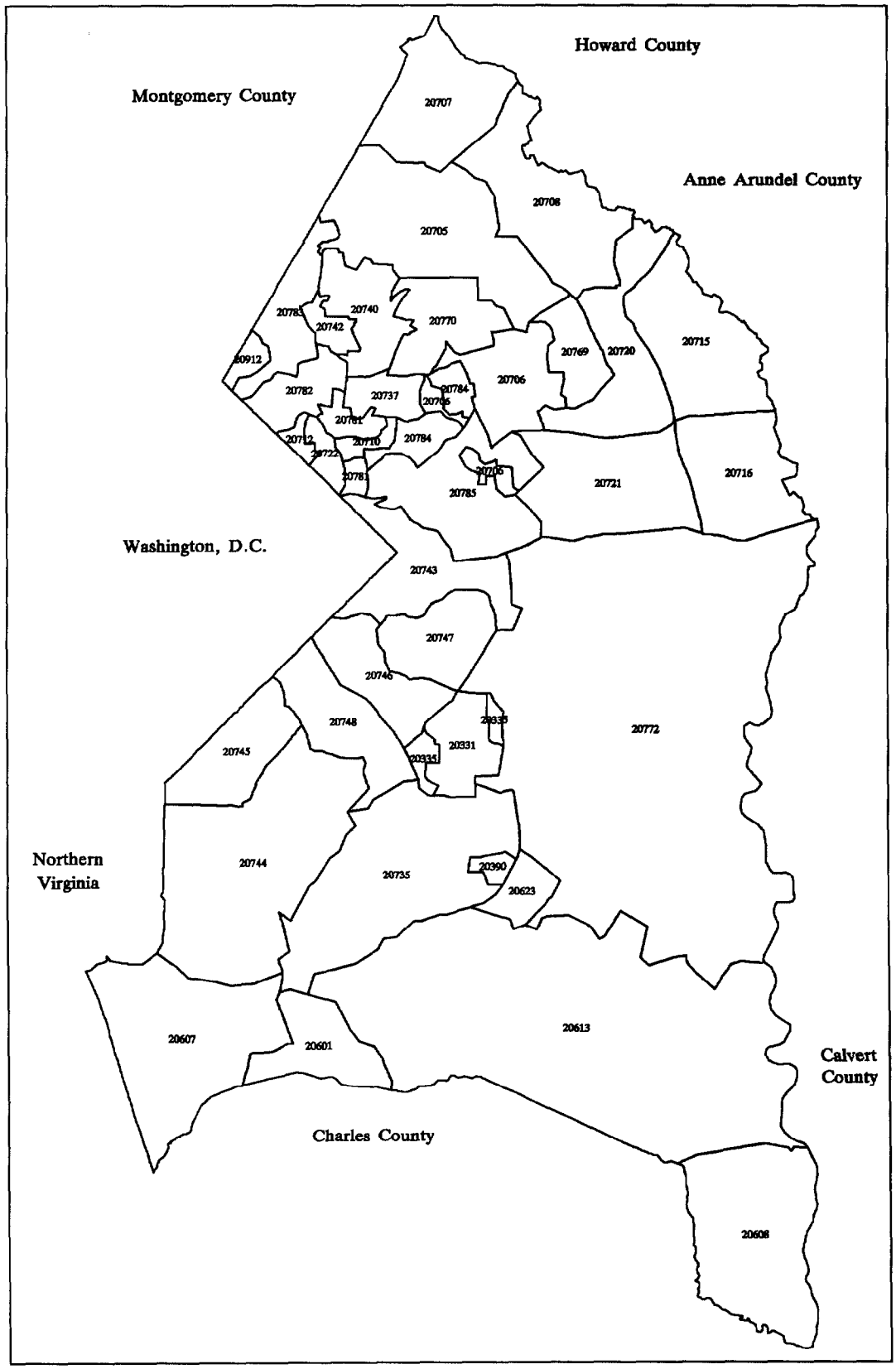
Figure 24 - Zip Codes



Legend:

Zip Code Boundary

N

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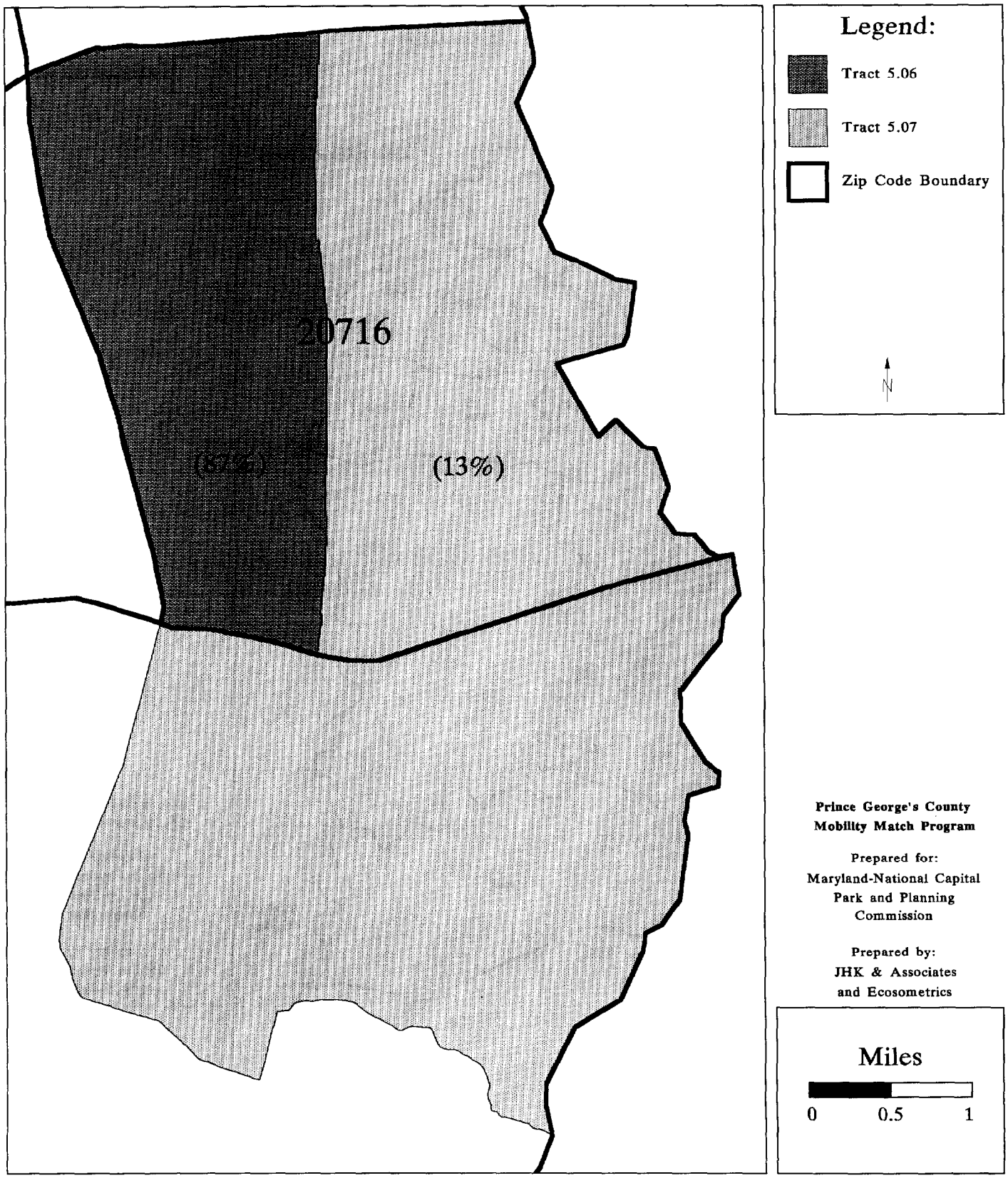
Figure 25 - Example of Zip Code/Census Tract Conversion



3.3.2.1 Hampton Business Park

The Hampton Business Park cluster was the only one for which the Project Team was not able to collect enough employee zip code information to assemble a representative sample. The Project Team received two surveys from major employers in this cluster, one from a major postal facility and one from a construction company. However, the postal service indicated in the survey form that they would not be able to provide the employee zip code place of residence information. Upon a review of the data received from the construction company, the Project Team concluded that the residential location patterns of construction employees are not typical of the other employees in the cluster.

In addition to the post office and the construction company, there are only four more employers with more than 100 employees. These four employers were contacted by telephone to request the employee place of residence information, but they indicated that they would not be able to provide it.

Thus, the Project Team and the Technical Working Group agreed that the Hampton Business Park cluster would be dropped from further consideration because of the following reasons:

1. Only one of the major employers in the cluster provided information on the place of residence of employees; and this employer (construction company) is not representative of the typical employment in the cluster. The post office, the major employer in the cluster with over 43 percent of the cluster's total employment, did not provide information on the place of residence of its employees.

2. Two thirds of the employees at the postal facility begin work at times other than the AM peak period. This means that the employees at the major employer in the cluster work at times different from those of the other employers in the cluster.

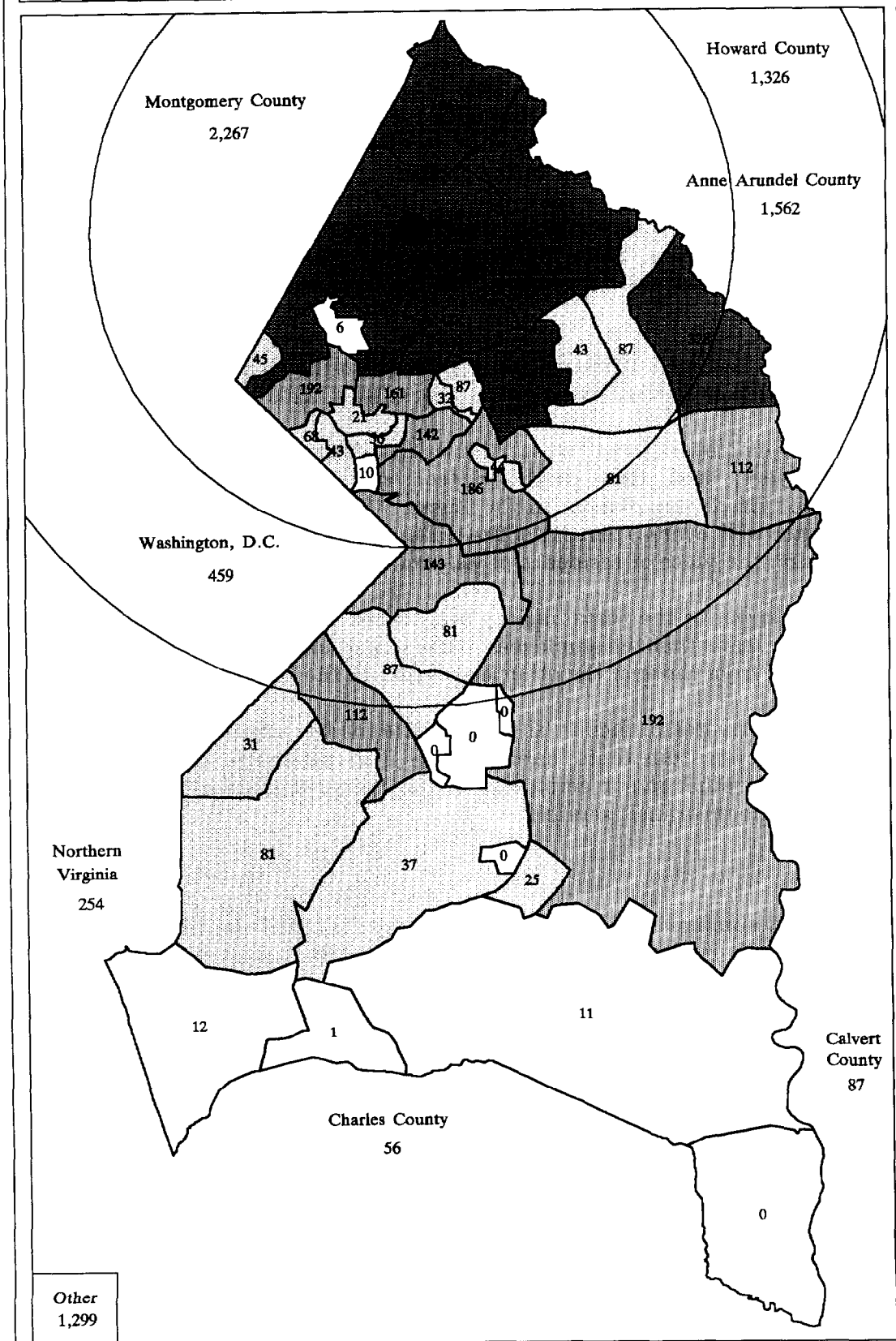
3. With the elimination of the postal facility as a candidate for the implementation of non-traditional transit service, due to its "hard-to-serve" work schedules, the number of employees working for other major employers in the cluster would be too low to support most non-traditional transit services.

3.3.2.2 Beltsville

Figures 26 and 27 and Table 9 summarize the information, at the zip code level, on place of residence of employees that work in the Beltsville cluster. As expected, most of the large concentrations were found in residential clusters located within 10 miles of the employment site. There are, however, a number of areas located further than 10 miles from the employment site that have significant concentrations of employee residences. The information presented in Figure 27 represents the place of residence for employees that begin work during the AM peak period.

Montgomery County, Anne Arundel County, Howard County, and Washington D.C. are the place of residence for 15, 11, 9 and 3 percent, respectively, of the employees that work in this cluster. Calvert County, Charles County and Northern Virginia combined account for three percent of the employee residences. Approximately 50 percent of the employees that work in this cluster live in Prince George's County.

Figure 26 - Beltsville
Number of Employee Residences



Legend:

- Beltsville
- Zip Code Boundary
- 10-15 Mile Radius

N

Number of Workers

- 0 to 12
- 21 to 87
- 112 to 192
- 326 to 1,431

Total: 14,699

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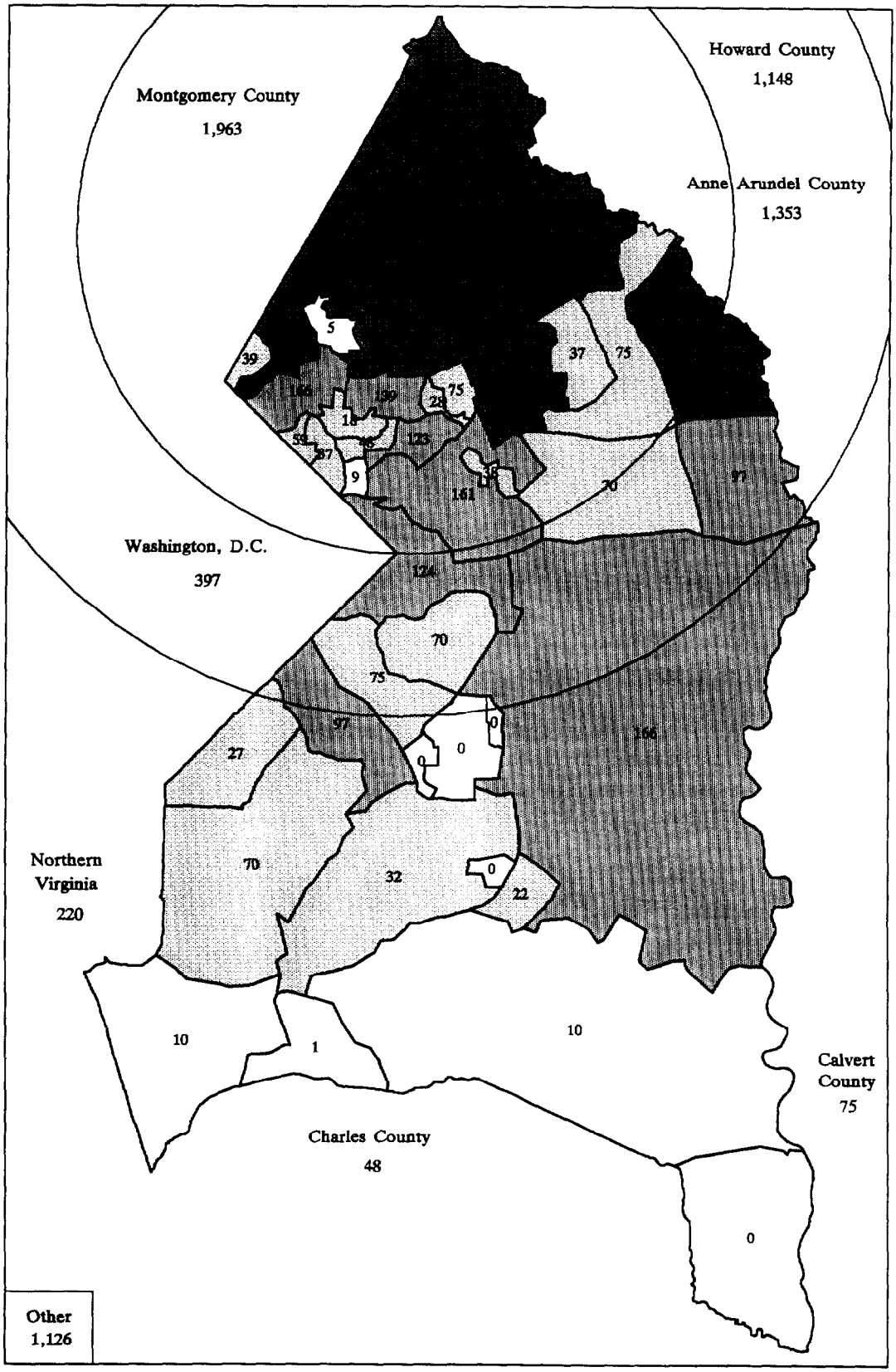
Figure 27 - Beltsville
Number of Residences for Peak Period Employees



Legend:

- Beltsville
- Zip Code Boundary
- 10-15 Mile Radius

N

Number of Workers

- 0 to 10
- 18 to 75
- 97 to 166
- 282 to 1,239

Total: 12,729

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Prepared by:
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Table 9
Residential Distribution of Peak Period Employees
Beltsville

	Number	Percent
Prince George's County	6,399	50.3%
Less than 10 miles	(5,504)	(43.3%)
Between 10 and 15 miles	(551)	(4.3%)
More than 15 miles	(344)	(2.7%)
Montgomery County	1,963	15.4%
Howard County	1,148	9.0%
Anne Arundel County	1,353	10.6%
Calvert County	75	0.6%
Charles County	48	0.4%
Washington, D.C.	397	3.1%
Northern Virginia	220	1.7%
Other	1,126	8.9%
TOTAL	12,729	100.0%

3.3.2.3 Hyattsville/Prince George's Plaza

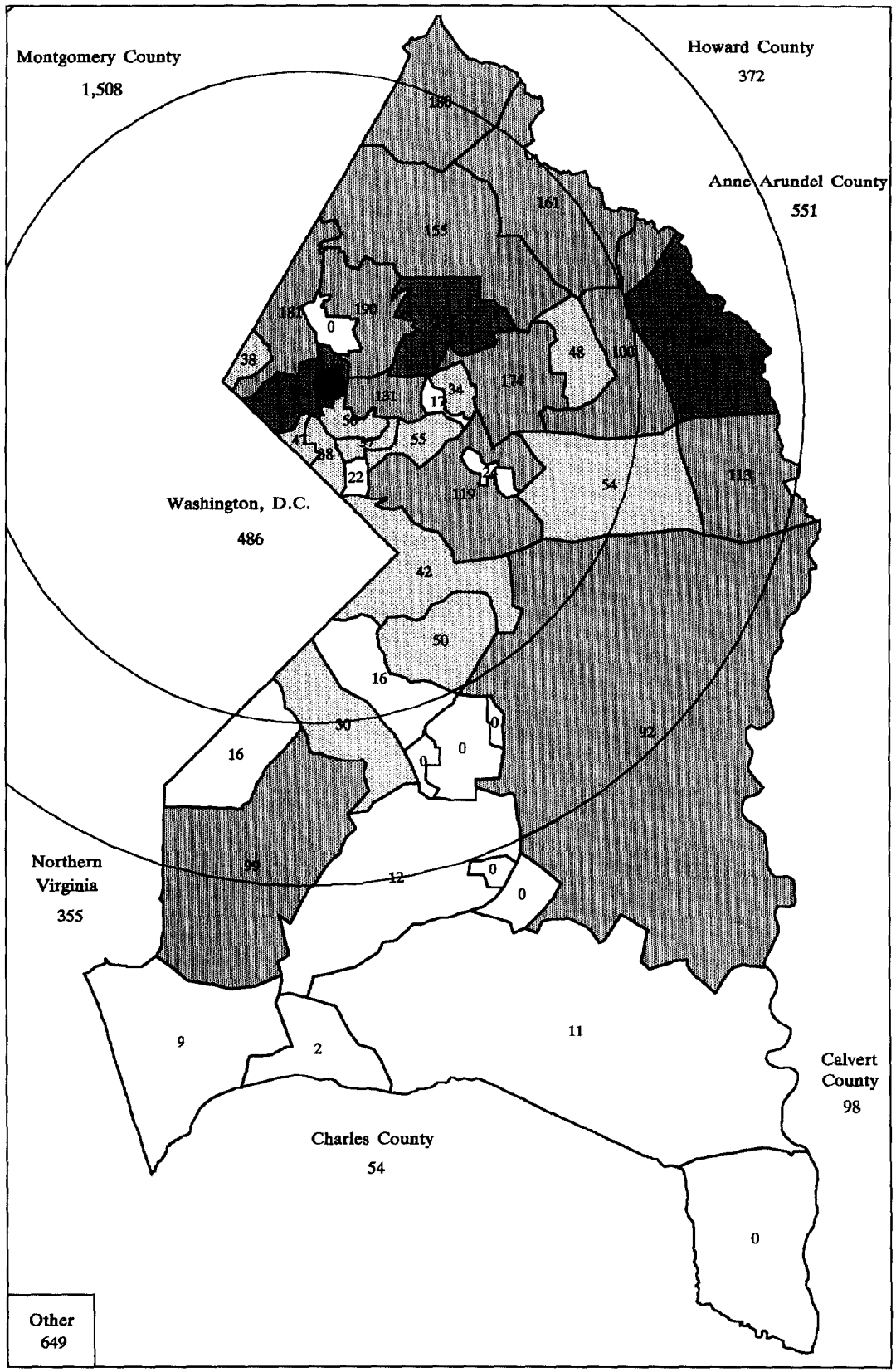
Most of the significant residential concentrations of employees that work for Hyattsville/Prince George's Plaza employers are located within 10 miles of the employment cluster. However, as Figures 28 and 29 and Table 10 show, there are other more distant significant residential clusters located to the east and south of this employment concentration.

Montgomery County, Anne Arundel County, Washington D.C., and Howard County are the place of residence for 21, 8, 7 and 5 percent, respectively, of the employees that work in this cluster. Calvert County, Charles County and Northern Virginia combined account for seven percent of the employee residences. Approximately 44 percent of the employees that work in this cluster live in Prince George's County.

3.3.2.4 Washington and Hanson Palmer Business Parks

Table 11 and Figures 30 and 31 display the residential distribution of employees that work within the Washington and Hanson Palmer Business Parks. As these graphics show, over half of this cluster's workers reside within Prince George's County, and the majority of these live within 10 miles of the cluster. There are also some significant concentrations outside of 10 miles to the east and south of the Business Parks.

Figure 28 - Hyattsville/Prince George's Plaza
Number of Employee Residences



Legend:

- Hyattsville\PG Plaza
- Zip Code Boundary
- 10-15 Mile Radius

N

Number of Workers

- 0 to 24
- 30 to 55
- 92 to 190
- 235 to 422

Total: 7,319

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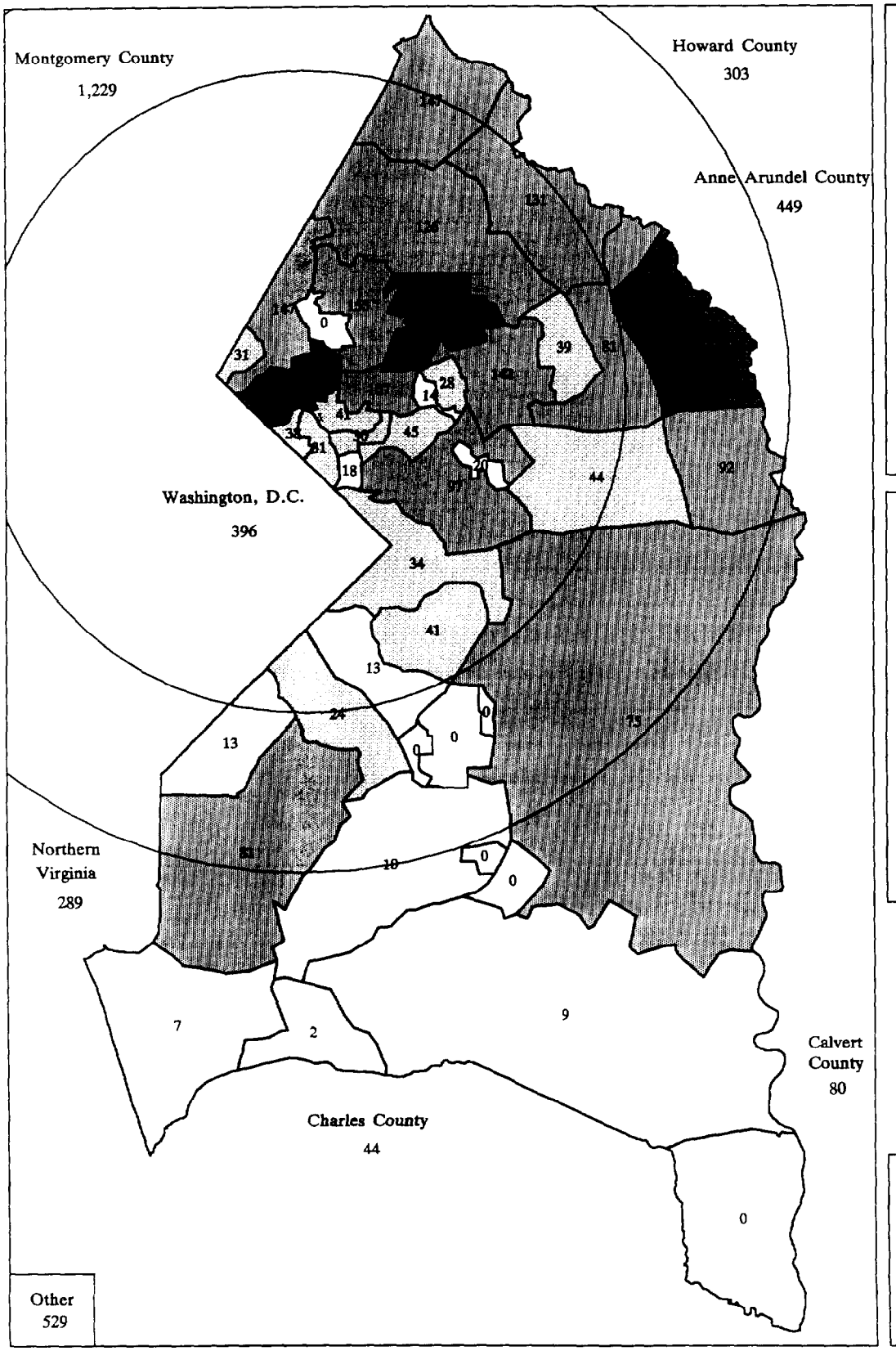
Figure 29 - Hyattsville/Prince George's Plaza
Number of Residences for Peak Period Employees



Legend:

- Hyattsville\PG Plaza
- Zip Code Boundary
- 10-15 Mile Radius

N

Number of Workers

- 0 to 20
- 24 to 45
- 75 to 155
- 191 to 344

Total: 5,964

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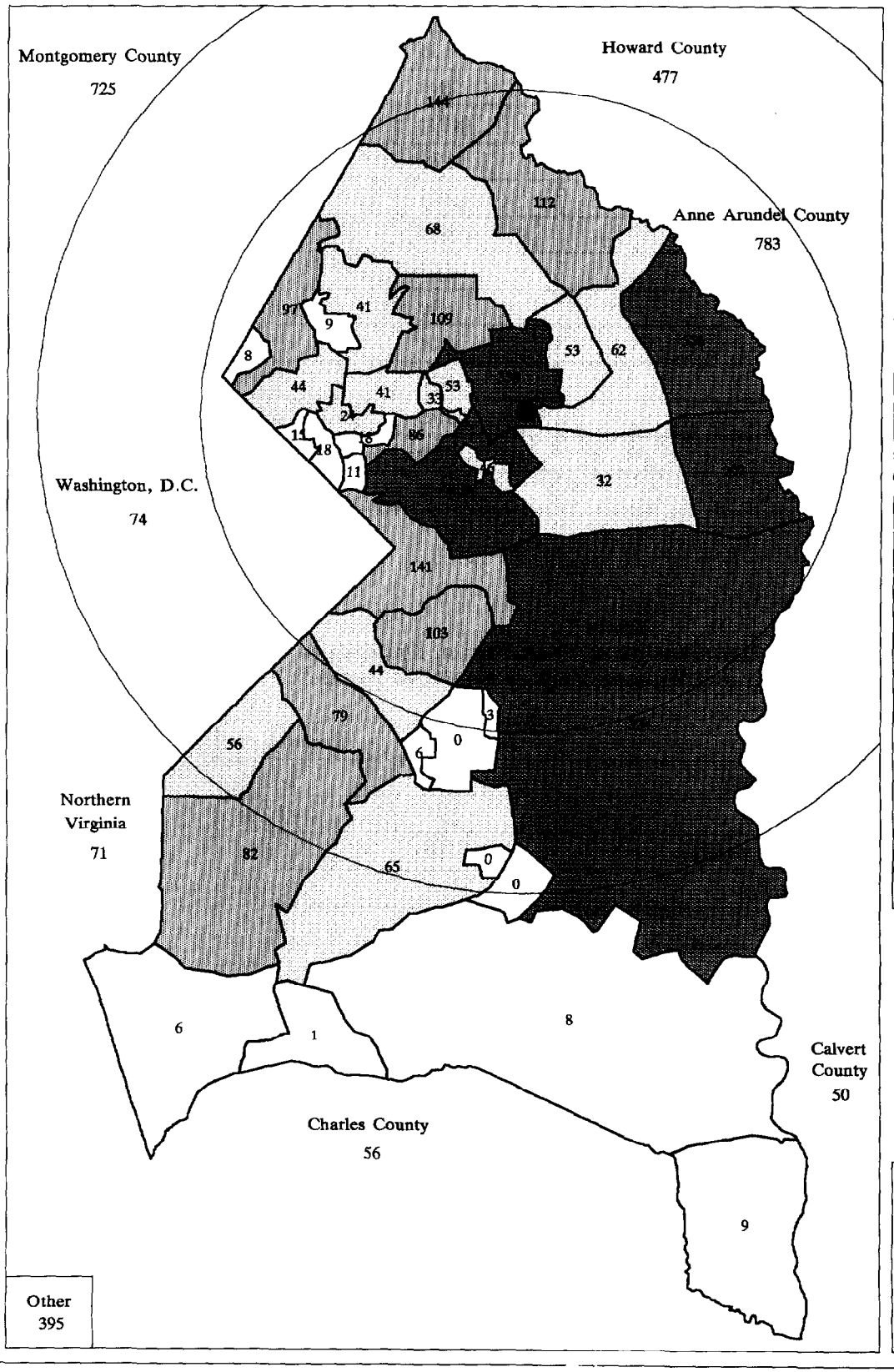
Table 10
Residential Distribution of Peak Period Employees
Hyattsville/Prince George's Plaza

	Number	Percent
Prince George's County	2,645	44.4%
Less than 10 miles	(1,994)	(33.4%)
Between 10 and 15 miles	(481)	(8.1%)
More than 15 miles	(170)	(2.9%)
Montgomery County	1,229	20.6%
Howard County	303	5.1%
Anne Arundel County	449	7.5%
Calvert County	80	1.3%
Charles County	44	0.7%
Washington, D.C.	396	6.6%
Northern Virginia	289	4.9%
Other	529	8.9%
TOTAL	5,964	100.0%

Table 11
Residential Distribution of Peak Period Employees
Washington and Hanson Palmer Business Parks

	Number	Percent
Prince George's County	3,103	56.8%
Less than 10 miles	(2,575)	(47.1%)
Between 10 and 15 miles	(410)	(7.5%)
More than 15 miles	(118)	(2.2%)
Montgomery County	652	11.9%
Howard County	429	7.8%
Anne Arundel County	704	12.9%
Calvert County	45	0.8%
Charles County	51	0.9%
Washington, D.C.	66	1.2%
Northern Virginia	64	1.2%
Other	356	6.5%
TOTAL	5,470	100.0%

Figure 30 - Washington & Hanson Palmer Business Parks
Number of Employee Residences



Legend:

- Zip Code Boundary
- Washington/Hanson Palmer
- 10-15 Mile Radius

N

Number of Workers

- Between 0 and 18
- Between 24 and 68
- Between 79 and 144
- Between 209 and 556

Total: 6,082

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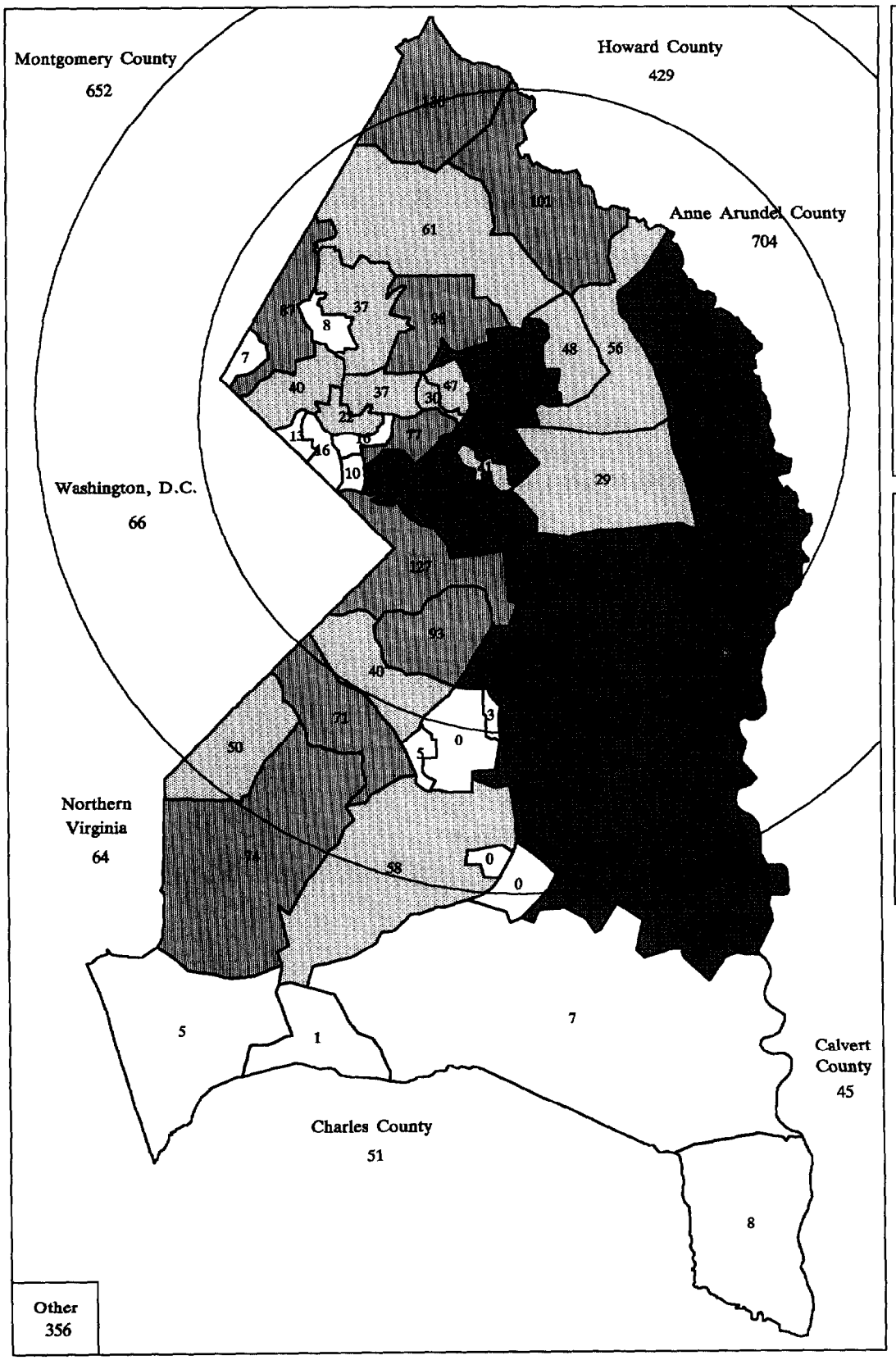
Figure 31 - Washington & Hanson Palmer Business Parks
Number of Residences for Peak Period Employees



Legend:

- Zip Code Boundary
- Washington/Hanson Palmer
- 10-15 Mile Radius

N

Number of Workers

- Between 0 and 22
- Between 29 and 67
- Between 82 and 110
- Between 181 and 223

Total: 5,470

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Approximately 12 and 13 percent of the workers live in Montgomery County and Anne Arundel County, respectively, while Howard, Calvert and Charles Counties and Northern Virginia, and the District make up 11 percent of the residences of the employees.

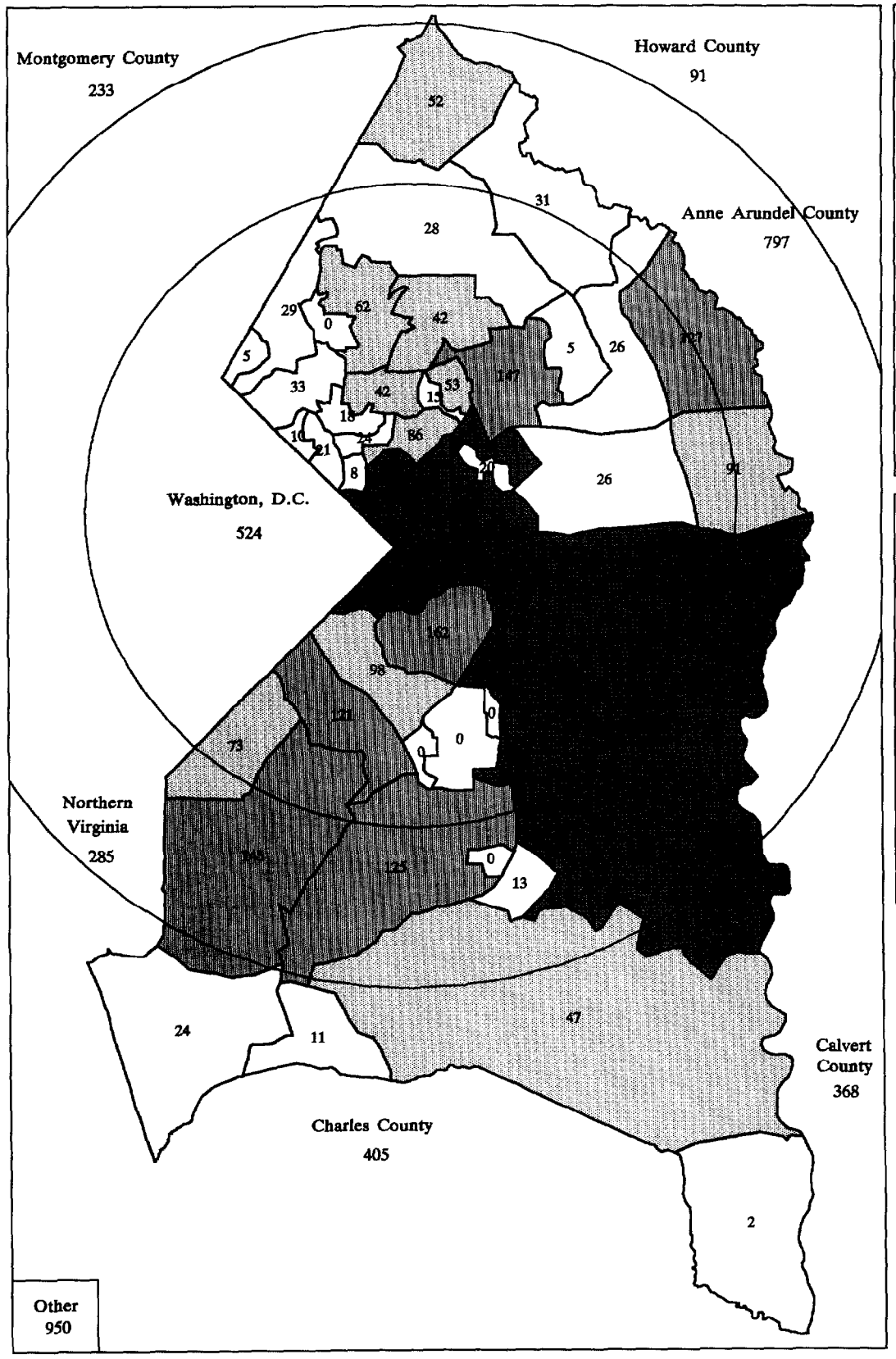
3.3.2.5 Columbia Park Road Business Center

As shown in Table 12 and Figures 32 and 33, the residential concentrations associated with this employment cluster are located in Prince George's County primarily near and to the south of the employment site. Outside the county, Anne Arundel County, Washington D.C., Charles County, Calvert County are the place of residence for 13, 8, 6 and 6 percent, respectively, of the employees that work in this cluster. Northern Virginia, Montgomery County and Howard County combined account for ten percent of the employee residences. Approximately 42 percent of the employees that work in this cluster live in Prince George's County.

Table 12
Residential Distribution of Peak Period Employees
Columbia Park Road Industrial Center

	Number	Percent
Prince George's County	1,838	42.5%
Less than 10 miles	(1,440)	(33.3%)
Between 10 and 15 miles	(333)	(7.7%)
More than 15 miles	(65)	(1.5%)
Montgomery County	159	3.7%
Howard County	62	1.4%
Anne Arundel County	543	12.5%
Calvert County	251	5.8%
Charles County	276	6.4%
Washington, D.C.	357	8.2%
Northern Virginia	194	4.5%
Other	650	15.0%
TOTAL	4,330	100.0%

Figure 32 - Columbia Park Road Industrial Center
Number of Employee Residences



Legend:

- Columbia Park Rd
- Zip Code Boundary
- 10-15 Mile Radius

N

Number of Workers

- 0 to 33
- 42 to 98
- 121 to 162
- 266 to 327

Total: 6,354

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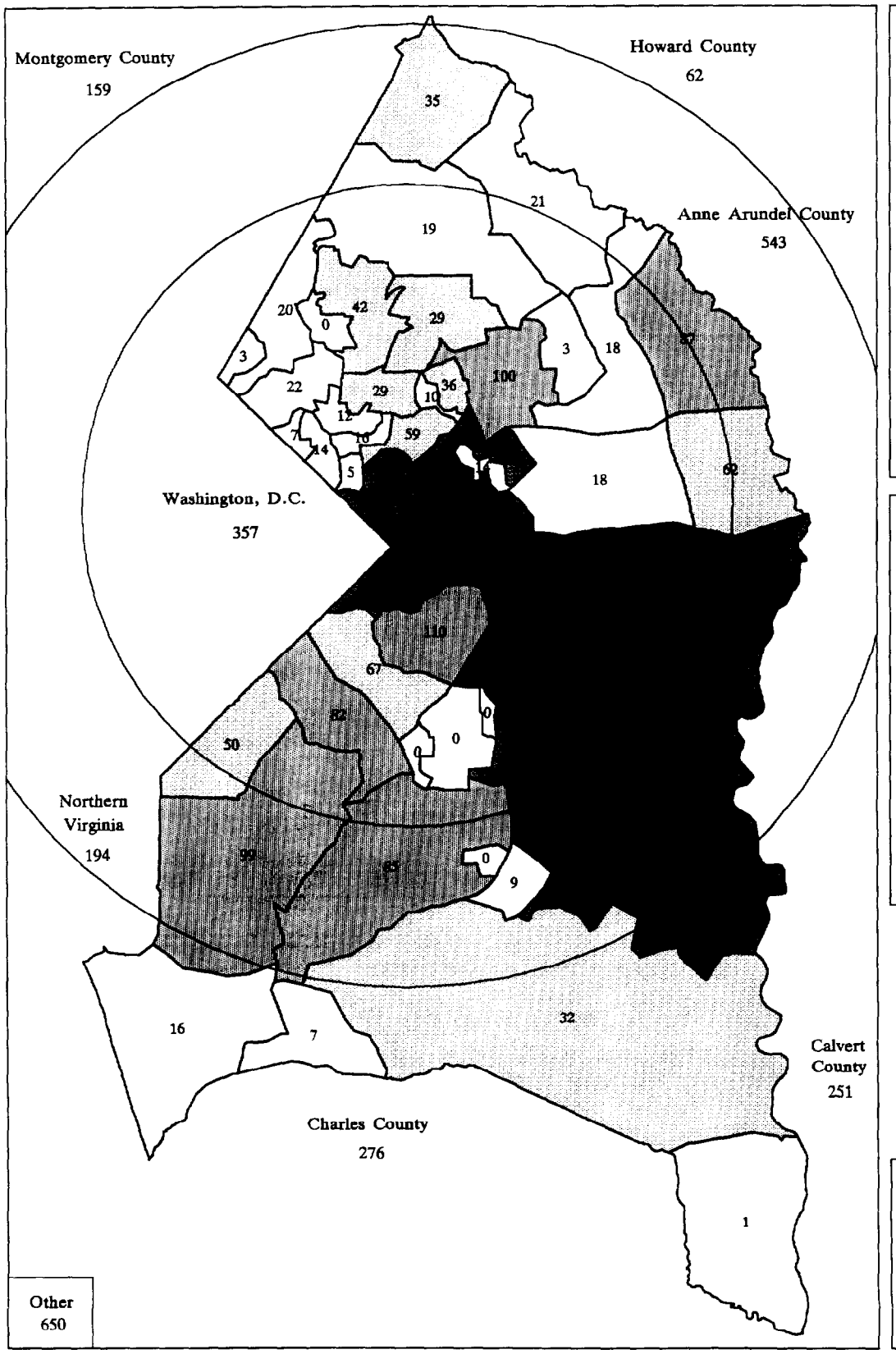
Figure 33 - Columbia Park Road Industrial Center
Number of Residences for Peak Period Employees



Legend:

- Columbia Park Rd
- Zip Code Boundary
- 10-15 Mile Radius

Number of Workers

- 0 to 22
- 29 to 67
- 82 to 110
- 181 to 223

Total: 4,330

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3.3.2.6 Southern Maryland Hospital

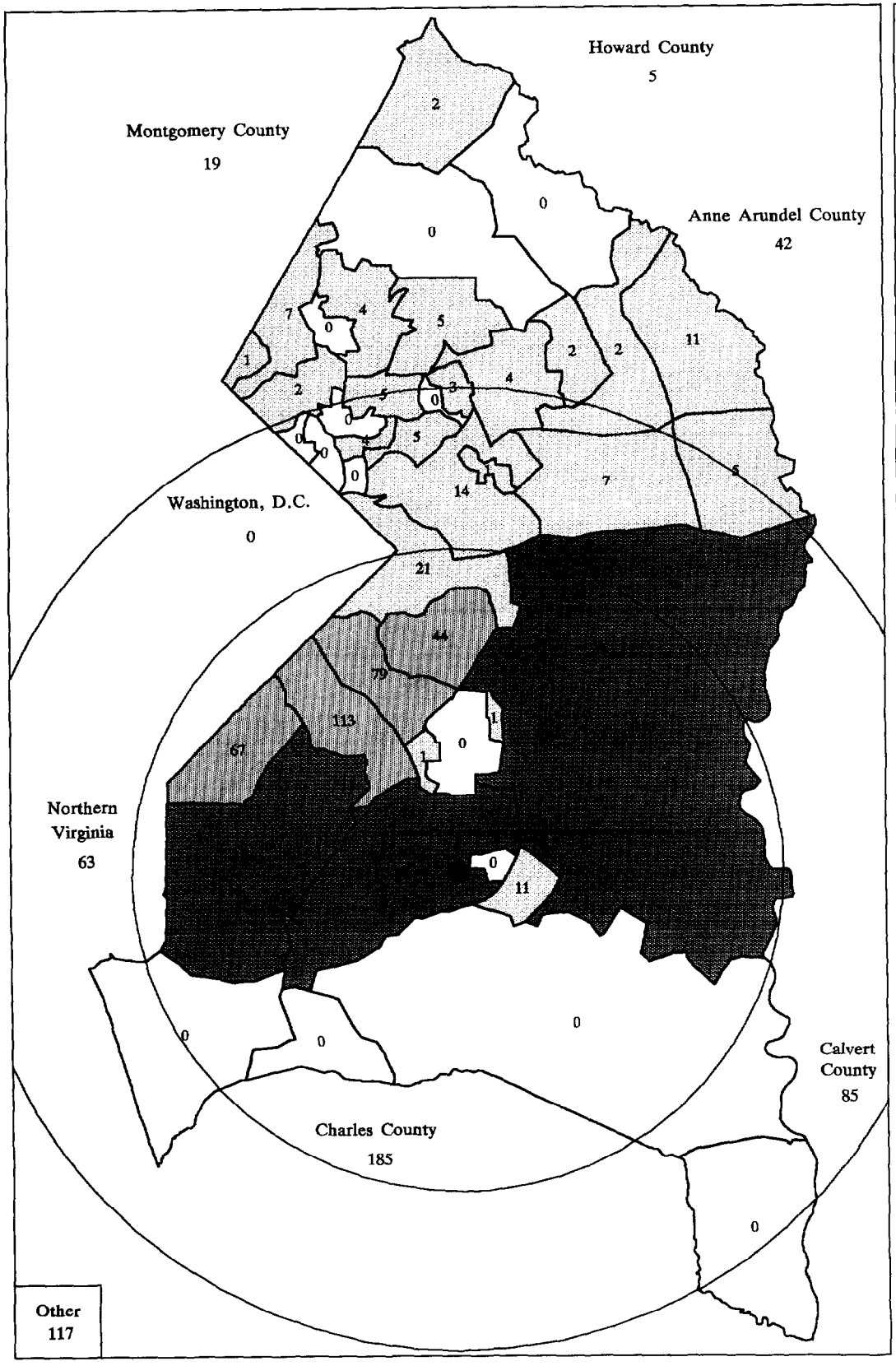
Table 13 and Figures 34 and 35 show that the majority of the employees that work in this cluster live within ten miles of the place of work. The total lack of transit service to this cluster may have some effect on the existing employee place of residence patterns. Approximately 67 percent of the employees that work in this cluster live in Prince George's County.

Table 13
Residential Distribution of Peak Period Employees
Southern Maryland Hospital

	Number	Percent
Prince George's County	658	66.9%
Less than 10 miles	(571)	(58.1%)
Between 10 and 15 miles	(61)	(6.2%)
More than 15 miles	(26)	(2.6%)
Montgomery County	12	1.2%
Howard County	3	0.3%
Anne Arundel County	27	2.8%
Calvert County	53	5.4%
Charles County	117	11.9%
Washington, D.C.	0	0.0%
Northern Virginia	40	4.1%
Other	73	7.4%
TOTAL	983	100.0%

Outside Prince George's County, Charles County and Calvert County are the place of residence for 12 and 5 percent, respectively, of the employees in this cluster. Northern Virginia, Anne Arundel County, Montgomery County and Howard County combined account for eight percent of the cluster employees. Interestingly, on the basis of the data received from the employers, none of the cluster employees live in Washington D.C.

Figure 34 - Southern Maryland Hospital Number of Employee Residences



Legend:

- Southern MD Hospital
- Zip Code Boundary
- 10-15 Mile Radius

N

Number of Workers

- None
- 1 to 21
- 44 to 113
- 153 to 288

Total: 1,561

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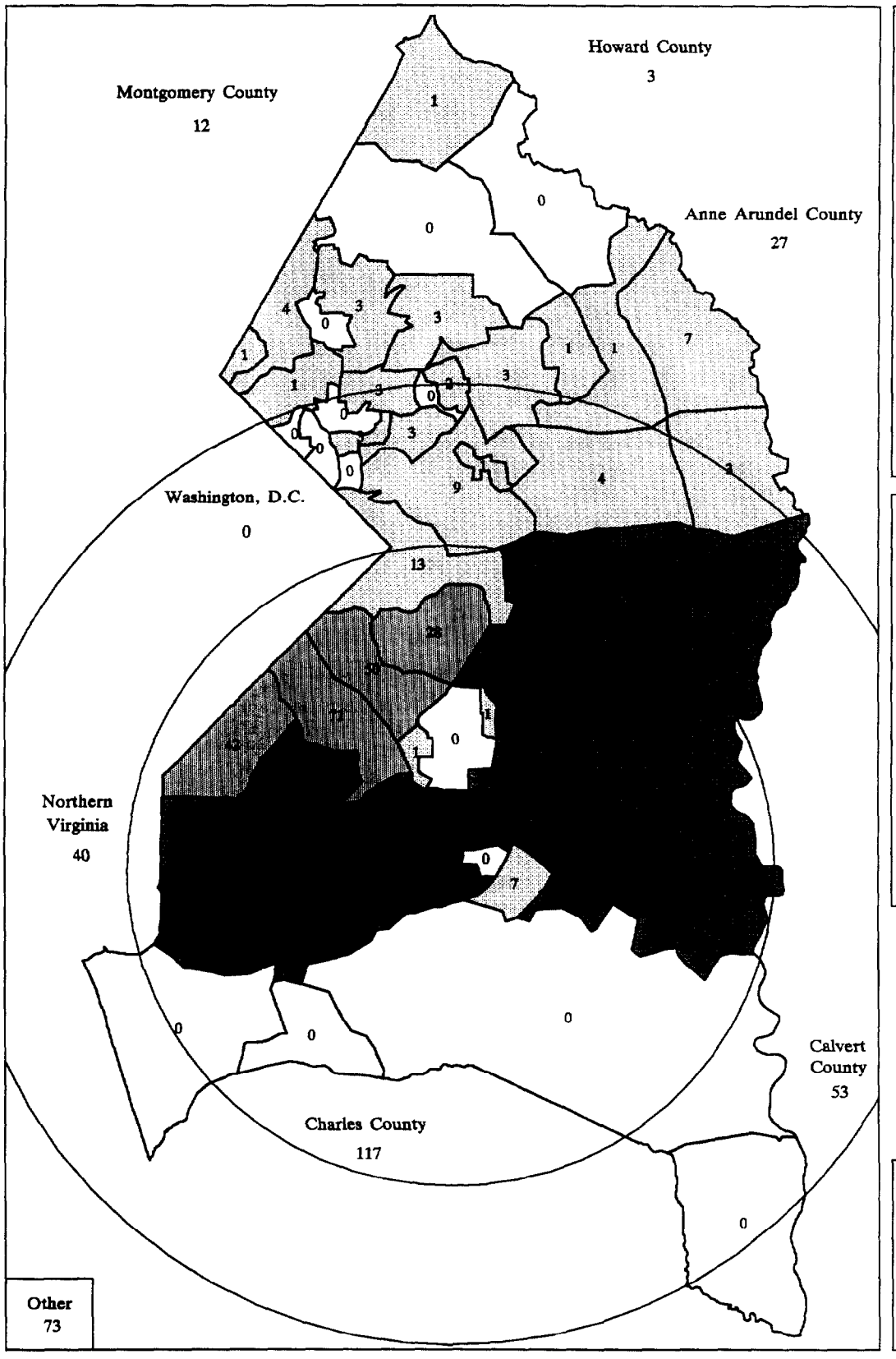
Figure 35 - Southern Maryland Hospital
Number of Residences for Peak Period Employees



Legend:

- Southern MD Hospital
- Zip Code Boundary
- 10-15 Mile Radius

Number of Workers

- None
- 1 to 13
- 28 to 71
- 96 to 181

Total: 983

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3.3.2.7 Bowie State University

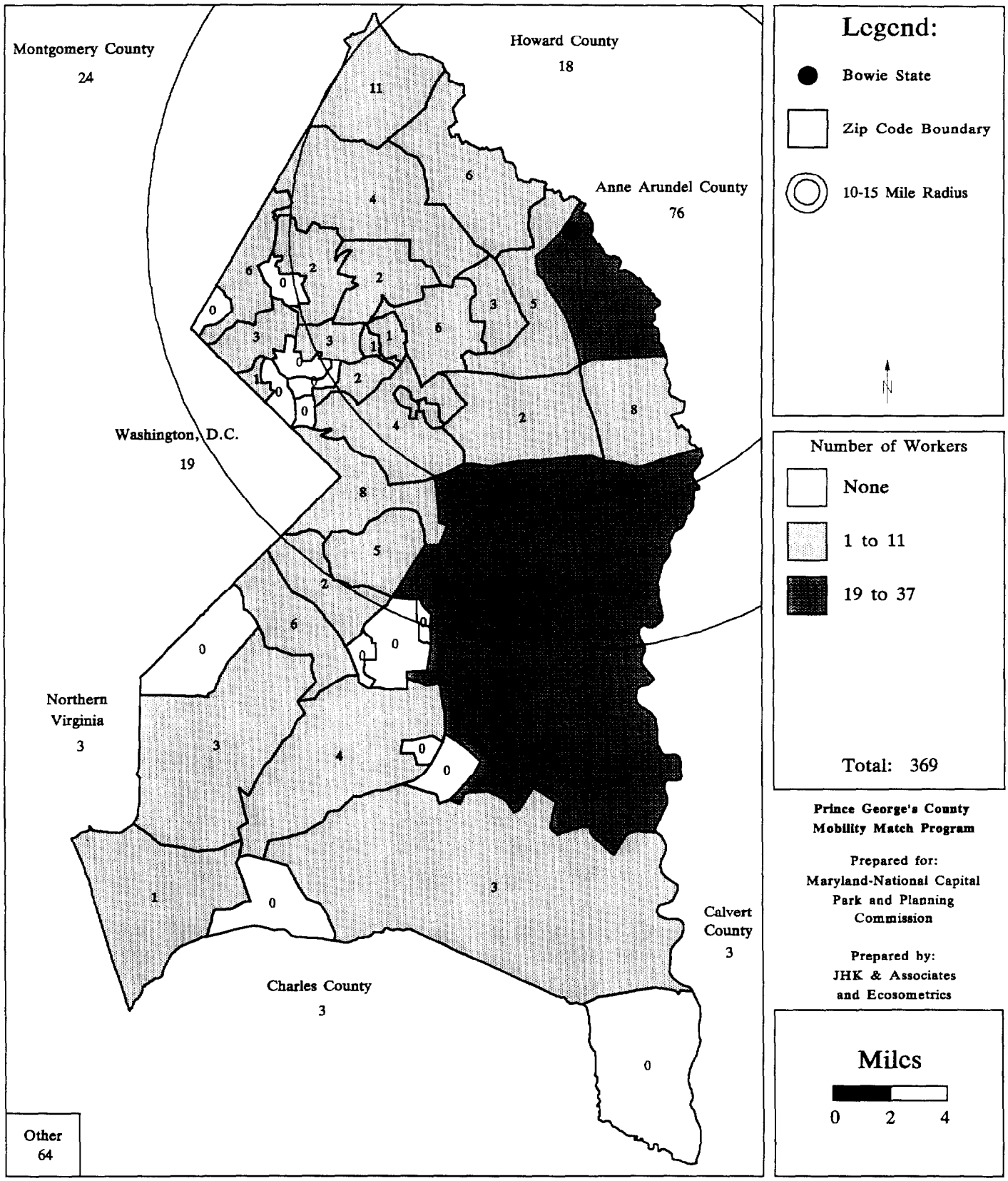
On the basis of the data received from Bowie State University, there is no significant difference between the daily and the peak period employment. Thus, only a summary of place of residence of peak period employees (employees that begin work between 6:00 AM and 9:00 AM) is presented in this technical memorandum in Table 14 and Figure 36. This figure shows that within Prince George's County there are only a few locations with significant concentrations of employees of this cluster. Approximately 43 percent of the employees that work in this cluster live in Prince George's County.

Table 14
Residential Distribution of Peak Period Employees
Bowie State University

	Number	Percent
Prince George's County	159	43.1%
Less than 10 miles	(96)	(26.0%)
Between 10 and 15 miles	(37)	(10.0%)
More than 15 miles	(26)	(7.1%)
Montgomery County	24	6.5%
Howard County	18	4.9%
Anne Arundel County	76	20.6%
Calvert County	3	0.8%
Charles County	3	0.8%
Washington, D.C.	19	5.2%
Northern Virginia	3	0.8%
Other	64	17.3%
TOTAL	369	100.0%

Outside the county, Anne Arundel County and Montgomery County account, respectively, for 21 and 7 percent of the employment at the University. Northern Virginia, Washington, D.C., Howard County and Calvert County combined account for 12 percent of the employees of this cluster.

Figure 36 - Bowie State University
Number of Residences for Peak Period Employees



3.3.2.8 Inglewood Office Complex

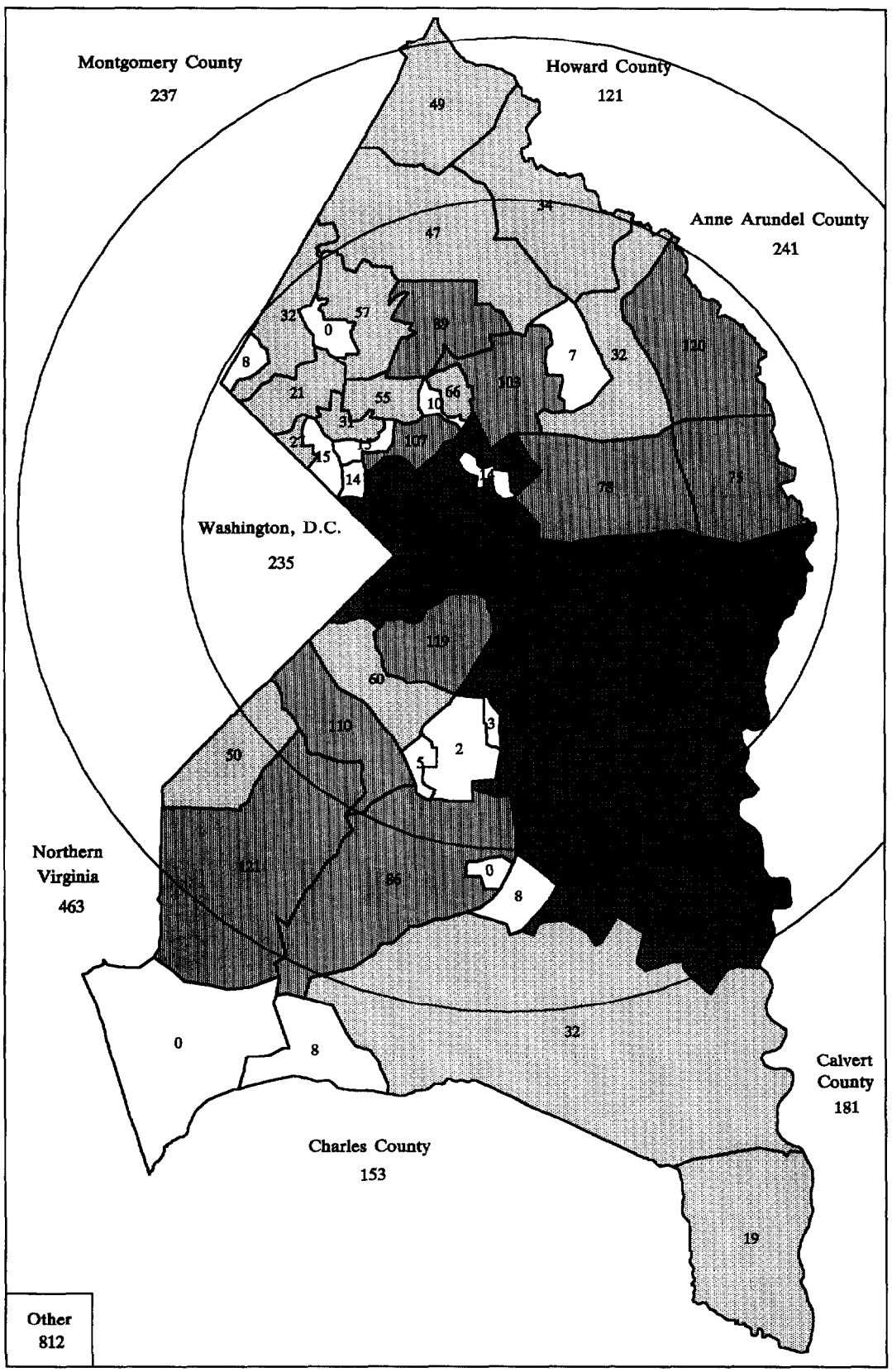
Table 15 and Figures 37 and 38 show that the majority of employee residential concentrations are located within ten miles of the Inglewood Office Complex cluster. Residential concentrations more than ten miles from the cluster are located primarily in the southern portion of Prince George's County. Approximately 53 percent of the employees that work in this cluster live within Prince George's County.

Table 15
Residential Distribution of Peak Period Employees
Inglewood Office Complex/USAir Arena

	Number	Percent
Prince George's County	2,475	53.2%
Less than 10 miles	(2,056)	(44.2%)
Between 10 and 15 miles	(348)	(7.5%)
More than 15 miles	(71)	(1.5%)
Montgomery County	211	4.5%
Howard County	108	2.3%
Anne Arundel County	214	4.6%
Calvert County	161	3.5%
Charles County	136	2.9%
Washington, D.C.	209	4.5%
Northern Virginia	412	8.9%
Other	723	15.6%
TOTAL	4,649	100.0%

Outside the County, Northern Virginia, Anne Arundel County, Montgomery County and Washington D.C. are the preferred places of residence for employees of the cluster accounting for nine, five, five and four percent of the employee residences respectively. Calvert County, Charles County and Howard County combined account for nine percent of the employee residences.

Figure 37 - Inglewood/USAir Arena
Number of Employee Residences



Legend:

- Zip Code Boundary
- Inglewood/USAir Arena
- 10-15 Mile Radius

N

Number of Workers

- 0 to 15
- 19 to 66
- 75 to 121
- 202 to 458

Total: 5,288

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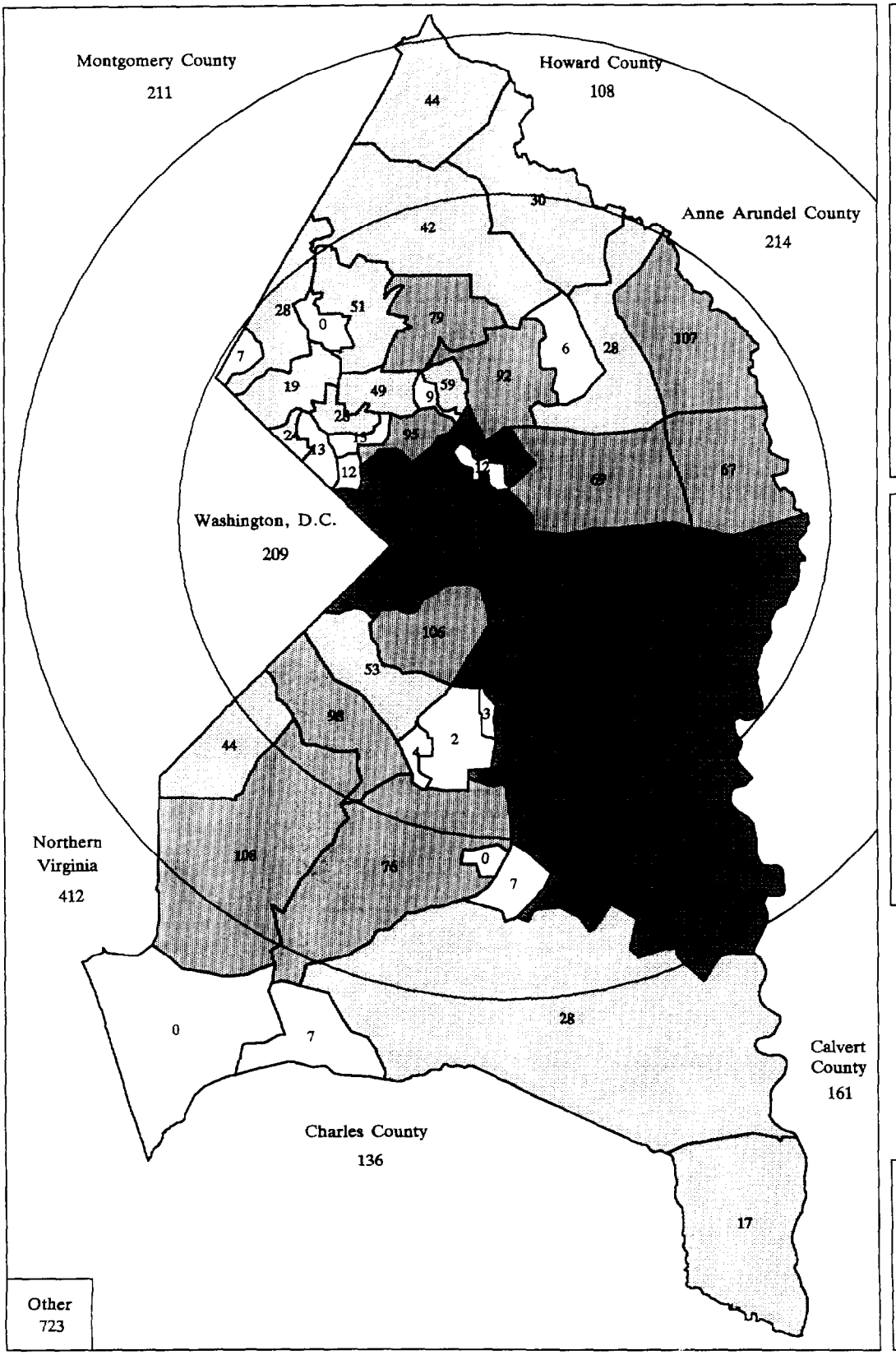
Figure 38 - Inglewood/USAir Arena
Number of Residences for Peak Period Employees



Legend:

- Zip Code Boundary
- Inglewood/USAir Arena
- 10-15 Mile Radius

N

Number of Workers

- 0 to 13
- 17 to 59
- 67 to 108
- 180 to 407

Total: 4,649

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3.4 Non-Traditional Transit Usage

The employee residential data and the population of high need/high potential residential clusters were used to estimate the number of potential non-traditional transit users for each census tract in the county. This section describes the methodologies used to estimate work and non-work non-traditional transit potential and presents a summary of the results.

3.4.1 Methodology used to Determine Potential Non-Traditional Transit Work Trips

For each cluster, the Project Team calculated the potential number of users of non-traditional transit using the information on place of residence of employees of each cluster. Based on the distance from employment clusters, the accessibility via transit to the employment sites, and the ranking of the residential area in the evaluation of need/potential[1], the potential number of users of non-traditional transit was calculated for the key residential areas. The Project Team began the analysis assuming that, as described in the Route 183 Corridor Study, the percentage usage will likely range between 3 and 13 percent[2]. Conditions at the Route 183 Corridor in Austin, Texas are similar to those observed throughout most of Prince George's County. Both the Route 183 Corridor and Prince George's County are suburban environments with large internal employment base; i.e., a large proportion of work trips that originate in the area/corridor are destined for locations within the area/corridor. While densities in some areas of the County are higher than those observed in the Route 183 Corridor, the densities in the areas with high need and high potential are similar to those found in the Austin Corridor. Therefore, because of these similarities, the Project Team concluded that it was reasonable to use the same factors for transit potential as the ones used in the Route 183 Corridor study.

As shown in Table 16, the attractiveness potential of each census tract was assessed on the basis of distance to employment site, accessibility via transit from the residential area to the employment site, and the assessed need/potential. For instance, a residential area (census tract) located within 10 miles of an employment cluster, with direct transit service to the employment site, and not ranked as having high need/high potential (in Task 1) was assumed to have a low potential non-traditional "attractiveness" level of three percent[3] of the employees that commute between the residential area and the employment cluster. On the other hand, a residential area located more than 15 miles from an employment cluster that currently has no transit service, and ranked as high need/high potential (in Task 1) was assumed to potentially attract 13 percent[4] of the commuters that travel from the residential area to the employment cluster.

---

[1] See Table A3 in the appendix.

[2] Rosenbloom Sandra, *Non-Traditional Transit Service Study; The 183 Corridor, Austin Texas*, 1988, page 32.

[3] Three percent corresponds to 0.750% + 1.125% + 1.125% (see Table 16)

[4] Thirteen percent corresponds to 3.250% + 4.875% + 4.875% (see Table 16)

Table 16
Ranking System Used to Determine the Potential Attractiveness of Each Census Tract

Potential	Distance From Census Tract To Employment Site	Non-Traditional Transit Attractiveness Potential for Distance to Employment Site	Accessibility Via Existing Transit Service	Non-Traditional Transit Attractiveness Potential for Accessibility Via Existing Transit Service	Assessment of Need/Potential of the Residential Area (as described in the Task 1 Technical Memorandum)	Non-Traditional Transit Attractiveness Assessment of Need/ Potential of the Residential Area
Low	Less Than 10 Miles	0.750%	Existing Direct Connection	1.125%	Neither High Need nor High Potential Area	1.125%
Medium	Between 10 and 15 Miles	2.000%	One or More Transfers	3.000%	High Need or High Potential Area	3.000%
High	More Than 15 Miles	3.250%	No Existing Transit Connection	4.875%	High Need and High Potential Area	4.875%

NOTE: These factors were developed by the Project Team for this study. The coefficients were developed on the basis of having a non-traditional transit potential for each of the areas under study that was greater than three percent and less than 13 percent.

The Project Team evaluated each pair of the identified key productions and attractions to determine the percentage and number of potential non-traditional transit users. Thus, the proportion of potential users from each census tract to each employment cluster that could be attracted to non-traditional transit was calculated by evaluating the distance, transit accessibility and need/potential of each individual census tract. For each census tract, the percentages associated with distance, transit service and need/potential (shown in Table 16) were determined. These three percentage figures were summed to determine the overall non-traditional transit attractiveness of each census tract. This resulting percentage figure, associated with trips from a particular census tract to a particular employment cluster, was multiplied by the estimated number of peak period commuters from the census tract to the employment cluster[1] to determine the potential number of non-traditional transit users from each census tract to each employment cluster.

3.4.2 Work Trip Non-Traditional Transit Potential

Using the methodology described above, the Project Team estimated the number of potential peak period non-traditional transit work trips for each of the selected employment clusters. Appendix C presents tables summarizing the estimated number of employee residences by census tract for each of the selected employment clusters. These results were used in the next steps of the study to select non-traditional transit options appropriate for the estimated demand levels and to develop specific services for these options. It should be noted here that, in many cases, the resulting estimates for each individual census tract are low. However, when put together in target service areas or in specific travel corridors, the aggregate potential of several census tracts may well be able to warrant the introduction of non-traditional transit service.

3.4.2.1 Beltsville Work Trip Non-Traditional Transit Potential

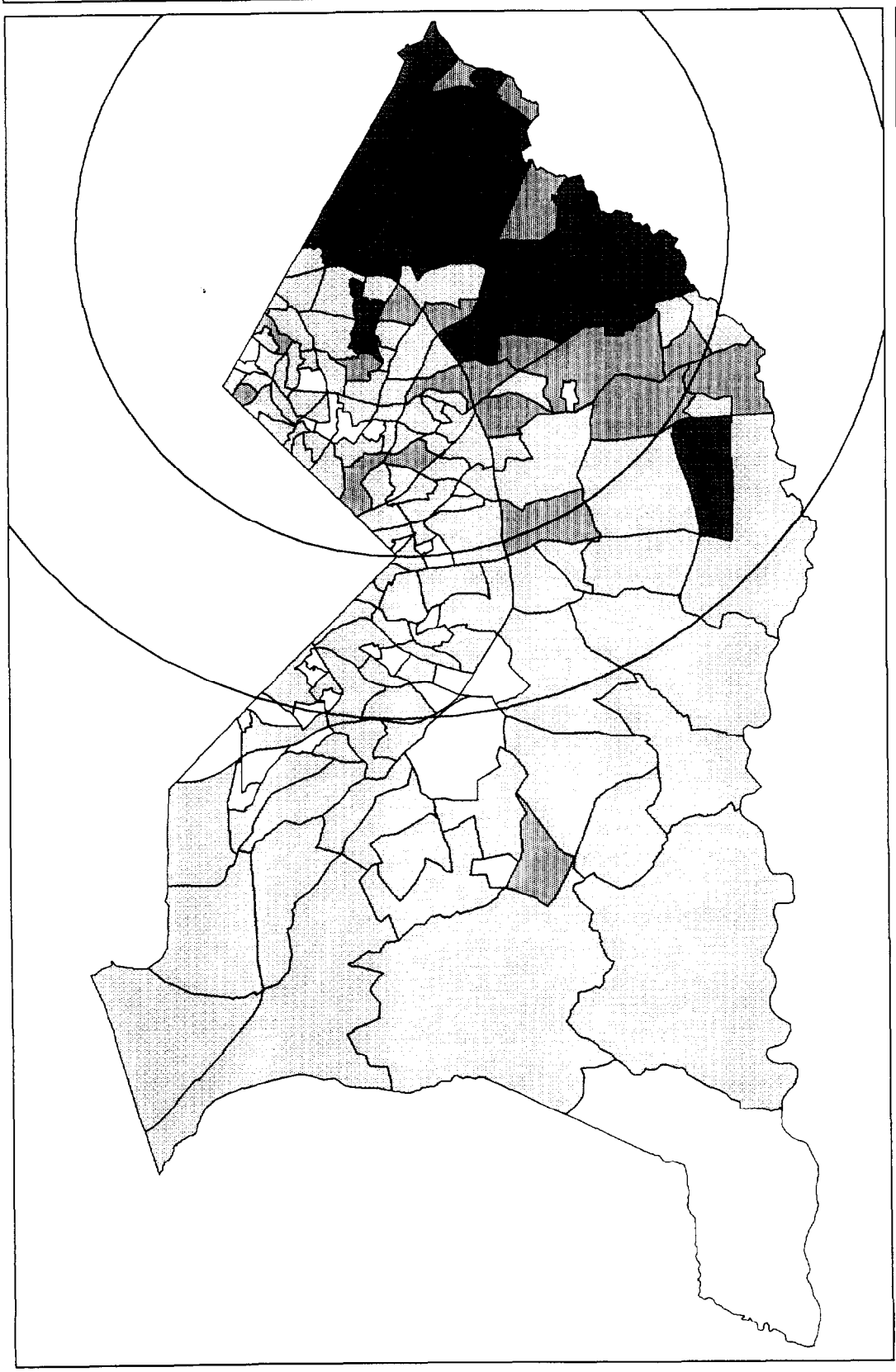
An evaluation of the information presented in Figure 39 indicates that there are 349 potential work trip users of non-traditional transit services. The principal residential areas associated with the Beltsville employment cluster with the most potential are:

- Less Than Ten Miles From the Cluster:
  - The I-95 corridor north of the Beltway
  - Southern Laurel
  - Northern Bowie/Southeast Greenbelt
  - College Park
- Between 10 and 15 Miles From the Cluster:
  - Southern Bowie
- More Than 15 Miles From the Cluster:
  - Temple Hills/Camp Springs

These areas were used as the main focus of the development of non-traditional transit options. However, other residential areas may be served by non-traditional transit vehicles traveling from/to the key residential areas identified in Figure 39 to/from the employment cluster.

[1] These estimates are presented in Appendix B.

Figure 39 - Beltsville
Potential Peak Period Work Trip Non-Traditional Transit Users



Legend:

- Census Tract
- Beltsville
- 10-15 Mile Radius

N

Potential

- None
- Between 1 and 2
- Between 3 and 4
- Between 5 and 16

Total: 349

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3.4.2.2 Hyattsville/Prince George's Plaza Work Trip Non-Traditional Transit Potential

The residential areas with non-traditional transit potential associated with this cluster have a total of 142 potential users which are depicted in Figure 40. The main residential areas associated with the Hyattsville/Prince George's Plaza employment cluster are:

- Less Than Ten Miles From the Cluster:
  - Chillum
  - Northern Bowie/Southeast Greenbelt
  - College Park
- Between 10 and 15 Miles From the Cluster:
  - Montpelier
  - Bowie
- More Than 15 Miles From the Cluster:
  - Friendly/Tantallon/Silesia

While these areas were used as the main focus of the development of non-traditional transit options, other residential areas would also be served. Therefore, for a particular non-traditional transit option the overall potential was estimated on the basis of the estimated potential of all of the residential areas served by the non-traditional transit vehicles.

3.4.2.3 Washington and Hanson Palmer Business Parks Non-Traditional Transit Potential

Figure 41 shows that there exist 189 potential non-traditional transit users within Prince George's County. An investigation of the data reveals that the most significant concentrations of non-traditional transit users reside:

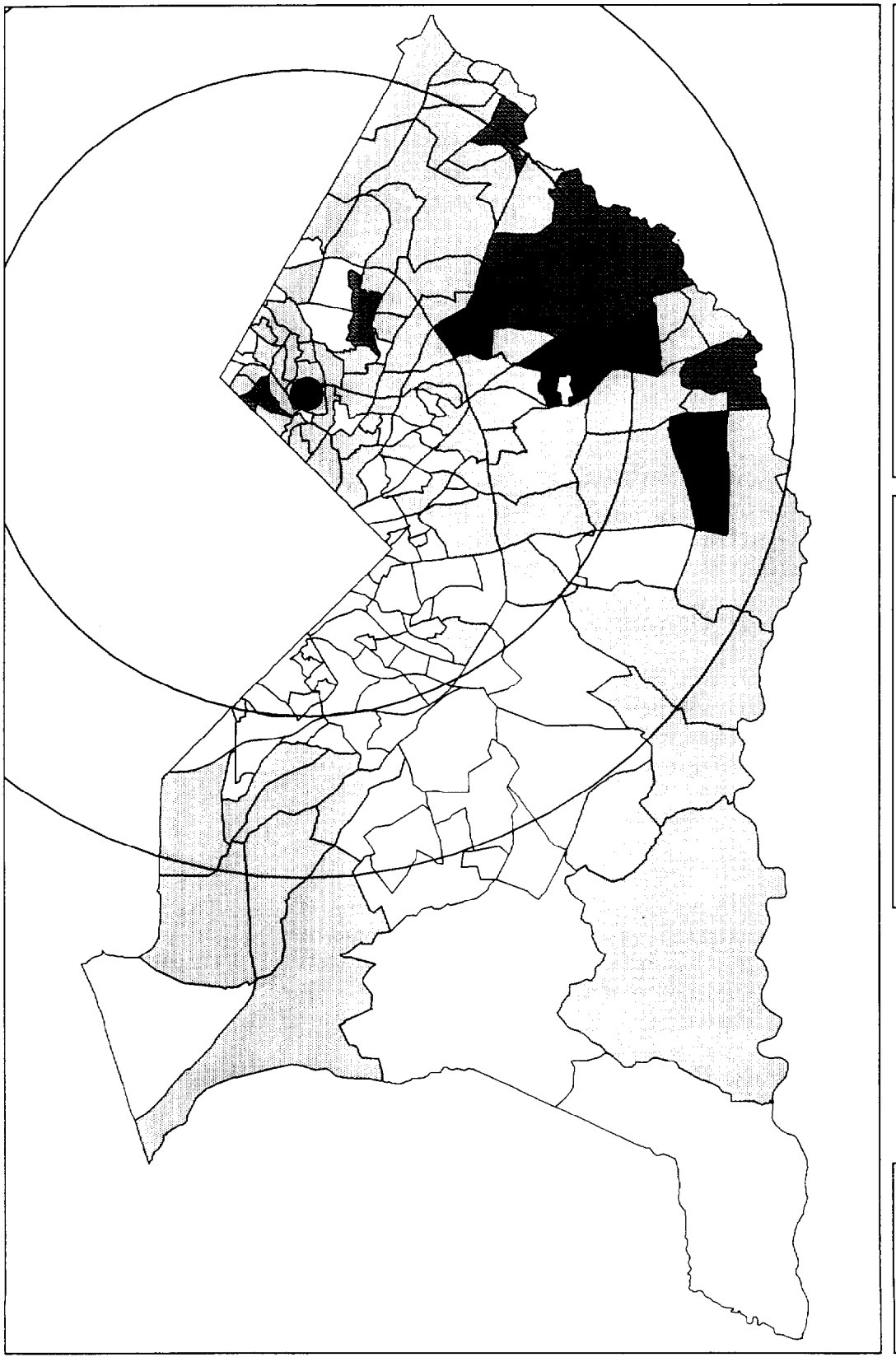
- Less Than Ten Miles From the Cluster:
  - Bowie
  - Glen Dale

These residential areas were used as the primary focus of the development of non-traditional transit service options. However, other areas may be served by non-traditional transit service that runs from/to the main residential areas identified in Figure 41 to/from the Washington and Hanson Palmer Business Parks.

3.4.2.4 Columbia Park Road Business Center Non-Traditional Transit Potential

The Columbia Park Road Business Center has a total of 106 potential non-traditional transit users. An evaluation of the data shown in Figure 42 indicates that the primary residential areas associated with this employment cluster with the most potential are:

Figure 40 - Hyattsville/Prince George's Plaza
Potential Peak Period Work Trip Non-Traditional Transit Users



Legend:

- Census Tract
- Hyattsville/PG Plaza
- 10-15 Mile Radius

Potential

- None
- Between 1 and 2
- Between 3 and 4
- Between 5 and 6

Total: 142

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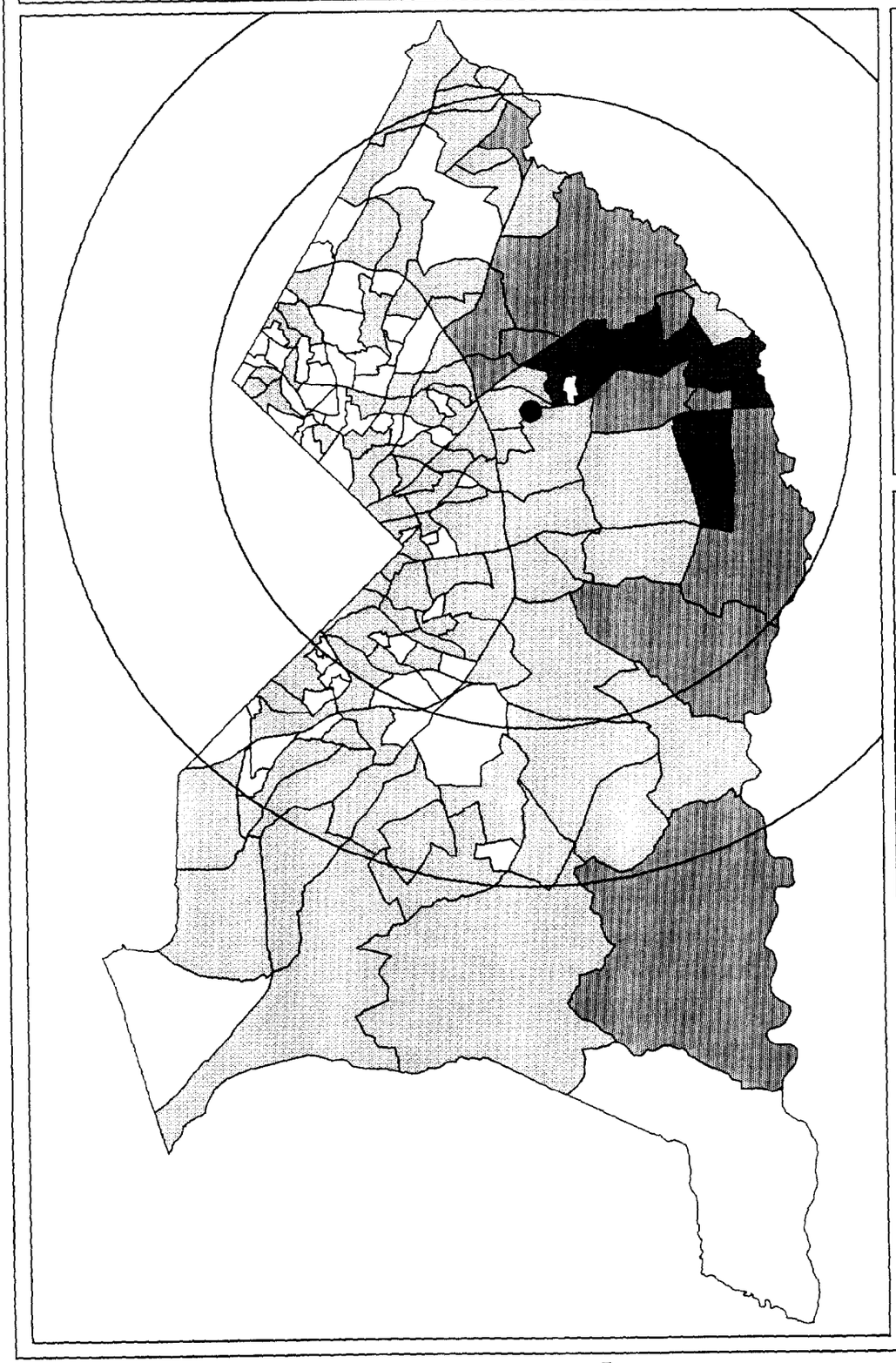
0 2 4

Figure 41 - Washington & Hanson Palmer Business Parks Potential Peak Period Work Trip Non-Traditional Transit Users



Legend:

Census Tract

Washinton/Hanson Palmer

10-15 Mile Radius

N

Potential

None

Between 1 and 2

Between 3 and 4

Between 5 and 16

Total: 189

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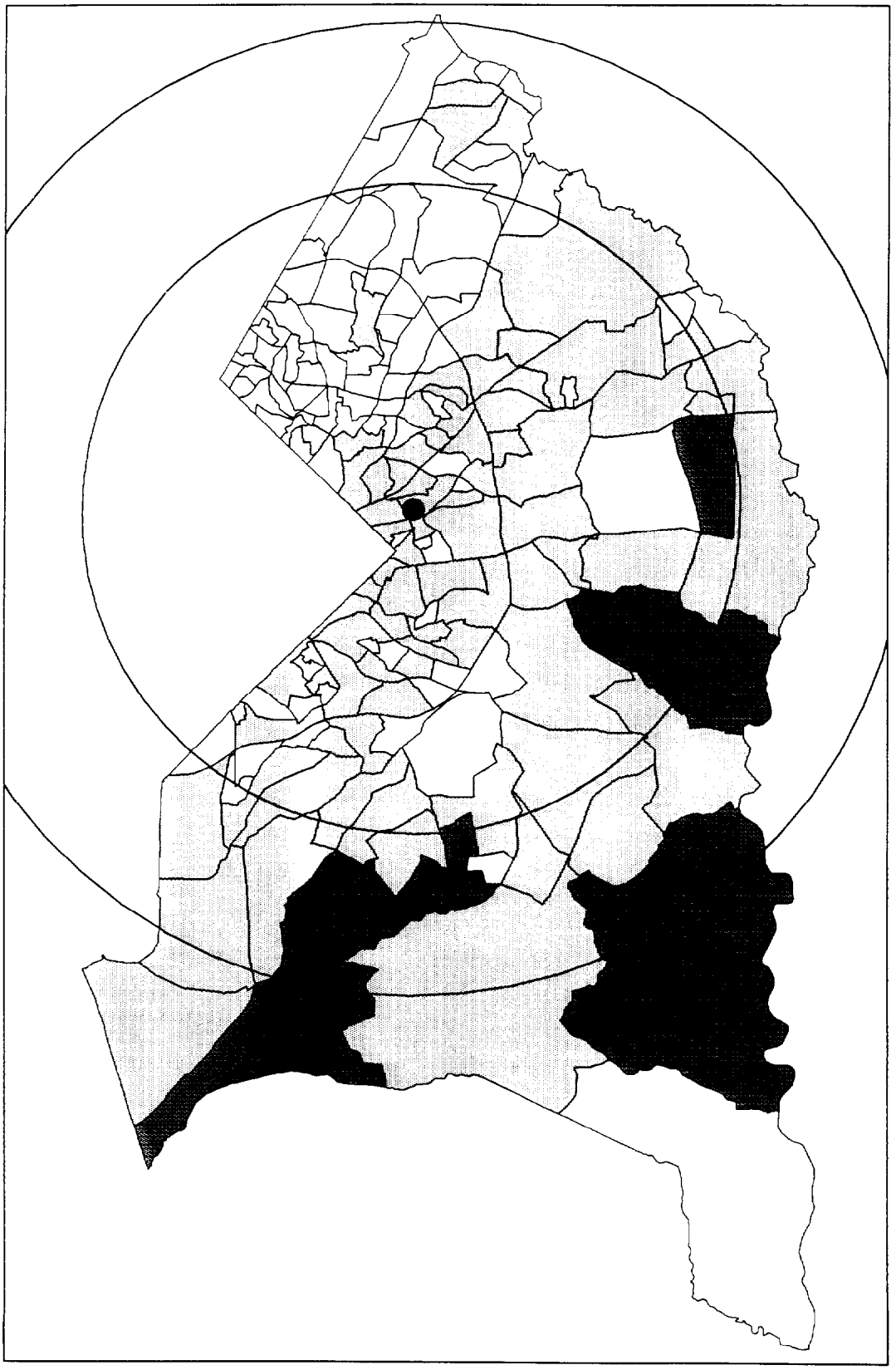
Miles

0 2 4

Figure 42 - Columbia Park Road Industrial Center
Potential Peak Period Work Trip Non-Traditional Transit Users



Legend:

- Census Tract
- Columbia Park Rd
- 10-15 Mile Radius

N

Potential

- None
- Between 1 and 2
- Between 3 and 4

Total: 106

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- Less Than Ten Miles From the Cluster:
  - Southern Bowie

- Between 10 and 15 Miles From the Cluster:
  - Brock Hall/Marlboro Meadows

- More Than 15 Miles From the Cluster:
  - Piscataway

The Project Team used these areas only as the main focus of non-traditional transit options to be developed. The total potential usage was calculated by summing up the estimated potential usage for each of the residential areas served by the proposed non-traditional transit option.

3.4.2.5 Southern Maryland Hospital Non-Traditional Transit Potential

As Figure 43 indicates, there is a total of 48 potential users of non-traditional transit service associated with the Southern Maryland Hospital cluster, and all of the key residential concentrations are located within ten miles of the hospital. The principal residential areas of employees of the Southern Maryland Hospital employment cluster are:

- Less Than Ten Miles From the Cluster:
  - Clinton
  - Brandywine Meadows/Clinton Woods
  - Friendly
  - Upper Marlboro

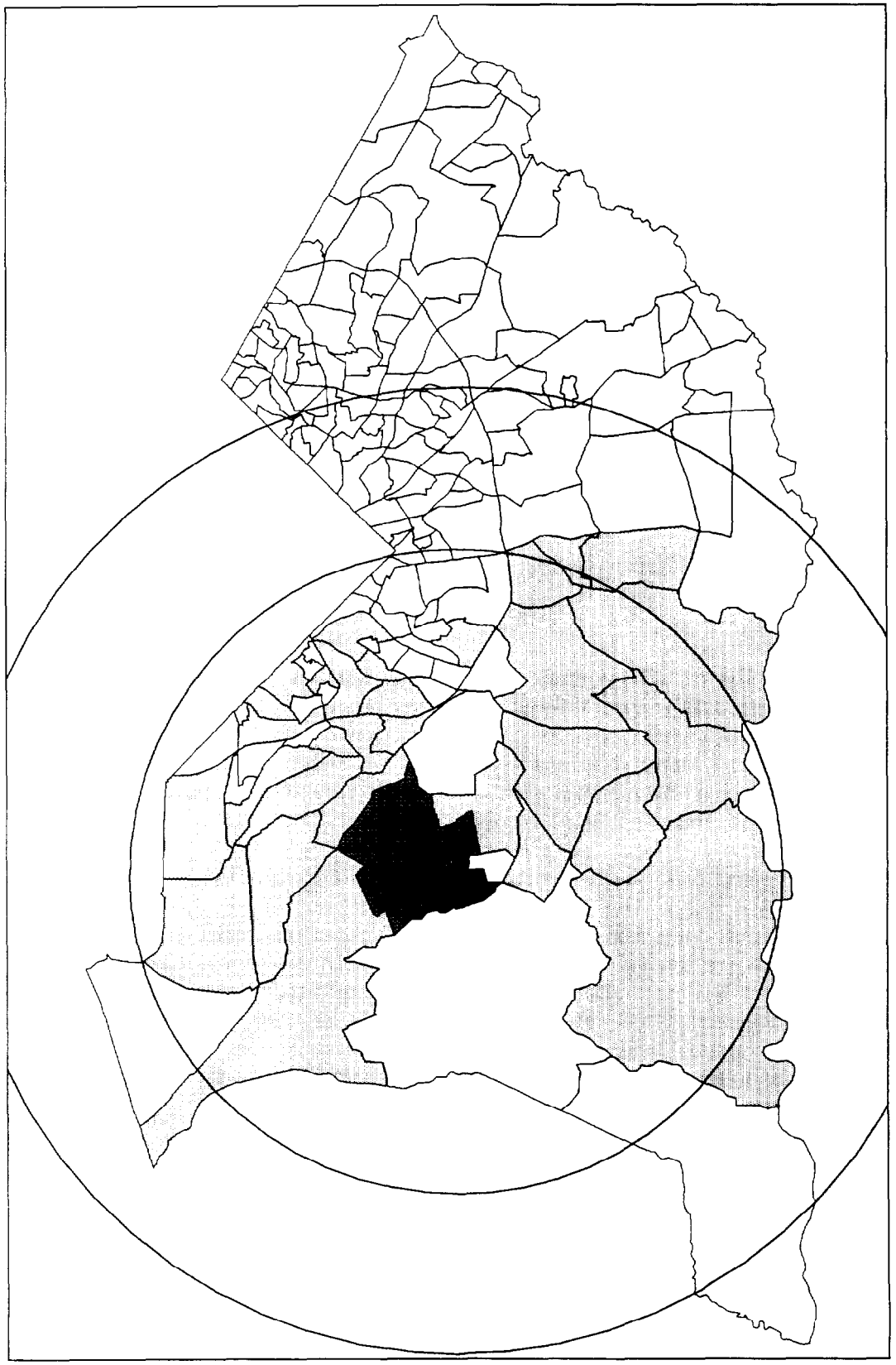
While the potential shown in Figure 43 for each census tract may be low, the aggregate potential of a number of census tracts within key corridors may be high enough to justify the implementation of non-traditional transit options. Moreover, the fact that this cluster has no existing transit service presents an opportunity to serve both the work and non-work trip markets. With this in mind, service options that attempted to tie this area into the regional transit system for both work and non-work trips were investigated.

3.4.2.6 Bowie State University Non-Traditional Transit Potential

The Project Team, using the methodology described above to estimate non-traditional transit potential, concluded that there are no residential areas with substantial concentrations of employee residences to warrant the implementation of a dedicated non-traditional transit option for this employment cluster.[1] However, it may be possible to incorporate service to this employment cluster into a non-traditional transit option developed for one or more of the other clusters, as Bowie has been found to be an area with high potential for several clusters. Because Bowie is the residential area with the largest concentration of University employees, this option would provide a connection between Bowie and the University.

[1] See Table C6 in Appendix C.

Figure 43 - Southern Maryland Hospital
Potential Peak Period Work Trip Non-Traditional Transit Users



Legend:

- Census Tract
- Southern MD Hospital
- 10-15 Mile Radius

N

Potential

- None
- Between 1 and 2
- Between 3 and 5

Total: 48

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Miles

0 2 4

3.4.2.7 Inglewood/USAir Arena Non-Traditional Transit Potential

There are a total of 148 potential users of non-traditional transit services for the Inglewood/USAir Arena employment cluster. An evaluation of the information presented in Figure 44 indicates that the principal residential areas associated with this employment cluster with the most potential are:

- Less Than Ten Miles From the Cluster:
  - Southern Bowie
  - Upper Marlboro
  - Columbia Park/Kentland
  - Lottsford
  - Bladensburg/Landover/Cheverly

- Between 10 and 15 Miles From the Cluster:
  - Westwood
  - Naylor
  - Tantallon/Silesia/Clinton/Friendly

These areas were used as the main focus of the development of non-traditional transit options. However, since other residential areas would served by non-traditional transit vehicles serving the areas listed above, the overall potential was estimated on the basis of the estimated potential of all of the census tracts/residential areas served by the proposed non-traditional transit option.

3.4.2.8 Non-Work Trip Non-Traditional Transit Potential

While the primary focus of the Project Team was to develop non-traditional transit options for work trips for the employment clusters listed above, options for non-work trips were also considered. Options that serve non-work trips were assessed for the areas identified in Task 1 as being high need or high potential residential areas[1]. The Project Team assumed that the maximum potential number of non-work trip users from each of these areas is equivalent to two percent of the population of the area.[2] Table 17 summarizes the estimated maximum number of non-traditional transit users from each of the high need/high potential residential areas.

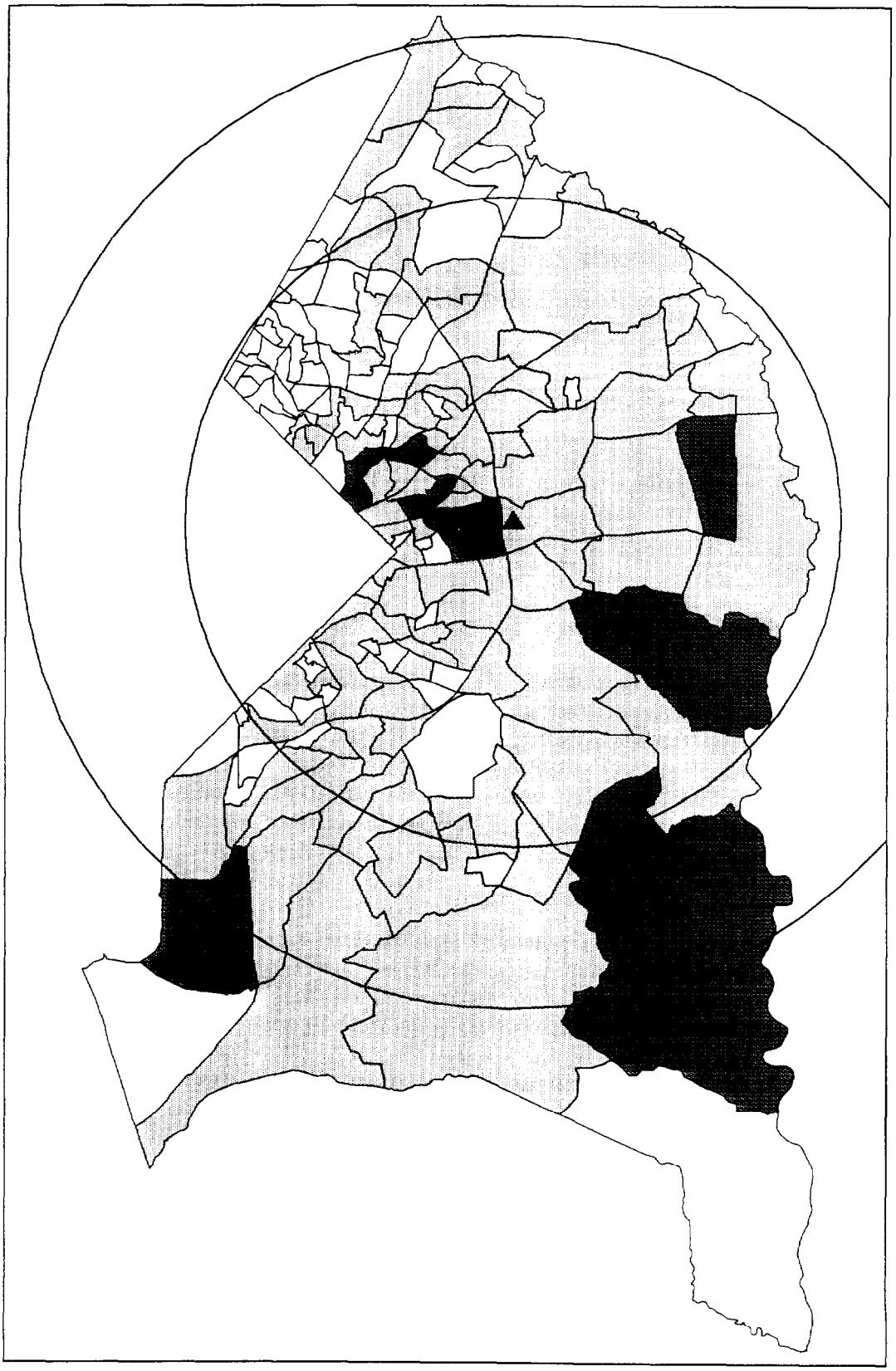
As non-traditional options were developed and specific residential areas served by the option were evaluated, the maximum potential of each tract was adjusted to account for the factors that would reduce the potential of the area. For instance, areas with ample fixed route coverage would have less potential to attract non-work trip users than areas which currently have limited transit service. On the other hand, the potential was increased in the cases where the option proposed to serve non-work trips had more characteristics of fixed route type of service than demand-responsive.

---

[1] These areas are shown in Figure 22.

[2] The rationale for using two percent as the maximum potential was discussed in the "Residential Clusters" section of this Chapter.

Figure 44 - Inglewood/USAir Arena
Potential Peak Period Work Trip Non-Traditional Transit Users



Legend:

- Census Tract
- Inglewood/USAir Arena
- 10-15 Mile Radius

N

Potential

- None
- Between 1 and 2
- Between 3 and 4

Total: 148

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Table 17
Maximum Non-Traditional Transit Potential for High Need/ High Potential Census Tracts

High Need/High Potential Census Tract	Population	Non-Traditional Transit Potential
1.04	8,388	168
2.02	4,249	85
2.04	9,473	189
2.07	5,100	102
5.06	13,268	265
6.01	6,667	133
12.01	7,864	157
12.02	6,190	124
12.03	5,874	117
12.04	6,992	140
13.01	6,384	128
13.03	10,648	213
13.04	9,222	184
14.01	8,341	167
14.03	6,545	131
16.00	3,603	72
17.01	4,471	89
17.03	10,258	205
17.04	5,436	109
18.01	2,171	43
18.02	4,316	86
18.06	8,676	174
19.02	6,373	127
20.01	5,878	118
20.02	2,767	55
21.05	7,858	157
22.03	5,112	102
24.01	7,113	142
24.03	5,021	100
24.04	4,825	97
25.00	6,488	130
26.00	3,790	76
27.00	3,130	63
28.03	3,900	78
28.04	6,398	128
29.01	3,205	64
29.03	1,409	28
30.01	2,382	48
30.02	2,916	58
31.00	2,935	59
32.00	3,276	66

Table 17 (Continued)
Maximum Non-Traditional Transit Potential for High Need/ High Potential Census Tracts

High Need/High Potential Census Tract	Population	Non-Traditional Transit Potential
33.00	4,691	94
34.01	1,799	36
34.02	5,220	104
35.05	5,878	118
35.06	9,475	190
35.07	6,789	136
35.08	3,953	79
35.09	4,892	98
35.11	4,894	98
36.09	6,867	137
38.03	5,265	105
39.00	3,518	70
40.01	4,522	90
41.02	5,440	109
43.00	3,413	68
44.00	2,485	50
46.00	2,988	60
48.00	4,413	88
49.00	3,746	75
50.00	4,887	98
51.01	3,420	68
52.01	3,439	69
52.02	3,438	69
55.00	3,881	78
56.00	9,661	193
57.00	4,684	94
58.02	3,193	64
59.01	4,159	83
59.05	5,994	120
60.00	3,720	74
62.00	3,828	77
65.01	3,444	69
66.01	3,726	75
66.02	3,627	73
67.03	6,315	126
67.05	10,803	216
70.00	4,942	99
71.02	4,032	81
74.06	6,176	124
Total	426,529	8,532

3.5 Summary of Findings of Trip Generation and Distribution

This Chapter summarizes the results of the estimation of non-traditional transit potential for selected areas in Prince George's County. In Task 1 of this study, the Project Team selected eight employment clusters to be used as the focus for the development of non-traditional transit options for work trips. The selected clusters were:

1. Beltsville
2. Hyattsville/Prince George's Plaza
3 Washington Hanson Palmer Business Park
4. Columbia Park Road Industrial Center
5. Hampton Business Park
6. Southern Maryland Hospital
7. Bowie State University
8. Inglewood Office Complex

In Task 2, the Project Team eliminated the Hampton Business Park from further detailed examination of its non-traditional transit potential because of lack of adequate data as well as a determination that the type of employment in this cluster cannot be easily served by non-traditional transit options. The transit potential for each of the employment clusters was estimated by determining the place of residence of employees, evaluating existing transit service and the assessing the need/potential of the residential concentrations.

Beltsville, Hyattsville/Prince George's Plaza, Washington Hanson Palmer Business Park, Columbia Park Road Industrial Center, and Inglewood Office Complex have the most significant concentrations of potential non-traditional transit users. The analysis of non-traditional transit potential indicates that these clusters will likely be able to support options specifically dedicated to provide service between the employment clusters and the place of residence of their employees. Bowie State University shows such low potential that it could only be served with non-dedicated options developed in conjunction with service to some of the other employment clusters. In the case of Southern Maryland Hospital, sufficient potential does not exist to support a non-traditional transit service dedicated solely to work trips to this cluster. However, since the area has no transit service at present, an option that provides for work trips to the employment cluster and general transit service to the surrounding residential areas was considered to be viable.

The information on non-traditional transit potential, summarized in this Chapter, was used in the next task of this project to identify areas with potential for fixed route and non-fixed route services, evaluate service options to meet work trip needs, and assess the overall potential of non-work trip options within high need/high potential residential areas. The range of non-traditional options investigated included the following:

- Subscription bus
- Carpool programs
- Vanpool programs
- Community circulators
- Fixed route feeder services

- Demand responsive feeder services
- Use of small transit vehicles
- Route deviation
- User-side subsidy/taxi programs

Each of the employment clusters listed above was matched with one or more non-traditional transit modes based on the trip patterns identified for each cluster and the characteristics of the individual modes. After the initial matches were made, an analysis of the potential for success was conducted. Thus, at the end of Task 4, a list of non-traditional transit options for the employment clusters and residential concentrations was developed to be carried into Task 5 of the project, the evaluation of the cost effectiveness of each of the recommended non-traditional transit options.

4.0 IDENTIFICATION AND EVALUATION OF NON-TRADITIONAL TRANSIT OPTIONS

This Chapter identifies feasible options that improve mobility in Prince George's County and presents an evaluation of non-traditional transit alternatives.

4.1 Purpose and Methodology of Tasks 4 and 5

The purpose of Task 4 was to develop feasible traditional and non-traditional transit options that could serve the target areas identified in tasks Two and Three of the study. Initially in Task 4, the Project Team prepared a set of non-traditional and traditional options for evaluation. These options were presented to the Technical Working Group and input from the members was incorporated into the analysis. After these preliminary steps the options were classified into two major subgroups:

- Traditional: includes new fixed route alternatives and modifications to existing fixed routes.

- Non-traditional: includes all new services that are not operated with a large bus on a traditional fixed route.

No additional analysis was conducted on the traditional transit options. These identified fixed route options will be studied further as part of the transit development plan update currently under preparation by the County.

The non-traditional transit options were refined and evaluated further. The Project Team prepared an evaluation matrix which was used as the starting point for the selection of three options to be selected for more detailed evaluation. These three options were selected in a working session with the Technical Working Group. In Task 5, the Project Team conducted detailed evaluation of the cost effectiveness of the three selected options.

The results of Tasks 4 and 5 are presented in this Chapter. There is a section that presents the preliminary options proposed for Prince George's County. Another section describes the evaluation of the options and the selection of options for further evaluation. The last section presents a description of the three options initially recommended to be carried over to the next phase of the study, the development of an implementation plan.

4.2 Preliminary Options for Prince George's County

This section describes the preliminary non-traditional and fixed route transit options selected by the Project Team to address identified mobility deficiencies in Prince George's County. The employment and residential clusters identified as target areas and their corresponding characteristics were described in the previous chapters. The Project Team evaluated existing service to the target areas, need and potential of origin areas, and applicability of non-traditional transit alternatives to develop specific options for the target areas.

Because of projected level of demand, most clusters did not appear to warrant the introduction of any new fixed route service. Rather, it is believed that non-traditional service would be cost effective and competitive with the private automobile. The non-traditional

service could be used to establish a foundation upon which to build demand for future fixed route services.

The only clusters for which a new fixed route was proposed are the Southern Maryland Hospital, Columbia Park Road Industrial Center, and Inglewood/US AIR Arena. Southern Maryland Hospital is the only one with no existing transit service. Non-traditional transit services were also proposed for these clusters.

The following sections describe in detail the preliminary options selected to improve mobility in key areas of Prince George's County. All of the described traditional and non-traditional transit options would work better if the proposed service is accompanied by a package of employer subsidies, disincentives for single occupant vehicle commuting, establishment of transportation coordinators, and other employer-based transportation demand management measures.

4.2.1 Beltsville Area

The Beltsville area is relatively larger than the other areas selected as targets in Tasks 2 and 3 of this study. There are approximately 14,700 employees working for the major employers in Beltsville. Approximately 50 percent of these employees live in Prince George's County. The major employers are the National Agricultural Research Center (NARC), Arbitron, and Computer Science Corporation (with 1,100, 800 and 400 employees respectively). The estimated proportion of workers that start work during peak hours is 87 percent and the estimated peak period non-traditional transit potential is 350 passengers. There are no major parking deficiencies in this area.

4.2.1.1 Beltsville - Option 1 - Bowie Subscription Service

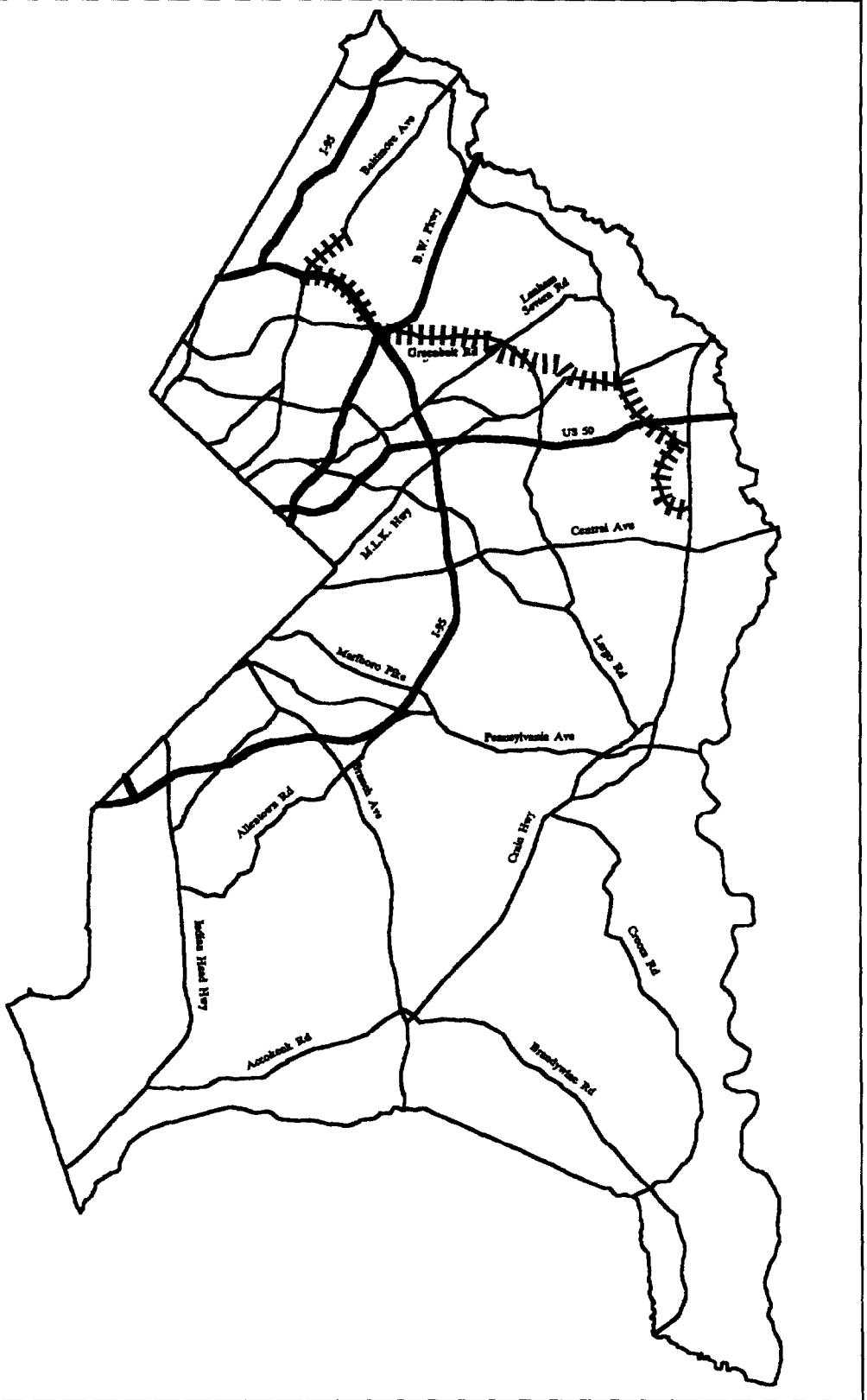
Currently, there is no direct transit connection between Bowie and Beltsville. However, as shown in Figure 27, there is a relatively large number of employees that live in Bowie and the corridor that connects Bowie to Beltsville. There are more than 320 workers employed in Beltsville that reside in the zip code that encompasses the Bowie area. Figure 39 shows that several of the areas along this corridor have adequate transit potential to warrant the implementation of a service to address the needs of Bowie-Beltsville travelers.

Thus, the first option proposed for the Beltsville area is to coordinate with the major employers in the Beltsville area to establish a subscription bus from Bowie. The presence of two major employers with more than 500 employees facilitates the coordination of subscription service. Thus, subscription service appears to be more feasible for this cluster than general public route deviated service. The bus would operate during peak periods and would also be used to provide a shuttle circulator during lunch hours. The vehicle would deviate to serve subscribers along the way. The spine of the service corridor would likely follow the route shown in Figure 45.

4.2.1.2 Beltsville - Option 2 - Beltsville Circulator

A large proportion of the employees that work in Beltsville live in residential communities within four miles of the National Agricultural Research Center (NARC) main building. Over 1,200 employees reside in the zip code that encompasses the Beltsville area.

Figure 45 - Beltsville Option 1



Legend:

- Arterial
- Highway
- Proposed Route

N

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A large portion of this zip code area is composed of the NARC. Thus, the 1,200 employees that reside in the Beltsville zip code area are concentrated in the residential clusters within three miles of the NARC. These clusters include the residential communities inside and outside the Beltsville area. While there is substantial transit service along Route 1, there is not adequate penetration into the residential areas described above.

Thus, another option for the Beltsville area is to operate a shuttle bus during peak periods serving the major employers in Beltsville, the residential communities inside the Beltsville area, and the residential areas east of I-95 and south of Powder Mill Road. The proposed shuttle would have to be operated with relatively close headways to make the system attractive to the short distance commuters. In addition, as part of this option, a lunch hour shuttle connecting the major employers with retail establishments to the south should be considered.

4.2.1.3 Beltsville - Options 3 and 4 - Modifications to Existing Bus Routes

There are two routes that currently serve sections of the Beltsville area that could be modified to provide better access to the major employment center in the area, the NARC facility.

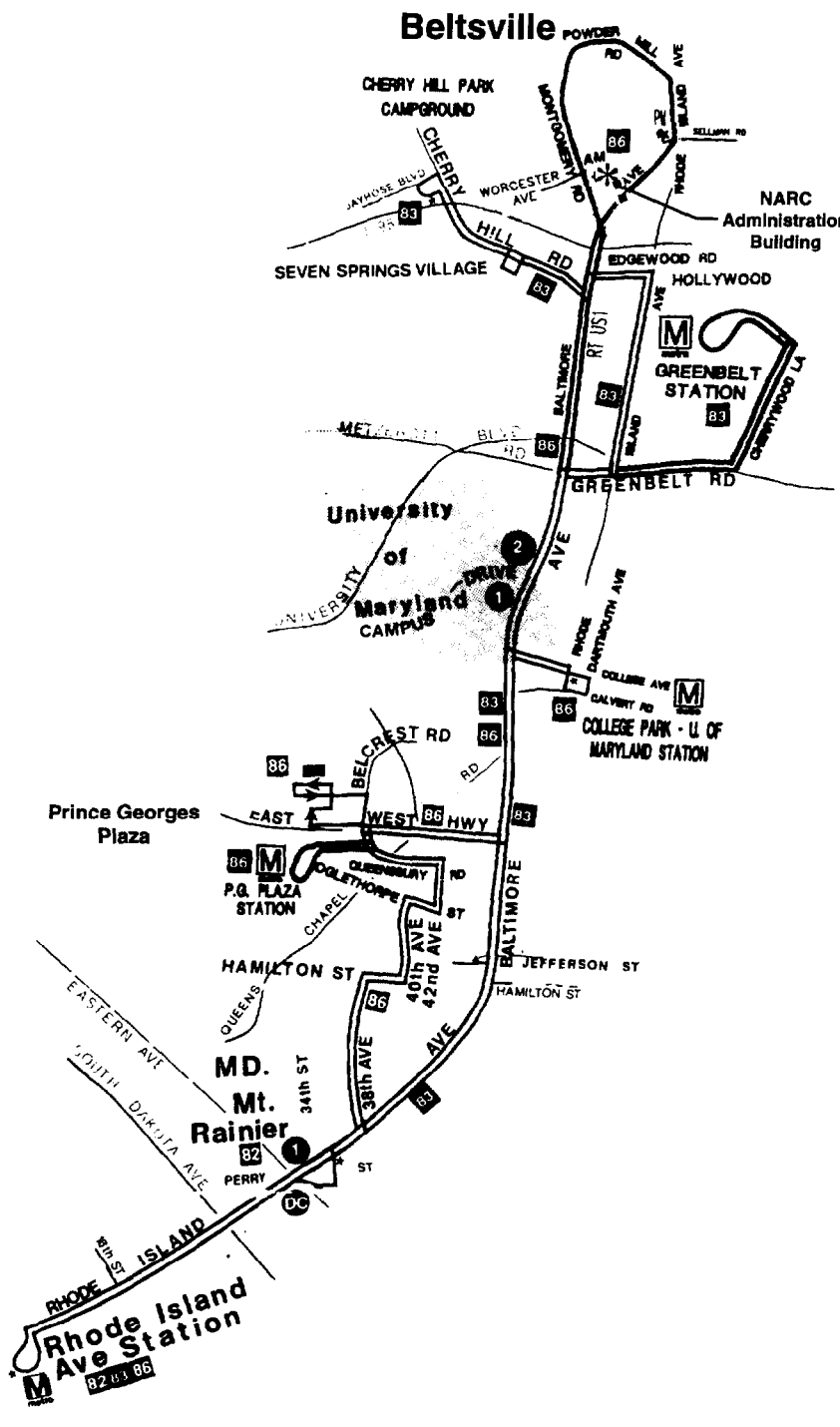
Option 3, shown in Figure 46, would be to modify WMATA Route 83/86, which currently serves the southern section of Beltsville, to serve the front entrance of the research center.

Option 4, shown in Figure 47, would be to modify the Connect-A-Ride Route G, which serves the northern portion of the Beltsville area, to serve the front entrance of the research facility.

4.2.2 Hyattsville/Prince George's Plaza

The Hyattsville/Prince George's Plaza area is also relatively large. The major employment centers within the area are concentrated near the Prince George's Plaza Metro station. There are approximately 7,300 employees working for the major employers in the Hyattsville/Prince George's Plaza area, approximately 44 percent of whom live in Prince George's County. The major employers are the Department of Health and Human Services (HHS), United States Department of Agriculture (USDA), and the National Health Center (NHC), with 890, 821 and 465 employees respectively. The estimated proportion of workers that start work during peak hours is 82 percent and the estimated peak period non-traditional transit potential is 140 passengers. This area experiences some parking deficiencies and traffic congestion at key locations. Transit service to the area is extensive, with several high frequency routes serving the two Metro stations, Prince George's Plaza and West Hyattsville, located within the area. However, there is potential for the implementation of shuttle/community circulator type service and connecting service to key areas within the County. The following are the options selected to address the key transit deficiencies of the Hyattsville area.

Figure 46 - Beltsville Option 3
Modification to Route 83/86



Legend:

- M — Metrorail Station
- ★ — Terminal Stands
- DC 1 2 — Fare Zone Limits
- ■ — Base Service
- ▪ ▪ ▪ — Modification to Existing Route

N

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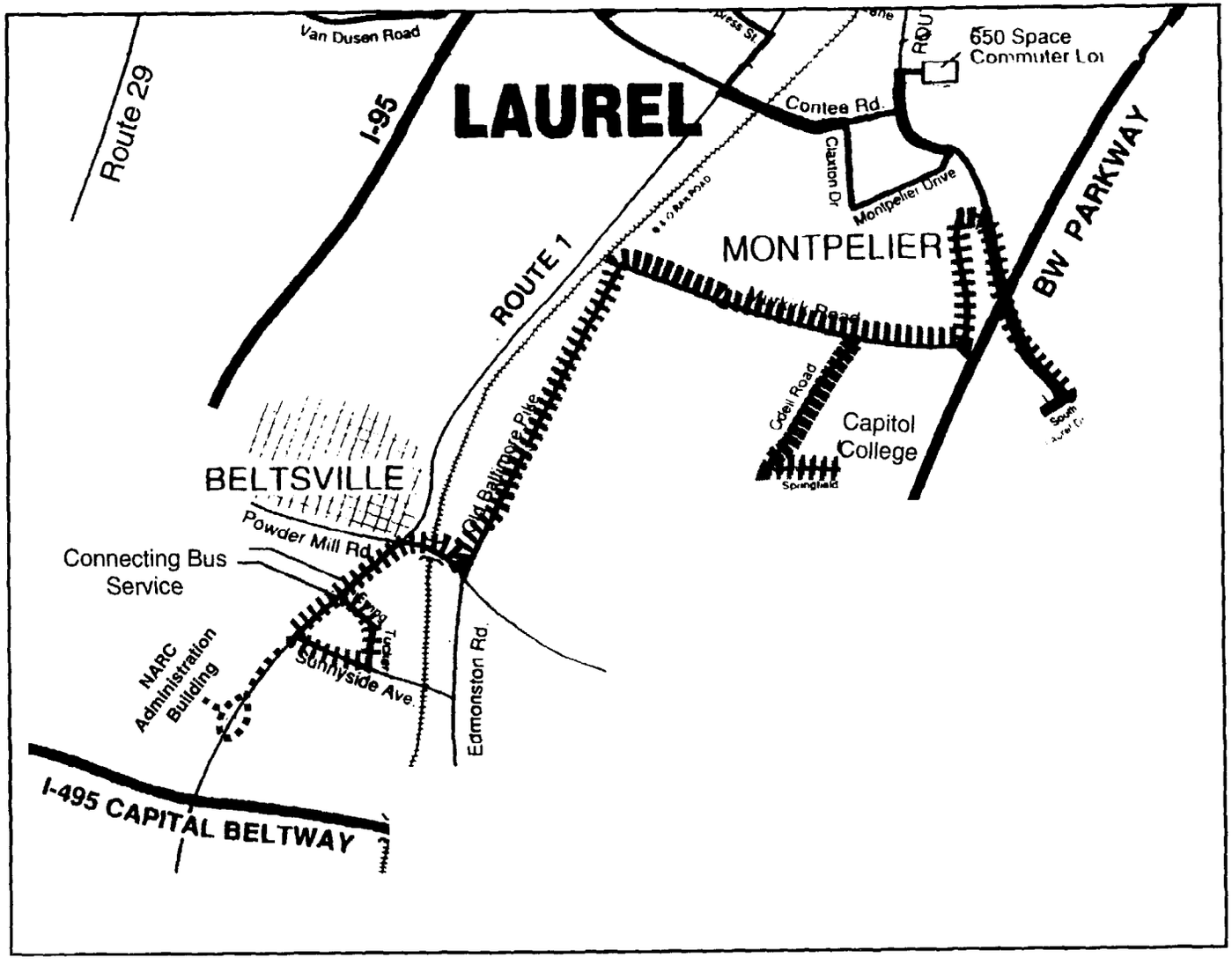
Figure 47 - Beltsville Option 4
Modification to Route G



Legend:

Route G

Modification to Existing Route

N

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4.2.2.1 Hyattsville/Prince George's Plaza - Option 1 - Peak Period/Midday Circulator

While there are many bus routes serving this area with a system of radial routes that connect residential communities in Prince George's County to the Prince George's Plaza and West Hyattsville Metro stations, there is potential to attract more users if a fast, frequent connection between the Metro stations, the residential areas, and the major employment centers were implemented.

There is also a need to provide a good connection between the Prince George's Plaza Metro station, the major employment centers, and the Prince George's Plaza Shopping Center.

Thus, the first recommended option for this area is to establish a peak period/midday circulator bus shuttle in the Prince George's Plaza area. This circulator would connect the major employers in the Prince George's Plaza area, would serve the shopping center and the metro station, would provide transit penetration in the residential areas and could transport passengers to restaurants and stores during lunch and midday hours. The major purposes of the circulator are to improve accessibility of residents and employees to community resources, transportation options, shopping and employment centers, and to increase mobility options throughout the area.

The circulator would serve the Hyattsville/Prince George's Plaza area with ten to fifteen minute headways during peak hours. This service would be attractive to persons that could currently use existing bus routes but do not use them because the employment end of the trip is not within walking distance from the bus route terminus. It would also serve the needs of residents by providing a transit connection to community services.

4.2.2.2 Hyattsville/Prince George's Plaza - Option 2 - Subscription Service to Bowie

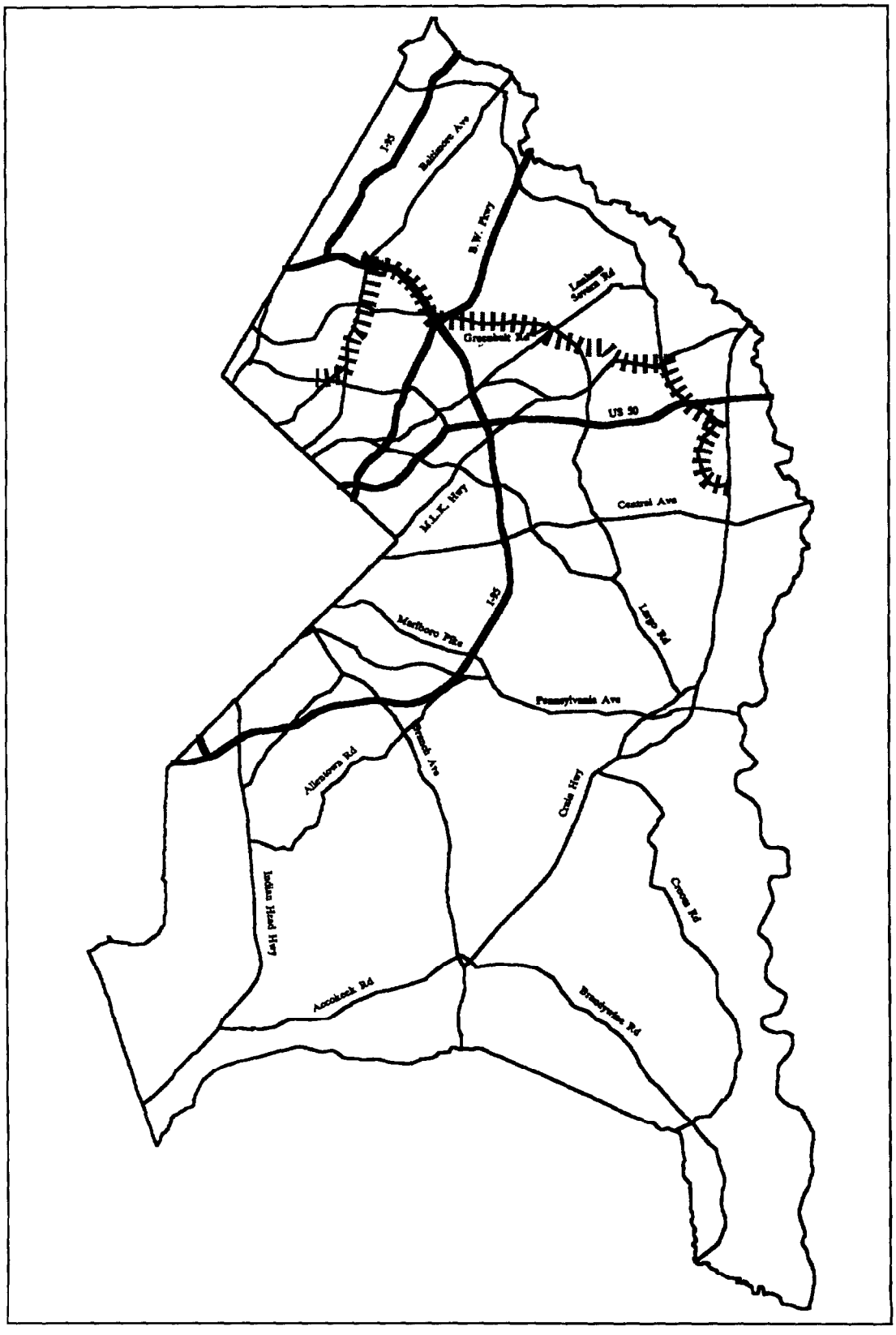
Despite the extensive transit service to the Hyattsville/Prince George's Plaza area, there is currently no direct route to the area from Bowie. Figure 40 shows that the peak period transit potential for a route connecting Bowie the Hyattsville/Prince George's Plaza area would be approximately 15 to 20 passengers.

Thus, Option 2 for the Hyattsville/Prince George's Plaza would be to establish a subscription bus to serve Bowie and the corridor between Bowie and Prince George's Plaza shown in Figure 48. The focus is to serve the three major employers (HHS, USDA and NHC) and to use representatives of these employers to coordinate the operation of the subscription service. Under this option, a corridor would be established and residents of areas located within the corridor, using the route shown in Figure 48 as the spine of the service, would be candidates that could subscribe to the service.

4.2.3 Washington and Hanson Palmer Business Parks

The Washington and Hanson Palmer Business Parks area is relatively smaller than the other areas selected as targets in Tasks 2 and 3 of this study. There is no large major employer in this area. Rather, there is a heavy concentration of medium sized employers. The largest employers in this area are RJO and Multivision Cable TV Corporation, with 360 and 200 employees, respectively. There are approximately 6,100 employees working for the major

Figure 48 - Prince George's Plaza Option 2



Legend:

- Arterial
- Highway
- Proposed Route

N

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employers in the Business Park area. Approximately 57 percent of these employees live in Prince George's County. The estimated proportion of workers that start work during peak hours is 90 percent and the estimated peak period non-traditional transit potential is 190 passengers. This area experiences some parking deficiencies and traffic congestion at key locations. The following are the options selected to address the key transit deficiencies of the Washington and Hanson Palmer Business Parks area.

4.2.3.1 Washington and Hanson Palmer Business Parks - Option 1 - Route Deviated Service to Bowie

There is currently no direct transit connection between the Washington and Hanson Palmer Business Parks area and Bowie. However, there are several employees that commute daily from Bowie. There are more than 760 peak period employees that reside in zip code areas associated with Bowie. Also, an evaluation of Figure 41 indicates that there is substantial non-traditional transit potential for a route serving Bowie and the corridor between Bowie and the Washington and Hanson Palmer Business Parks area.

Therefore, Option 1 for the Washington and Hanson Palmer Business Parks area is to serve the corridor to Bowie, shown in Figure 49, with a bus operated as a point deviated or route deviated service. The lack of one major employer with more than 500 employees makes it difficult to implement subscription service in this cluster. The difficulty in maintaining adequate coordination between the several medium size employers in this cluster makes the proposed route deviated service a more feasible option than subscription bus. The service would be operated as route or point deviated to increase the level of penetration into the residential areas in Bowie and north of Annapolis Road. To add potential for this route, the vehicles would also serve the New Carrollton Metro Station.

4.2.3.2 Washington and Hanson Palmer Business Parks - Options 2, 3 and 4 - Modifications to Existing Bus Routes

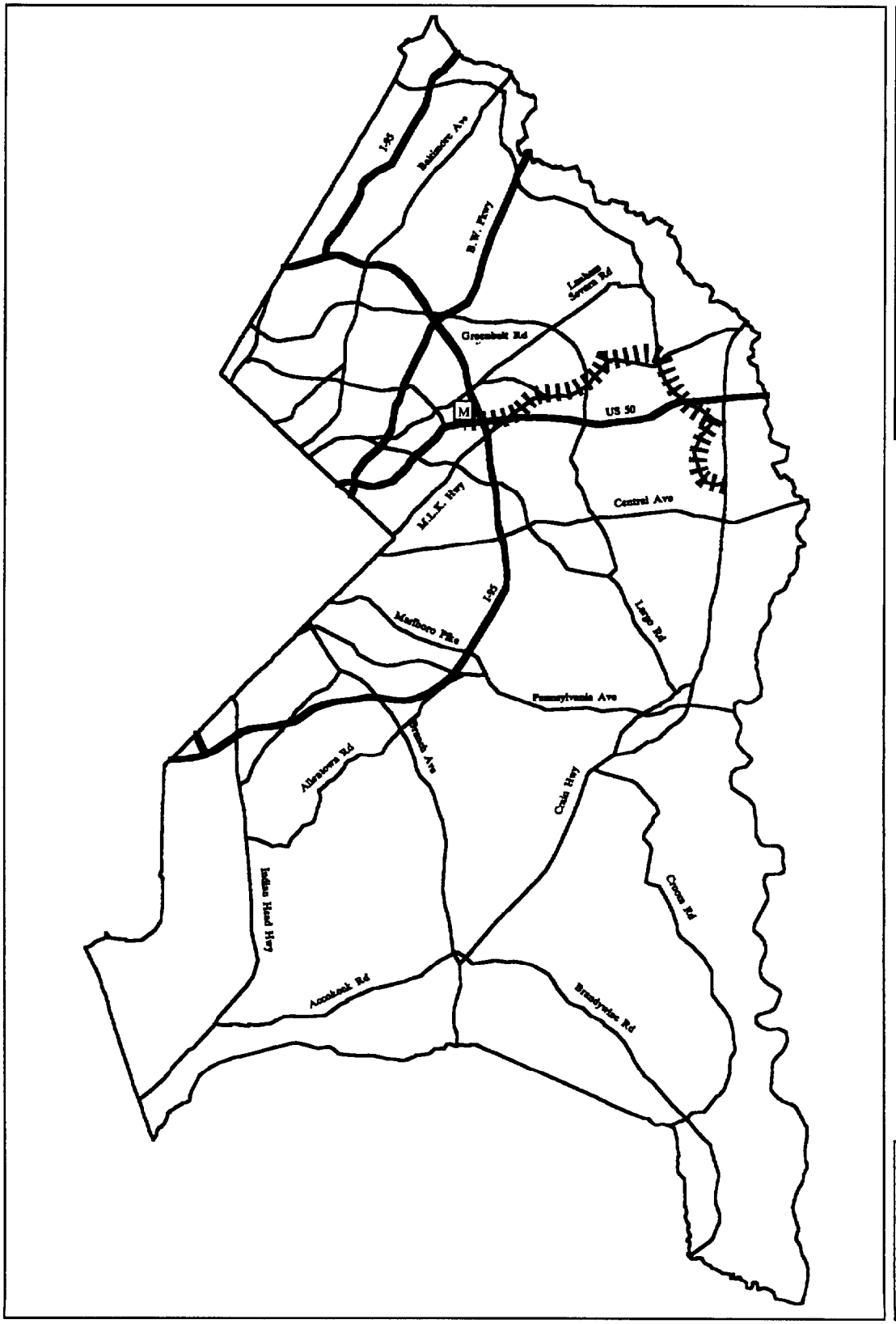
There are three routes that currently serve sections of the Washington and Hanson Palmer Business Parks area that could be modified to provide better access to the major employment centers in the Washington and Hanson Palmer Business Parks.

Option 2 would be to modify WMATA Route C28, shown in Figure 50, to serve the business parks. This loop may be operated as "on demand only." Some type of electronic display would be installed to indicate to the driver that there is a passenger requesting a pick up at one of the stops within the business parks. The installation of this electronic call devices would allow for the route to operate more efficiently, as the vehicles would only deviate to pick up passengers when there is a call for service. Such devices have been used on the residential end of on-demand routes in other systems.

Option 3 would be to modify WMATA Route B23/B24, shown in Figure 51, to serve the business parks. Similar to Option 2, this loop may be operated as "on demand only" with the same type of electronic displays for passenger calls as described in Option 2.

Option 4 would be to modify WMATA Route B21/B22, shown in Figure 52, to serve the business parks. This loop may also be operated as "on demand only" with the type of electronic devices for passenger calls as described for Option 2 above.

Figure 49 - Washington Hanson Palmer Business Parks Option 1



Legend:

- Arterial
- Highway
- M — Metro Station
- Proposed Route

N

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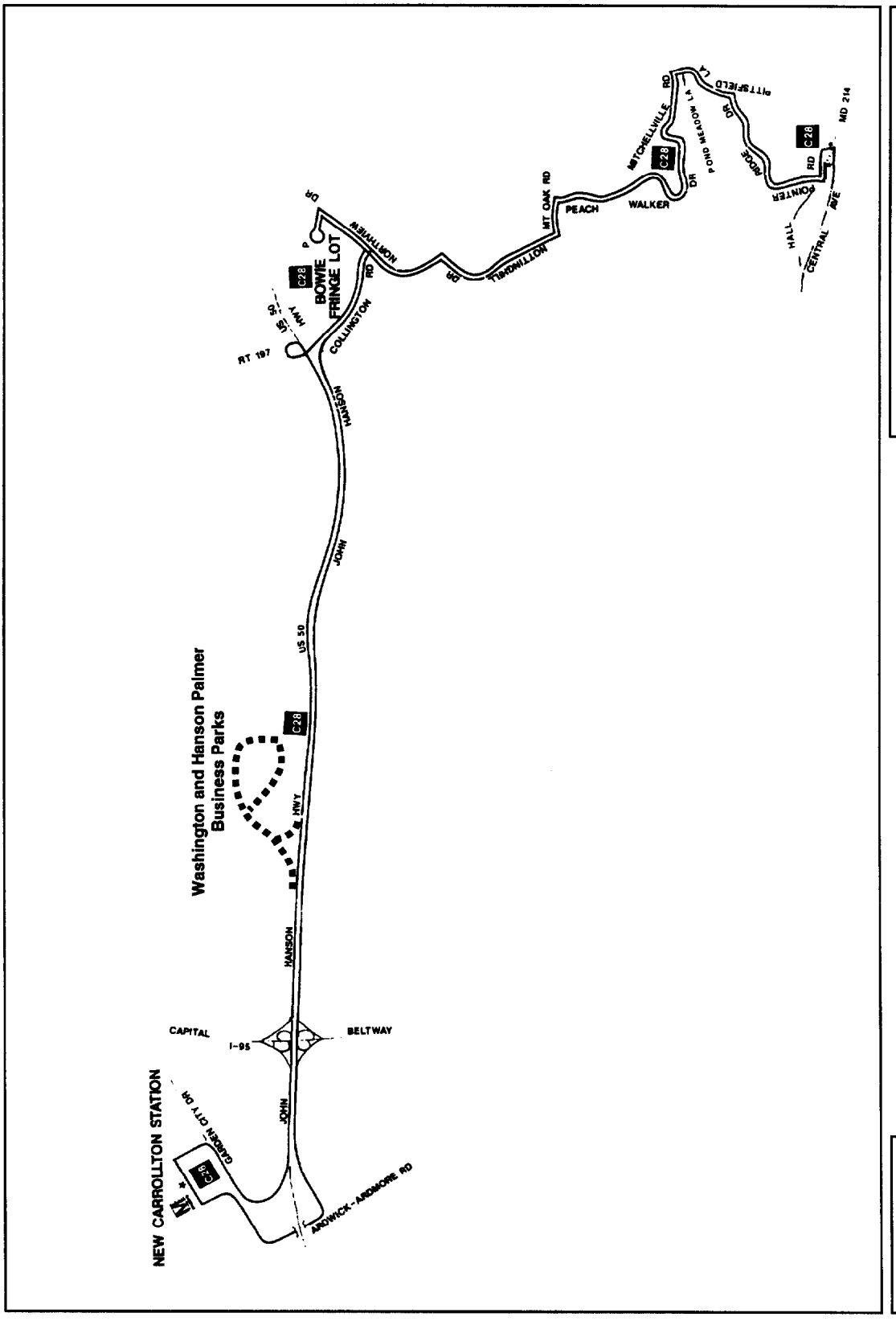
0 2 4

Figure 50 - Washington and Hanson Palmer Business Parks Option 2-Modification to Route C28



Legend:

- Metrorail Station
- Terminal Stands
- Parking Lot
- Base Service
- Modification to Existing Route

N

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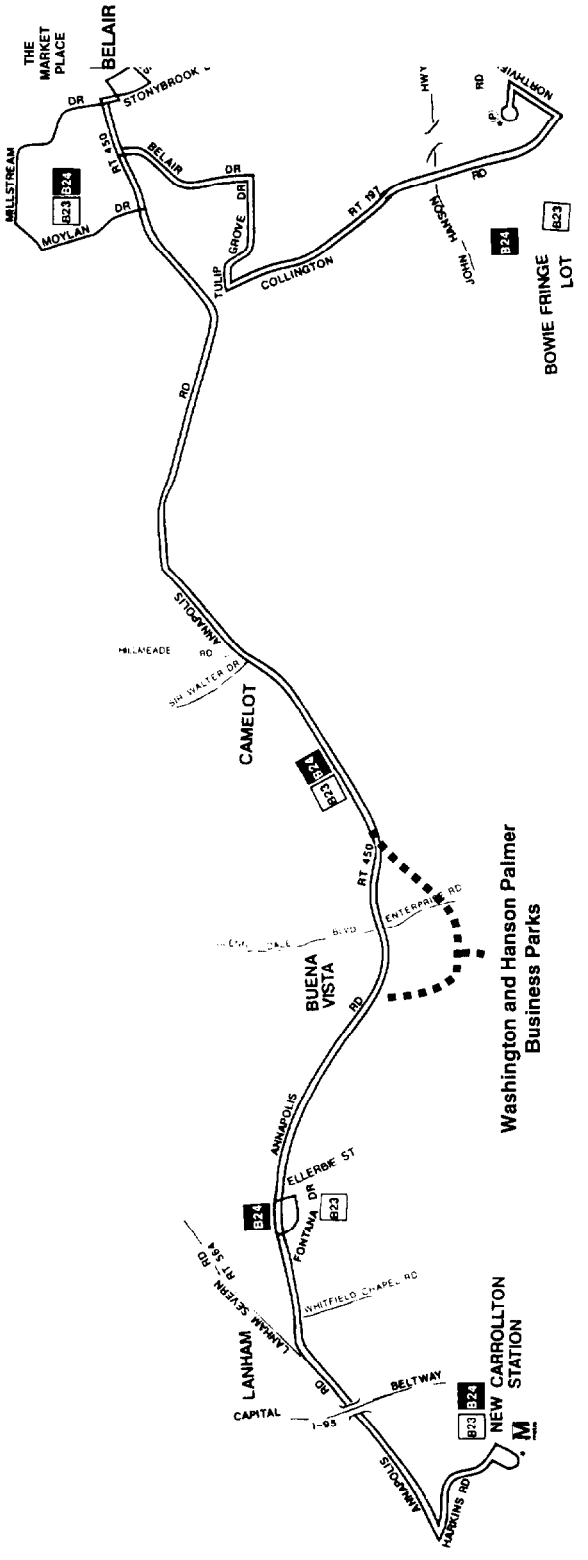
Figure 51 - Washington and Hanson Palmer Business Parks Option 3-Modification to Route B23/B24



Legend:

- M — Metrorail Station
- ★ — Terminal Stands
- ■ — Base Service
- P — Parking Lot
- ▪ ▪ ▪ — Modification to Existing Route

N

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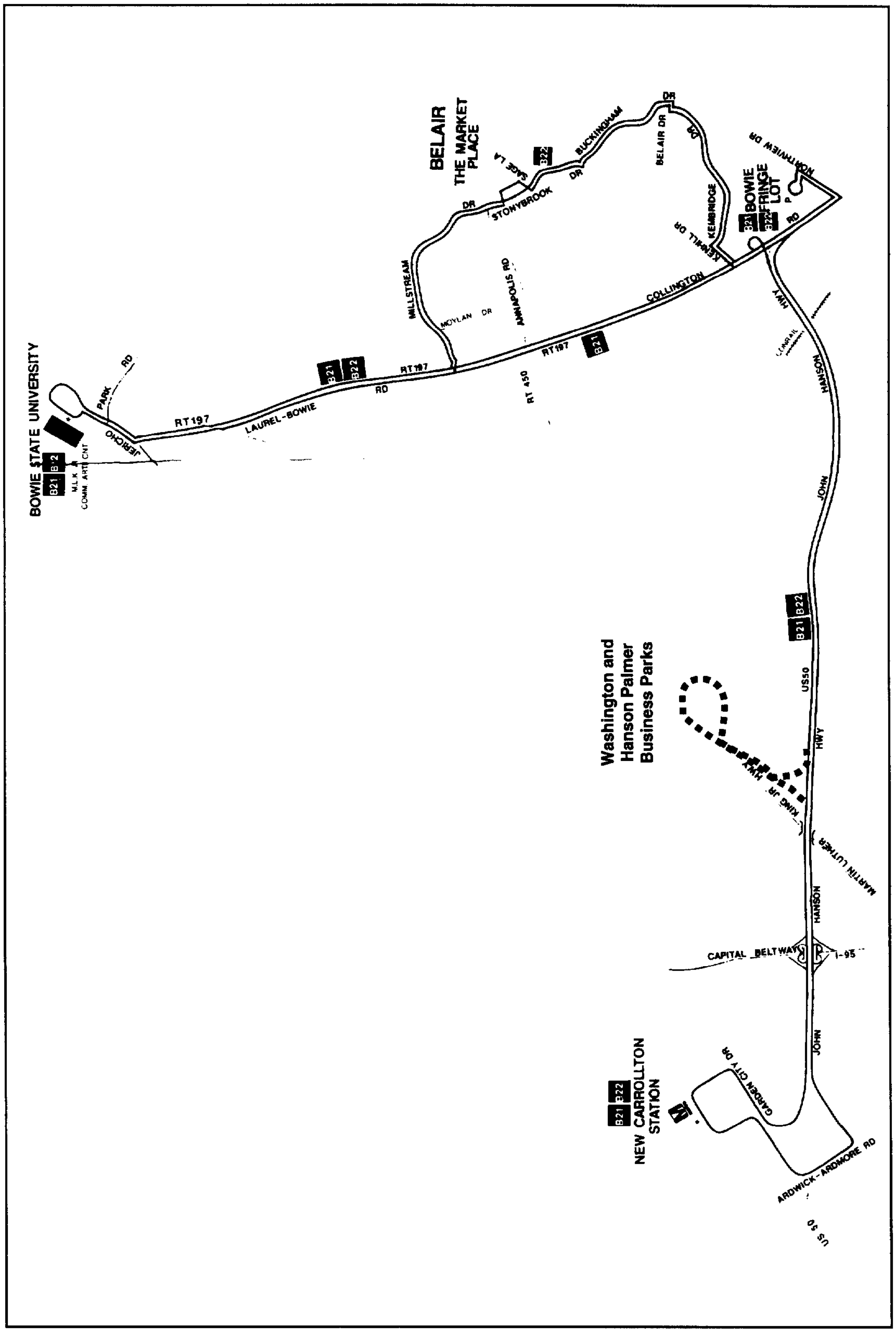
Figure 52 - Washington and Hanson Palmer Business Parks Option 4-Modification to Route B21/B22



Legend:

- M — Metrorail Station
- ★ — Terminal Stands
- ■ — Rush Hour Service
- P — Parking Lot
- ■ ■ ■ — Modification to Existing Route

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4.2.4 Columbia Park Road Industrial Center

Within the Columbia Park Road Industrial Center area there are approximately 6,400 employees working for the major employers in the cluster. Approximately 42 percent of these employees live in Prince George's County. The estimated proportion of workers that start work during peak hours is 67 percent and the estimated peak period non-traditional transit potential is 110 passengers. The cluster features two large employers, Giant and Safeway. Approximately 2,900 employees work at the Giant warehousing and administrative facilities in this area, and 1,100 employees work at the Safeway facilities. This area experiences some parking deficiencies and traffic congestion at key locations. The following are the options selected to address the key transit deficiencies of the Columbia Park Road Industrial Center area.

4.2.4.1 Columbia Park Road Industrial Center - Option 1 - Vanpool/Carpool

The low transit potential shown by this area is primarily a result of the warehousing type of employment associated with the two largest employers in the area. Figure 42 shows that the areas with potential are relatively spread throughout the eastern and southern portions of the County. However, the presence of two large employers with transportation coordinators could facilitate the implementation of certain types of non-traditional transit service.

Option 1 for this area is to establish a vanpool/carpool program with parking incentives for rideshare participants. The use of the Giant and Safeway transportation coordinators to set up and administer these programs would improve the chances for success for this option.

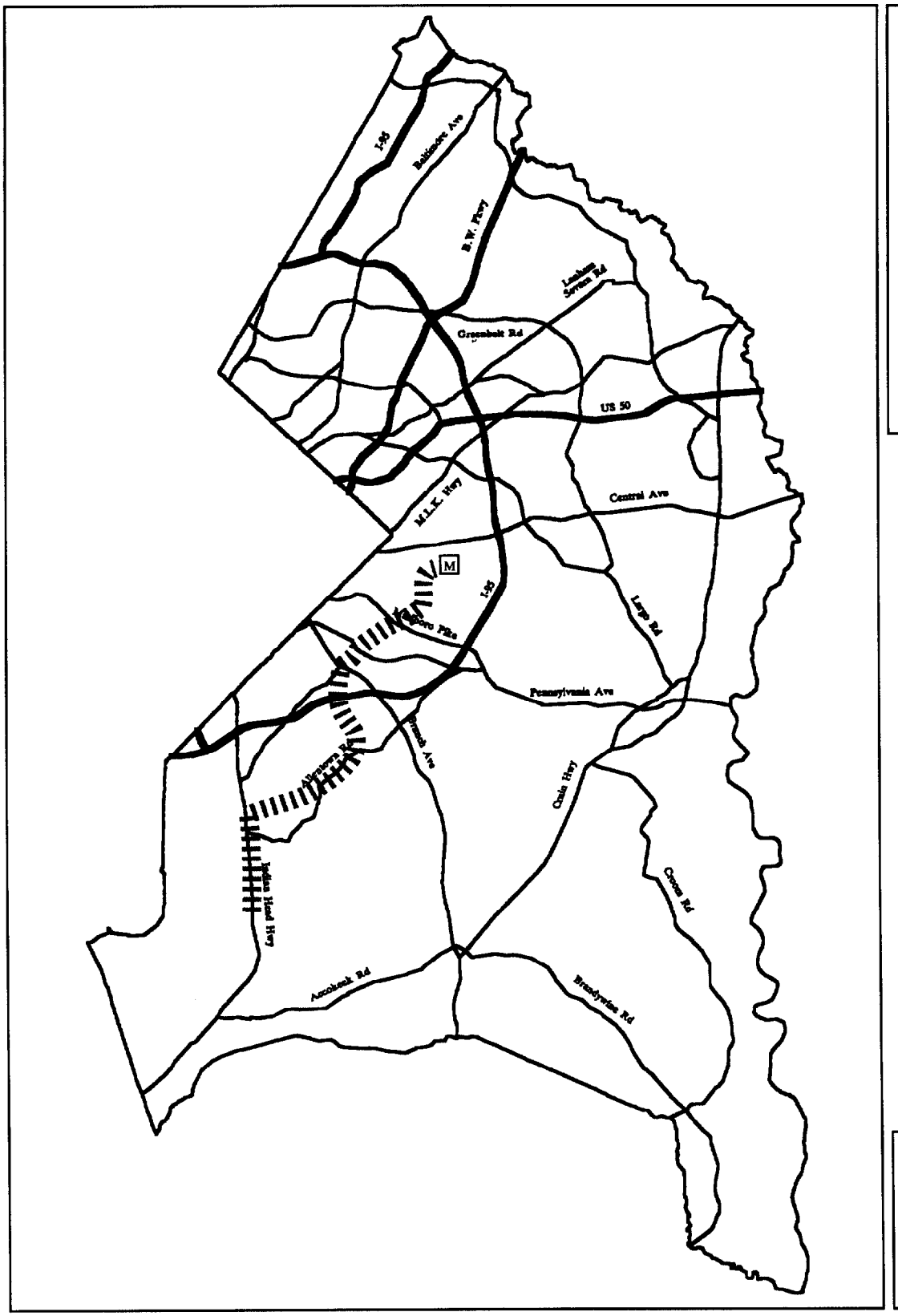
4.2.4.2 Columbia Park Road Industrial Center - Option 2 - Southwestern Prince George's County Subscription/Fixed Route Service

As shown in Figure 42, there is potential for the implementation of a route connecting the Columbia Park Road Industrial Center to the residential communities in the southwestern sections of the County. There are approximately 540 peak period employees that reside in the zip codes connecting the industrial center to the southwestern areas of the County. In addition, these zip codes contain an area that was identified in the 1988 Bus Transportation Study Master Plan as a potential new service area.

Thus, Option 2 would be to serve the corridor shown in Figure 53 with a subscription bus operated only during peak periods or with an all day fixed route bus that operates on a one hour headway. The route may be started at the Park & Ride lot at the Old Forte Village Shopping Center. If WMATA Route A12/15 is modified in option 5, below, to serve the Giant and Safeway facilities, it may be possible to terminate option 2's fixed route alternative at the Addison Road Metro station[1].

[1] WMATA Route A12/15 operates with high frequencies. Therefore, if this route is modified to connect the Addison Road Metro Station to the Columbia Park Road Industrial Center there may not be a need to extend the subscription service beyond the metro station. The desirability of requesting passengers of the subscription service to transfer to (modified) Route A12/15 at the metro station would have to be explored.

Figure 53 - Columbia Park Road Industrial Center Option 2



Legend:

- Arterial
- Highway
- M — Metro Station
- Proposed Route

N

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4.2.4.3 Columbia Park Road Industrial Center - Option 3 - Subscription Service to Bowie

As with other areas throughout the analysis, Bowie shows up as an area with potential transit origins destined for the Columbia Park Road Industrial Center. As shown in Figure 33, there are approximately 150 peak period employees that reside in the zip code areas that encompass Bowie. Therefore Option 3 would be to establish a subscription van serving Bowie. The spine of the subscription van service is presented in Figure 54. The presence of two of the largest employers in the county, both with transportation coordinators, facilitates the implementation of subscription bus, and makes this type of service more feasible than route deviated service.

4.2.4.4 Columbia Park Road Industrial Center - Option 4 - Four-mile Service Area around Cheverly or Addison Road Metro Stations

The Columbia Park Road Industrial Center is located relatively close to both the Cheverly and Addison Road Metro stations. Many potential transit users that work in the Columbia Park Road Industrial Center may not be using transit because of the lack of a good, frequent transit service from the Metro system.

Option 4, to provide either a demand responsive van, shared-ride taxi service, or route deviated loop service (with a four mile radius) based at either the Cheverly or Addison Road Metro stations, would provide a critical connection to the Columbia Park Road Industrial Center. While the Cheverly station is closer to the Columbia Park Road Industrial Center, basing the service out of the Addison Road station would enable it to serve both the Columbia Park Road Industrial Center and the Inglewood/USAIR Arena areas. If the service is operated as demand responsive, it may be possible to utilize IVHS technology to provide indications to the vehicle drivers when there is a call for service.

4.2.4.5 Columbia Park Road Industrial Center - Option 5 - Modification to Existing Routes

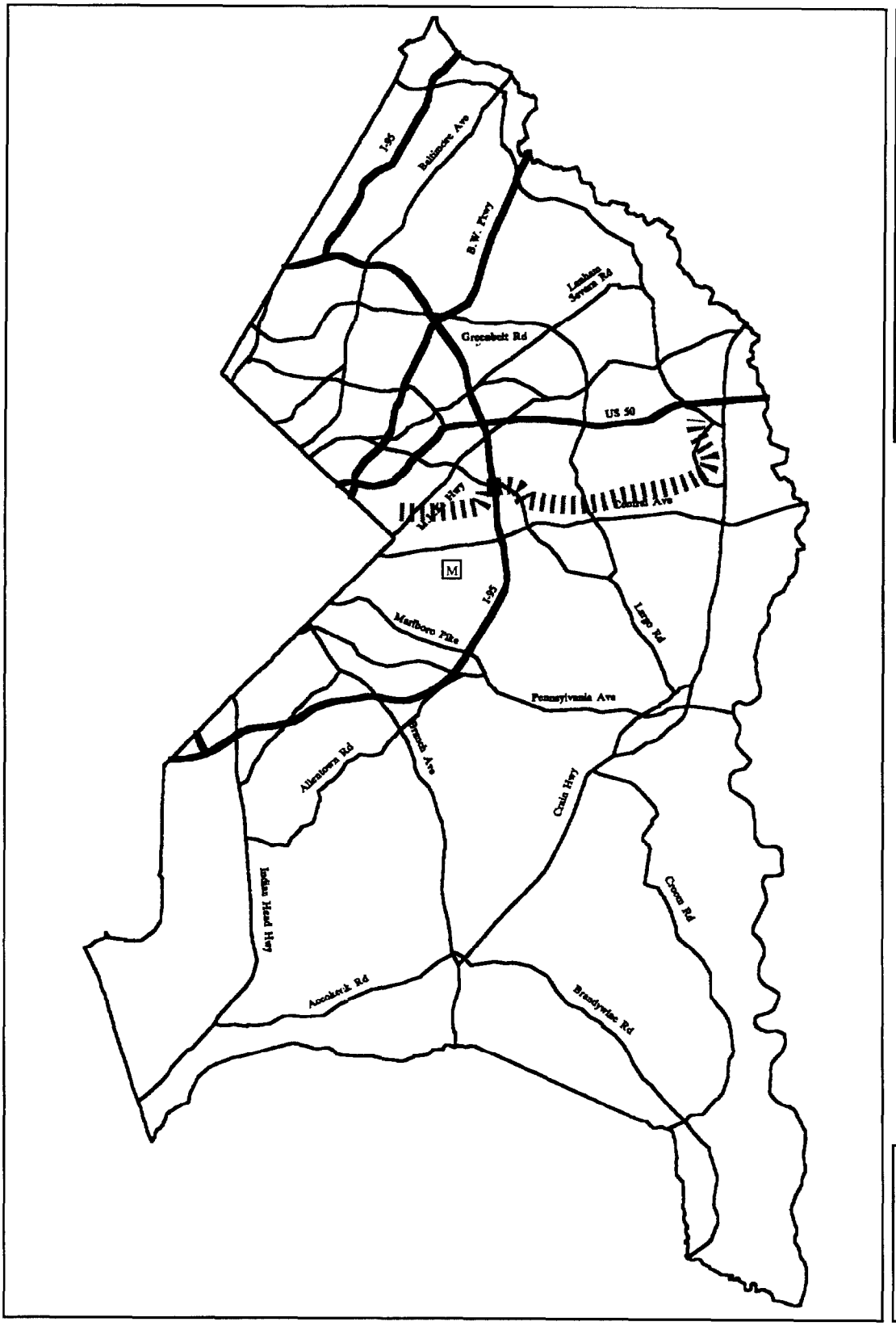
It may be possible to improve transit service to the Columbia Park Road Industrial Center by modifying an existing bus route. Option 5, shown in Figure 55, would be to modify WMATA Route A12/15 to serve the Safeway and Giant facilities. The impact of operating all or some trips on this route via Sheriff Road rather than Martin Luther King Jr. Highway should be explored. This route currently operates on 15 and 20 minute headways; while Route F14, which serves the cluster, operates on 35 and 70 minute headways.

4.2.5 Southern Maryland Hospital

The Southern Maryland Hospital employment cluster is comprised of a small concentration of three employers. Of the 1,561 employees in this cluster, 1,300 are employed in the hospital, two-thirds reside within the county, and 63 percent start work within the peak period. The peak period non-traditional transit potential for this cluster was estimated to be 48 passengers in Task 3 of this study.

This cluster is the only one that has no existing transit service. This lack of service, combined with the area's recent growth, contributes to the cluster's parking problems and peak period congestion. A high incidence of taxi use reflects the fact that visitors and patrons

Figure 54 - Columbia Park Road Industrial Center Option 3



Legend:

- Arterial
- Highway
- M — Metro Station
- Proposed Route

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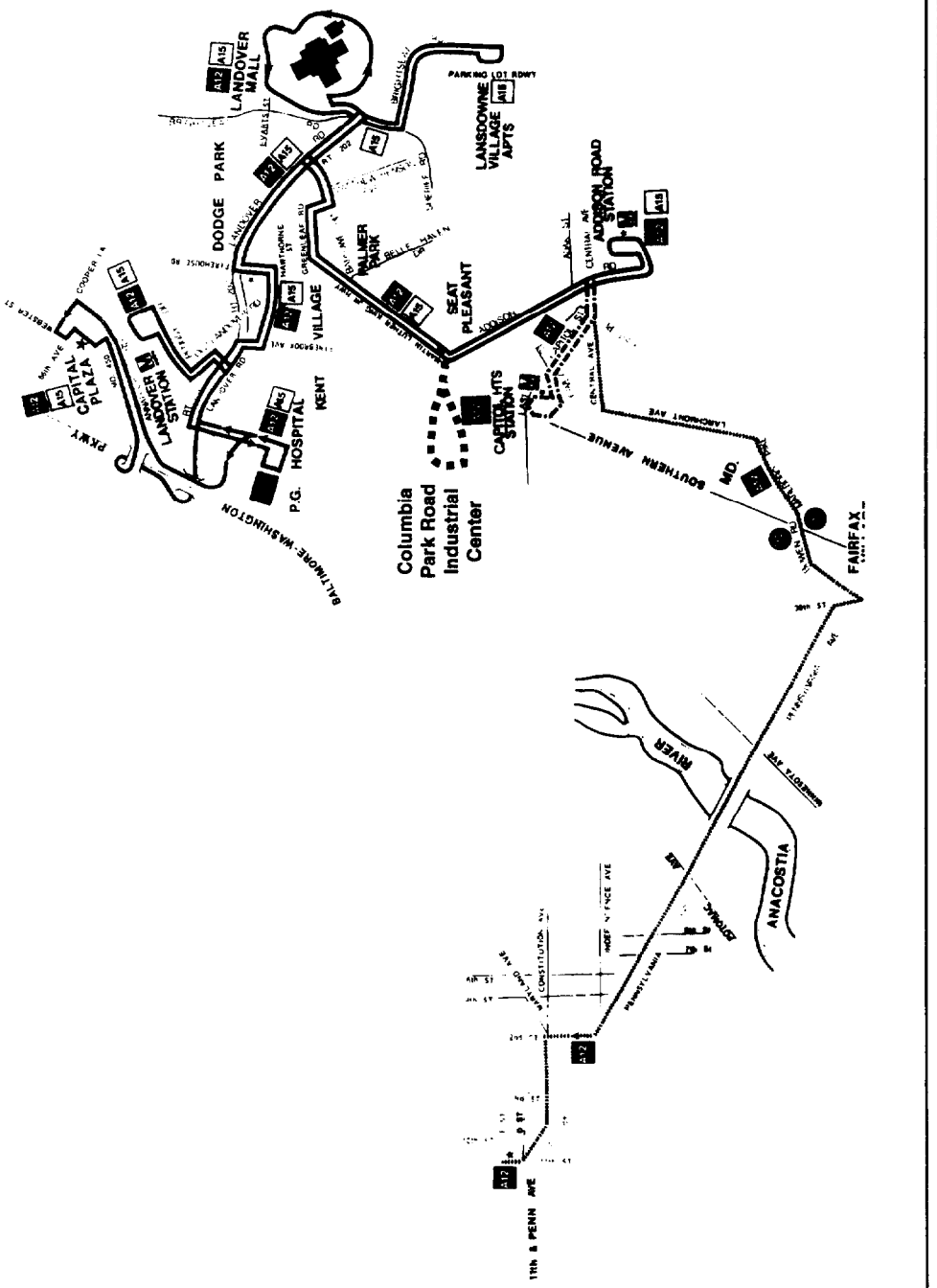
Figure 55 - Columbia Park Road Industrial Center Option 5-Modification to Route A12/A15



Legend:

- Metrorail Station
- Terminal Stands
- Fare Zone Limits
- Base Service
- Rush Hour Service
- Modification to Existing Route

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of the hospital need an alternative means of transportation to the automobile. In addition, this cluster, perhaps more than all of the others besides Prince George's Plaza, has the highest potential to serve both work and non-work trips. Moreover, this area was identified in the 1988 Bus Transportation Study Master Plan as a potential new service area.

Due to the rotating shifts at the hospital, the dominant employer in the cluster, it would be difficult to establish a service that requires a significant coordination effort. Therefore, fixed route or demand responsive services would be more applicable than subscription type services in this cluster. The following four options present alternatives to address the transit deficiencies of this area.

4.2.5.1 Southern Maryland Hospital - Option 1 - Subsidized Taxi/Jitney Service

As shown in Figure 35, the majority of this cluster's employees reside within a ten-mile radius of the hospital. Therefore, one non-traditional transit option for this cluster would be to establish a subsidized taxi or jitney service that would operate within a ten-mile radius of the hospital. This ten-mile boundary also ensures that at least one Metro station (Addison Road) is included within this service area.

4.2.5.2 Southern Maryland Hospital - Option 2 - Fixed or Deviated Route to Iverson Mall

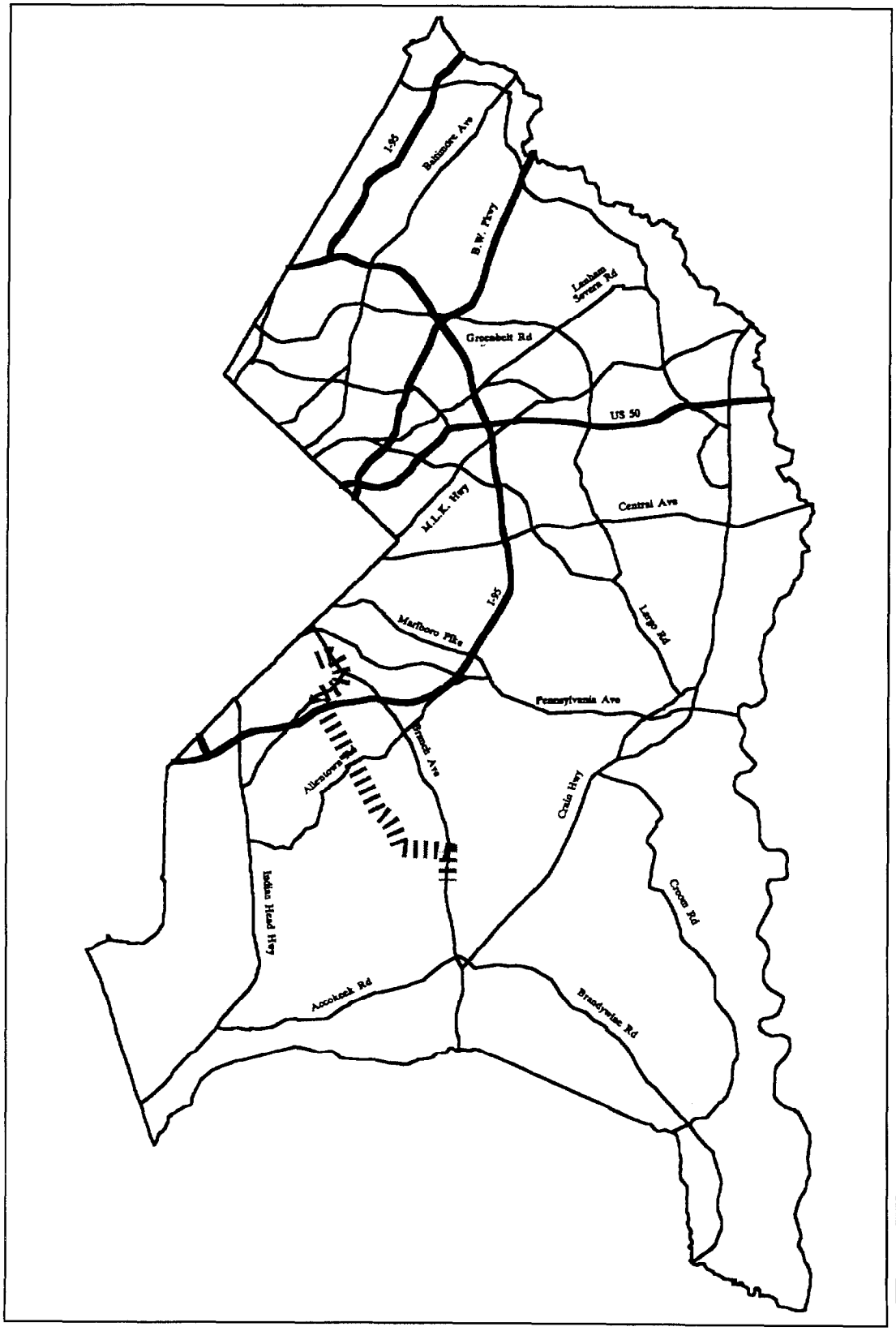
Because of the lack of transit service, high taxi use, and the types of trips to this cluster, the implementation of some fixed/deviated route service appears to be warranted. As shown in Figure 43, the corridor to the northwest of the hospital provides the most potential to support such a service. Within this corridor there are other medical facilities and several tracts with a population density high enough to justify fixed/deviated route service and a greater than average elderly population. In addition, this corridor contains a potential new service area as identified in the 1988 Master Plan.

The route could begin with a loop at the northern portion of the service area at Iverson Mall and Marlow Heights Shopping Center. After completing the loop along Iverson, 23rd, Olson, and Raleigh, the route would head south along Temple Hill Road and then turn left at Piscataway Road. Along Piscataway, the route would serve the Southern Maryland Regional Health Center. Continuing along Woodyard Road, the route could also serve the Parkview Manor Care Center. The route would then turn south onto Branch Avenue, serve the Southern Maryland Hospital, and terminate at the Bradford Oaks Care Center. During the off-peak hours, this route could operate as a route deviated service to provide a more direct connection to those individuals making medical and shopping trips. The alignment of this route is presented in Figure 56.

4.2.5.3 Southern Maryland Hospital - Option 3 - Fixed Route to Addison Road Metro

Another fixed/deviated route alternative would be to connect the route in Option 1 to the Addison Road Metro. Rather than beginning with the loop near the Marlow Heights Shopping Center, the route would start at the Addison Road Metro station. From the station, the route would continue south along Addison Road to Silver Hill Road, where it would turn right. At Saint Barnabas Road, the route would turn left, serve Marlow Heights, and follow

Figure 56 - Southern Maryland Hospital Option 2



Legend:

- Arterial
- Highway
- Proposed Route

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the routing in Option 2 from Temple Hills Road to the cluster. Similar to Option 1, this route could operate as a route deviated service during the off-peak hours. The alignment of this route is presented in Figure 57.

4.2.5.4 Southern Maryland Hospital - Option 4 - Modification to WMATA Route C11

The only existing route that runs in close proximity to the cluster is WMATA Route C11, the Clinton Express. This express route operates only during the peak period and offers 12:00 AM and 3:00 PM peak direction trips and three reverse-peak trips during both peak periods. The route begins at Clinton Plaza, just over a mile north of the hospital, and travels along Branch Avenue and Suitland Parkway into Washington, D.C. The route could be extended to the hospital and be allowed to deviate off of Branch Avenue in the reverse peak direction. This service would accommodate primarily work trips to the cluster. However, service could also be expanded to off-peak hours to serve both work and non-work trips. The existing and proposed alignment of this route is presented in Figure 58.

4.2.6 Bowie State University

Bowie State University is the smallest cluster and has only one employer. Each of the 369 employees start work within the peak period and 43 percent of them reside within Prince George's County.

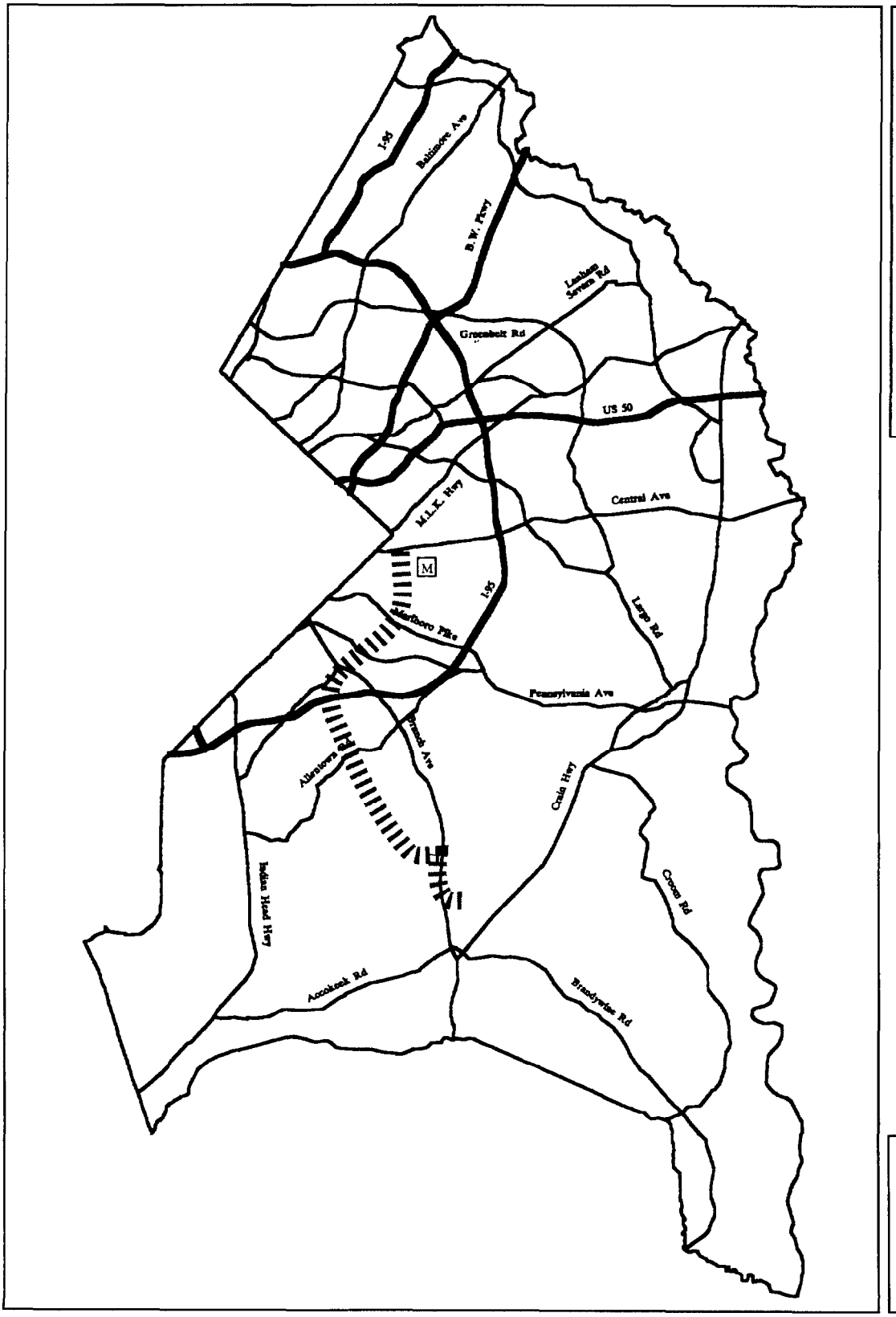
As stated in Chapter 3, there exist no residential areas with substantial concentrations to support a dedicated non-traditional transit service to this cluster. The only corridor with any significant concentrations is already being served by WMATA Route B21,22 which connects the University to the New Carrollton Metro station via the Bowie Fringe parking lot. Moreover, because of the lack of potential, it is also difficult to justify directly combining service to the University with other options developed for the other employment clusters.

There are, however, several options being proposed that serve the residential areas south of the University and the Bowie Fringe lot, an area identified in the 1988 Bus Transportation Study Master Plan as a potential new service area. These alternatives (Beltsville-Option 1, Prince George's Plaza-Option 2, Washington Hanson Business Park-Options 1 and 3, Columbia Park Road Industrial Center-Option 3) could provide a means of connection to WMATA Route B21,22 at the Fringe Lot for the students, faculty, and staff of the University. Therefore, because of the lack of demand, the project team does not recommend the implementation of a dedicated service for Bowie State University.

4.2.7 Inglewood/USAIR Arena

The Inglewood/USAir Arena employment cluster contains about 25 major office buildings within one square mile of land bounded by the Beltway, Landover Road, and Central Avenue. Of the 5,200 employees that work in this cluster, 89 percent begin their jobs within the peak period and 52 percent live within Prince George's County. The cluster is comprised primarily of several small employers with 50 to 300 employees. The two largest employers are the Center Group and Falcon Microsystems, with 353 and 276 employees, respectively. In Task 3 of this study, the peak period non-traditional transit potential for this cluster was estimated to be 148 passengers. The following four options attempt to address the transit deficiencies of this rapidly growing employment cluster.

Figure 57 - Southern Maryland Hospital Option 3



Legend:

- Arterial
- Highway
- Metro Station
- Proposed Route

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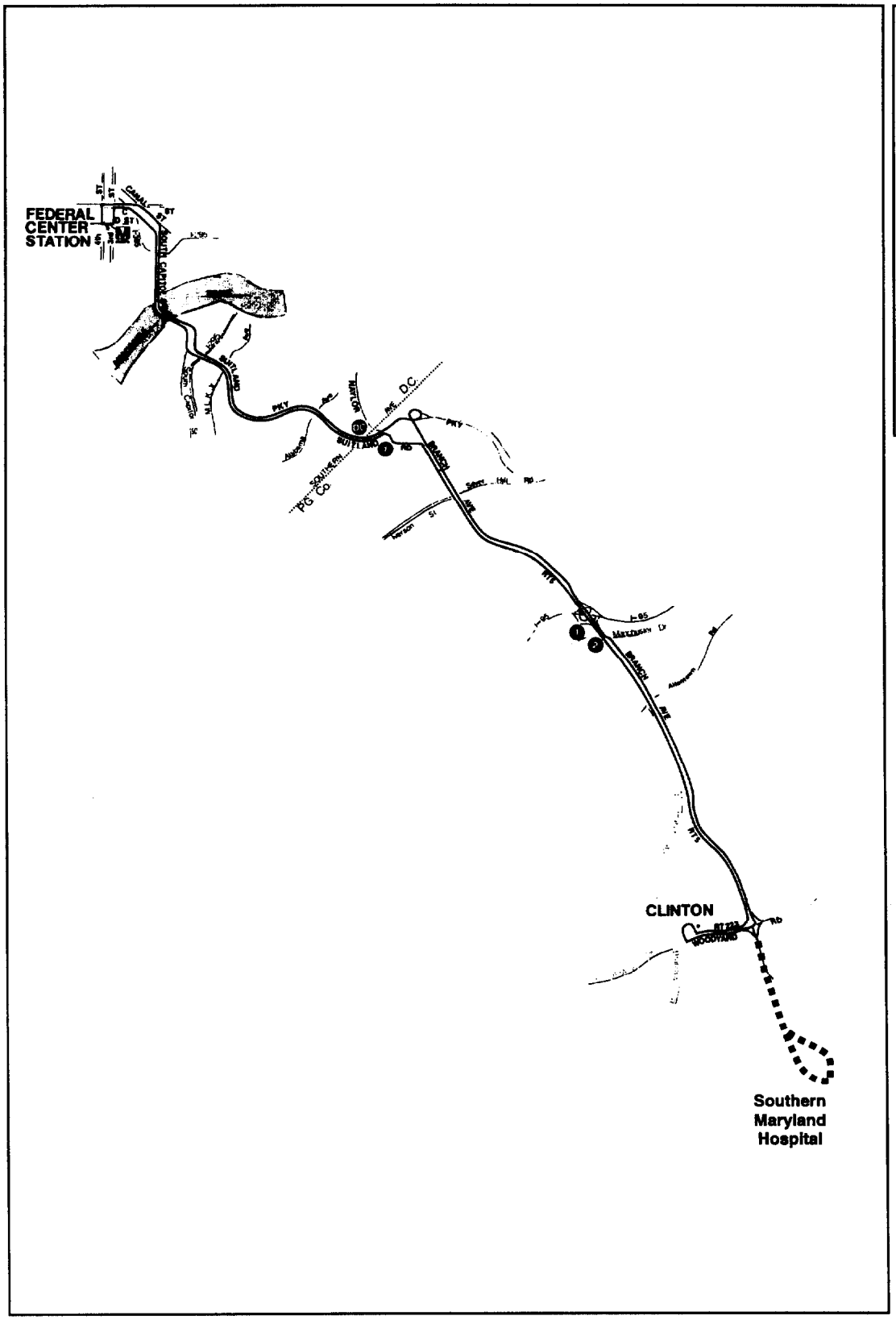
Figure 58 - Southern Maryland Hospital Option 4-Modification to Route C11



Legend:

- Metrorail
- Terminal
- DC 1 2 — Fare Zone
- Modification to Existing Route

N

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4.2.7.1 Inglewood/USAir Arena - Option 1 - On Demand Service to Addison Road Metro

Presently, only Prince George's The Bus Route 21 provides service to this cluster, connecting Upper Marlboro to the New Carrollton Metro station. As shown in Figure 38, there are other residential concentrations that present a need for additional service, one of which lies directly west of the cluster. One option to serve this market would be to provide an on-demand service anchored at the Addison Road Metro station. Either a demand responsive van/shared-ride taxi or a route deviated loop service could operate within a four-mile radius of the metro station. The service should be provided during peak periods as well as during events at the USAir Arena. It would be important to explore the possibility of getting the USAir Arena to subsidize this service. In addition, because the Columbia Road Business Park also falls with the four-mile service area, it too could be served by the demand responsive vehicle.

4.2.7.2 Inglewood/USAir Arena - Option 2 - Route Deviated Bus to Tantallon

One area highlighted in Figure 44 is the corridor leading to the Tantallon area in the southwestern portion of the county. Within this corridor, a deviated bus route beginning at the Park and Ride lot at the Old Forte Village Shopping Center on Indian Head Highway could be established. From the lot the route would travel north upon Indian Head Highway and then turn onto Palmer Road. The route would then continue along Allentown Road to Temple Hill Road. At Saint Barnabas Road the route would turn right and then right again onto Silver Hill Road. The route would then turn north onto Addison Road then head east along Central Avenue. The route would then circulate through the cluster after having crossed the Beltway. Along this primary path, the route could deviate as much as one mile, as necessary to pick up and drop off passengers. Figure 59 present the proposed core alignment of this route.[1]

4.2.7.3 Inglewood/USAir Arena - Option 3 - Fixed Route to Landover Station

As shown in Figure 44, there are two other areas to the northwest of the cluster that indicate a need for additional service. These two neighborhoods, Landover and Bladensburg, could be linked to the employment cluster by a fixed route. The route could begin either at the West Hyattsville Metro station or with a residential loop in Bladensburg. The route would then travel along Landover Road and serve the Cheverly area and the Landover Metro station. It would then continue along Landover Road and circulate within the cluster. The alignment of this route is presented in Figure 60. This service could be provided by a small bus and be operated all day. For the evenings during which events at USAir Arena are held, a larger vehicle may be required.

4.2.7.4 Inglewood/USAir Arena - Option 4 - Modification to WMATA Route C21,22

As shown in Figure 44, the only other corridor with significant potential is the one to Bowie. WMATA route C21,22,29 does serve this corridor, but it does not penetrate into the cluster and service into Bowie is only provided on Saturdays. Therefore, it is proposed that selected

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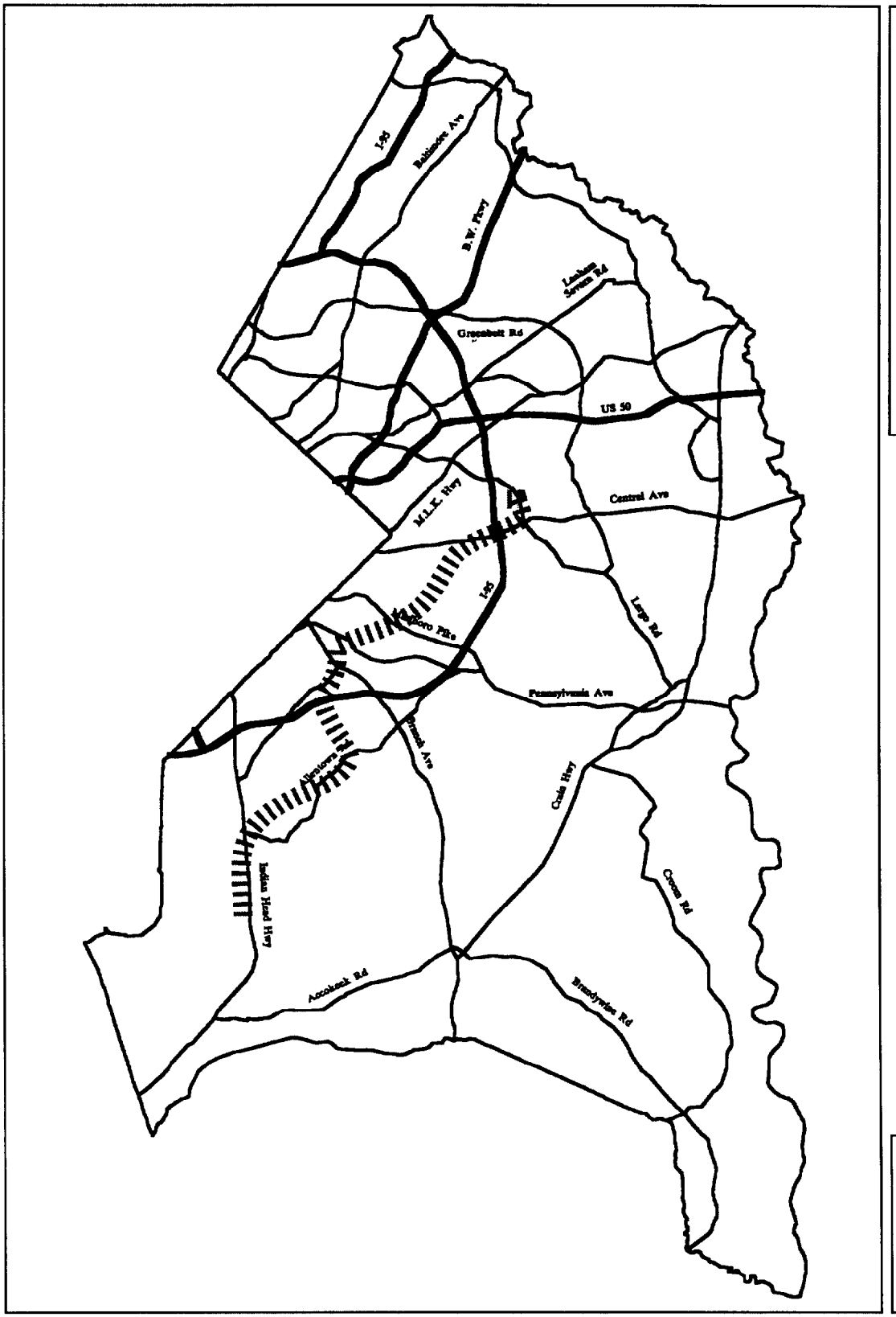
[1] This option may be implemented in conjunction with the proposed Columbia Park Road Industrial Center - Option 2. Specific routes and travel times would have to be determined to assess the feasibility of integrating the proposed options for Columbia Park Road Industrial Center and the Inglewood/USAIR Arena employment clusters.

Figure 59 - USAir Arena
Option 2



Legend:

- Arterial
- Highway
- Proposed Route

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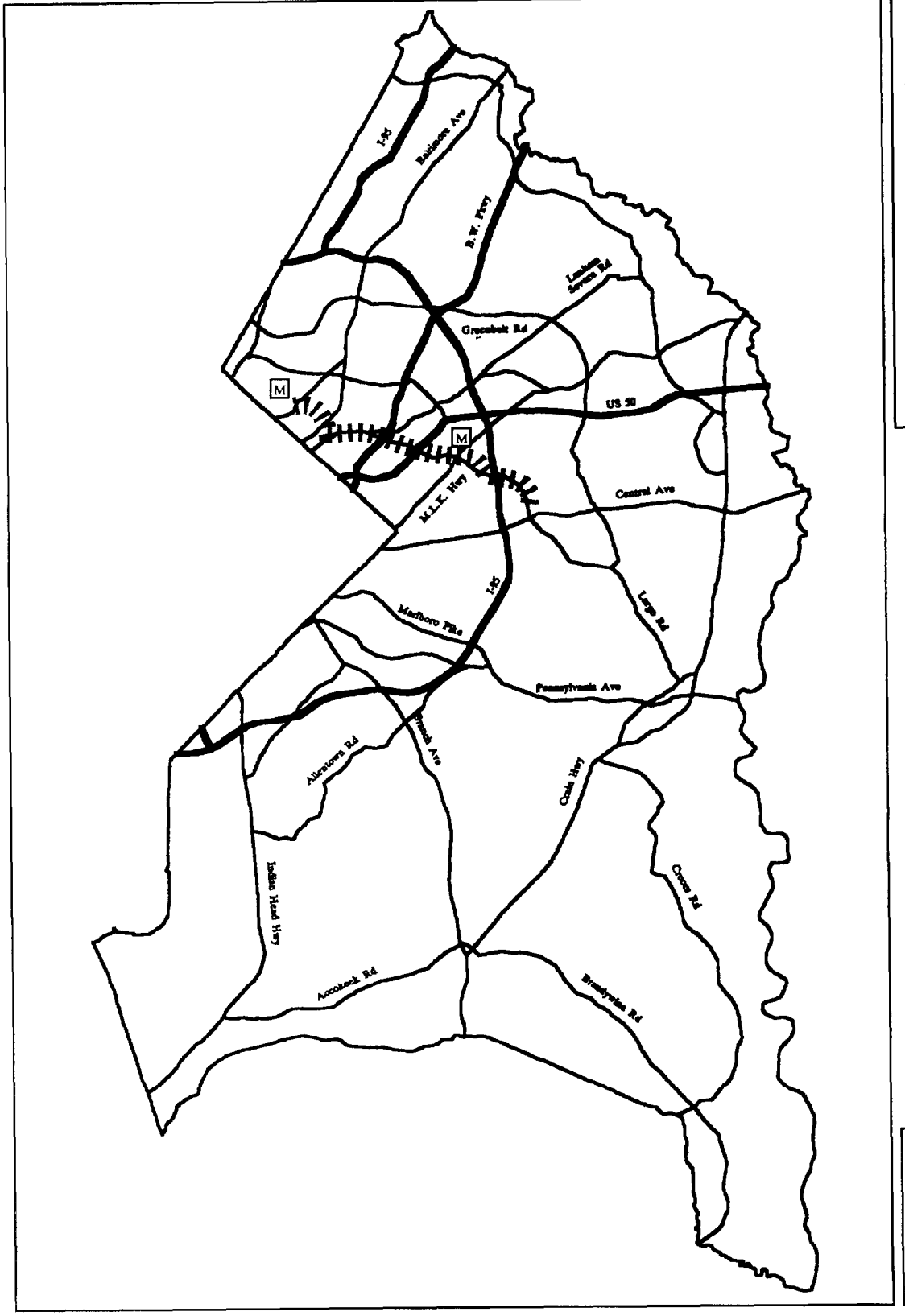
Figure 60 - USAir Arena
Option 3



Legend:

- Arterial
- Highway
- M — Metro Station
- Proposed Route

N

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trips on the C21,22 portion of the route follow the C29 routing as far as the Bowie Fringe parking lot and penetrate into the cluster during peak hours.[1] This route would provide the necessary connection without adding too much travel time to the existing passengers. The existing and proposed routing is shown in Figure 61.

4.2.7.5 Summary of Recommended Options

Options were recommended for each of the key clusters identified in Tasks 1 and 2 of the project, except for the Bowie State University where the estimated demand was too low.

Table 18 summarizes the preliminary options recommended for Prince George's County. Appendix D presents a table with a description of each of the services recommended in the preliminary options.

4.3 Evaluation of the Preliminary Options

The preliminary options discussed in the previous section of this Chapter were presented to the Technical Working Group and the comments of the members were used to refine the alternatives. The Project Team developed the criteria to evaluate the proposed options, prepared an evaluation matrix and conducted a working session to select three options for further analysis. This section describes the process by which the options were analyzed and details the criteria used in the evaluation of the non-traditional options.

4.3.1 Fixed Route Services

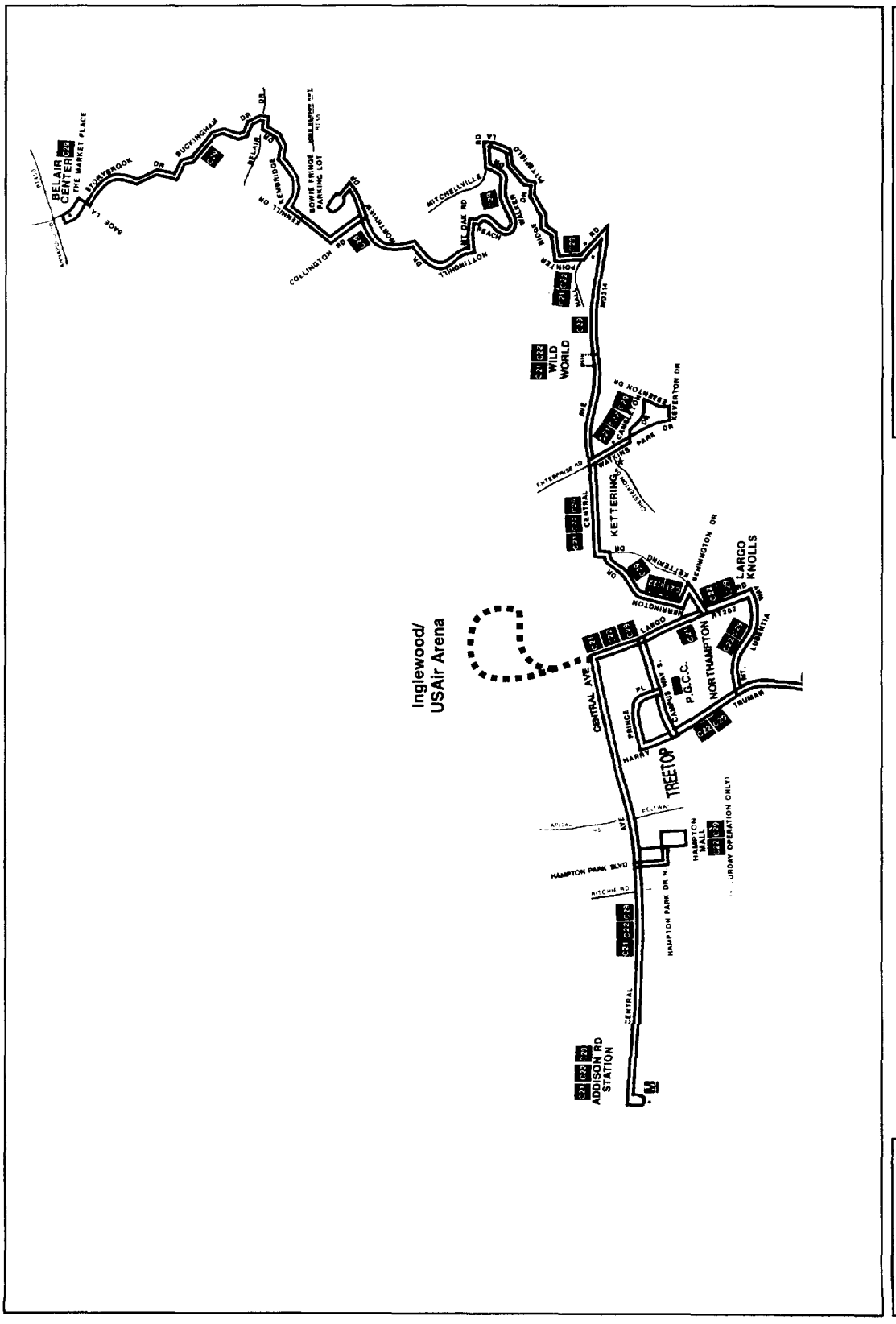
The options presented in the previous section of this Chapter included new fixed route options and modifications to existing fixed routes. These options were not included in the evaluation matrix because the primary emphasis of this study is on evaluating non-traditional transit options. However, the Project Team recommended that the proposed new fixed routes and modifications to fixed routes be analyzed thoroughly in the development of the County's Transit Development Plan update and those options found to have high potential for success be considered for implementation. To assist in the assessment of the potential of these options, Table 19 summarizes information on service potential for the proposed fixed route and fixed route modification options. Options that were proposed as fixed route or route deviated were included in both the fixed route service coverage table (Table 19) and the evaluation matrix.

4.3.2 Non-Traditional Transit Options

The Project Team evaluated the preliminary non-traditional transit options and presented the results of the evaluation to the Technical Working Group. In a working session with the Technical Working Group, using the input from the Project Team evaluation, three options were recommended for further consideration.

[1] Because of the proximity of Bowie to the Inglewood/USAIR Arena employment cluster, the modification of an established bus route appears to be more feasible than the implementation of a new non-traditional transit service.

Figure 61 - Inglewood/USAir Arena
Option 4-Modification to Route C21/C22



Legend:

- M — Metrorail Station
- ★ — Terminal Stands
- ■ — Base Hour Service
- ▪▪▪ — Modification to Existing Route

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Table 18

Summary of Options

Area	Option
Beltsville	Bowie Subscription Service
	Beltsville Circulator
	Modifications to Existing Bus Routes
	WMATA Route 83/86
	Connect-A-Ride Route G
Hyattsville/Prince George's Plaza	Peak Period/Lunch Hour Circulator
	Subscription Service to Bowie
Washington and Hanson Palmer Business Parks	Route Deviated Service to Bowie
	Modifications to Existing Bus Routes
	WMATA Route C28
	WMATA Route B23/24
	WMATA Route B21/22
Columbia Park Road Industrial Center	Vanpool/Carpool
	Southwestern Prince George's County Subscription/Fixed Route Service
	Subscription Service to Bowie
	4-mile Service Area around Cheverly or Addison Road Metro Stations
	Modification to Existing Bus Routes
	WMATA Route A12/15
Southern Maryland Hospital	Subsidized Taxi/Jitney Service
	Fixed Route to Iverson Mall
	Fixed Route to Addison Road Metro
	Modification to Existing Bus Route
	WMATA Route C11
Inglewood/USAIR Arena	On Demand Service to Addison Road Metro
	Route Deviated Bus to Tantallon
	Fixed Route to Landover Station
	Modification to Existing Bus Route
	WMATA Route C21/22/29

Table 19. Employment and Population Served by New or Modified Fixed Routes

Area	Option	Fixed Route	Employment	Notes on Employment	Population	Other Major Attractors
Beltsville	3a	Modified WMATA 83,86	1,100	Includes only the USDA	N/A	
	3b	Connect A Ride G	1,100	Includes only the USDA	N/A	
Washington and Hanson P. Business Parks	2a	Modified WMATA C28	7,300	Includes only the Business Parks	N/A	
	2b	Modified WMATA B23,24	7,300	Includes only the Business Parks	N/A	
	2c	Modified WMATA B21,22	7,300	Includes only the Business Parks	N/A	
Columbia Park Road Ind. Cntr.	2	From Tantalon to Addison Rd Metro	8,200	Estimated from PAZ data	22,600	Old Forte Village, Fort Washington, Livingston Square, Padgetts Corner, and Marlow Heights Shopping Centers, Smithsonian Support Center, Garber Facility Silver Hill Co 29, Suitland Federal Center, Penn Station Shopping Center, Capitol Heights Shopping Plaza, Walker Mill Business Park
	5a	Modified WMATA A12,15	3,800	Includes only Giant and Safeway	N/A	
Southern Md. Hospital	2	From So. Md. Hospital to Iverson Mall	6,700	Estimated from PAZ data & JHK calcs.	10,200	Clinton Plaza, Parkwood Hospital, Parkview Manor Care Center, So. MD Regional Health Center, Iverson Mall, Padgetts Corner, Marlow Heights Shopping Centers
	3	From So. MD Hospital to Addison Road Metro	10,900	Estimated from PAZ data & JHK calcs.	16,100	Clinton Plaza
	4a	Modified WMATA C21,22	1,600	Includes only the hospital	N/A	Parkwood Hospital, Parkview Manor Care Center, So. MD Regional Health Center, Padgetts Corner, Marlow Heights Shopping Centers, Smithsonian Support Center, Garber Facility Silver Hill Co 29, Suitland Federal Center, Penn Station Shopping Center, Capitol Heights Shopping Plaza, Walker Mill Business Park
Inglewood/USAir Arena	3	From USAir to W. Hyattsville Metro Station	8,700	Estimated from PAZ data & JHK calcs.	9,000	Landover Mall, Arena Plaza, Dodge Park and Kent Village Shopping Centers
	3	From USAir to Bladensburg	6,400	Estimated from PAZ data & JHK calcs.	4,500	Landover Mall
	4a	Modified WMATA C21,22	5,200	Includes only Inglewood/USAIR Arena	N/A	Arena Plaza, Dodge Park and Kent Village Shopping Centers

The criteria used to evaluate the preliminary options included measures of effectiveness, market niche, public/private sector support and cost. This section presents descriptions of the factors used to evaluate the non-traditional transit options.

4.3.2.1 Effectiveness

The five factors used to assess effectiveness include service area potential, modal diversion/SOV reduction, ease of use, ease of implementation, and reliability.

4.3.2.1.1 Service Area Potential

This factor is a measurement of the size, in terms of numbers of potential users, of the residential and employment developments in the targeted service areas.

4.3.2.1.2 Modal Diversion/SOV Reduction

Modal diversion assesses the potential ridership for the option. A large service area potential generally translates into high modal diversion potential. However, when an option is not designed to meet the needs of the targeted users, an option may have a large service area potential but may score low on the modal diversion factor.

4.3.2.1.3 Ease of Use

Ease of use addresses how easy it is to use the proposed service. For instance, services that require making reservations ahead of time are generally considered to be more complicated than routes that operate in the traditional fixed route/fixed schedule mode (e.g. circulator).

4.3.2.1.4 Ease of Implementation

This factor refers to the difficulty in developing operating plans and preparing the necessary infrastructure to operate the new service. In general, services that require communications and/or electronics equipment (such as route deviated service) are more difficult to implement than the options that do not require these devices.

4.3.2.1.5 Reliability

Reliability refers to the ability of the service vehicles to adhere to schedules and how predictable travel times are.

4.3.2.2 Market Niche

The factors utilized to assess market niche are marketability/packaging, unmet needs, neighborhood coverage, and opportunity to support other transit services.

4.3.2.2.1 Marketability/Packaging

Marketability is related to how visible the service is to the public and how easy it is to promote it.

4.3.2.2.2 Unmet Needs

Unmet needs refers to the how well the concept serves areas which are not currently served or are underserved by existing transit service.

4.3.2.2.3 Neighborhood Coverage

This factor refers to the extent to which a proposed non-traditional transit service penetrates into neighborhood/residential areas within the designated service areas.

4.3.2.2.4 Opportunity to Support Other Transit Services

This factor refers to how well the proposed option works in conjunction with existing transit services. For instance, options that serve metro stations scored well in this category.

4.3.2.3 Public/Private Sector Support

The factors used to assess public/private sector support are the degree to which an option supports identified policy initiatives, potential private sector support, and potential community support.

4.3.2.3.1 Degree to Which an Option Supports Identified Policy Initiatives

There are a number of policy initiatives that are supported by some of the evaluated options. One example of this is the new national Livable Communities Initiative. Options that support these initiatives were scored high in the evaluation process.

4.3.2.3.2 Potential Private Sector Support

While private sector support for the proposed options in Prince George's County has not been explored in detail, the potential support was assessed on the basis of the experience with non-traditional transit options implemented in other places in the United States.

4.3.2.3.3 Potential Community Support

This factor, based on preliminary data and input from County staff includes the level of support that the affected community would have for the options that affect them.

4.3.2.4 Cost

The only cost factor that was ranked for all options was farebox recovery ratio. Other cost factors such as cost per hour, cost per day, and capital cost were not ranked. Instead, the estimated cost information for each option was listed to help in the selection of the three options recommended to be carried into the following phases of the project.

4.3.3 Summary of Evaluation Results

The Project Team conducted an evaluation of the preliminary options by assigning a score (from 1 to 10) for each of the factors described above. Furthermore, based on an assessment of the goals and objectives of the project, weights were assigned to each of the factors selected

for the analysis. For instance, ease of use was assigned a lower weight than the ability to meet unmet needs. As shown in Table 20, the highest scoring options were associated with Hyattsville/Prince George's Plaza, Southern Maryland Hospital and the Columbia Park Road Industrial Center. The lowest scoring options are in the Beltsville and the Inglewood/USAIR Arena clusters. Using the ranking of options as a tool for the selection process and after a discussion on each of the proposed options, the Technical Working Group and the Project Team made a preliminary selection of three options for further evaluation and the preparation of an implementation plan. The three alternatives were recommended not only on the basis of the results of the evaluation procedure, summarized in Table 20, but also through the incorporation of qualitative assessments expressed during the working session with the Technical Working Group. The selected options are not exactly the same as proposed in the preliminary phase. Modifications that could improve the possibility of success were incorporated into the alternatives as part of the preliminary evaluation process. The following section describes the three alternatives recommended for further evaluation and for the preparation of implementation plans.

4.4 SELECTED OPTIONS

The Project Team in conjunction with the Technical Working Group made a preliminary selection of three options to be carried to the next phase of the project, the development of a detailed implementation plan. The three selected options, "A", "B", and "C", would serve primarily the Hyattsville/Prince George's Plaza, Southern Maryland Hospital and Columbia Park Road Industrial Center clusters.

4.4.1 Option A - Hyattsville/Prince George's Plaza Circulator Services

This option would provide circulator services in the Hyatsville/Prince George's Plaza area. The major purposes of the circulators are to improve accessibility of residents and employees to community resources, transportation options, shopping and employment centers, and to increase mobility options throughout the area. Service would be provided with small buses (20 passenger vehicles) to minimize disturbance and maximize penetration potential into the neighborhoods in the area. This option would be operated with two different sets of vehicles serving two different subareas. Thus, this option was subdivided into two different sub-options, Option A-1 and Option A-2. These two routes were developed by the staff of the Prince George's County Department of Public Works and were checked by the Project Team to insure compliance with the goals and objectives of this study. In the development of the implementation plan, a more thorough evaluation of the proposed routes, including field investigations, was conducted to validate the feasibility of the proposed Options A-1 and A-2.

4.4.1.1 Option A-1

This option would serve the West Hyatsville Metrorail Station, Chillum Park, North Avondale, Queenstown, Queenstown Center and the South Chillum Community. The route operates primarily on Queens Chapel Road, Chillum Road, and Sargent Road.

4.4.1.1.1 Operating and Financial Characteristics

Service for Option A-1 would be provided Monday through Friday from 6:00 AM through 7:00 PM on headways of 15 minutes. The service could be provided at a cost of $132,000 per year

Table 20. Transit Service Concepts Evaluation

Criteria / Factors	Weight	Beltsville Area		Hyatsville/Prince George's Plaza		Washington & Hanson Palmer Business Parks	Columbia Park Road Industrial Center				Southern Maryland Hospital		Inglewood/USAIR Arena	
		Option 1 Subscription Service To Bowie	Option 2 Beltsville Circulator	Option 1 Peak Period/ Lunch Hour Circulator	Option 2 Subscription Service To Bowie	Option 1 Route Deviated Service to Bowie	Option 1 Vanpool/ Carpool	Option 2 Southwestern P.G. County Subscription Service	Option 3 Subscription Service To Bowie	Option 4 4-Mile Service Area Around Cheverly or Adison Rd. Metro Stations	Option 1 Subsidized Taxi/Jitney Service	Option 2 Fixed Route/Route Deviated Service to Iverson Mall	Option 1 On Demand Service to Addison Road Metro Station	Option 2 Route Deviated Service to Tantallon
Effectiveness														
Service area potential	8	7	2	4	7	7	8	4	7	5	4	5	5	8
Modal diversion/SOV reduction	8	6	2	6	6	6	7	4	4	5	4	4	4	6
Ease of use	5	8	10	10	8	6	5	8	8	7	7	6	6	6
Ease of implementation	8	8	8	8	8	5	9	8	8	7	6	6	6	6
Reliability	7	8	10	10	8	7	7	8	8	6	7	8	6	7
Market Niche														
Marketability/packaging	4	8	7	9	8	6	8	8	8	8	9	7	8	6
Unmet needs	10	7	3	6	7	7	6	5	5	5	9	8	6	6
Neighborhood coverage	5	5	7	4	5	5	5	5	5	5	7	6	4	7
Opportunity to support other transit services	8	4	4	10	4	4	4	10	4	10	10	7	10	4

Scores: 1-10
Weight: 1-10

Table 20. Transit Service Concepts Evaluation (Continued)

Criteria / Factors	Weight	Beltsville Area		Hyatsville/Prince George's Plaza		Washington & Hanson Palmer Business Parks	Columbia Park Road Industrial Center				Southern Maryland Hospital		Inglewood/USAIR Arena	
		Option 1 Subscription Service To Bowie	Option 2 Beltsville Circulator	Option 1 Peak Period/ Lunch Hour Circulator	Option 2 Subscription Service To Bowie	Option 1 Route Deviated Service to Bowie	Option 1 Vanpool/ Carpool	Option 2 Southwestern P.G. County Subscription Service	Option 3 Subscription Service To Bowie	Option 4 4-Mile Service Area Around Cheverly or Adison Rd. Metro Stations	Option 1 Subsidized Taxi/Jitney Service	Option 2 Fixed Route/Route Deviated Service to Iverson Mall	Option 1 On Demand Service to Addison Road Metro Station	Option 2 Route Deviated Service to Tantallon
Public/private sector support														
Degree to which it supports Livable Communities Initiative	10	6	6	10	6	6	6	6	6	10	10	10	6	6
Potential private sector support	9	7	4	9	7	7	8	7	7	7	7	8	8	7
Potential community support	7	7	7	8	7	7	7	7	7	8	7	7	7	7
Cost														
Farebox recovery	8	7	6	8	7	8	10	6	7	8	7	6	7	6
Cost per hour		$30 - $35	$30 - $35	$30 - $35	$30 - $35	$30 - $35	$0 - $20	$30 - $35	$30 - $35	$30 - $35	N/A	$30 - $35	$30 - $35	$30 - $35
Cost per day		$390-$455	$390-$455	$570-$655	$390-$455	$390-$455	N/A	$480-$560	$390-$455	$480-$560	N/A	$390-$455	$390-$455	$480-$560
Capital cost		$50,000/veh.	$50,000/veh.	$50,000/veh.	$50,000/veh.	$50,000/veh	$0	$50,000/veh.	$50,000/veh	$50,000/veh.	N/A	$50,000/veh.	$50,000/veh.	$50,000/veh.
Vehicle requirements (number of vehicles)		3 - 4	2 - 3	2 - 3	3 - 4	3 - 4	0	3 - 4	3 - 4	3 - 4	N/A	3 - 4	3 - 4	3 - 4
Total Points (including applied weight factor)		651	528	701	611	591	654	627	571	658	681	637	585	562
Ranking		5	13	1	8	9	4	7	11	3	2	6	10	12

Scores: 1-10
Weight: 1-10

if the County operates the service. The estimated cost of the vehicles required for this operation is $130,000. Detailed descriptions of routing, vehicle requirements, travel distance, costs, and revenues are included in Chapter 5.

4.4.1.1.2 Demand Estimation

Table 21 summarizes the County's demand estimation for Route A-1. Route A-1 is anticipated to have daily demand of 284 passengers.

Table 21
Ridership Estimation for Route A-1

Generator	Employees/ Customers	Residential Units Within 2000 Feet of Route	Transit Ridership Factor	Daily Demand
Chillum Shopping Center and Other Chillum Road Commercial Employees	450		5%	23
Residential Units		1,524	15%	228
Sub-Total Potential Daily Users				502 (228+23) x 2
Less Existing Metrobus Ridership				-218
Net Daily Demand				**284**
Annual Ridership				**71,284** (284 x 251 days)

4.4.1.2 Option A-2

This option would serve the West Hyatsville Metrorail Station, the Senior Citizens Building on 42nd Avenue, the County Service Building, Hyatsville City Hall, Prince George's Plaza Metrorail Station, Prince George's Plaza, office buildings on Bellcrest Road, DeMatha High School, and the Queens Chapel Manor Community.

4.4.1.2.1 Operating and Financial Characteristics

Service for Option A-2 would be provided Monday through Friday from 6:00 AM through 7:00 PM on headways of 15 minutes. The service could be provided at a cost of $210,000 per

year if the County operates the service. The estimated cost of the vehicles required for this operation is $260,000. Detailed descriptions of routing, vehicle requirements, travel distance, costs, and revenues are included in Chapter 5.

4.4.1.2.2 Demand Estimation

Table 22 summarizes the County's demand estimation for Route A-2. Route A-2 is anticipated to have daily demand of 518 passengers.

Table 22
Ridership Estimation for Route A-2

Generator	Employees/ Customers/ Senior Citizens	Residential Units Within 2000 Feet of Route	Transit Ridership Factor	Daily Demand
Hyatsville/Prince George's Plaza Area Employees	7,300		2%	146
Senior Citizens Housing	150		10%	15
Residential Units		4,166	15%	625
Sub-Total Potential Daily Users				1,572 (146+15+625)x2
Less Existing Metrobus Ridership				-1,054
Net Daily Demand				**518**
Annual Ridership				**130,018** (518 x 251 days)

4.4.2 Option B - Southern Maryland Hospital Fixed Route/Route Deviated Service to Iverson Mall

This option would provide transit service to the Southern Maryland Hospital, a cluster that does not currently have transit service. This option would provide a fixed route/route deviated service connecting the Southern Maryland Hospital to Iverson Mall. The route would operate in a fixed route mode during peak periods and as a point deviated option during midday operations. Service would be provided with small buses (20 passenger vehicles) to minimize disturbance and maximize penetration potential into the neighborhoods in the service area.

The bus would serve the Southern Maryland Hospital, Crossland High School, Marlow Heights Shopping Center and the Iverson Mall. During midday hours, the buses would deviate on each side of the route to pick up and drop off passengers. The deviations would

improve the potential for the route to provide comprehensive coverage to the residential community surrounding the Iverson Mall and the ones located on either side of Temple Hills.

4.4.2.1 Operating and Financial Characteristics

Service for Option B would be provided Monday through Friday from 6:00 AM through 10:00 PM on headways of 25 minutes utilizing three vehicles during peak hours and on headways of 90 minutes during off-peak hours. The service could be provided at a cost of $129,000 per year if the County operates the service. The estimated cost of the vehicles required for this operation is $195,000. Detailed descriptions of routing, operations, vehicles requirements, travel distance, costs, and revenues are included in Chapter 5.

4.4.2.2 Demand Estimation

Table 23 summarizes the demand estimation for the Southern Maryland Hospital Route. This route is anticipated to have a daily demand of 502 passengers.

Table 23
Ridership Estimation for Option B

Generator	Employees/ Customers	Population From Residential Units Within 2,000 Feet of Route	Transit Ridership Factor	Daily Demand
Southern Maryland Hospital Employment Cluster	1,560(1)		3%(2)	47
Ridership From Residential Units in Area of Influence		10,200	2%(2)	204
Sub-Total Potential Daily Users				502 (47+204) x 2
Less Existing Metrobus Ridership				0(1)
Net Daily Demand				**502**
Annual Ridership				**126,000** (502 x 251 days)

(1) There are 6,700 employees that work for employers located along the route, but most of these employers are retail facilities with existing transit service. Thus, the use of only employees that work at the Southern Maryland Hospital cluster gives a conservative estimative of the number of potential riders. Since there is no existing transit service to the Hospital, existing ridership is not deducted from the estimated number of potential riders.

(2) See Non-Traditional Transit usage estimation, in Chapter 3.

4.4.3 Option C - Columbia Park Road Industrial Center - Service Area Around the Addison Road Metro Station

The proposed option to address the transit needs of the Columbia Park Road Industrial Center is to provide a subsidized shared-ride taxi service based at the Addison Road Metro Station[1]. The radius of operations for the service is approximately four miles. Under this proposed option, private operators would be contracted to operate subsidized taxi or jitney type service[2]. The service would be open to the general public and would be limited to a specific service area. The use of small vehicles to operate this service minimizes disturbance and maximizes penetration potential into the neighborhoods within the service area.

The subsidized taxi service would operate within the area shown in Figure 62. There are several employment clusters within the service area including the Columbia Park Road Industrial Center, The Inglewood/USAIR Arena, and the Hampton Business Park. The service area also includes the Addison Road Metro Station and residential communities in Cheverly, Fairmount Heights, Seat Pleasant, Capitol Heights, District Heights, and Forestville.

4.4.3.1 Hours of Operation

Monday through Friday 6:00 AM through 9:00 PM. Additional hours may be provided during those days that there are late events at the USAIR Arena.

4.4.3.2 Route

There is no designated route for the subsidized taxi service. The taxis, however, are confined to operate in the designated service area to be eligible for the designated subsidy. Passengers whose destinations are beyond the service area would not be allowed to receive the subsidized taxi rate.

4.4.3.3 Travel Distance

Since the principal attractors are located at the edges of the service area, a typical trip would be between three and four miles.

4.4.3.4 Demand Estimation

The total demand for the proposed alternative was calculated by adding the estimated work trip demand to the estimated residential based demand. The work and residential based demand for non-traditional transit in the subsidized taxi service area was estimated using

[1] As explained in a previous section of this Chapter, while the Cheverly Station is closer to the Columbia Park Road Industrial Center, basing the service out of the Addison Road Station would enable it to serve both the Columbia Park Road Industrial Center and the Inglewood/USAIR Arena clusters.

[2] Under this type of service, a taxi may pick up more than one passenger during a trip. The driver, under predetermined parameters coordinates with the dispatcher the logistics of delivering the passengers to their destinations in the service area.

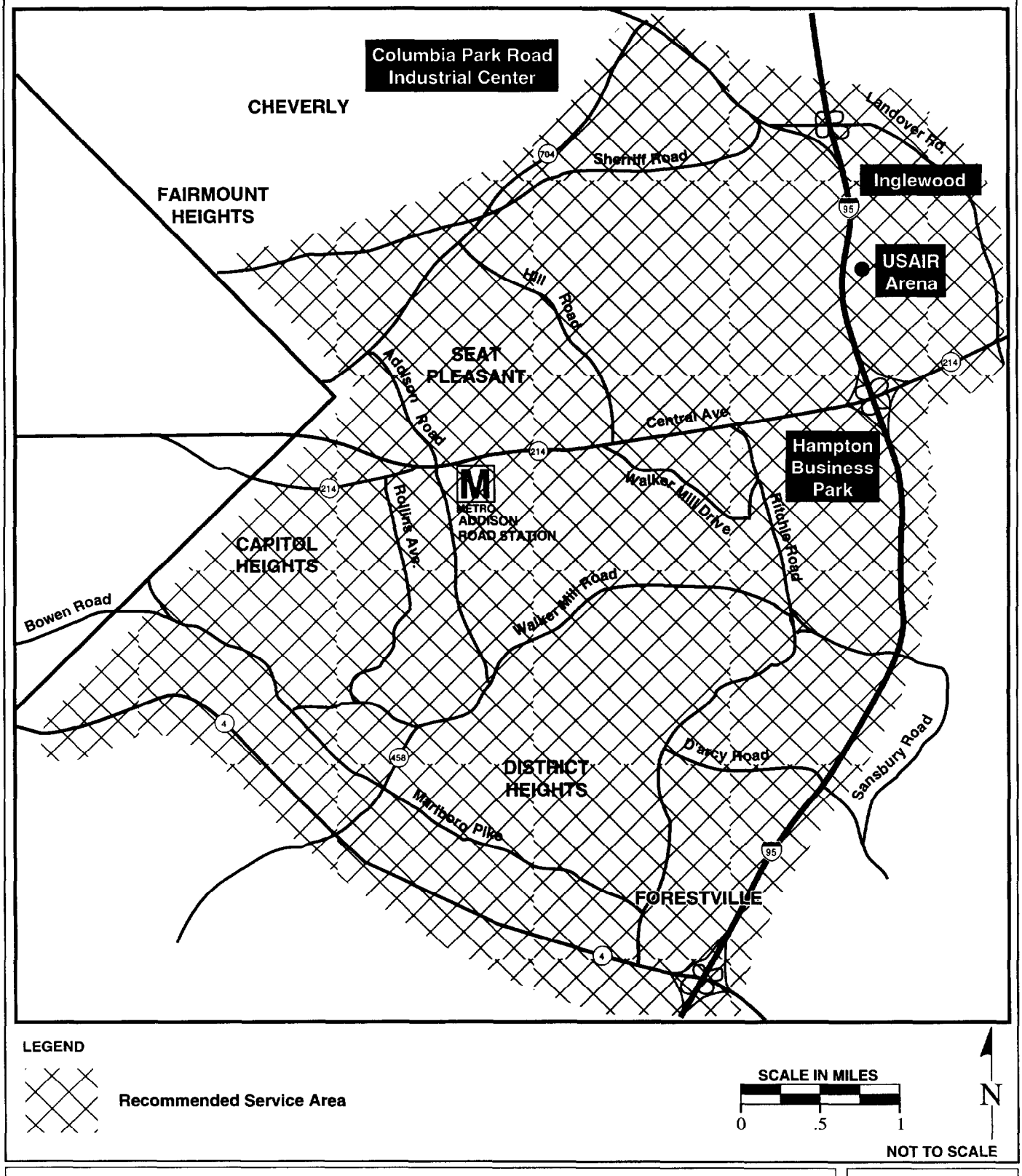

Figure 62. Service Area for the Columbia Park Road Industrial Center Subsidized Taxi

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the estimates developed in Chapter 3 and Tables C3 and C7 Appendix C[1]. The following summarizes the demand estimation methodology for the selected service area:

4.4.3.5 Peak Period Work Trip

- Number of Peak Period Work Trips for the Columbia Park Road Industrial Center = 16
- Number of Peak Period Work Trips for the Inglewood/USAIR Arena = 20
- Number of Peak Period Work Trips for the Hampton Business Park = 16 (assumed the same as the Columbia Park Road Industrial Center because of similar number of employees and similar type of commercial operations)

4.4.3.6 Daily Work Trip

- Number of Daily Work Trips for the Columbia Park Road Industrial Center = 64 [16 per peak period x 2 peak periods x 2 (assumes 50 % of the daily trips occur during the peak periods)]
- Number of Daily Work Trips for the Inglewood/USAIR Arena = 80 [20 per peak period x 2 peak periods x 2 (assumes 50 % of the daily trips occur during the peak periods)]
- Number of Daily Work Trips for the Hampton Business Park = 64 [16 per peak period x 2 peak periods x 2 (assumes 50 % of the daily trips occur during the peak periods)]
- Total Number of Daily Work Trips (considering only the three major employers listed above) = 64 + 80 + 64 = 208

4.4.3.7 Daily Residential Based Trips

- Total number of potential daily residential based trips for the census tracts listed above (see Table 17), = 1,248
- Assume only 20 % of the potential demand would materialize because of the existence of transit service in the area. Total Daily Attainable Demand for Residential Based Trips = 250 (1,248 x 0.20)

[1] The census tracts included in the proposed service area are 25, 26, 27, 24.03, 28.03, 29.01, 29.03, 30.01, 21.03, 22.03, 23.01, 24.04, 22.04, 28.04, 28.05, 28.06, 30.02, 35.07, 34.02, and 34.01.

4.4.3.8 Estimated Total Daily Trips

- **Total Daily Trips = 458** (Daily Residential Based + Work Trips). This estimate is relatively conservative; as it ignores work trips to the smaller employment locations in the service area.

- Yearly Daily Trips = 458 x 251 = 114,960

4.4.4 Cost and Revenues

The cost associated with the implementation of the subsidized taxi option is a function of the average subsidy per passenger trip. As a preliminary estimate, it was assumed that there would be a cost of $2.00 per passenger trip to fund the subsidy program. Thus, the yearly cost (deficit), ignoring administrative expenses is $229,920.

4.4.5 Summary of Findings for the Identification and Evaluation of Non-Traditional Transit Options and Recommendations

At the conclusion of Task 5 of this study the Project Team recommended that the three options described in this Chapter be carried over to the next phase of this project, the development of a detailed implementation plan. However, in a working session with the Technical Working Group at the conclusion of Task 5 a new option was evaluated. Because this new option would provide needed transit service to a large residential community under development (Naval Housing), the Project Team and the Technical Working Group concluded that this new option, the Brightseat Road, would have a higher priority than the Columbia Park Road Industrial Center Subsidized Taxi Option. Therefore, the Brightseat Road Option, described in the next Chapter, was selected for the next phase of the project and the Columbia Park Road option was eliminated from further consideration. The three recommended options, evaluated in Task 6, would be focused on serving the needs of both employees in the employment clusters and residents in the selected service areas. The three recommended options provide service in a wide range of areas within the County and combine a diversity of non-traditional transit options. The Task 4 and Task 5 analysis indicates that the three options, Prince George's Plaza, Southern Maryland Hospital, and Brightseat Road, are feasible and serve a latent demand in high need/high potential areas. However, additional refinements were made to all of the options in the process of developing detailed implementation plans.

5.0 IMPLEMENTATION PLAN

This chapter presents the implementation plan for the recommended service alternatives presented in Chapter 4. The first major section is a more detailed description and refinement of the services decided upon as a result of the analysis in the previous chapters, and the input of the Technical Working Group (TWG) on the information in the draft versions of Chapter 4. This information has already been supplied to Maryland-National Capital Park and Planning Commission-Prince George's (MNCPPC-PG) for use in the pre-application letter to the Federal Transit Administration (FTA), outlining the proposed project.

The second part of this chapter is the implementation plan, including a schedule, organizational roles, estimated costs, and anticipated funding. Also included is a section on evaluation and monitoring.

The plan presented in this chapter is the result of TWG input provided following presentation of a technical memorandum covering this material. A number of issues, including the schedule, the exact timetables, contracting versus direct operation, vehicle ownership, etc. will ultimately be finalized when the decisions about funding have been made. The operating cost data in the implementation plan is presented for a two-year period of operation. In addition, there will be eight months of start-up work prior to the initiation of service. During the last six months the two-year operating demonstration there will also be additional evaluation activities.

The routes and services presented here are the result of the technical analysis and TWG input over the entire Mobility Match project to this point. These proposals will need final evaluation and review prior to implementation, including a process that will solicit public and community input.

5.1 Detailed Route Descriptions

5.1.1 Hyattsville/Prince George's Plaza Circulator Services

In the Hyattsville area two route alternatives are recommended. Both are neighborhood circulators designed to enhance community connections by linking residential areas with area shopping, social services, day care, schools, and local employment centers as well as facilitating connections to the regional transportation network. Although there is extensive Metrobus service in this part of the County, it is designed primarily as line-haul service, or to connect directly to regional services. It may be easier to go to downtown Washington, D.C. on transit than it is to reach the grocery store on the other side of the neighborhood. These services are designed to address the need to provide local transit connections to destinations in the immediate area, building a sense of identity in the community while improving local mobility.

5.1.1.1 Option A-1

Option A-1 will link several apartment complexes with a community center, a community park, several community shopping centers, an elementary school, and the West Hyattsville Metrorail Station. Service will be provided Monday through Friday from 6:00 AM through 7:00 PM on headways of 15 minutes utilizing two vehicles.

5.1.1.1.1 Route Description

The proposed routing (see Figure 63) will originate at the West Hyattsville Metrorail Station, turn right on Ager Road, right on Queens Chapel Road, and right onto Chillum Road. The area near the intersection of Queens Chapel Road and Chillum Road is home to a number of retail establishments including two grocery stores. The route will continue on Chillum Road passing the Chillum Station of Washington Gas Light, an employment site. At 16th Avenue the route turns right. Just after the turn a large garden apartment complex is served, as is a community park. The routing continues on 16th Avenue passing a second apartment complex and onto Ray Road. At the end of Ray Road the bus will turn left onto Sargent Road where a community center and a third apartment complex are located. The route loops back to 16th Avenue via a left onto Madison Street. In doing so it passes by a different side of the two apartment complexes served outbound. Next, the route turns left back onto Chillum Road, where it passes by a fourth apartment complex and near a college. The route then continues back past the retail area at the intersection of Chillum Road and Queen's Chapel Road, providing easy access to shopping and Metrorail for several high density, moderate-income communities. It also links Metrorail and Metrobus with a major employer in the area, Washington Gas Light.

5.1.1.1.2 Key Origins and Destinations Along the Route

In creating a service that improves the livability of a community, it is important to design the service in such a way as to both increase the mobility of those residents and to ensure that such things as retail, schools, employment, and community activities are easily accessible. The proposed routing of Option A-1 provides access to the following:

- Residential -- Four apartment complexes would be served by Option A-1. These include Cypress Creek, Overlook, LaSalle Park, and Rollingcrest Commons. Access to shopping and the West Hyattsville Metrorail Station would be achieved in less than ten minutes for residents of any of these communities.

- Shopping -- Luskins Plaza, Queens Chillum Shopping Center, and the Shopper's Food Warehouse. Service will be provided to these three shopping areas located at or near the intersection of Chillum and Queens Chapel Roads. Within these shopping plazas are several grocery and drug stores as well as several banks.

- Employment Sites -- The Washington Gas Light Company Chillum Station, employing more than 200 persons, is located on Chillum Road along the proposed route. It is served in both directions on each trip.

- Community Center/Community Park -- The Chillum Community Park is situated across from the Cypress Creek Apartments along the Northwest Branch. Additionally the Michigan Park Hills recreational area is located across Chillum Road from the Cypress Creek Apartments. The Rollingcrest/Chillum Community Center is located off of the intersection of Sargent Road and Ray Road.

- Schools -- Accessible through the Cypress Creek community is Chillum Elementary. Also located near (approximately 1/4 mile off of Chillum Road) the proposed route is DeLaSalle College.

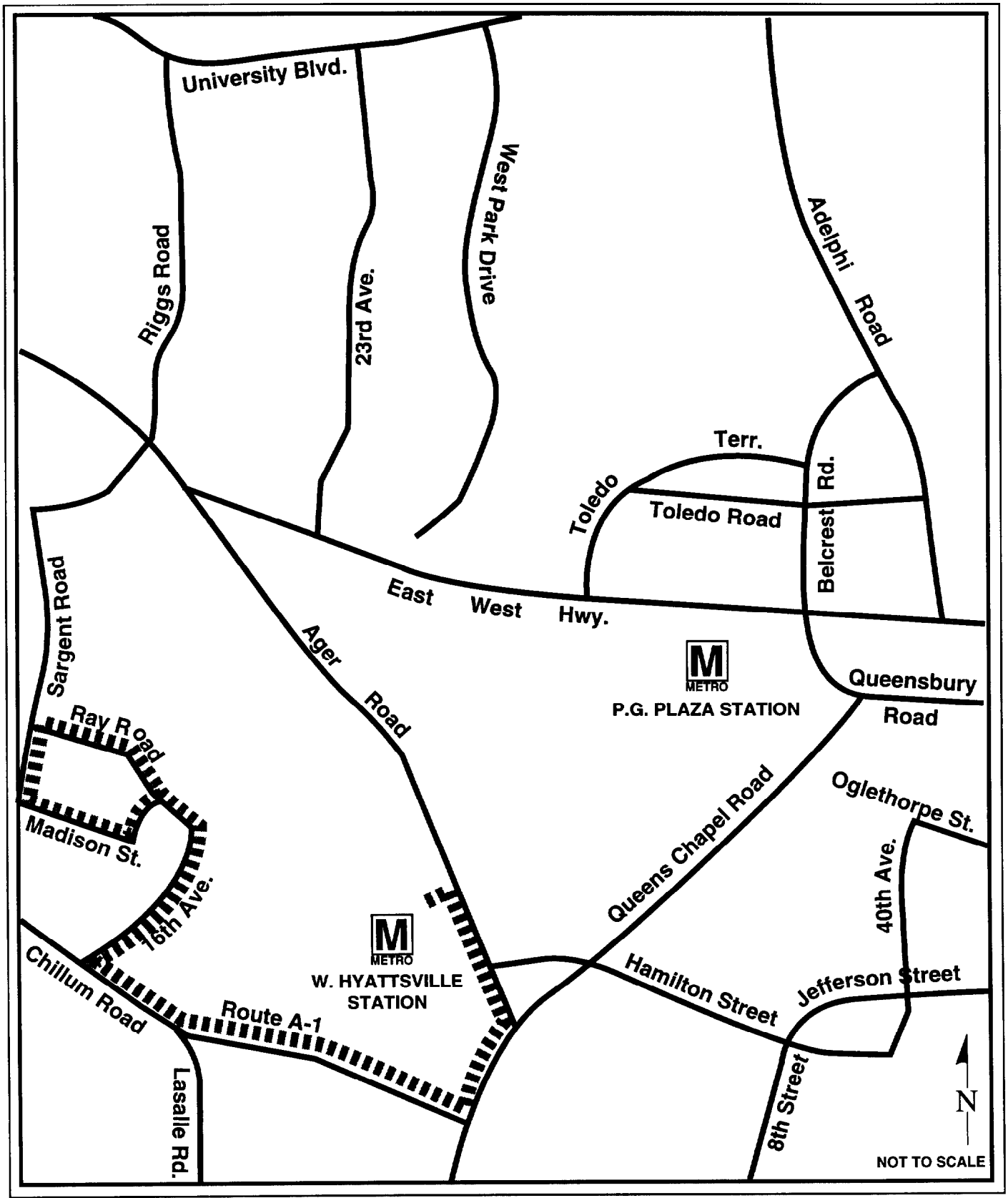

Figure 63. Hyattsville/Prince George's County Option A-1

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LEGEND
Proposed bus route

- Metrorail Service -- Access to the Metrorail Green Line with one-stop service to the Metrorail Red Line (Fort Totten Station) is possible by way of the West Hyattsville Metrorail Station.

- Metrobus Service -- Transfers to the F2, F6, F8, and R4 are available at the West Hyattsville Metrorail Station, offering connections to the regional mall, Prince George's Plaza, and to additional discount shopping at Langley Park.

While segments of this proposed route are served by existing Metrobus service, some are not. These include the segment along 16th Avenue and the portion of Chillum Road between 19th Avenue and Queens Chapel Road. While operating along these segments will provide easier and more direct access to bus service for residents and employees in the service area, it will especially benefit residents of Cypress Creek Apartments, Overlook Apartments, and employees of Washington Gas Light.

5.1.1.1.3 Route Details

Route statistics, costs and revenue of contracted service, and costs and revenue of county operated service can be found in Tables 24, 25, and 26, respectively.

5.1.1.2 Option A-2

This route is also a neighborhood connector linking a regional mall, downtown Hyattsville, and Metrorail at both the West Hyattsville and the Prince George's Plaza Metrorail Stations with residential areas that are currently served by Metrobus only peripherally. Service will be provided Monday through Friday from 6:00 AM through 7:00 PM on headways of 15 minutes utilizing four vehicles during peak hours and on headways of 30 minutes utilizing two vehicles during off-peak times.

5.1.1.2.1 Route Description

The Option A-2 routing (see Figure 64) will originate at the West Hyattsville Metrorail Station. Exiting the station, the bus will turn left on Ager Road. It will turn right onto Lancer Drive, then left onto 31st Avenue in the Queens Chapel Manor neighborhood in the town of Hyattsville. It continues by turning right onto Nicholson Street, passing by an apartment complex at the intersection of Nicholson Street and 31st Avenue. Continuing down Nicholson, service is provided to Nicholas Orem Middle School, one of several schools along the route. The route next turns left onto Queens Chapel Road and then right onto Oglethorpe Street. Moving along Oglethorpe to 42nd Avenue the route passes by a local market and day care center at the intersection of 40th Avenue, where it intersects with the Metrobus Route 86. The bus will make a right onto 42nd Avenue. Hyattsville Middle School is located at that intersection. Another apartment complex is also located at that corner. The route passes a nursing home on 42nd Avenue where Madison Street crosses 42nd Avenue. The route turns left onto Jefferson Street, which has two elementary schools (Hyattsville Elementary and St. Jeromes Catholic School). Also along Jefferson just before reaching U.S. Route 1 is an office complex. Turning right onto U.S. Route 1 the route proceeds down to 43rd Avenue, passing by the Prince George's County Services Building and Justice Center at U.S. Route 1 and 43rd Avenue. The route turns right onto 43rd Avenue and left onto Gallatin Street. It continues down Gallatin Street to 42nd Avenue. The route turns right

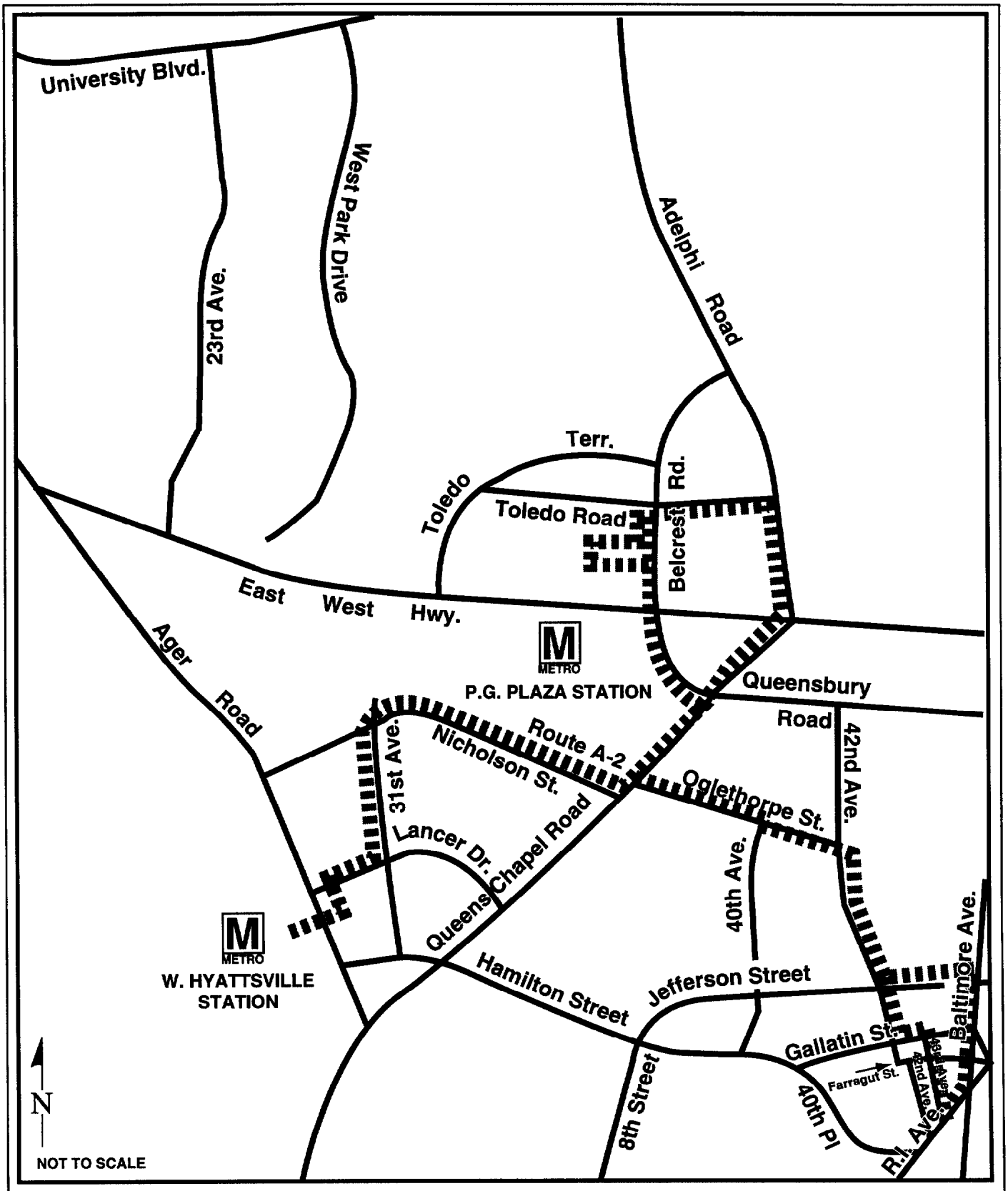

Figure 64. Hyattsville/Prince George's Plaza County Option A-2

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LEGEND
Proposed bus route

Table 24

OPTION A-1 ROUTE STATISTICS

	Vehicle #1	Vehicle #2	Total
Daily:			
Hours of Operation	6:00 a.m. - 7:00 p.m.	6:15 a.m. - 6:45 p.m.	6:00 a.m. - 7:00 p.m.
Revenue Service Hours	13.00	12.50	25.50
Non-Revenue Hours	2.00	2.00	4.00
Total Hours (1)	15.00	14.50	29.50
Roundtrips	26	25	51
Route Length (roundtrip)	4.4	4.4	
Annual:			
Days of Operation	251	251	
Revenue Service Hours	3,263.00	3,137.50	6,400.50
Non-Revenue Hours	502.00	502.00	1,004.00
Total Hours (1)	3,765.00	3,639.50	7,404.50

(1) Revenue plus Non-Revenue Hours.

Table 25

OPTION A-1 OPERATING COSTS AND REVENUE OF CONTRACTED SERVICE *

	Contracted Service	
	Vehicles Provided By Private Provider	Vehicles Provided By P.G. County
Annual Revenue Service Hours	6,400.50	6,400.50
Cost per Service Hour	$46.85	$35.00
Total Annual Operating Costs	$299,863.43	$224,017.50
Annual Passenger Trips	71,284	71,284
Revenues per Trip	$0.75	$0.75
Annual Revenues	$53,463.00	$53,463.00
Annual Net Deficit	$246,400.43	$170,554.50

* Capital costs are not included.

Table 26

OPTION A-1
COSTS AND REVENUE OF COUNTY OPERATED SERVICE

Driver Salaries and Fringe Benefits:	
Drivers	4
Driver Wages (per driver)	$27,300
Total Wages	$109,200
Driver Fringe (per driver)	$8,190
Total Fringe	$32,760
SUBTOTAL - Salaries/Fringe	$141,960
Fuel & Maintenance:	
Vehicles	2
Fuel (1)	$24,000
Maintenance (2)	$10,000
SUBTOTAL - Fuel/Maintenance	$34,000
Miscellaneous Costs:	
Uniform Cost (per driver)	$2,400
SUBTOTAL - Miscellaneous	$9,600
Total Annual Operating Costs	$185,560
Annual Passenger Trips	71,284
Revenues per Trip	$0.75
Annual Revenues	$53,463
Annual Net Deficit	$132,097

(1) Fuel costs are based on $12,000 per year per vehicle.
(2) Maintenance costs are based on $5,000 per year per vehicle.

onto 42nd and down to Oglethorpe, passing by the same apartments and nursing home. The bus will turn left onto Oglethorpe and the route will proceed back by the local market and day care center to Queens Chapel Road. Turning right onto Queens Chapel Road the route will continue to a left turn on Adelphi Road and then a left onto Toledo Road. On Toledo the route passes a public library, a community center, health care providers, and the U.S. Postal Service office before reaching Prince George's Plaza, the regional mall. After a stop at the Mall's Transit Center, the bus will return to Belcrest Road, cross East-West Highway, stop at the Metro Station, and continue the route.

5.1.1.2.2 Key Origins and Destinations on the Route

The following origins and destinations within the Hyattsville community would be served by this option:

- Residential -- Apartments served by this option include the Courtyard Park Apartments at 42nd Avenue and Oglethorpe, the Friendship Arms Apartments along 42nd Avenue near Oglethorpe, and Prince George's Towers Apartments at the intersection of Nicholson Street and 31st Avenue in the Queens Chapel Manor area. In addition, the Madison Manor Nursing Home at Madison Street and 42nd Avenue is also served.

- Shopping -- The main shopping destination for the communities served by this option is Prince George's Plaza. Additional retail establishments can be found along U.S. Route 1 in East Hyattsville and at the 4-Way Stop Market at Oglethorpe Street and 40th Avenue.

- Employment Sites -- Major employers served by this option include many retail establishments in Prince George's Plaza, the U.S. Department of Agriculture and Group Health Association at the Prince George's Center, and the County Services Building and the Justice Center in East Hyattsville.

- Health Related Facilities -- An eye care center and the offices of Group Health Association can both be found in the Prince George's Center.

- Day Care -- The proposed route provides service to one day care center. Brook's Day Care Center is located just off the route at 40th Avenue and Nicholson Street.

- Community Centers/Community Parks -- At the intersection of Adelphi Road and Toledo Road is the Prince George's Plaza Community Center.

- Libraries -- Service would be provided to the Hyattsville Branch of the Prince George's County Memorial Library.

- Schools -- Neighborhood schools served by this option include the New City Montessori School located at the Hyattsville Presbyterian Church along Nicholson Street, the St. Matthews Day School, also along Nicholson Street, Hyattsville Elementary along Jefferson Street, St. Jerome's on 42nd Place, and Hyattsville Middle School at Oglethorpe Street and 42nd Avenue.

- Metrorail Service -- The West Hyattsville Metrorail Station is one endpoint of the routing. Service is also provided to the Prince George's Plaza Metrorail Station.

This option provides service to portions (between Oglethorpe Street and Jefferson Street) of 42nd Avenue, along which lie a nursing home and apartment complex, and the community of Queens Chapel Manor, both of which are currently unserved. It would also provide a more direct means of travelling between East Hyattsville (County Services Building and Justice Center) and Prince George's Plaza.

5.1.1.2.3 Route Details

Route statistics, costs and revenue of contracted service, and costs and revenue of county operated service can be found in Tables 27, 28, and 29, respectively.

5.1.2 Southern Maryland Hospital Fixed Route/Route Deviated Service to Iverson Mall

This route is proposed as a means of linking currently unserved communities between Iverson Mall and Southern Maryland Hospital Center in Clinton. Southern Maryland Hospital Center is both an employment center and a medical services provider, and it currently is not served by any kind of fixed-route transit service. Peak hour only Metrobus service which operates on Branch Avenue comes only as close as a park and ride lot at Woodyard Road, some distance from the Hospital. The Metrobus service operates on Branch Avenue (Maryland Route 5), which is being rebuilt as a limited access highway that does not allow linkages to the many neighborhoods between Clinton and downtown. The intention of this service is to offer fixed-route service in the peak-hour, with route deviation available during the off-peak as a means of providing a connection between the residential areas, shopping, and medical facilities. Service will be provided Monday through Friday from 6:00 AM through 10:00 PM on headways of 25 minutes utilizing three vehicles during peak hours and on headways of 90 minutes during off-peak hours. The last trip from Iverson Mall is scheduled at about 10:00 PM to allow store employees a means of returning home by transit.

Route deviation involves vehicles traveling along a prescribed route at scheduled times just as fixed route service does. However, with route deviation, the route may vary depending upon passenger's requests. Passengers may access the route at fixed stops or by calling in advance for service. Service would be provided to the latter via requests to a dispatcher and within a specified radius from the fixed portion of the route. Key issues to be considered include the number of deviations from the fixed route, the maximum distance from the fixed route, additional fares, if any, and the mechanics of dispatching. In general, the route deviation corridor would be at least 3/4 mile on either side of the basic route, to meet ADA requirements. Depending on the number of deviations, additional areas could possibly be served. Implementing this Southern Maryland route as a route-deviation service with scheduled stops at time-points along with route could demonstrate several of the vehicle dispatch strategies that are part of the FTA's Advanced Public Transportation Systems (APTS) program under the Departmental IVHS Initiative. In concept this service is very similar to the German "Smart-Bus" systems that have been considered for locations elsewhere in the country. Use of digital technology to communicate with the driver, and a means of knowing the vehicle location would allow the route deviations to be scheduled with little advance notice, and could allow additional trips that would cause the bus to miss its time points to be shifted to taxis, perhaps under the County's Call-a-Cab program.

Table 27

OPTION A-2 ROUTE STATISTICS

	Vehicle #1	Vehicle #2	Vehicle #3	Vehicle #4	Total
Daily:					
Hours of Operation	6:00 a.m. - 7:00 p.m.	6:15 a.m. - 9:15 a.m. 4:15 p.m. - 7:15 p.m.	6:00 a.m. - 7:00 p.m.	6:15 a.m. - 9:15 a.m. 4:15 p.m. - 7:15 p.m.	6:00 a.m. - 7:00 p.m.
Revenue Service Hours	13.00	6.00	13.00	6.00	38.00
Non-Revenue Hours	2.00	4.00	2.00	4.00	12.00
Total Hours (1)	15.00	10.00	15.00	10.00	50.00
Roundtrips	13.0	6.0	13.0	6.0	38.0
Route Length (roundtrip)	10.6	10.6	10.6	10.6	
Annual:					
Days of Operation	251	251	251	251	
Revenue Service Hours	3,263.00	1,506.00	3,263.00	1,506.00	9,538.00
Non-Revenue Hours	502.00	1,004.00	502.00	1,004.00	3,012.00
Total Hours (1)	3,765.00	2,510.00	3,765.00	2,510.00	12,550.00

(1) Revenue plus Non-Revenue Hours.

Table 28

OPTION A-2
OPERATING COSTS AND REVENUE OF CONTRACTED SERVICE *

	Contracted Service	
	Vehicles Provided By Private Provider	Vehicles Provided By P.G. County
Annual Revenue Service Hours	9,538.00	9,538.00
Cost per Service Hour	$46.85	$35.00
Total Annual Operating Costs	$446,855.30	$333,830.00
Annual Passenger Trips	130,018	130,018
Revenues per Trip	$0.75	$0.75
Annual Revenues (1)	$87,762.15	$87,762.15
Annual Net Deficit	$359,093.15	$246,067.85

* Capital costs are not included.

(1) Assumes that 10 percent of passenger trips are provided free to County employees.

Table 29

OPTION A-2
COSTS AND REVENUE OF COUNTY OPERATED SERVICE

Driver Salaries and Fringe Benefits:	
Drivers	6.5
Driver Wages (per driver)	$27,300
Total Wages	$177,450
Driver Fringe (per driver)	$8,190
Total Fringe	$53,235
SUBTOTAL - Salaries/Fringe	$230,685
Fuel & Maintenance:	
Vehicles (1)	3
Fuel (2)	$36,000
Maintenance (3)	$15,000
SUBTOTAL - Fuel/Maintenance	$51,000
Miscellaneous Costs:	
Uniform Cost (per driver)	$2,400
SUBTOTAL - Miscellaneous	$15,600
Total Annual Operating Costs	$297,285
Annual Passenger Trips	130,018
Revenues per Trip	$0.75
Annual Revenues (4)	$87,762
Annual Net Deficit	$209,523

(1) Number of vehicles is based on four vehicles operating during peak hours and two at all other times.
(2) Fuel costs are based on $12,000 per year per vehicle.
(3) Maintenance costs are based on $5,000 per year per vehicle.
(4) Assumes that 10 percent of passenger trips are provided free to County employees.

For the Southern Maryland Hospital Center option the route deviated portion of the service would be operated midday between the AM and PM peak hours. Roundtrip route times would be 90 minutes leaving sufficient time for a number of deviations. A maximum number would need to be set as only so much extra time is built into the route schedule. The maximum distance would be set so as to allow access to and from high density residential areas, schools, medical facilities, and major shopping areas. The issue of additional fares might be decided upon based on the additional costs of providing service to points which are increments of, for example, a quarter of a mile off the fixed route. The specific mechanics of meeting requests for deviated service would vary depending upon whether the County or a private provider operates the service.

5.1.2.1 Route Description

Originating at Southern Maryland Hospital Center, the route (see Figure 65) also will be able to serve a nearby office park and apartment complex. The bus route will travel up Maryland Route 5 and exit to go west on Woodyard Road. The route serves a shopping plaza at this intersection and continues westbound on Woodyard Road, which becomes Piscataway Road. Before turning right onto Temple Hill Road the route passes by a number of retail establishments, a professional center, a high school, a public library, and two elementary schools. Continuing north on Temple Hill Road another elementary school is served (just off of Woodyard Road) and a mobile home park near the intersection of Kirby Road and Temple Hill Road would be provided service under this option. The route continues on Temple Hill Road providing service to a major employer, a shopping center, a high school, another professional center, a community center, and a school before turning right onto St. Barnabas Road. The bus route proceeds on St. Barnabas Road to northbound Branch Avenue. It continues left onto Iverson Street through a major employment site and shopping mall. The proposed route turns left onto 23rd Parkway and right onto Raleigh Road before crossing back over St. Barnabas to Temple Hill Road and making the return trip to Southern Maryland Hospital.

5.1.2.2 Key Origins and Destinations Along the Proposed Route

The major origins and destinations in the communities surrounding the route which would receive service under this option include the following:

- Residential -- Most apartment complexes served by this route are located along 23rd Parkway in Hillcrest Heights. Additional medium to high density housing served would include the Southern Maryland Townhouses behind the Southern Maryland Hospital Center and a mobile home village along the eastern portion of Temple Hill Road south of the Kirby Road intersection. Other housing served during period of route deviated service would include a senior residence (Branchwood Towers) behind the Clinton Park Shopping Center.

- Shopping -- Among the shopping centers, plazas, and malls served by this option are the Clinton Park Shopping Center at Woodyard Road and Branch Avenue, the Padgetts Corner Shopping Center at Temple Hill Road and Allentown Road, and Iverson Mall and Marlow Heights Shopping Center, each at Branch Avenue and Iverson Street. A number of additional retail establishments are accessible along Woodyard Road and along St. Barnabas Road.

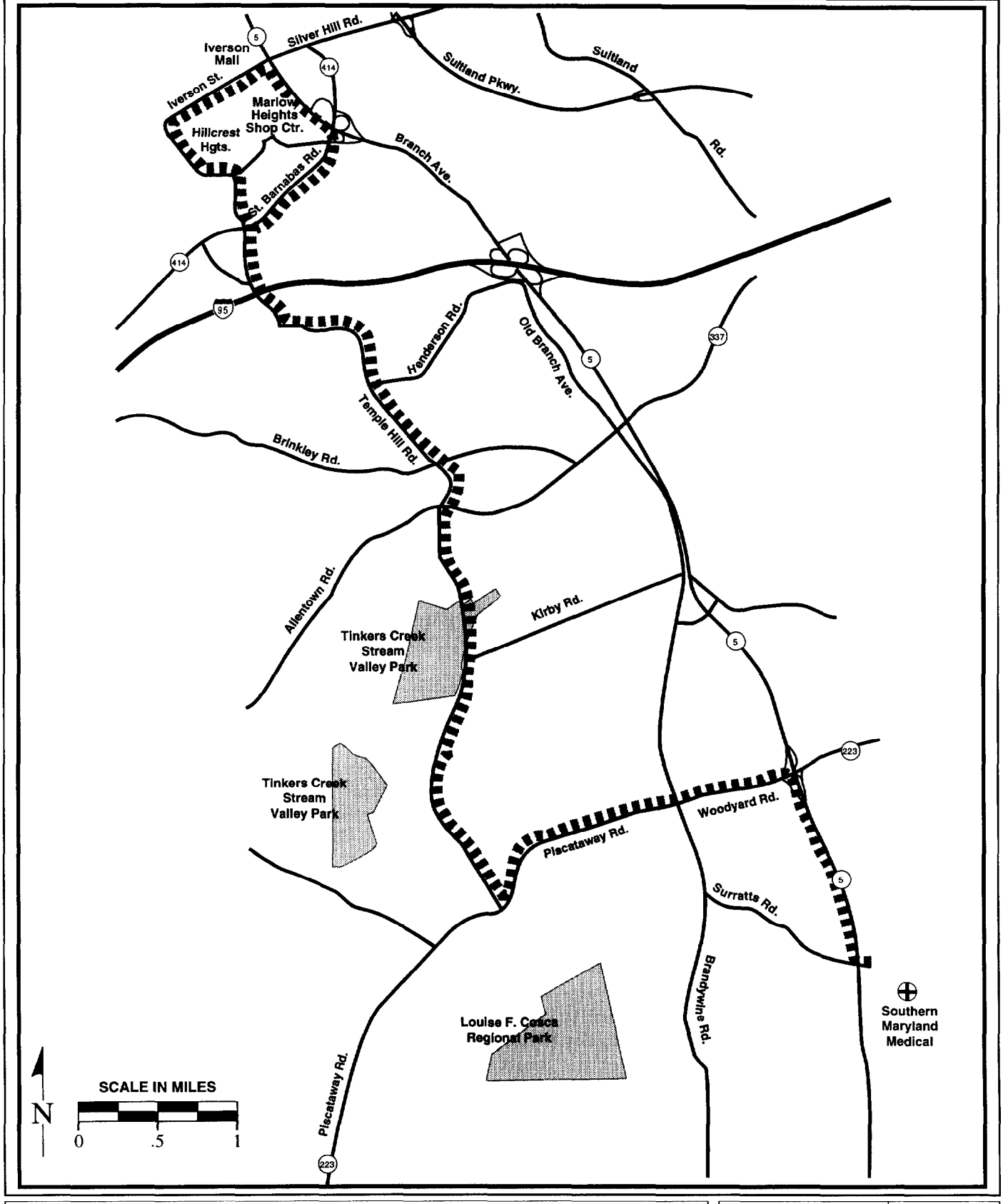


Figure 65. Southern Maryland Hospital Route

JHK & Associates
An SAIC Company

LEGEND

Proposed bus route

- Employment Sites -- Major employers along the proposed route include Southern Maryland Hospital Center, Washington Suburban Sanitary Commission along Temple Hill Road, Padgetts Corner Shopping Center at the intersection of Temple Hill Road and Allentown Road, and Iverson Mall and Marlow Heights Shopping Center, each at the intersection of Branch Avenue and Iverson Street. Other employment sites include several office parks and professional centers situated along Woodyard Road.

- Health Related Facilities -- Health care facilities located along the route include Southern Maryland Hospital Center, also a major employer and key destination, the D. Leonard Dyer Regional Health Center (Prince George's County Health Department) along Woodyard Road, and the Piscataway Towers which contains numerous doctors' offices.

- Community Centers/Community Parks -- A number of community centers and parks are located along the proposed route. These include Tinkers Creek Stream Valley Park along Temple Hill Road near the intersection of Kirby Road, Henson Creek Neighborhood Park along Temple Hill Road near the intersection of Henderson Road, and Temple Hills Community Center and Park about a quarter of a mile north of the intersection of Temple Hill Road and Henderson Road. Also found just off the route is the Clinton Boys and Girls Sports Complex. It is located off of Woodyard Road on Dixon Drive.

- Libraries -- One public library is situated alongside the route and it is the Surratts-Clinton Branch of the Public Library.

- Schools -- There are seven schools serving the communities along or just off of this route. They include Surrattsville High School off of Woodyard Road, Clinton Grove Elementary on Temple Hill Road, Crossland High School near the intersection of Temple Hill and Allentown Roads, Allenwood Elementary School just off of Temple Hill Road near Brinkley Road, Grace Bretheren School along Temple Hill Road north of Henderson Road, Hillcrest Heights Elementary School on 22nd Place just off of 23rd Parkway, and Benjamin Stoddert Middle School on Olson Street just past Raleigh Road.

- Metro Rail/Bus Service -- Access to Metrorail would be provided via transfers to one of several Metrobus routes, including the C-14 and H-12 which provide all-day service to the Orange and Blue Lines at the Potomac Avenue Metrorail Station; H-11, C-12, and H-14 providing peak hour services to the Potomac Avenue Metrorail Station; the P-12 provides all-day service to the Addision Road Metrorail Station; and the C-11 offers peak period service to the Federal Center Southwest Metrorail Station. Service on the southern portion of the route would provide access to the Clinton Fringe Parking Lot during the mid-day off-peak and in the evenings, when the Metrobus Route C-11 is not operating.

This option would provide service to Southern Maryland Hospital Center, a key destination and a major employer in the County which is currently unserved. Additional areas that are currently unserved, but which would receive service under this option, include Woodyard Road between Branch Avenue and Temple Hill Road, and Temple Hill Road between Woodyard Road and Allentown Road, and between Brinkley Road and Fisher Road.

Additional areas off of these route segments would receive service from the route-deviation operations.

5.1.2.3 Route Details

Route statistics, costs and revenue of contracted service, and costs and revenue of county operated service can be found in Tables 30, 31, and 32, respectively.

5.1.3 Brightseat Road Service

This proposed route links Landover Mall, a regional shopping center, with a discount shopping area, an apartment complex, several office/light industrial parks, a major U.S. military housing complex (under construction), and the Addison Road Metro Station. This service provides a critical link between the Summerfield housing project, Landover Mall and nearby shopping, and Metrorail service. This development is under construction, with the first section of apartments and townhouses almost ready for occupancy. Bus shelters are being installed by the Defense Department because they are aware of the transit needs of the future residents. Community linkages to the regional transit service and to shopping and other services will be provided by this route. This route will also link employment sites along Brightseat Road with the Metrorail system and shopping areas. Service will be provided Monday through Friday from 6:00 AM through 6:00 PM on headways of 15 minutes utilizing four vehicles.

5.1.3.1 Route Description

The Brightseat Road route (see Figure 66) originates at Landover Mall, one of the largest shopping malls in Prince George's County. The route would begin at the existing Metrobus shelter located near the southeast corner of Sears. The route would then exit via Evarts Street along the north side of the Mall. It would extend left onto Brightseat Road passing by one of several apartment complexes on the route. Continuing down Brightseat Road across Landover Road several retail establishments would be accessible just before the route turned left again onto Brightseat Road. Approximately one half mile further south on Brightseat Road, the route passes another of the apartment complexes served by this option. It would then continue on Brightseat Road, making a stop in the Centre Pointe Office Park. This is one of the major employment sites along the route. Departing the Office Park the route continues down Brightseat Road to Central Avenue where a right is made onto Central Avenue. The route continues down Central Avenue to Summerfield Boulevard. A right is made onto Summerfield Boulevard and right again onto Fieldstone Way to the Summerfield Military Housing. The route continues out of Summerfield Housing and down Central Avenue toward Addison Road Metrorail Station, the destination of the route.

5.1.3.2 Demand Estimation for the Brightseat Road Local Bus Service

Demand for the Brightseat Road local bus service was estimated using the mode split factors developed by the Metropolitan Washington Council of Governments (COG). Employment centers on the proposed route include Landover Mall, the Manor Farm Business Park and the Centerpointe Office Park. A 2 percent mode split for transit on the total of 3,450 employees results in an estimate of 69 daily riders. There are 1,541 dwelling units within 2,000 feet of the proposed route, and applying the COG transit user factor of 15 percent results in an estimate of an additional 231 users. Combining the employment and residential

Table 30

SOUTHERN MARYLAND HOSPITAL CENTER ROUTE STATISTICS

	Vehicle #1	Vehicle #2	Vehicle #3	Total
Daily:				
Hours of Operation	6:00 a.m. - 9:05 a.m. 3:15 p.m. - 7:45 p.m.	6:25 a.m. - 8:55 a.m. 4:25 p.m. - 6:55 p.m.	6:10 a.m. - 10:45 p.m.	6:10 a.m. - 10:45 p.m.
Revenue Service Hours	7.08	5.00	16.58	28.66
Non-Revenue Hours	4.00	4.00	2.00	10.00
Total Hours (1)	11.08	9.00	18.58	38.66
Roundtrips	6.0	4.0	11.5	21.50
Route Length (roundtrip)	22.1	22.1	22.1	
Annual:				
Days of Operation	251	251	251	
Revenue Service Hours	1,777.08	1,255.00	4,161.58	7,193.66
Non-Revenue Hours	1,004.00	1,004.00	502.00	2,510.00
Total Hours (1)	2,781.08	2,259.00	4,663.58	9,703.66

(1) Revenue plus Non-Revenue Hours.

Table 31

SOUTHERN MARYLAND HOSPITAL CENTER
OPERATING COSTS AND REVENUE OF CONTRACTED SERVICE *

	Contracted Service	
	Vehicles Provided By Private Provider	Vehicles Provided By P.G. County
Annual Revenue Service Hours	7,193.66	7,193.66
Cost per Service Hour	$46.85	$35.00
Total Annual Operating Costs	$337,022.97	$251,778.10
Annual Passenger Trips	126,000	126,000
Revenues per Trip	$0.75	$0.75
Annual Revenues	$94,500.00	$94,500.00
Annual Net Deficit	$242,522.97	$157,278.10

* Capital costs are not included.

Table 32

SOUTHERN MARYLAND HOSPITAL CENTER
COSTS AND REVENUE OF COUNTY OPERATED SERVICE

Driver Salaries and Fringe Benefits:	
Drivers	5
Driver Wages (per driver)	$27,300
Total Wages	$136,500
Driver Fringe (per driver)	$8,190
Total Fringe	$40,950
SUBTOTAL - Salaries/Fringe	$177,450
Fuel & Maintenance:	
Vehicles (1)	2
Fuel (2)	$24,000
Maintenance (3)	$10,000
SUBTOTAL - Fuel/Maintenance	$34,000
Miscellaneous Costs:	
Uniform Cost (per driver)	$2,400
SUBTOTAL - Miscellaneous	$12,000
Total Annual Operating Costs	$223,450
Annual Passenger Trips	126,000
Revenues per Trip	$0.75
Annual Revenues	$94,500
Annual Net Deficit	$128,950

(1) Number of vehicles is based on three vehicles operating during peak hours and one at all other times.

(2) Fuel costs are based on $12,000 per year per vehicle.

(3) Maintenance costs are based on $5,000 per year per vehicle.

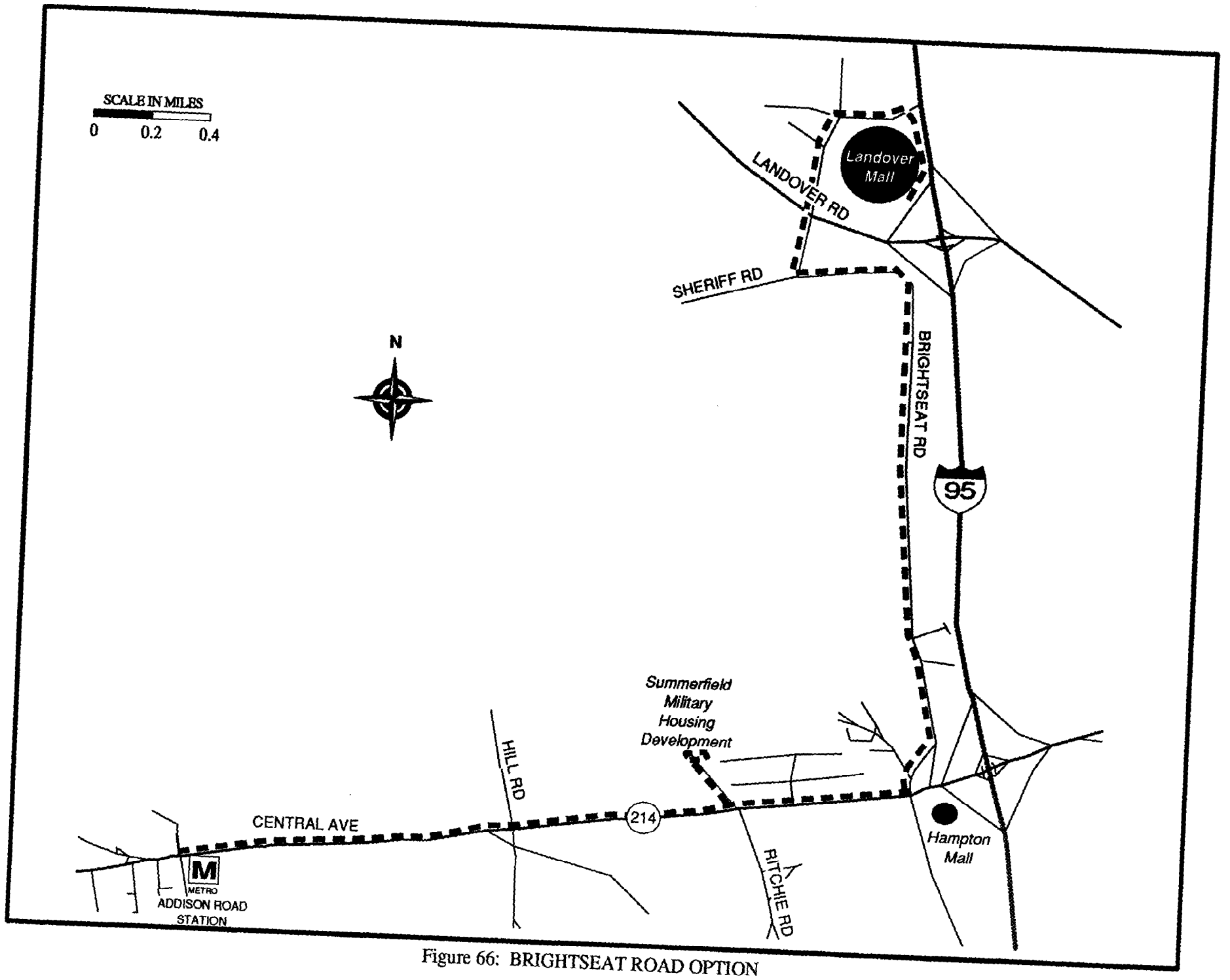


Figure 66: BRIGHTSEAT ROAD OPTION

demand figures, and assuming that each user makes two transit trips per weekday results in an estimated demand of 600 trips per day for this route, or 150,600 annual trips based on 251 workdays.

5.1.3.3 Key Origins and Destinations Along the Proposed Route

The following origins and destinations within the Landover and Central Avenue (inside the Beltway) area communities would be served by this option:

- Residential -- Along the route four apartment complexes and several townhome villages are served. The apartment complexes include Glenarden and Maple Ridge Apartments near Landover Mall, Landsdowne Village, and Manor Farm Apartments on Brightseat Road, and Central Park Apartments along Central Avenue near the Addison Road Metrorail Station. Residential areas made up of townhomes include Centennial Village along Brightseat Road, and the Summerfield Military Housing Development.

- Shopping -- Shopping areas include Landover Mall, one of the largest malls in Prince George's County, the Landover Crossing shopping area at Brightseat Road and Landover Road which includes Sam's Club, Circuit City, and a number of other retail establishments, and Hampton Mall at Central Avenue and the Beltway.

- Employment Sites -- Employment sites along the route include Landover Mall, Landover Crossing, Ninety Five Office Park, Landover Industrial Center, Spectrum 95 (an office park), Centre Pointe Office Park, the Corporate Press Complex, Manor Business Center, and Hampton Mall.

- Schools -- Access is provided to Thomas Pullen Middle School, an arts magnet school, located along Brightseat Road.

- Metrorail Service -- One of the destinations of the route is the Addison Road Metrorail Station, endpoint of the Blue Line on the Metrorail System.

This option would give residents of the Landover Mall area and those residing just south of Landover Road along Brightseat Road more direct access to the Addison Road Metrorail Station than that which currently exists and also provide service along a portion of Brightseat Road not currently served. Current Metrobus service exists only on the portions of Brightseat Road just south of Landover Road and just north of Central Avenue. This is provided on the former by the A15 outbound only during the AM Rush and inbound only during the PM Rush and on the latter both ways during peak hour only by the J15. The portions of each route along Brightseat Road would be eliminated and replaced by this option.

5.1.3.4 Route Details

Route statistics, costs and revenue of contracted service, and costs and revenue of county operated service can be found in Tables 33, 34, and 35, respectively.

Table 33

BRIGHTSEAT ROAD ROUTE STATISTICS

	Vehicle #1	Vehicle #2	Vehicle #3	Vehicle #4	Total
Daily:					
Hours of Operation	6:00 a.m. - 6:00 p.m.	6:15 a.m. - 5:45 p.m.	6:00 a.m. - 6:00 p.m.	6:15 a.m. - 5:45 p.m.	6:00 a.m. - 6:00 p.m.
Revenue Service Hours	12.00	11.50	12.00	11.50	47.00
Non-Revenue Hours	2.00	2.00	2.00	2.00	8.00
Total Hours (1)	14.00	13.50	14.00	13.50	55.00
Roundtrips	12.0	11.5	12.0	11.5	47.0
Route Length (roundtrip)	13.3	13.3	13.3	13.3	
Annual:					
Days of Operation	251	251	251	251	
Revenue Service Hours	3,012.00	2,886.50	3,012.00	2,886.50	11,797.00
Non-Revenue Hours	502.00	502.00	502.00	502.00	2,008.00
Total Hours (1)	3,514.00	3,388.50	3,514.00	3,388.50	13,805.00

(1) Revenue plus Non-Revenue Hours.

Table 34

BRIGHTSEAT ROAD
OPERATING COSTS AND REVENUE OF CONTRACTED SERVICE *

	Contracted Service	
	Vehicles Provided By Private Provider	Vehicles Provided By P.G. County
Annual Revenue Service Hours	11,797.00	11,797.00
Cost per Service Hour	$46.85	$35.00
Total Annual Operating Costs	$552,689.45	$412,895.00
Annual Passenger Trips	150,600	150,600
Revenues per Trip	$0.75	$0.75
Annual Revenues (1)	$107,302.50	$107,302.50
Annual Net Deficit	$445,386.95	$305,592.50

* Capital costs are not included.

(1) Assumes that 5 percent of passenger trips are provided free to County employees.

Table 35

BRIGHTSEAT ROAD ROUTE
COSTS AND REVENUE OF COUNTY OPERATED SERVICE

Driver Salaries and Fringe Benefits:	
Drivers	8
Driver Wages (per driver)	$27,300
Total Wages	$218,400
Driver Fringe (per driver)	$8,190
Total Fringe	$65,520
SUBTOTAL - Salaries/Fringe	$283,920
Fuel & Maintenance:	
Vehicles	4
Fuel (1)	$48,000
Maintenance (2)	$20,000
SUBTOTAL - Fuel/Maintenance	$68,000
Miscellaneous Costs:	
Uniform Cost (per driver)	$2,400
SUBTOTAL - Miscellaneous	$19,200
Total Annual Operating Costs	$371,120
Annual Passenger Trips	150,600
Revenues per Trip	$0.75
Annual Revenues (3)	$107,303
Annual Net Deficit	$263,818

(1) Fuel costs are based on $12,000 per year per vehicle.
(2) Maintenance costs are based on $5,000 per year per vehicle.
(3) Assumes that 5 percent of passenger trips are provided free to County employees.

5.2 Implementation Plan

5.2.1 Organization

Figure 67 presents the basic anticipated organizational structure for implementation of the Livable Communities demonstration. The Prince George's County Department of Public Works and Transportation (DPW&T) is the project applicant to FTA, and the Maryland-National Capital Park and Planning Commission-Prince George's (MNCPPC-PG) will prepare the grant application. The County (DPW&T) will contract with FTA, monitor the project, and submit progress and final reports to FTA as called for by the grant agreement. MNCPPC-PG will prepare the grant application and continue in the project in an advisory role to Prince George's County. DPW&T's Transit Division will implement and operate the services. DPW&T is already responsible for overseeing the provision of Metrobus service in the County, operating its own local bus services (THE BUS and County-wide demand-responsive service), and contracting for subsidized taxi service, and it has the ability to either operate some or all of the services itself, or to contract with private management contractors for operation. DPW&T will have the lead role in the final detailed operational planning, including location and signing of stops, final timetables, etc. It will also have the lead role in arranging for marketing of the proposed services, and in the monthly monitoring of performance. The operator (or DPW&T) would have the role of operating the vehicles; vehicle maintenance; receiving and accounting for revenues; and monitoring and report ridership. Table 36 presents an overview of the organizational roles of the participating agencies.

Table 37 presents a summary of the anticipated annual operational personnel requirements and costs based on the current pay rates and fringe benefits of the DPW&T. These are presented separately for each service. These costs, whether the service is directly operated by DPW&T or by their contractor, would be covered by the grant funding for a period of 24 months of operation, out of a total 32 month grant period. The eight additional months are included for startup tasks at the beginning, which would then be followed by the 24 months of operations. There may be additional starter or dispatcher costs as well, which are assumed to be included in projected contract bus operation hourly rates. A cost escalation factor of four percent should be applied to a second year of the project on DPW&T operations.

5.2.1.1 Implementation Management

In addition to the direct operating costs, there will be administrative staff requirements as well. At MNCPPC any additional requirements of preparing the grant application (beyond completion of this report) will be contributed to the project in support of the effort to provide these improved services. At DPW&T the implementation for all four services will require an additional full-time person to contract with FTA, contract for the service, obtain vehicles, fine-tune routes and schedules, prepare a marketing effort and contract for any outside design or ad placements. On-going duties of this project administrator will include monitoring the services, conducting rider surveys, administering grant funds, and conducting on-going marketing. Estimating a $40,000 annual salary level, plus 35 percent fringes gives an estimated annual administrative cost of $54,000. For the full 32 month period (including eight months of startup activities prior to the 24-month operating period) this would come to $150,660, including a four percent escalation rate for the last 12 months. Under the proposed Livable Communities Initiative, the Federal share would be 80 percent, the local share 20 percent. The success of these proposed services will require additional staff time to implement, monitor, and (particularly) market the services.

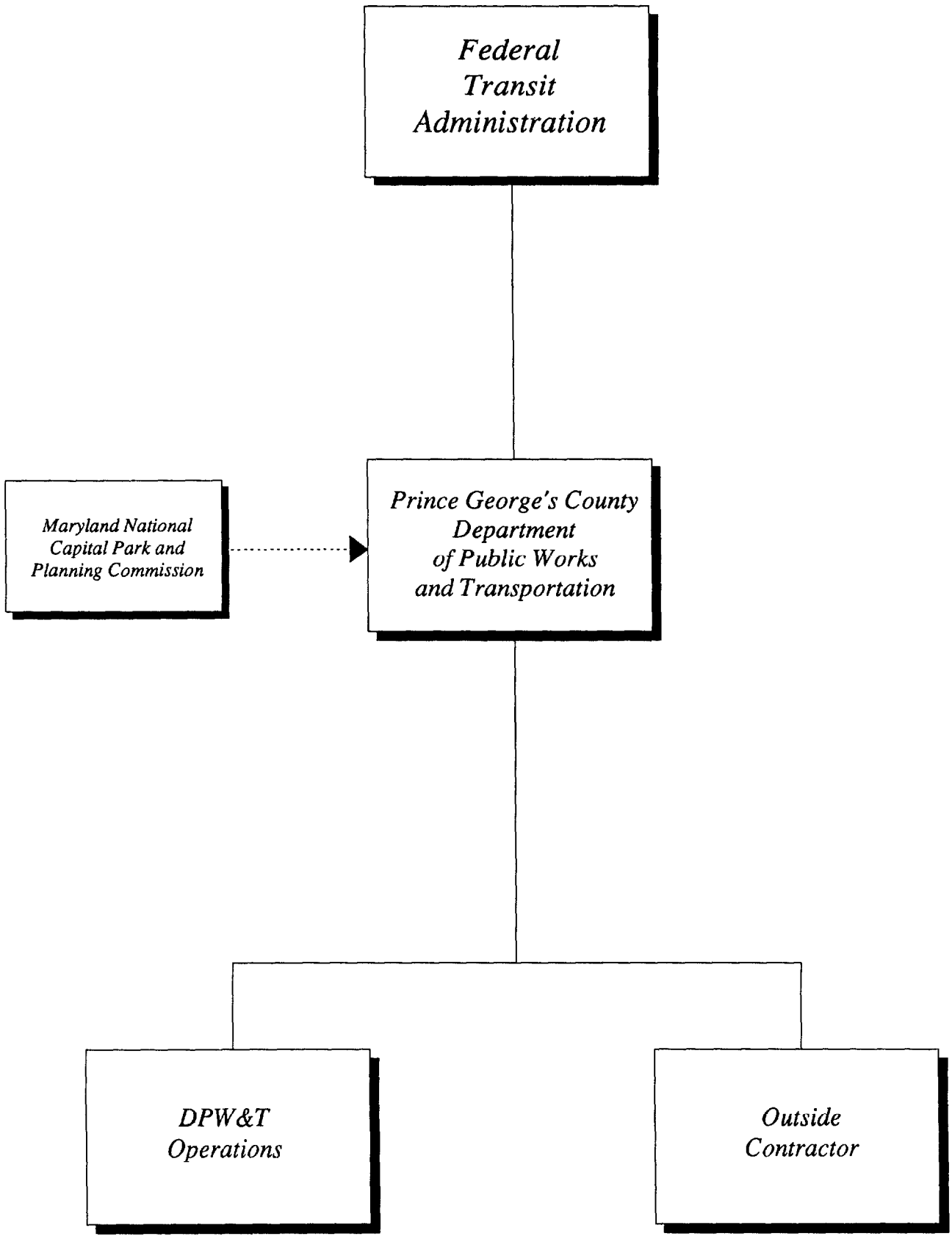


Figure 67

PRINCE GEORGE'S COUNTY
MOBILITY MATCH ORGANIZATIONAL CHART

Table 36

ORGANIZATIONAL ROLES OF PARTICIPATING AGENCIES

	MNCPPC	DPW&T	Contract Operator
Project Applicant	●		
Preparation of Grant Application	●		
Monitor the Project and Progress		●	
Implementation of Services		●	
Operation of Services			
Vehicles		◌	◌
Vehicle Maintenance		◌	◌
Receiving and Accounting		◌	◌
Operational Planning		●	
Marketing of Services		●	
Monthly Monitoring		●	

● Major role.
◌ Dependent upon whether the service is operated by DPW&T or contracted out.

Table 37

OPERATING PERSONNEL REQUIREMENTS OF COUNTY OPERATED SERVICE

	Hyattsville/Prince George's Plaza		Brightseat Road	Southern Maryland Hospital Center	Total
	Option A-1	Option A-2			
Drivers (FTE)	4	6.5	8	5	23.5
Driver Wages (per driver)	$27,300	$27,300	$27,300	$27,300	---
Total Wages	$109,200	$177,450	$218,400	$136,500	$641,550
Driver Fringe (per driver)	$8,190	$8,190	$8,190	$8,190	---
Total Fringe	$32,760	$53,235	$65,520	$40,950	$192,465
TOTAL - Salaries/Fringe	$141,960	$230,685	$283,920	$177,450	$834,015

5.2.1.2 Marketing Costs

These services are intended to make the communities they serve more livable, and to increase the accessibility and mobility of the users. It is critical to the success of the project to inform the communities about the services, to create an image that creates community "ownership", and to have a positive, friendly image for the services. Each community service could well require its own identity and marketing materials. Marketing efforts would have to include signage, and perhaps promotional materials delivered door-to-door in the market areas of the services. Normally, transit planners budget two percent of an overall transit operating budget to market services, but in this case a higher level of approximately five percent is recommended. These expenses are also likely to be included as operating, with an 80/20 Federal/local match ratio.

5.2.2 Schedule of Tasks

MNCPPC-PG and the County should complete and submit this request for demonstration funding under the Livable Communities Initiative as soon as possible following acceptance of this report. While no information is available about the length of time it would take to obtain a decision from FTA, there are a number of additional steps that need to take place to reach the start-up. A generalized listing and time schedule is provided in Figure 68, along with a time horizon that begins with the anticipated October application to the Livable Communities program by MNCPPC-PG and the County. The immediate tasks are those involved with the grant application or proposal, and then an unknown period of time passes before the hoped-for notice to proceed.

A second phase involves a series of tasks which occupies an eight-month period, culminating in the operation of the services. Even an eight-month schedule for this phase may be tight, particularly if budget and procurement approvals take additional time. The schedule portrays this period as having a number of tasks devoted to contracting for services, but if DPW&T operated the services, this same time would be used for staffing, for obtaining vehicles, and for training and preparation for service. Also during this period community input would be sought to help in the final review of the routing and schedules.

The third phase is the operation of services. This is an on-going activity, and if the services are successful, a shift in funding sources will be made to continue operation in the future as part of the County's transit system. In this schedule, the first six months of operation is allowed at the beginning to promote the services and allow ridership to develop, with on-going evaluation and incremental changes.

A fourth phase is on-going operation, from month 14 to 32. At the end of 18 months of operation, evaluation documentation begins, with an evaluation report to FTA at the end of 24 months of operation, 32 months after notice to proceed. Assuming at that point that the services are successful and would warrant continuation as part of the County's transit system, funding from that point would be under the basic state/federal transit programs used to fund the County's other services. These services will become part of Prince George's County's transit system, operated as local community bus services by the County or under contract to the County.

Figure 68: MOBILITY MATCH IMPLEMENTATION SCHEDULE

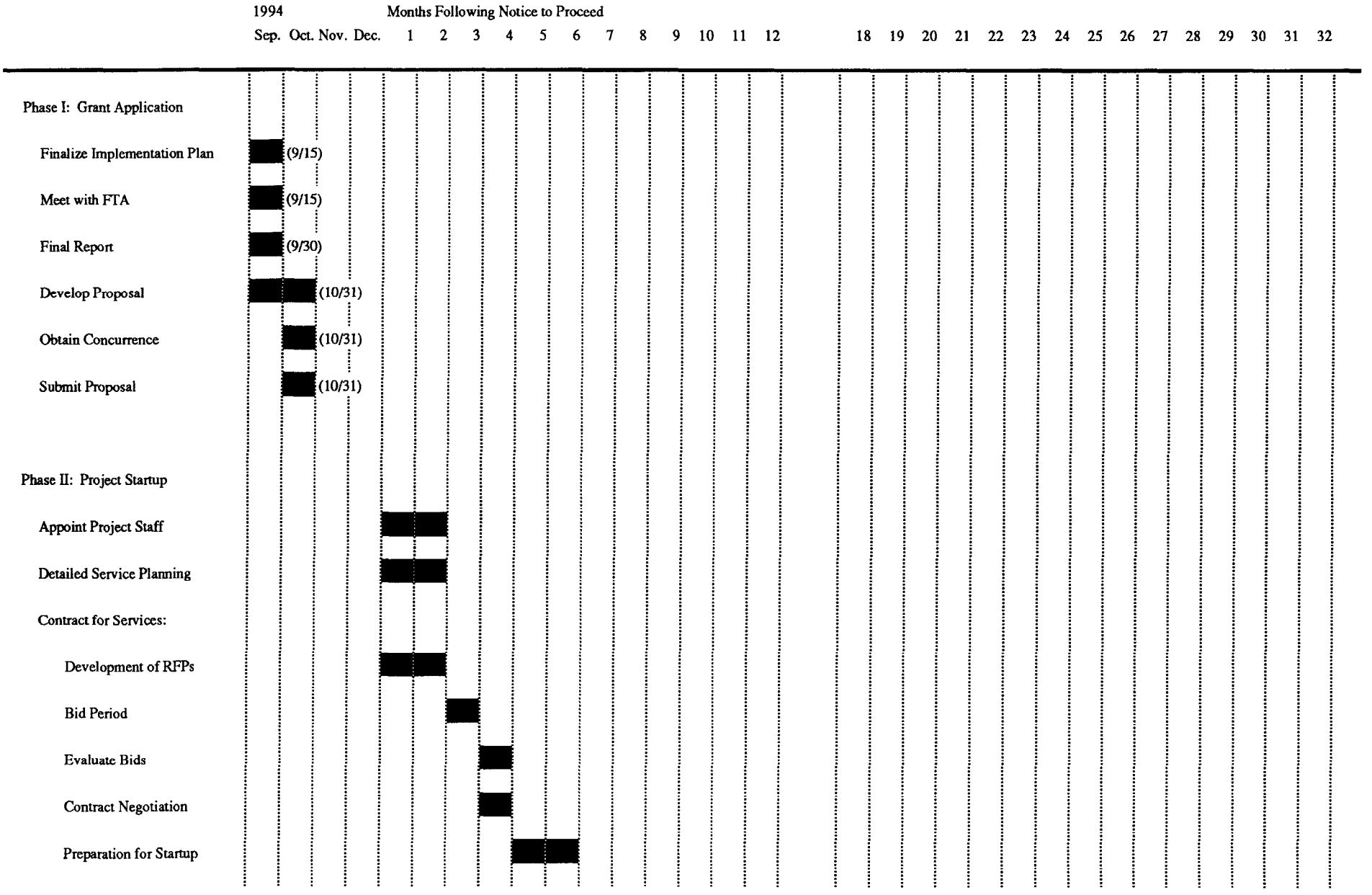


Figure 68: MOBILITY MATCH IMPLEMENTATION SCHEDULE

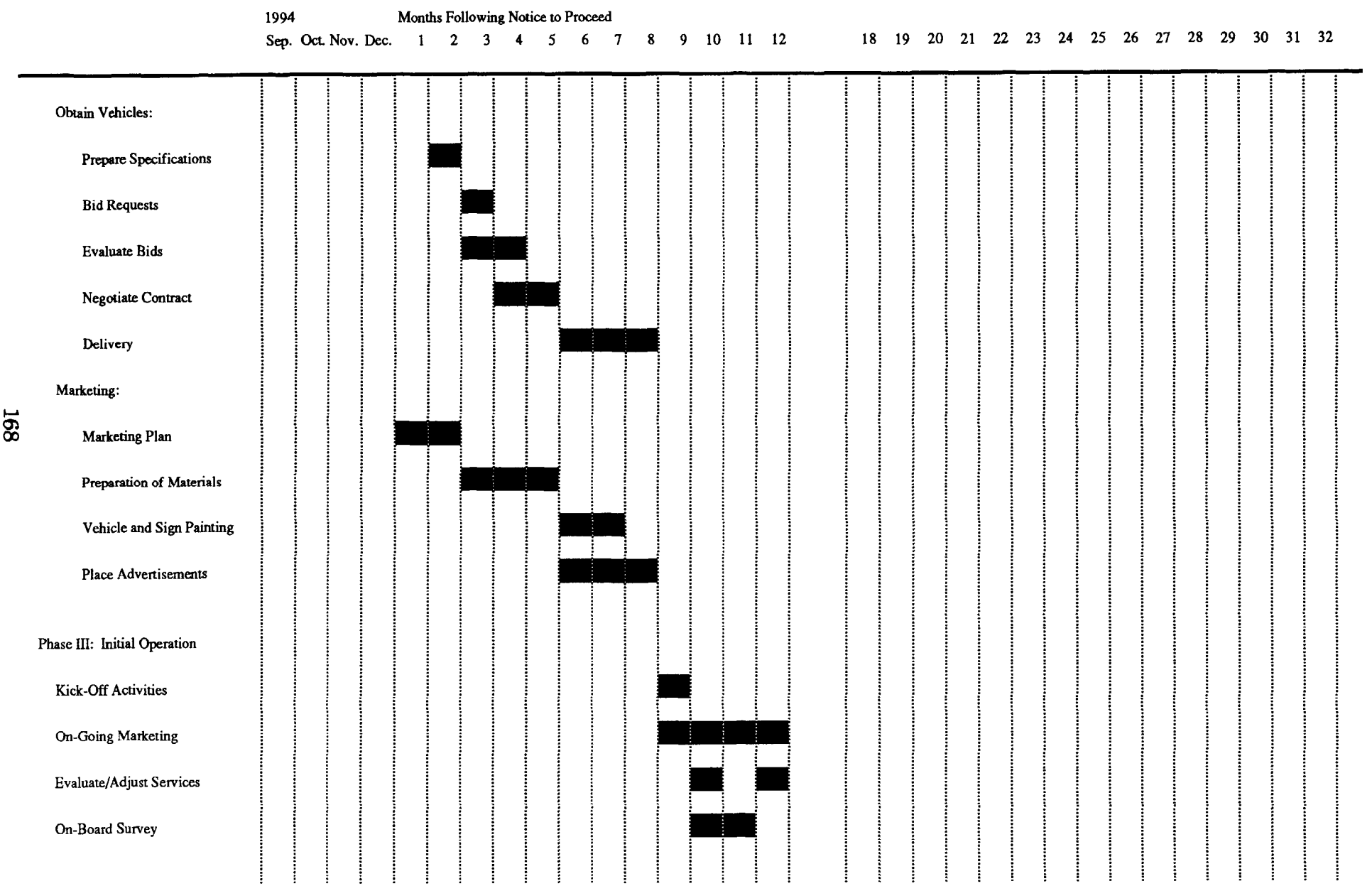
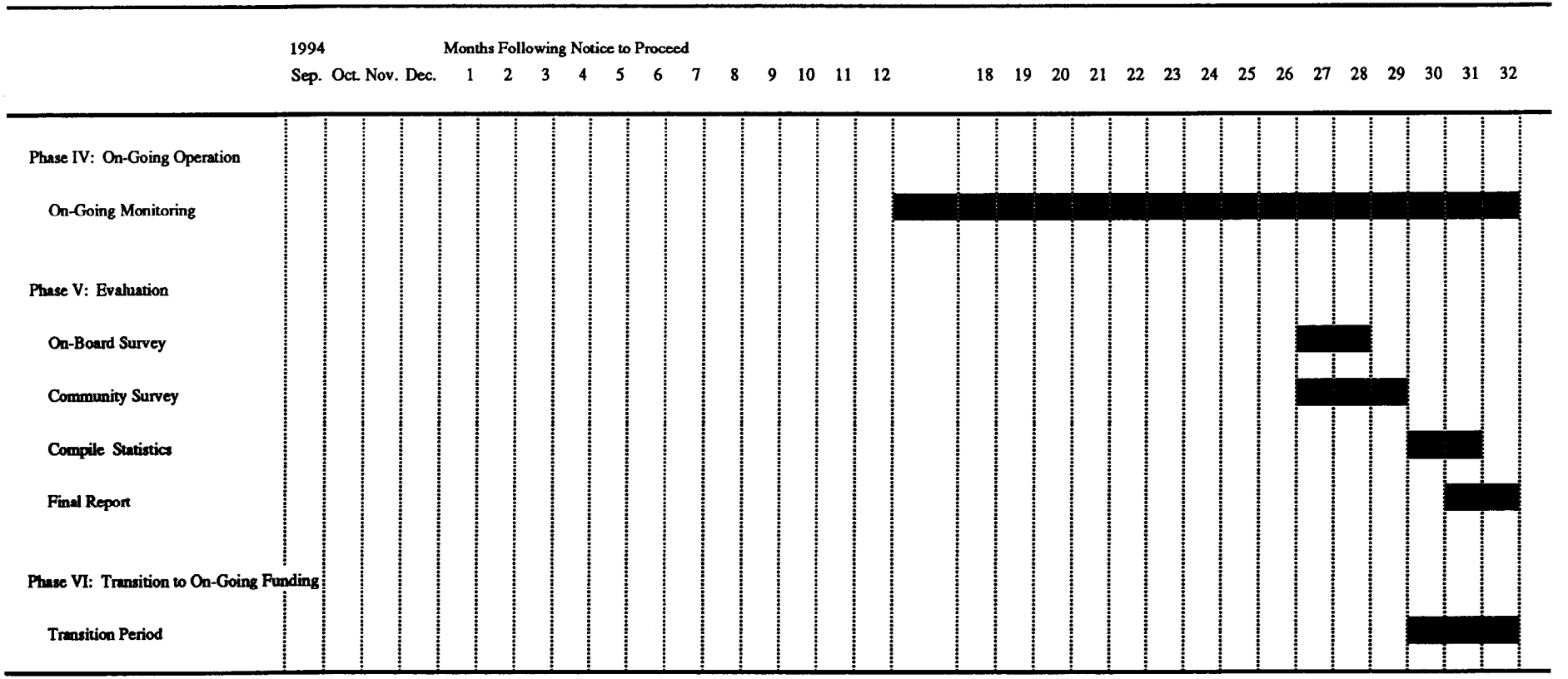


Figure 68: MOBILITY MATCH IMPLEMENTATION SCHEDULE



5.2.3 Vehicles

As can be seen in Table 38, there are 11 vehicles required to operate the proposed services, and 2 vehicles have been added to provide an acceptable spare ratio. This table shows the vehicles as body-on-chassis, lift-equipped light-duty buses, with 80 percent federal funding and 20 percent local. For operating alternatives that have Prince George's County supplying the vehicles, this local share would have to be added to the local share of the net deficit to arrive at the total cost. The schedule shows an optimistic procurement schedule for obtaining these vehicles in time to have an operational start-up eight months after notice to proceed.

One change considered to make these services more accessible is the use of low-floor vehicles such as the Thor Industries ELF, which uses a Ford E350 cab with front axle drive but has a completely low-floor passenger area. Such a vehicle does not need a lift, and Thor is describing the vehicle as a ten-year bus, possibly longer if the rear low-floor section is bolted to a new cab/engine unit. Thor offers this in a 21-ambulatory passenger seat/16 ambulatory with two wheelchairs seating configuration, probably priced in the mid $80,000 range. This is equivalent to a small bus such as the Bluebird CS, which is a ten-year bus with 25 ambulatory/2 wheelchair positions and a lift. The same capacity can be purchased in cutaway in the mid-$50,000 range, although such a vehicle is likely to be a three-year bus. Use of low-floor vehicles would add another dimension to the enhancement of community access, making boarding easier for all passengers including the elderly, persons with strollers or grocery carts, children, and anyone with a mobility problem. However, there is a cost premium. Perhaps these vehicles could be used on one or two of the demonstration routes, with an evaluation of the impact of the difference in bus design.

The alternative to having the County purchase the buses is to include them in a turn-key operating contract to have the contract operator provide the vehicles. In that case a different operating deficit would result because of the inclusion of the capital costs in the contract hourly rate.[1] There are likely to be considerable time savings if this route is followed, though the County should include vehicle specifications in the bid package to make sure that the vehicles used are new, attractive, and meet the standards called for by the service. A contract bidder is likely to buy the least expensive vehicles for a contract with a short term, so that they can be depreciated during the contract period. Alternatives such as the ELF or use of a seven- or ten-year bus are likely to be much more expensive because the bidders will want to recover as much of the cost as possible during the contract period. Bidders could be asked to supply cost options that include use of the low-floor vehicles as an alternative bid price.

5.2.4 Legislative or Regulatory Changes Required

Because both MNCPPC-PG and Prince George's County DPW&T are currently Federal grant recipients, and DPW&T is directing the provision of Metrobus service, local bus service, County-wide dial-a-ride, and subsidized taxi service, we believe that these agencies have the

[1]It should be noted that FTA does allow for capital cost of leasing at an 80 percent federal/20 percent local rate, though there are some administrative steps that need to be followed to demonstrate that this is the most cost-effective means of meeting the needs. It is possible that Prince George's County could lease the vehicles under such a program, and then sub-lease them to a contract operator.

Table 38

ESTIMATED CAPITAL COSTS

Service Option	Number of Vehicles	Estimated Unit Cost	Total Vehicle Capital Costs	80% Federal Share	20% Local Share
Hyattsville/Prince George's Plaza					
Option A-1	2	$65,000	$130,000	$104,000	$26,000
Option A-2	3	$65,000	$195,000	$156,000	$39,000
Brightseat Road	4	$65,000	$260,000	$208,000	$52,000
Southern Maryland Hospital Center	2	$65,000	$130,000	$104,000	$26,000
SUBTOTAL	11		$715,000	$572,000	$143,000
Spare Vehicles	2	$65,000	$130,000	$104,000	$26,000
TOTAL	13		$845,000	$676,000	$169,000

legal and regulatory authority to apply for and operate this project without any additional legislation or regulatory changes beyond those normally required to apply for grants and budget authority. The Hyattsville and Brightseat Road Routes are within the WMATA ADA service area. On the Southern Maryland Route the Temple Hill Road portion of the route runs down the southern border of the ADA service area. It would expand the area by 3/4 mile further south of Temple Hill Road, and the same amount beyond Southern Maryland Hospital. The overall impact is probably very small because of a small number of ADA-eligible persons living in these low-density areas.

5.2.5 Funding Requirements and Sources

It is anticipated that the Federal funding source for this demonstration will be the Livable Communities Initiative, with local shares provided by the County. At this point, to illustrate the relative funding requirements of alternatives and the need for local share, the funding is shown using the an 80 percent federal/20 percent local share operations and capital equipment.

Tables 39, 40, and 41 present estimates of the required local share of **operating** costs under three different alternatives. Table 39 is based on the assumption that the County would provide the vehicles and operate all services directly. Table 40 is based on the assumption that the County would provide the vehicles, and contract with a management firm to operate the service. For both of these options, the local share would then include the $143,000 in anticipated local share of vehicle capital shown in Table 38. The costs for Prince George's County are based on the costs provided to the study team by DPW&T for the Brightseat Road service. Table 41 presents the estimated cost if the vehicles are provided by a contractor who also operates the services. Table 42 adds the capital cost of the vehicles to the two alternatives for which the County would provide the vehicles. As can be seen, the option that calls for the contractor to provide the vehicles and operate the service is the most expensive of the three -- but is likely to be implemented faster. In addition, this kind of turn-key operation would either require renewal at the end of the contract period, or purchase of vehicles by the County to continue service. A key factor is the ability of the County to procure vehicles under all the FTA (and possibly MTA guidelines) in a timely fashion. It should be restated that in a turn-key operating contract, an option would be to have the contractor provide the vehicles and to capitalize a portion of the costs.

The total grant cost is greater than the sum of operating and capital by the amounts to be added for project administration/evaluation and the marketing program. An estimate of $150,660 for administrative/evaluation costs was presented above, and a marketing program based on five percent of the gross operating budget for the option of contracted vehicles and operation is $80,793. Rounding these estimates to $150,000 for project administration/ evaluation and $80,000 for marketing adds $150,000 to the project. Table 43 presents the total funding requirements and estimated sources for the proposed demonstration project. The total Federal share to implement all four services is approximately $2,300,000, with a local share of $574,000, under either of the contracted service scenarios (whether the County or the contractor supplies the vehicles). The local sources may not be provided by the County, but will be provided from non-federal sources. These may include state "Ride-On" funds or private contributions. It is anticipated that if the services are successful at the end of the demonstration period, continuation would be under the County's transit program with its combination of federal and state "Ride On" funding.

Table 39

LOCAL SHARE OF OPERATING COSTS
COUNTY OPERATED SERVICE

Service Option	Operating Costs			Annual Revenues	Annual Net Deficit (Operating Costs - Annual Revenues)	80% Federal Share	20% Local Share
	Driver Salaries/ Fringe	Driver Uniforms	Fuel/ Maintenance				
Hyattsville/Prince George's Plaza							
Option A-1	$141,960.00	$9,600.00	$34,000.00	$53,463.00	$132,097.00	$105,677.60	$26,419.40
Option A-2	$230,685.00	$15,600.00	$51,000.00	$87,762.15	$209,522.85	$167,618.28	$41,904.57
Brightseat Road	$283,920.00	$19,200.00	$68,000.00	$107,302.50	$263,817.50	$211,054.00	$52,763.50
Southern Maryland Hospital Center	$177,450.00	$12,000.00	$34,000.00	$94,500.00	$128,950.00	$103,160.00	$25,790.00
TOTAL	$834,015.00	$56,400.00	$187,000.00	$343,027.65	$734,387.35	$587,510	$146,877

Table 40

LOCAL SHARE OF OPERATING COSTS
CONTRACTED SERVICE WITH VEHICLES PROVIDED BY PRINCE GEORGE'S COUNTY

Service Option	Annual Operating Costs	Annual Revenues	Annual Net Deficit (Operating Costs - Annual Revenues)	80% Federal Share	20% Local Share
Hyattsville/Prince George's Plaza					
Option A-1	$224,017.50	$53,463.00	$170,554.50	$136,443.60	$34,110.90
Option A-2	$333,830.00	$87,762.15	$246,067.85	$196,854.28	$49,213.57
Brightseat Road	$412,895.00	$107,302.50	$305,592.50	$244,474.00	$61,118.50
Southern Maryland Hospital Center	$251,778.10	$94,500.00	$157,278.10	$125,822.48	$31,455.62
TOTAL	$1,222,520.60	$343,027.65	$879,492.95	$703,594	$175,899

Table 41

LOCAL SHARE OF OPERATING COSTS
CONTRACTED SERVICE WITH VEHICLES PROVIDED BY THE PRIVATE PROVIDER

Service Option	Annual Operating Costs	Annual Revenues	Annual Net Deficit (Operating Costs - Annual Revenues)	80% Federal Share	20% Local Share
Hyattsville/Prince George's Plaza					
Option A-1	$299,863.43	$53,463.00	$246,400.43	$197,120.34	$49,280.09
Option A-2	$446,855.30	$87,762.15	$359,093.15	$287,274.52	$71,818.63
Brightseat Road	$552,689.45	$107,302.50	$445,386.95	$356,309.56	$89,077.39
Southern Maryland Hospital Center	$337,022.97	$94,500.00	$242,522.97	$194,018.38	$48,501.59
TOTAL	$1,636,431.15	$343,027.65	$1,293,403.50	$1,034,723	$258,681

Table 42

TOTAL LOCAL SHARE OF OPERATING AND CAPITAL COSTS

Service Option	Operating	Capital (1)	Total Local Share
County Operated Service:			
Hyattsville/Prince George's Plaza			
Option A-1	$26,419.40	$30,727.27	$57,146.67
Option A-2	$41,904.57	$46,090.91	$87,995.48
Brightseat Road	$52,763.50	$61,454.55	$114,218.05
Southern Maryland Hospital Center	$25,790.00	$30,727.27	$56,517.27
		TOTAL	$315,877.47
Contracted Service (Vehicles Provided by Prince George's County):			
Hyattsville/Prince George's Plaza			
Option A-1	$34,110.90	$30,727.27	$64,838.17
Option A-2	$49,213.57	$46,090.91	$95,304.48
Brightseat Road	$61,118.50	$61,454.55	$122,573.05
Southern Maryland Hospital Center	$31,455.62	$30,727.27	$62,182.89
		TOTAL	$344,898.59
Contracted Service (Vehicles Provided by Private Provider):			
Hyattsville/Prince George's Plaza			
Option A-1	$49,280.09	---	$49,280.09
Option A-2	$71,818.63	---	$71,818.63
Brightseat Road	$89,077.39	---	$89,077.39
Southern Maryland Hospital Center	$48,504.59	---	$48,504.59
		TOTAL	$258,680.70

(1) Cost of spare vehicles is included. This cost was distributed proportionally between the four route options.

Table 43

TOTAL FEDERAL AND LOCAL SHARES - 24 MONTH OPERATING DEMONSTRATION

Service Option	Pre-Operation - First 8 Months		Operating - 24 Months				Capital		Total - 32 Months	
	Local	Federal	First 12 Months		Second 12 Months		Local	Federal	Total Local Share	Total Federal Share
			Local (1)	Federal (1)	Local (1)*	Federal (1)*				
County Operated Service:										
Hyattsville/Prince George's Plaza										
Option A-1	$2,025.00	$8,100.00	$31,119.40	$124,477.60	$32,364.18	$129,456.70	$30,727.27	$122,909.09	$96,235.85	$384,943.39
Option A-2	$2,025.00	$8,100.00	$46,604.57	$186,418.28	$48,468.75	$193,875.01	$46,090.91	$184,363.64	$143,189.23	$572,756.93
Brightseat Road	$2,025.00	$8,100.00	$57,463.50	$229,854.00	$59,762.04	$239,048.16	$61,454.55	$245,818.18	$180,705.09	$722,820.34
Southern Maryland Hospital Center	$2,025.00	$8,100.00	$30,490.00	$121,960.00	$31,709.60	$126,838.40	$30,727.27	$122,909.09	$94,951.87	$379,807.49
TOTAL	$8,100.00	$32,400.00	$165,677.47	$662,709.88	$172,304.57	$689,218.28	$169,000.00	$676,000.00	$515,082.04	$2,060,328.16
Contracted Service (Vehicles Provided by Prince George's County):										
Hyattsville/Prince George's Plaza										
Option A-1	$2,025.00	$8,100.00	$38,810.90	$155,243.60	$40,363.34	$161,453.34	$30,727.27	$122,909.09	$111,926.51	$447,706.03
Option A-2	$2,025.00	$8,100.00	$53,913.57	$215,654.28	$56,070.11	$224,280.45	$46,090.91	$184,363.64	$158,099.59	$632,398.37
Brightseat Road	$2,025.00	$8,100.00	$65,818.50	$263,274.00	$68,451.24	$273,804.96	$61,454.55	$245,818.18	$197,749.29	$790,997.14
Southern Maryland Hospital Center	$2,025.00	$8,100.00	$36,155.62	$144,622.48	$37,601.84	$150,407.38	$30,727.27	$122,909.09	$106,509.74	$426,038.95
TOTAL	$8,100.00	$32,400.00	$194,698.59	$778,794.36	$202,486.53	$809,946.13	$169,000.00	$676,000.00	$574,285.12	$2,297,140.49
Contracted Service (Vehicles Provided by Private Provider):										
Hyattsville/Prince George's Plaza										
Option A-1	$2,025.00	$8,100.00	$53,980.09	$215,920.34	$56,139.29	$224,557.15	---	---	$112,144.38	$448,577.49
Option A-2	$2,025.00	$8,100.00	$76,518.63	$306,074.52	$79,579.38	$318,317.50	---	---	$158,123.01	$632,492.02
Brightseat Road	$2,025.00	$8,100.00	$93,777.39	$375,109.56	$97,528.49	$390,113.94	---	---	$193,330.88	$773,323.50
Southern Maryland Hospital Center	$2,025.00	$8,100.00	$53,204.59	$212,818.38	$55,332.77	$221,331.12	---	---	$110,562.36	$442,249.50
TOTAL	$8,100.00	$32,400.00	$277,480.70	$1,109,922.80	$288,579.93	$1,154,319.71	---	---	$574,160.63	$2,296,642.51

(1) Total Administration/Evaluation and Marketing expenses for the four options were estimated at $54,000 ($40,000 salary and 35 percent fringe) and $40,000 respectively per year. To determine the local and federal shares by option the costs were allocated equally between the four options.

* Includes an adjustment of 4 percent inflation for the second 12 months.

5.3 Monitoring and Evaluation

The implementation plan outlined above includes on-going monitoring and specific evaluation of the proposed services. It also includes some more specific evaluation of the services, the users, and the community impacts, to see if these community-based transit services have the impact that is desired. The monitoring and evaluation program should consist of two elements:

- On-going monitoring, using data collected as part of operations, to provide information on the service provided, and the usage on a monthly basis over the life of the project.

- Evaluation tasks to find out more about the users of the services, their alternatives, their trip purposes, trip frequency, and attitudes about the service and its marketing.

DPW&T already performs service monitoring on the routes operated in the County by Metrobus, and so is familiar with using ridership and operating data to collect basic performance measures dealing with efficiency and effectiveness. The key indicators for these projects are the same ones that generally apply to transit service:

- Efficiency Measures:
  - -- Cost per hour of operation, by route and service type,
  - -- Cost per mile of operation, by route and service type.

- Effectiveness Measures:
  - -- Boardings per revenue mile of operation, and
  - -- Boardings per hour of revenue service.

- Cost-Effectiveness:
  - -- Cost per trip, by route, by service type,
  - -- Net cost per trip, by route and service type.

For these measure, the services need to be compared over time to provide trend data, but also compared against the alternative types of services. It is not clear that a service which is closer to the community or makes it more livable will necessarily be more efficient or cost-effective. For the County, the alternatives to providing these services are probably to do nothing in these areas, to provide conventional Metrobus service, or to provide local bus service. Similar performance measures for these alternatives should be collected to permit comparison.

In addition to route-level data on a monthly-basis, on-off counts by stop (using EZ Data as the County has been doing) and trip should be conducted periodically during the start-up six months to facilitate service adjustments.

Monitoring reports should also include relevant information about changes in the service, or in the service area that may affect ridership. For example, the Summerfield military housing complex on the proposed Brightseat service is not yet occupied, but will be increasing its resident population in stages over the next few years. As each complex opens the ridership should increase. Or as construction on local streets affects access (Belcrest Road at Prince George's Plaza is currently closed, but should be open by the time service would start) or as other external factors take place.

One other element of ongoing monitoring would be to evaluate ridership changes on adjacent or linked transit services, to see if the new services are diverting riders or finding new riders, and feeding the transit network. The County collects and monitors data which should permit this data collection to take place -- some minor modifications may be required to pull out the desired information.

5.3.1 Evaluation Activities

In addition to ongoing monitoring of the performance of the transportation services, several additional evaluation activities should be conducted. These services are intended to offer access to people who otherwise would take fewer trips, or use private autos, so information on user and trip characteristics should be collected. Ideally, one would like travel behavior information from the populations along the routes collected before service implementation, during the early service introduction period (when marketing efforts are taking place), and during on-going operation. However, drawing a sample of the population large enough to capture a sufficient sample size of transit riders, and then collecting on-going travel diaries is likely to be quite expensive. Alternatively, we would propose an on-board survey of the riders after the initial start-up, and again during the last six months. Data sought would include:

- Ridership demographics such as age, sex, income, etc.
- Trip purpose: work, shopping, medical, personal business, social, or recreational.
- Trip characteristics: origin and destination, time of day, transfer to other modes.
- Information about how they learned of the service, and
- Attitudes regarding service quality and characteristics of these routes as contrasted with other transit services.

Careful wording of the questionnaire will be required. A pre-test is a good idea. In addition, depending on the resources available, collecting the same data on nearby conventional bus services could be a means of determining whether or not the "community-based" aspects of these services result in any different attitudes among users.

At the end of the project a final report will be prepared, including a description of the services and the implementation history, the results of the monthly performance monitoring, and the results of the user surveys. This will be provided to FTA to document the project, and will be used in assisting the decision-makers in the County regarding continuation of services.

APPENDIX A

DATA USED IN THE ANALYSIS OF HIGH NEED/HIGH POTENTIAL AREAS

Table A1: RANKING OF CENSUS TRACTS BASED ON THE NUMBER OF PERSONS WITH HIGH NEED CHARACTERISTICS

Census Tract	Households in Poverty	Ranking of Households in Poverty	Zero Car Households	Ranking of Zero Car Households	Median Household Income	Ranking of Median Household Income	Total Unemployment	Ranking of Total Unemployment	Female Headed Households	Ranking of Female Headed Households	Sum of Rankings
56.00	304	16	796	1	$28,386	7	446	1	482	19	44
35.09	293	21	630	5	$23,663	2	261	9	604	14	51
18.06	478	2	736	3	$33,406	34	253	10	849	3	52
48.00	316	13	685	4	$25,818	3	188	20	451	21	61
17.03	380	8	440	12	$36,073	48	439	2	957	2	72
25.00	275	29	588	7	$35,443	44	314	3	679	8	91
35.07	381	6	324	21	$37,055	57	279	6	808	4	94
17.04	252	37	792	2	$31,008	22	193	18	599	15	94
28.04	388	4	410	14	$37,604	64	299	5	673	9	96
36.09	229	47	471	9	$32,031	28	272	7	649	12	103
40.01	279	26	468	10	$26,678	6	153	35	382	30	107
35.08	355	9	346	19	$31,750	26	156	33	444	23	110
20.01	258	35	353	17	$31,829	27	163	28	697	7	114
2.04	317	12	230	36	$36,661	51	219	12	559	16	127
21.05	199	63	495	8	$34,775	38	198	17	965	1	127
59.05	301	18	348	18	$32,373	30	173	25	309	46	137
19.02	381	7	420	13	$36,811	54	135	53	652	11	138
34.02	286	24	246	33	$33,064	33	144	42	718	6	138
67.03	385	5	131	67	$31,555	24	212	15	377	34	145
24.04	291	23	463	11	$31,667	25	101	77	624	13	149
20.02	232	46	328	20	$26,235	4	136	51	364	36	157
24.03	218	49	626	6	$30,879	18	123	57	394	28	158
24.01	263	33	203	41	$38,780	71	185	21	749	5	171
57.00	300	19	249	32	$34,850	39	151	38	298	51	179
18.02	213	53	214	37	$36,123	49	169	26	523	17	182
59.01	194	68	312	23	$30,094	15	118	62	401	26	194
50.00	277	27	365	15	$36,822	55	116	64	363	37	198
55.00	323	11	323	22	$32,880	31	82	97	319	44	205
43.00	207	57	259	29	$30,996	21	118	61	348	38	206

Table A1: RANKING OF CENSUS TRACTS BASED ON THE NUMBER OF PERSONS WITH HIGH NEED CHARACTERISTICS

Census Tract	Households in Poverty	Ranking of Households in Poverty	Zero Car Households	Ranking of Zero Car Households	Median Household Income	Ranking of Median Household Income	Total Unemployment	Ranking of Total Unemployment	Female Headed Households	Ranking of Female Headed Households	Sum of Rankings
52.02	184	78	204	39	$29,606	9	144	41	347	39	206
67.05	306	14	146	60	$48,397	114	301	4	458	20	212
26.00	192	70	190	45	$35,785	47	227	11	328	42	215
41.02	199	62	255	31	$37,790	66	160	31	401	27	217
1.04	331	10	259	30	$43,527	93	136	52	379	33	218
70.00	551	1	298	24	$30,907	19	91	88	189	86	218
31.00	273	30	184	46	$29,835	11	100	79	287	54	220
62.00	245	39	263	28	$34,250	37	143	44	205	81	229
74.06	304	15	170	53	$38,741	70	143	46	307	47	231
14.02	262	34	129	68	$47,702	107	182	23	485	18	250
60.00	254	36	144	61	$33,463	35	106	70	304	48	250
32.00	118	128	357	16	$30,068	14	106	69	420	25	252
14.01	218	50	171	52	$48,390	113	189	19	450	22	256
28.03	171	87	138	64	$37,161	58	182	22	381	32	263
67.08	302	17	242	34	$33,668	36	64	120	237	63	270
33.00	150	103	154	57	$37,739	65	217	13	343	40	278
51.01	173	85	275	26	$28,824	8	94	86	209	76	281
16.00	115	130	230	35	$32,930	32	117	63	424	24	284
52.01	205	59	266	27	$36,893	56	86	91	293	53	286
35.06	190	74	103	73	$48,739	117	205	16	656	10	290
30.02	193	69	118	71	$39,356	74	216	14	227	66	294
71.02	425	3	101	75	$30,033	13	151	37	29	167	295
22.03	265	32	141	63	$43,454	91	96	83	369	35	304
17.01	211	55	91	80	$41,397	81	150	39	303	49	304
65.01	216	51	206	38	$32,172	29	87	90	167	98	306
29.03	199	60	277	25	$11,326	1	41	145	179	91	322
49.00	148	105	204	40	$37,417	62	105	74	312	45	326
30.01	166	93	192	43	$30,245	16	74	105	220	69	326
39.00	179	82	178	49	$37,363	61	112	65	217	71	328

Table A1: RANKING OF CENSUS TRACTS BASED ON THE NUMBER OF PERSONS WITH HIGH NEED CHARACTERISTICS

Census Tract	Households in Poverty	Ranking of Houscholds in Poverty	Zero Car Households	Ranking of Zero Car Households	Median Household Income	Ranking of Median Household Income	Total Unemployment	Ranking of Total Unemployment	Female Headed Households	Ranking of Female Headed Households	Sum of Rankings
27.00	190	73	134	65	$36,667	52	128	54	194	84	328
66.01	154	100	202	42	$35,280	42	86	92	276	56	332
5.06	239	42	73	89	$56,691	142	144	43	385	29	345
29.01	161	98	70	90	$40,699	77	156	32	277	55	352
47.00	189	75	172	50	$41,453	82	106	71	209	77	355
36.05	284	25	83	84	$53,808	132	122	59	270	58	358
12.05	294	20	192	44	$41,078	80	73	106	144	110	360
58.02	164	96	168	54	$41,790	84	110	66	232	64	364
38.03	181	79	172	51	$39,205	73	83	96	227	67	366
66.02	136	113	125	70	$35,711	46	102	76	246	61	366
14.04	170	88	95	78	$41,493	83	105	73	296	52	374
23.01	244	40	79	85	$47,342	106	99	81	239	62	374
46.00	167	91	183	47	$35,360	43	79	100	159	100	381
6.01	235	44	97	76	$55,052	135	152	36	176	96	387
18.01	82	144	132	66	$37,806	67	120	60	298	50	387
10.01	191	72	68	93	$46,250	100	148	40	181	90	395
40.02	147	107	183	48	$37,994	68	91	87	184	87	397
14.05	167	92	154	56	$39,120	72	63	121	270	57	398
2.07	198	64	51	114	$40,923	79	169	27	127	119	403
4.07	215	52	79	87	$49,598	120	71	109	326	43	411
18.05	91	141	160	55	$37,292	60	122	58	168	97	411
44.00	162	97	143	62	$35,545	45	78	101	145	108	413
36.08	199	61	47	118	$50,180	122	143	45	226	68	414
17.02	117	129	110	72	$35,036	40	76	104	210	75	420
13.01	165	95	58	102	$51,946	127	156	34	219	70	428
12.02	246	38	23	140	$59,607	151	161	29	212	74	432
19.04	194	66	89	81	$42,397	88	64	119	205	80	434
69.00	188	76	55	106	$46,557	101	137	50	154	105	438
12.04	267	31	13	151	$60,147	153	143	47	270	59	441

Table A1: RANKING OF CENSUS TRACTS BASED ON THE NUMBER OF PERSONS WITH HIGH NEED CHARACTERISTICS

Census Tract	Households in Poverty	Ranking of Households in Poverty	Zero Car Households	Ranking of Zero Car Households	Median Household Income	Ranking of Median Household Income	Total Unemployment	Ranking of Total Unemployment	Female Headed Households	Ranking of Female Headed Households	Sum of Rankings
34.01	72	152	56	104	$29,756	10	100	78	166	99	443
61.00	173	84	128	69	$36,775	53	65	117	101	134	457
36.06	207	58	29	133	$52,133	128	127	55	184	88	462
13.04	234	45	13	152	$55,086	137	124	56	208	79	469
73.01	276	28	58	101	$45,804	98	80	99	84	143	469
41.01	129	121	101	74	$46,920	102	69	112	246	60	469
12.01	131	118	55	108	$55,388	139	178	24	190	85	474
67.04	191	71	79	86	$37,593	63	54	129	114	129	478
74.07	196	65	34	130	$49,570	119	95	84	198	82	480
28.05	92	140	92	79	$49,732	121	108	68	216	72	480
13.03	241	41	17	146	$70,838	171	143	48	209	78	484
1.02	147	106	153	58	$37,191	59	40	147	139	114	484
4.04	212	54	25	139	$69,083	168	161	30	178	94	485
19.01	291	22	38	125	$60,474	155	95	85	143	111	498
58.01	179	81	48	115	$47,000	103	71	108	159	101	508
15.00	176	83	59	99	$46,197	99	66	114	140	113	508
22.04	123	127	52	113	$54,920	134	85	94	336	41	509
2.06	89	142	83	83	$44,111	95	66	116	215	73	509
4.02	210	56	55	107	$60,059	152	106	72	121	123	510
35.05	58	162	29	134	$55,551	140	138	49	382	31	516
7.01	166	94	48	116	$47,931	110	100	80	124	120	520
1.03	113	131	84	82	$31,048	23	36	150	99	135	521
21.04	107	134	35	128	$35,229	41	45	140	195	83	526
36.10	168	89	78	88	$52,963	129	84	95	117	127	528
28.06	67	157	57	103	$40,333	75	88	89	134	116	540
5.04	218	48	54	109	$61,272	157	56	128	159	103	545
36.02	108	133	31	132	$40,769	78	70	110	179	92	545
59.02	151	102	52	111	$30,500	17	29	155	23	169	554
74.05	237	43	60	98	$55,088	138	39	149	116	128	556

Table A1: RANKING OF CENSUS TRACTS BASED ON THE NUMBER OF PERSONS WITH HIGH NEED CHARACTERISTICS

Census Tract	Households in Poverty	Ranking of Households in Poverty	Zero Car Households	Ranking of Zero Car Households	Median Household Income	Ranking of Median Household Income	Total Unemployment	Ranking of Total Unemployment	Female Headed Households	Ranking of Female Headed Households	Sum of Rankings
11.04	53	164	10	156	$30,972	20	72	107	137	115	562
73.03	132	115	67	95	$47,262	104	47	138	142	112	564
19.05	156	99	36	126	$55,066	136	67	113	178	93	567
65.02	70	153	95	77	$38,388	69	60	124	81	144	567
14.03	126	123	28	136	$67,226	166	98	82	228	65	572
4.06	133	114	32	131	$50,631	123	77	102	158	104	574
37.00	130	119	67	94	$43,472	92	42	143	109	131	579
72.00	55	163	11	154	$42,273	86	265	8	25	168	579
21.03	139	109	35	127	$41,951	85	69	111	68	151	583
35.11	88	143	149	59	$64,058	164	52	130	184	89	585
18.04	167	90	41	121	$48,947	118	51	132	119	125	586
2.08	139	111	39	123	$60,472	154	85	93	154	106	587
51.02	60	161	60	97	$29,911	12	24	159	44	162	591
2.02	81	146	28	135	$48,601	115	105	75	123	122	593
63.00	77	149	46	119	$36,250	50	50	133	81	145	596
42.00	139	110	70	91	$54,033	133	66	115	74	149	598
17.06	64	158	68	92	$42,600	89	43	142	129	117	598
19.06	96	138	52	112	$42,315	87	42	144	119	126	607
67.07	179	80	38	124	$40,592	76	18	164	35	166	610
5.03	194	67	21	143	$61,896	160	59	126	128	118	614
38.01	131	117	47	117	$48,177	112	60	125	74	147	618
74.04	172	86	21	142	$48,730	116	50	135	85	142	621
12.03	149	104	41	122	$58,317	148	27	158	176	95	627
54.00	81	145	55	105	$45,400	97	50	134	53	157	638
64.00	184	77	58	100	$68,373	167	36	152	72	150	646
35.10	70	155	15	149	$69,556	169	109	67	146	107	647
8.00	142	108	65	96	$56,848	145	24	160	95	138	647
59.04	153	101	10	155	$47,721	108	48	137	74	148	649
36.01	128	122	42	120	$56,783	144	51	131	98	136	653

Table A1: RANKING OF CENSUS TRACTS BASED ON THE NUMBER OF PERSONS WITH HIGH NEED CHARACTERISTICS

Census Tract	Households in Poverty	Ranking of Households in Poverty	Zero Car Households	Ranking of Zero Car Households	Median Household Income	Ranking of Median Household Income	Total Unemployment	Ranking of Total Unemployment	Female Headed Households	Ranking of Female Headed Households	Sum of Rankings
7.03	101	136	26	138	$61,946	161	77	103	124	121	659
1.05	78	148	27	137	$47,993	111	57	127	96	137	660
53.00	73	151	52	110	$43,333	90	13	167	61	154	672
5.05	109	132	6	163	$58,683	149	81	98	107	132	674
11.01	0	172	8	158	$26,250	5	0	171	7	171	677
6.02	100	137	17	145	$51,029	124	47	139	87	140	685
68.00	138	112	35	129	$53,707	131	19	163	62	153	688
13.02	123	125	16	148	$47,286	105	36	151	47	159	688
36.07	124	124	13	150	$56,957	146	48	136	88	139	695
10.02	64	159	3	164	$59,511	150	62	123	144	109	705
52.03	61	160	19	144	$47,837	109	40	146	66	152	711
7.02	101	135	12	153	$53,207	130	15	165	113	130	713
22.01	47	166	6	162	$43,889	94	8	168	119	124	714
5.09	52	165	7	161	$64,966	165	62	122	159	102	715
9.00	73	150	9	157	$44,432	96	34	153	43	163	719
4.03	130	120	0	171	$61,342	158	44	141	86	141	731
67.06	68	156	8	160	$60,606	156	64	118	77	146	736
74.01	78	147	21	141	$57,235	147	39	148	36	165	748
36.11	40	167	16	147	$51,181	126	28	156	56	155	751
2.03	123	126	0	172	$70,154	170	28	157	102	133	758
73.04	131	116	8	159	$61,969	162	0	172	46	160	769
21.06	39	168	0	167	$56,782	143	20	162	55	156	796
4.01	70	154	0	169	$61,360	159	33	154	45	161	797
5.07	24	169	0	168	$56,375	141	14	166	51	158	802
3.00	0	171	0	165	$51,083	125	0	170	0	172	803
71.01	92	139	0	166	$63,508	163	5	169	14	170	807
5.08	24	170	0	170	$75,200	172	21	161	37	164	837

Table A2: RANKING OF CENSUS TRACTS BASED ON THE PERCENTAGE OF PERSONS WITH HIGH NEED CHARACTERISTICS

Census Tract	Percentage of Households Below the Poverty Level	Ranking of Percentage of Households Below the Poverty Level	Percentage of Zero Car Households	Ranking of Percentage of Zero Car Households	Percentage of County Median Household Income	Ranking of Percentage of County Median Household Income	Percentage Unemployment	Ranking of Percentage Unemployment	Percentage of Female Headed Households	Ranking of Percentage of Female Headed Households	Sum of Rankings
29.03	37.13%	1	49.64%	1	26.26%	1	7.45%	18	35.03%	7	28
35.09	18.12%	26	39.01%	2	54.87%	2	10.98%	3	37.70%	4	37
35.08	28.02%	5	27.99%	6	73.62%	26	7.98%	12	35.92%	6	55
20.02	18.71%	21	25.41%	9	60.83%	4	7.90%	14	28.26%	23	71
30.01	21.15%	11	22.88%	13	70.13%	16	6.21%	26	28.31%	22	88
31.00	26.40%	6	18.49%	23	69.18%	11	6.81%	23	27.20%	27	90
43.00	16.90%	37	21.04%	17	71.87%	21	7.05%	22	31.21%	13	110
28.04	19.47%	16	20.60%	19	87.19%	64	8.94%	7	33.35%	10	116
34.01	14.91%	59	12.20%	56	69.00%	10	11.44%	2	37.73%	3	130
26.00	16.92%	36	17.06%	28	82.98%	47	10.65%	4	28.06%	25	140
52.02	15.04%	57	16.03%	34	68.65%	9	7.60%	16	27.26%	26	142
34.02	17.67%	30	14.97%	42	76.67%	33	5.31%	43	42.71%	1	149
35.07	17.38%	33	14.48%	46	85.92%	57	7.42%	19	37.20%	5	160
27.00	20.23%	13	14.81%	43	85.02%	52	7.97%	13	22.00%	41	162
48.00	13.67%	73	29.10%	5	59.87%	3	5.90%	33	18.42%	58	172
40.01	14.23%	65	23.77%	10	61.86%	6	5.57%	40	19.30%	53	174
32.00	10.57%	118	31.99%	4	69.72%	14	5.72%	37	37.80%	2	175
17.04	11.83%	99	37.18%	3	71.90%	22	6.15%	28	28.15%	24	176
25.00	11.54%	102	25.79%	8	82.18%	44	8.70%	8	30.06%	18	180
30.02	19.28%	18	11.91%	59	91.26%	74	13.26%	1	24.49%	30	182
57.00	18.86%	19	15.65%	40	80.81%	39	5.38%	42	18.77%	55	195
51.02	18.24%	25	18.69%	22	69.36%	12	5.13%	46	13.02%	91	196
24.04	15.07%	56	23.45%	11	73.43%	25	3.67%	97	33.37%	9	198
29.01	17.75%	28	8.18%	77	94.37%	77	9.23%	6	30.27%	16	204
44.00	18.33%	24	16.18%	32	82.42%	45	5.94%	32	16.57%	71	204

Table A2: RANKING OF CENSUS TRACTS BASED ON THE PERCENTAGE OF PERSONS WITH HIGH NEED CHARACTERISTICS

Census Tract	Percentage of Households Below the Poverty Level	Ranking of Percentage of Households Below the Poverty Level	Percentage of Zero Car Households	Ranking of Percentage of Zero Car Households	Percentage of County Median Household Income	Ranking of Percentage of County Median Household Income	Percentage Unemployment	Ranking of Percentage Unemployment	Percentage of Female Headed Households	Ranking of Percentage of Female Headed Households	Sum of Rankings
51.01	13.72%	72	22.69%	14	66.84%	8	5.01%	50	17.64%	65	209
65.02	15.49%	50	21.40%	16	89.01%	69	7.68%	15	17.96%	59	209
28.03	13.86%	69	10.89%	62	86.17%	58	8.57%	9	30.17%	17	215
28.06	14.53%	61	12.75%	54	93.52%	75	9.33%	5	28.76%	20	215
46.00	16.47%	42	17.96%	25	81.99%	43	5.51%	41	16.55%	72	223
52.01	16.10%	44	20.90%	18	85.55%	56	4.18%	76	22.85%	35	229
58.02	16.42%	43	16.63%	29	96.90%	84	5.72%	38	22.72%	36	230
18.02	12.49%	90	12.76%	53	83.76%	49	6.28%	25	31.08%	15	232
56.00	10.02%	124	26.24%	7	65.82%	7	7.12%	21	15.86%	74	233
39.00	16.00%	46	15.92%	36	86.63%	61	5.63%	39	19.46%	51	233
20.01	11.28%	106	15.79%	38	73.80%	27	5.02%	49	31.14%	14	234
59.01	11.41%	104	18.35%	24	69.78%	15	4.76%	59	23.64%	32	234
18.06	12.85%	85	19.47%	21	77.46%	34	4.74%	60	22.64%	37	237
55.00	19.78%	14	19.74%	20	76.24%	31	3.35%	117	18.76%	56	238
62.00	15.42%	51	16.38%	31	79.42%	37	6.16%	27	12.88%	95	241
17.03	11.08%	108	12.95%	52	83.64%	48	7.57%	17	28.45%	21	246
60.00	17.10%	35	9.54%	68	77.59%	35	4.62%	61	19.55%	49	248
16.00	8.64%	139	17.28%	27	76.36%	32	5.21%	45	31.78%	12	255
18.01	9.45%	131	14.47%	47	87.66%	67	8.46%	10	32.18%	11	266
36.09	8.04%	145	15.98%	35	74.27%	28	5.83%	35	23.01%	33	276
33.00	10.94%	110	11.23%	61	87.51%	65	8.19%	11	24.73%	29	276
36.02	15.86%	47	4.19%	109	94.53%	78	5.98%	31	25.79%	28	293
70.00	29.67%	4	16.05%	33	71.67%	19	3.25%	122	10.26%	121	299
21.05	6.88%	154	16.44%	30	80.63%	38	4.34%	70	34.60%	8	300
71.02	32.25%	2	7.58%	81	69.64%	13	5.77%	36	2.17%	171	303

Table A2: RANKING OF CENSUS TRACTS BASED ON THE PERCENTAGE OF PERSONS WITH HIGH NEED CHARACTERISTICS

Census Tract	Percentage of Households Below the Poverty Level	Ranking of Percentage of Households Below the Poverty Level	Percentage of Zero Car Households	Ranking of Percentage of Zero Car Households	Percentage of County Median Household Income	Ranking of Percentage of County Median Household Income	Percentage Unemployment	Ranking of Percentage Unemployment	Percentage of Female Headed Households	Ranking of Percentage of Female Headed Households	Sum of Rankings
66.01	12.26%	92	15.92%	37	81.80%	42	3.87%	90	21.72%	43	304
19.02	13.86%	68	15.24%	41	85.35%	54	3.48%	111	24.27%	31	305
67.03	15.21%	54	5.17%	102	73.17%	24	5.04%	48	14.90%	80	308
49.00	10.60%	116	14.63%	45	86.76%	62	5.00%	53	23.01%	34	310
65.01	15.31%	52	14.68%	44	74.60%	29	4.08%	82	11.75%	104	311
50.00	13.44%	77	17.41%	26	85.38%	55	3.81%	91	17.50%	67	316
47.00	14.48%	63	13.65%	49	96.12%	82	4.88%	56	16.96%	68	318
18.05	8.57%	140	15.73%	39	86.47%	60	7.41%	20	16.77%	70	329
66.02	10.85%	111	9.90%	64	82.80%	46	4.60%	62	19.82%	48	331
41.02	10.56%	119	13.60%	50	87.62%	66	4.85%	57	21.22%	44	336
24.03	8.40%	142	23.19%	12	71.60%	18	3.63%	101	14.73%	84	357
23.01	18.56%	23	6.00%	93	109.77%	106	4.24%	73	17.70%	63	358
17.01	12.52%	89	5.40%	98	95.99%	81	6.02%	30	17.82%	61	359
24.01	10.08%	123	7.78%	78	89.92%	71	4.24%	74	29.01%	19	365
37.00	17.66%	31	9.67%	66	100.80%	92	3.75%	94	14.83%	82	365
72.00	19.71%	15	4.04%	112	98.02%	86	6.54%	24	9.77%	128	365
63.00	12.03%	95	7.15%	84	84.05%	50	5.12%	47	13.30%	90	366
59.05	11.49%	103	13.50%	51	75.06%	30	4.09%	81	12.04%	102	367
17.02	9.80%	126	9.12%	72	81.24%	40	4.56%	67	17.66%	64	369
18.04	21.36%	10	5.35%	99	113.50%	118	4.57%	66	14.88%	81	374
22.03	15.67%	49	8.42%	74	100.76%	91	3.28%	119	21.86%	42	375
15.00	18.62%	22	6.42%	89	107.12%	99	3.95%	85	14.81%	83	378
14.05	13.11%	82	12.17%	57	90.71%	72	3.15%	124	20.96%	45	380
12.05	19.44%	17	12.54%	55	95.25%	80	3.57%	105	10.07%	125	382
14.04	11.92%	97	6.45%	88	96.21%	83	4.53%	69	20.71%	46	383

Table A2: RANKING OF CENSUS TRACTS BASED ON THE PERCENTAGE OF PERSONS WITH HIGH NEED CHARACTERISTICS

Census Tract	Percentage of Households Below the Poverty Level	Ranking of Percentage of Households Below the Poverty Level	Percentage of Zero Car Households	Ranking of Percentage of Zero Car Households	Percentage of County Median Household Income	Ranking of Percentage of County Median Household Income	Percentage Unemployment	Ranking of Percentage Unemployment	Percentage of Female Headed Households	Ranking of Percentage of Female Headed Households	Sum of Rankings
40.02	11.27%	107	14.18%	48	88.10%	68	4.27%	72	13.84%	88	383
28.05	9.80%	127	9.65%	67	115.32%	121	5.84%	34	22.59%	38	387
41.01	11.90%	98	9.10%	73	108.79%	102	3.88%	89	22.24%	39	401
36.10	16.88%	38	8.25%	76	122.81%	129	5.00%	52	10.97%	113	408
21.03	17.14%	34	4.68%	106	97.27%	85	5.27%	44	8.24%	139	408
11.01	0.00%	171	21.62%	15	60.87%	5	0.00%	171	20.00%	47	409
67.08	14.19%	66	11.43%	60	78.07%	36	2.50%	138	11.29%	110	410
21.04	11.73%	100	3.91%	115	81.69%	41	3.53%	106	19.48%	50	412
59.02	22.34%	8	7.21%	83	70.72%	17	2.58%	136	3.22%	170	414
19.04	15.25%	53	6.89%	86	98.31%	88	3.43%	114	15.77%	76	417
69.00	13.80%	70	4.14%	111	107.95%	101	6.13%	29	11.42%	108	419
61.00	14.26%	64	10.55%	63	85.27%	53	3.62%	103	8.44%	138	421
36.01	18.82%	20	6.22%	91	131.66%	144	3.93%	86	14.20%	86	427
1.03	12.68%	86	9.53%	69	71.99%	23	2.79%	130	10.33%	120	428
38.01	17.54%	32	6.20%	92	111.71%	112	4.54%	68	9.81%	127	431
58.01	16.64%	40	4.49%	107	108.98%	103	3.47%	112	14.94%	79	441
73.03	15.14%	55	7.67%	80	109.59%	104	2.96%	127	15.85%	75	441
17.06	9.12%	136	9.71%	65	98.78%	89	3.63%	100	19.08%	54	444
74.06	12.59%	87	7.04%	85	89.83%	70	3.53%	107	12.66%	98	447
7.01	14.52%	62	4.16%	110	111.14%	110	4.90%	55	10.56%	117	454
2.04	8.19%	144	5.92%	94	85.01%	51	3.68%	95	14.69%	85	469
14.02	9.98%	125	4.88%	103	110.61%	107	4.15%	78	18.48%	57	470
19.05	15.71%	48	3.67%	117	127.68%	136	3.49%	110	17.80%	62	473
1.02	11.55%	101	11.93%	58	86.24%	59	2.28%	152	11.73%	106	476
36.05	14.58%	60	4.33%	108	124.77%	132	3.76%	93	14.03%	87	480

Table A2: RANKING OF CENSUS TRACTS BASED ON THE PERCENTAGE OF PERSONS WITH HIGH NEED CHARACTERISTICS

Census Tract	Percentage of Households Below the Poverty Level	Ranking of Percentage of Households Below the Poverty Level	Percentage of Zero Car Households	Ranking of Percentage of Zero Car Households	Percentage of County Median Household Income	Ranking of Percentage of County Median Household Income	Percentage Unemployment	Ranking of Percentage Unemployment	Percentage of Female Headed Households	Ranking of Percentage of Female Headed Households	Sum of Rankings
73.01	20.37%	12	4.00%	113	106.21%	98	3.68%	96	6.00%	165	484
53.00	13.47%	76	9.29%	71	100.48%	90	1.84%	157	12.98%	93	487
36.08	12.07%	94	2.83%	127	116.35%	122	4.76%	58	13.66%	89	490
54.00	10.81%	112	7.77%	79	105.27%	97	4.58%	65	7.84%	143	496
38.03	10.10%	122	9.40%	70	90.91%	73	2.59%	135	12.11%	101	501
10.01	10.71%	113	3.78%	116	107.24%	100	5.01%	51	10.12%	122	502
67.07	22.66%	7	4.83%	104	94.12%	76	1.98%	155	4.45%	169	511
9.00	14.04%	67	1.79%	140	103.03%	96	4.16%	77	9.05%	132	512
36.07	16.04%	45	1.72%	141	132.07%	146	3.91%	87	12.63%	99	518
19.06	10.39%	120	5.61%	97	98.12%	87	2.94%	128	12.99%	92	524
67.04	12.91%	84	5.32%	100	87.17%	63	2.59%	134	7.63%	146	527
52.03	10.59%	117	3.55%	118	110.92%	109	4.09%	80	11.93%	103	527
36.06	13.25%	78	1.84%	139	120.88%	128	4.21%	75	11.32%	109	529
14.01	7.31%	152	5.78%	95	112.20%	113	3.61%	104	15.27%	77	541
59.04	17.67%	29	1.21%	154	110.65%	108	3.26%	120	9.01%	133	544
12.02	13.58%	74	1.27%	151	138.21%	151	4.58%	64	11.67%	107	547
19.01	18.01%	27	2.37%	131	140.22%	155	3.51%	108	8.77%	134	555
2.06	6.26%	157	5.73%	96	102.28%	95	2.71%	131	15.12%	78	557
42.00	12.56%	88	6.33%	90	125.29%	133	3.80%	92	6.61%	154	557
13.02	16.62%	41	2.19%	135	109.64%	105	3.32%	118	6.41%	159	558
1.04	9.32%	134	7.24%	82	100.93%	93	2.50%	139	10.65%	115	563
2.07	9.20%	135	2.37%	130	94.89%	79	4.94%	54	5.92%	166	564
6.01	11.39%	105	4.70%	105	127.65%	135	4.06%	83	8.50%	136	564
36.11	8.75%	138	3.91%	114	118.68%	126	3.63%	102	12.90%	94	574
s 8.00	15.03%	58	6.78%	87	131.82%	145	1.35%	162	9.76%	129	581

Table A2: RANKING OF CENSUS TRACTS BASED ON THE PERCENTAGE OF PERSONS WITH HIGH NEED CHARACTERISTICS

Census Tract	Percentage of Households Below the Poverty Level	Ranking of Percentage of Households Below the Poverty Level	Percentage of Zero Car Households	Ranking of Percentage of Zero Car Households	Percentage of County Median Household Income	Ranking of Percentage of County Median Household Income	Percentage Unemployment	Ranking of Percentage Unemployment	Percentage of Female Headed Households	Ranking of Percentage of Female Headed Households	Sum of Rankings
22.01	9.79%	128	1.25%	152	101.77%	94	1.03%	167	22.20%	40	581
21.06	12.07%	93	0.00%	170	131.66%	143	3.43%	113	16.87%	69	588
22.04	7.41%	151	3.17%	123	127.34%	134	2.62%	133	19.41%	52	593
35.06	5.04%	161	2.73%	129	113.01%	117	3.25%	121	17.52%	66	594
13.01	8.01%	146	2.74%	128	120.45%	127	4.10%	79	10.40%	118	598
67.05	6.64%	155	3.16%	124	112.22%	114	3.98%	84	10.04%	126	603
12.04	11.97%	96	0.58%	159	139.46%	153	3.66%	98	12.21%	100	606
64.00	16.76%	39	5.31%	101	158.54%	167	2.33%	149	6.74%	152	608
74.07	10.65%	115	1.84%	138	114.94%	119	3.12%	125	10.76%	114	611
5.05	10.71%	114	0.59%	158	136.07%	149	4.29%	71	10.35%	119	611
67.06	9.74%	129	1.17%	155	140.53%	156	4.58%	63	11.00%	112	615
11.04	2.37%	170	0.45%	163	71.82%	20	3.37%	116	6.17%	161	630
35.05	2.71%	169	1.36%	148	128.81%	140	3.43%	115	17.92%	60	632
74.01	13.11%	81	3.54%	119	132.71%	147	3.19%	123	6.07%	164	634
4.06	9.34%	133	2.22%	133	117.40%	123	2.58%	137	11.20%	111	637
73.04	21.65%	9	1.36%	147	143.69%	162	0.00%	170	7.12%	149	637
4.07	8.46%	141	3.11%	125	115.00%	120	1.64%	160	12.72%	97	643
74.05	13.76%	71	3.48%	120	127.73%	138	1.33%	164	6.75%	151	644
5.04	13.24%	79	3.36%	122	142.07%	157	1.91%	156	9.52%	130	644
74.04	13.18%	80	1.60%	142	112.99%	116	2.08%	154	6.47%	158	650
68.00	13.56%	75	3.44%	121	124.53%	131	1.05%	166	6.14%	162	655
12.01	5.37%	159	2.26%	132	128.43%	139	3.89%	88	7.76%	145	663
71.01	30.07%	3	0.00%	171	147.26%	163	1.34%	163	5.04%	168	668
4.02	10.98%	109	2.86%	126	139.26%	152	3.02%	126	6.14%	163	676
5.07	7.41%	150	0.00%	169	130.72%	141	2.35%	147	15.99%	73	680

Table A2: RANKING OF CENSUS TRACTS BASED ON THE PERCENTAGE OF PERSONS WITH HIGH NEED CHARACTERISTICS

Census Tract	Percentage of Households Below the Poverty Level	Ranking of Percentage of Households Below the Poverty Level	Percentage of Zero Car Households	Ranking of Percentage of Zero Car Households	Percentage of County Median Household Income	Ranking of Percentage of County Median Household Income	Percentage Unemployment	Ranking of Percentage Unemployment	Percentage of Female Headed Households	Ranking of Percentage of Female Headed Households	Sum of Rankings
35.11	4.95%	162	8.35%	75	148.53%	164	1.79%	158	10.10%	123	682
2.02	4.32%	165	1.53%	143	112.69%	115	3.50%	109	6.58%	155	687
7.02	10.22%	121	1.22%	153	123.37%	130	0.83%	168	10.57%	116	688
4.03	13.01%	83	0.00%	166	142.24%	158	2.35%	148	8.50%	137	692
5.03	12.42%	91	1.34%	149	143.52%	160	2.15%	153	8.04%	140	693
1.05	5.59%	158	1.95%	137	111.28%	111	2.48%	140	6.91%	150	696
4.04	9.34%	132	1.12%	156	160.19%	168	3.65%	99	7.79%	144	699
2.08	7.75%	148	2.18%	136	140.22%	154	2.65%	132	8.74%	135	705
14.03	6.37%	156	1.43%	145	155.88%	166	2.45%	142	11.73%	105	714
6.02	7.74%	149	1.30%	150	118.32%	124	2.37%	145	6.73%	153	721
12.03	7.83%	147	2.21%	134	135.22%	148	0.80%	169	9.26%	131	729
5.09	4.15%	166	0.56%	160	150.64%	165	2.40%	144	12.77%	96	731
13.04	8.30%	143	0.46%	162	127.73%	137	2.44%	143	7.39%	148	733
5.06	4.94%	163	1.49%	144	131.45%	142	1.66%	159	7.85%	142	750
10.02	4.48%	164	0.21%	164	137.99%	150	2.29%	151	10.08%	124	753
4.01	9.55%	130	0.00%	168	142.28%	159	2.45%	141	6.47%	157	755
35.10	3.67%	167	0.81%	157	161.28%	169	2.90%	129	7.87%	141	763
7.03	5.24%	160	1.37%	146	143.64%	161	2.37%	146	6.57%	156	769
2.03	9.06%	137	0.00%	165	162.67%	170	1.06%	165	7.49%	147	784
13.03	7.22%	153	0.50%	161	164.25%	171	2.29%	150	6.24%	160	795
3.00	0.00%	172	0.00%	172	118.45%	125	0.00%	172	0.00%	172	813
5.08	3.10%	168	0.00%	167	174.37%	172	1.45%	161	5.15%	167	835

Table A3: COMBINED RANKING OF CENSUS TRACTS BASED ON BOTH THE NUMBER AND PERCENTAGE OF PERSONS WITH HIGH NEED CHARACTERISTICS

Census Tract	House-holds Below Poverty Level	Ranking of House-holds Below Poverty Level	% of House-holds Below the Poverty Level	Ranking of % of House-holds Below the Poverty Level	Zero Car House-holds	Ranking of Zero Car House-holds	% of Zero Car House-holds	Ranking of % of Zero Car House-holds	Median Household Income	Ranking of Median House-hold Income	% of County Median House-hold Income	Ranking of % of County Median Household Income	Total Unempl.	Ranking of Total Unempl.	% Unempl.	Ranking of % Unempl.	Female Headed House-holds	Ranking of Female Headed House-holds	Percentage of Female Headed House-holds	Ranking of Percentage of Female Headed House-holds	Sum of Rankings
35.09	293	21	18.12%	26	630	5	39.01%	2	$23,663	2	54.87%	2	261	9	10.98%	3	604	14	37.70%	4	88
35.08	355	9	28.02%	5	346	19	27.99%	6	$31,750	26	73.62%	26	156	33	7.98%	12	444	23	35.92%	6	165
28.04	388	4	19.47%	16	410	14	20.60%	19	$37,604	64	87.19%	64	299	5	8.94%	7	673	9	33.35%	10	212
20.02	232	46	18.71%	21	328	20	25.41%	9	$26,235	4	60.83%	4	136	51	7.90%	14	364	36	28.26%	23	228
48.00	316	13	13.67%	73	685	4	29.10%	5	$25,818	3	59.87%	3	188	20	5.90%	33	451	21	18.42%	58	233
35.07	381	6	17.38%	33	324	21	14.48%	46	$37,055	57	85.92%	57	279	6	7.42%	19	808	4	37.20%	5	254
17.04	252	37	11.83%	99	792	2	37.18%	3	$31,008	22	71.90%	22	193	18	6.15%	28	599	15	28.15%	24	270
25.00	275	29	11.54%	102	588	7	25.79%	8	$35,443	44	82.18%	44	314	3	8.70%	8	679	8	30.06%	18	271
56.00	304	16	10.02%	124	796	1	26.24%	7	$28,386	7	65.82%	7	446	1	7.12%	21	482	19	15.86%	74	277
40.01	279	26	14.23%	65	468	10	23.77%	10	$26,678	6	61.86%	6	153	35	5.57%	40	382	30	19.30%	53	281
34.02	286	24	17.67%	30	246	33	14.97%	42	$33,064	33	76.67%	33	144	42	5.31%	43	718	6	42.71%	1	287
18.06	478	2	12.85%	85	736	3	19.47%	21	$33,406	34	77.46%	34	253	10	4.74%	60	849	3	22.64%	37	289
31.00	273	30	26.40%	6	184	46	18.49%	23	$29,835	11	69.18%	11	100	79	6.81%	23	287	54	27.20%	27	310
43.00	207	57	16.90%	37	259	29	21.04%	17	$30,996	21	71.87%	21	118	61	7.05%	22	348	38	31.21%	13	316
17.03	380	8	11.08%	108	440	12	12.95%	52	$36,073	48	83.64%	48	439	2	7.57%	17	957	2	28.45%	21	318
24.04	291	23	15.07%	56	463	11	23.45%	11	$31,667	25	73.43%	25	101	77	3.67%	97	624	13	33.37%	9	347
20.01	258	35	11.28%	106	353	17	15.79%	38	$31,829	27	73.80%	27	163	28	5.02%	49	697	7	31.14%	14	348
52.02	184	78	15.04%	57	204	39	16.03%	34	$29,606	9	68.65%	9	144	41	7.60%	16	347	39	27.26%	26	348
29.03	199	60	37.13%	1	277	25	49.64%	1	$11,326	1	26.26%	1	41	145	7.45%	18	179	91	35.03%	7	350
26.00	192	70	16.92%	36	190	45	17.06%	28	$35,785	47	82.98%	47	227	11	10.65%	4	328	42	28.06%	25	355
57.00	300	19	18.86%	19	249	32	15.65%	40	$34,850	39	80.81%	39	151	38	5.38%	42	298	51	18.77%	55	374
36.09	229	47	8.04%	145	471	9	15.98%	35	$32,031	28	74.27%	28	272	7	5.83%	35	649	12	23.01%	33	379
18.02	213	53	12.49%	90	214	37	12.76%	53	$36,123	49	83.76%	49	169	26	6.28%	25	523	17	31.08%	15	414
30.01	166	93	21.15%	11	192	43	22.88%	13	$30,245	16	70.13%	16	74	105	6.21%	26	220	69	28.31%	22	414
21.05	199	63	6.88%	154	495	8	16.44%	30	$34,775	38	80.63%	38	198	17	4.34%	70	965	1	34.60%	8	427
32.00	118	128	10.57%	118	357	16	31.99%	4	$30,068	14	69.72%	14	106	69	5.72%	37	420	25	37.80%	2	427
59.01	194	68	11.41%	104	312	23	18.35%	24	$30,094	15	69.78%	15	118	62	4.76%	59	401	26	23.64%	32	428
19.02	381	7	13.86%	68	420	13	15.24%	41	$36,811	54	85.35%	54	135	53	3.48%	111	652	11	24.27%	31	443
55.00	323	11	19.78%	14	323	22	19.74%	20	$32,880	31	76.24%	31	82	97	3.35%	117	319	44	18.76%	56	443
67.03	385	5	15.21%	54	131	67	5.17%	102	$31,555	24	73.17%	24	212	15	5.04%	48	377	34	14.90%	80	453
62.00	245	39	15.42%	51	263	28	16.38%	31	$34,250	37	79.42%	37	143	44	6.16%	27	205	81	12.88%	95	470
30.02	193	69	19.28%	18	118	71	11.91%	59	$39,356	74	91.26%	74	216	14	13.26%	1	227	66	24.49%	30	476
28.03	171	87	13.86%	69	138	64	10.89%	62	$37,161	58	86.17%	58	182	22	8.57%	9	381	32	30.17%	17	478
51.01	173	85	13.72%	72	275	26	22.69%	14	$28,824	8	66.84%	8	94	86	5.01%	50	209	76	17.64%	65	490
27.00	190	73	20.23%	13	134	65	14.81%	43	$35,667	52	85.02%	52	128	54	7.97%	13	194	84	22.00%	41	490

Table A3: COMBINED RANKING OF CENSUS TRACTS BASED ON BOTH THE NUMBER AND PERCENTAGE OF PERSONS WITH HIGH NEED CHARACTERISTICS

Census Tract	House-holds Below Poverty Level	Ranking of House-holds Below Poverty Level	% of House-holds Below the Poverty Level	Ranking of % of House-holds Below the Poverty Level	Zero Car House-holds	Ranking of Zero Car House-holds	% of Zero Car House-holds	Ranking of % of Zero Car House-holds	Median Household Income	Ranking of Median House-hold Income	% of County Median House-hold Income	Ranking of % of County Median Household Income	Total Unempl.	Ranking of Total Unempl.	% Unempl.	Ranking of % Unempl.	Female Headed House-holds	Ranking of Female Headed House-holds	Percentage of Female Headed House-holds	Ranking of Percentage of Female Headed House-holds	Sum of Rankings
60.00	254	36	17.10%	35	144	61	9.54%	68	$33,463	35	77.59%	35	106	70	4.62%	61	304	48	19.55%	49	498
59.05	301	18	11.49%	103	348	18	13.50%	51	$32,373	30	75.06%	30	173	25	4.09%	81	309	46	12.04%	102	504
50.00	277	27	13.44%	77	365	15	17.41%	26	$36,822	55	85.38%	55	116	64	3.81%	91	363	37	17.50%	67	514
24.03	218	49	8.40%	142	626	6	23.19%	12	$30,879	18	71.60%	18	123	57	3.63%	101	394	28	14.73%	84	515
52.01	205	59	16.10%	44	266	27	20.90%	18	$36,893	56	85.55%	56	86	91	4.18%	76	293	53	22.85%	35	515
70.00	551	1	29.67%	4	298	24	16.05%	33	$30,907	19	71.67%	19	91	88	3.25%	122	189	86	10.26%	121	517
24.01	263	33	10.08%	123	203	41	7.78%	78	$38,780	71	89.92%	71	185	21	4.24%	74	749	5	29.01%	19	536
16.00	115	130	8.64%	139	230	35	17.28%	27	$32,930	32	76.36%	32	117	63	5.21%	45	424	24	31.78%	12	539
41.02	199	62	10.56%	119	255	31	13.60%	50	$37,790	66	87.62%	66	160	31	4.85%	57	401	27	21.22%	44	553
33.00	150	103	10.94%	110	154	57	11.23%	61	$37,739	65	87.51%	65	217	13	8.19%	11	343	40	24.73%	29	554
29.01	161	98	17.75%	28	70	90	8.18%	77	$40,699	77	94.37%	77	156	32	9.23%	6	277	55	30.27%	16	556
39.00	179	82	16.00%	46	178	49	15.92%	36	$37,363	61	86.63%	61	112	65	5.63%	39	217	71	19.46%	51	561
34.01	72	152	14.91%	59	56	104	12.20%	56	$29,756	10	69.00%	10	100	78	11.44%	2	166	99	37.73%	3	573
58.02	164	96	16.42%	43	168	54	16.63%	29	$41,790	84	96.90%	84	110	66	5.72%	38	232	64	22.72%	36	594
2.04	317	12	8.19%	144	230	36	5.92%	94	$36,661	51	85.01%	51	219	12	3.68%	95	559	16	14.69%	85	596
71.02	425	3	32.25%	2	101	75	7.58%	81	$30,033	13	69.64%	13	151	37	5.77%	36	29	167	2.17%	171	598
46.00	167	91	16.47%	42	183	47	17.96%	25	$35,360	43	81.99%	43	79	100	5.51%	41	159	100	16.55%	72	604
65.01	216	51	15.31%	52	206	38	14.68%	44	$32,172	29	74.60%	29	87	90	4.08%	82	167	98	11.75%	104	617
44.00	162	97	18.33%	24	143	62	16.18%	32	$35,545	45	82.42%	45	78	101	5.94%	32	145	108	16.57%	71	617
49.00	148	105	10.60%	116	204	40	14.63%	45	$37,417	62	86.76%	62	105	74	5.00%	53	312	45	23.01%	34	636
66.01	154	100	12.26%	92	202	42	15.92%	37	$35,280	42	81.80%	42	86	92	3.87%	90	276	56	21.72%	43	636
18.01	82	144	9.45%	131	132	66	14.47%	47	$37,806	67	87.66%	67	120	60	8.46%	10	298	50	32.18%	11	653
17.01	211	55	12.52%	89	91	80	5.40%	98	$41,397	81	95.99%	81	150	39	6.02%	30	303	49	17.82%	61	663
47.00	189	75	14.48%	63	172	50	13.65%	49	$41,453	82	96.12%	82	106	71	4.88%	56	209	77	16.96%	68	673
74.06	304	15	12.59%	87	170	53	7.04%	85	$38,741	70	89.83%	70	143	46	3.53%	107	307	47	12.66%	98	678
22.03	265	32	15.67%	49	141	63	8.42%	74	$43,454	91	100.76%	91	96	83	3.28%	119	369	35	21.86%	42	679
67.08	302	17	14.19%	66	242	34	11.43%	60	$33,668	36	78.07%	36	64	120	2.50%	138	237	63	11.29%	110	680
66.02	136	113	10.85%	111	125	70	9.90%	64	$35,711	46	82.80%	46	102	76	4.60%	62	246	61	19.82%	48	697
14.02	262	34	9.98%	125	129	68	4.88%	103	$47,702	107	110.61%	107	182	23	4.15%	78	485	18	18.48%	57	720
23.01	244	40	18.56%	23	79	85	6.00%	93	$47,342	106	109.77%	106	99	81	4.24%	73	239	62	17.70%	63	732
18.05	91	141	8.57%	140	160	55	15.73%	39	$37,292	60	86.47%	60	122	58	7.41%	20	168	97	16.77%	70	740
12.05	294	20	19.44%	17	192	44	12.54%	55	$41,078	80	95.25%	80	73	106	3.57%	105	144	110	10.07%	125	742
28.06	67	157	14.53%	61	57	103	12.75%	54	$40,333	75	93.52%	75	88	89	9.33%	5	134	116	28.76%	20	755
14.04	170	88	11.92%	97	95	78	6.45%	88	$41,493	83	96.21%	83	105	73	4.53%	69	296	52	20.71%	46	757
65.02	70	153	15.49%	50	95	77	21.40%	16	$38,388	69	89.01%	69	60	124	7.68%	15	81	144	17.96%	59	776

Table A3: COMBINED RANKING OF CENSUS TRACTS BASED ON BOTH THE NUMBER AND PERCENTAGE OF PERSONS WITH HIGH NEED CHARACTERISTICS

Census Tract	House-holds Below Poverty Level	Ranking of House-holds Below Poverty Level	% of House-holds Below the Poverty Level	Ranking of % of House-holds Below the Poverty Level	Zero Car House-holds	Ranking of Zero Car House-holds	% of Zero Car House-holds	Ranking of % of Zero Car House-holds	Median Household Income	Ranking of Median House-hold Income	% of County Median House-hold Income	Ranking of % of County Median Household Income	Total Unempl.	Ranking of Total Unempl.	% Unempl.	Ranking of % Unempl.	Female Headed House-holds	Ranking of Female Headed House-holds	Percentage of Female Headed House-holds	Ranking of Percentage of Female Headed House-holds	Sum of Rankings
14.05	167	92	13.11%	82	154	56	12.17%	57	$39,120	72	90.71%	72	63	121	3.15%	124	270	57	20.96%	45	778
40.02	147	107	11.27%	107	183	48	14.18%	48	$37,994	68	88.10%	68	91	87	4.27%	72	184	87	13.84%	88	780
1.04	331	10	9.32%	134	259	30	7.24%	82	$43,527	93	100.93%	93	136	52	2.50%	139	379	33	10.65%	115	781
51.02	60	161	18.24%	25	60	97	18.69%	22	$29,911	12	69.36%	12	24	159	5.13%	46	44	162	13.02%	91	787
17.02	117	129	9.80%	126	110	72	9.12%	72	$35,036	40	81.24%	40	76	104	4.56%	67	210	75	17.66%	64	789
14.01	218	50	7.31%	152	171	52	5.78%	95	$48,390	113	112.20%	113	189	19	3.61%	104	450	22	15.27%	77	797
67.05	306	14	6.64%	155	146	60	3.16%	124	$48,397	114	112.22%	114	301	4	3.98%	84	458	20	10.04%	126	815
36.05	284	25	14.58%	60	83	84	4.33%	108	$53,808	132	124.77%	132	122	59	3.76%	93	270	58	14.03%	87	838
36.02	108	133	15.86%	47	31	132	4.19%	109	$40,769	78	94.53%	78	70	110	5.98%	31	179	92	25.79%	28	838
19.04	194	66	15.25%	53	89	81	6.89%	86	$42,397	88	98.31%	88	64	119	3.43%	114	205	80	15.77%	76	851
69.00	188	76	13.80%	70	55	106	4.14%	111	$46,557	101	107.95%	101	137	50	6.13%	29	154	105	11.42%	108	857
38.03	181	79	10.10%	122	172	51	9.40%	70	$39,205	73	90.91%	73	83	96	2.59%	135	227	67	12.11%	101	867
28.05	92	140	9.80%	127	92	79	9.65%	67	$49,732	121	115.32%	121	108	68	5.84%	34	216	72	22.59%	38	867
41.01	129	121	11.90%	98	101	74	9.10%	73	$46,920	102	108.79%	102	69	112	3.88%	89	246	60	22.24%	39	870
61.00	173	84	14.26%	64	128	69	10.55%	63	$36,775	53	85.27%	53	65	117	3.62%	103	101	134	8.44%	138	878
35.06	190	74	5.04%	161	103	73	2.73%	129	$48,739	117	113.01%	117	205	16	3.25%	121	656	10	17.52%	66	884
15.00	176	83	18.62%	22	59	99	6.42%	89	$46,197	99	107.12%	99	66	114	3.95%	85	140	113	14.81%	83	886
10.01	191	72	10.71%	113	68	93	3.78%	116	$46,250	100	107.24%	100	148	40	5.01%	51	181	90	10.12%	122	897
36.08	199	61	12.07%	94	47	118	2.83%	127	$50,180	122	116.35%	122	143	45	4.76%	58	226	68	13.66%	89	904
36.10	168	89	16.88%	38	78	88	8.25%	76	$52,963	129	122.81%	129	84	95	5.00%	52	117	127	10.97%	113	936
21.04	107	134	11.73%	100	35	128	3.91%	115	$35,229	41	81.69%	41	45	140	3.53%	106	195	83	19.48%	50	938
37.00	130	119	17.66%	31	67	94	9.67%	66	$43,472	92	100.80%	92	42	143	3.75%	94	109	131	14.83%	82	944
72.00	55	163	19.71%	15	11	154	4.04%	112	$42,273	86	98.02%	86	265	8	6.54%	24	25	168	9.77%	128	944
58.01	179	81	16.64%	40	48	115	4.49%	107	$47,000	103	108.98%	103	71	108	3.47%	112	159	101	14.94%	79	949
1.03	113	131	12.68%	86	84	82	9.53%	69	$31,048	23	71.99%	23	36	150	2.79%	130	99	135	10.33%	120	949
6.01	235	44	11.39%	105	97	76	4.70%	105	$55,052	135	127.65%	135	152	36	4.06%	83	176	96	8.50%	136	951
73.01	276	28	20.37%	12	58	101	4.00%	113	$45,804	98	106.21%	98	80	99	3.68%	96	84	143	6.00%	165	953
1.02	147	106	11.55%	101	153	58	11.93%	58	$37,191	59	86.24%	59	40	147	2.28%	152	139	114	11.73%	106	960
18.04	167	90	21.36%	10	41	121	5.35%	99	$48,947	118	113.50%	118	51	132	4.57%	66	119	125	14.88%	81	960
63.00	77	149	12.03%	95	46	119	7.15%	84	$36,250	50	84.05%	50	50	133	5.12%	47	81	145	13.30%	90	962
2.07	198	64	9.20%	135	51	114	2.37%	130	$40,923	79	94.89%	79	169	27	4.94%	54	127	119	5.92%	166	967
59.02	151	102	22.34%	8	52	111	7.21%	83	$30,500	17	70.72%	17	29	155	2.58%	136	23	169	3.22%	170	968
7.01	166	94	14.52%	62	48	116	4.16%	110	$47,931	110	111.14%	110	100	80	4.90%	55	124	120	10.56%	117	974
12.02	246	38	13.58%	74	23	140	1.27%	151	$59,607	151	138.21%	151	161	29	4.58%	64	212	74	11.67%	107	979
36.06	207	58	13.25%	78	29	133	1.84%	139	$52,133	128	120.88%	128	127	55	4.21%	75	184	88	11.32%	109	991

Table A3: COMBINED RANKING OF CENSUS TRACTS BASED ON BOTH THE NUMBER AND PERCENTAGE OF PERSONS WITH HIGH NEED CHARACTERISTICS

Census Tract	House-holds Below Poverty Level	Ranking of House-holds Below Poverty Level	% of House-holds Below the Poverty Level	Ranking of % of House-holds Below the Poverty Level	Zero Car House-holds	Ranking of Zero Car House-holds	% of Zero Car House-holds	Ranking of % of Zero Car House-holds	Median Household Income	Ranking of Median House-hold Income	% of County Median House-hold Income	Ranking of % of County Median Household Income	Total Unempl.	Ranking of Total Unempl.	% Unempl.	Ranking of % Unempl.	Female Headed House-holds	Ranking of Female Headed House-holds	Percentage of Female Headed House-holds	Ranking of Percentage of Female Headed House-holds	Sum of Rankings
21.03	139	109	17.14%	34	35	127	4.68%	106	$41,951	85	97.27%	85	69	111	5.27%	44	68	151	8.24%	139	991
67.04	191	71	12.91%	84	79	86	5.32%	100	$37,593	63	87.17%	63	54	129	2.59%	134	114	129	7.63%	146	1,005
73.03	132	115	15.14%	55	67	95	7.67%	80	$47,262	104	109.59%	104	47	138	2.96%	127	142	112	15.85%	75	1,005
13.01	165	95	8.01%	146	58	102	2.74%	128	$51,946	127	120.45%	127	156	34	4.10%	79	219	70	10.40%	118	1,026
19.05	156	99	15.71%	48	36	126	3.67%	117	$55,066	136	127.68%	136	67	113	3.49%	110	178	93	17.80%	62	1,040
17.06	64	158	9.12%	136	68	92	9.71%	65	$42,600	89	98.78%	89	43	142	3.63%	100	129	117	19.08%	54	1,042
12.04	267	31	11.97%	96	13	151	0.58%	159	$60,147	153	139.46%	153	143	47	3.66%	98	270	59	12.21%	100	1,047
38.01	131	117	17.54%	32	47	117	6.20%	92	$48,177	112	111.71%	112	60	125	4.54%	68	74	147	9.81%	127	1,049
19.01	291	22	18.01%	27	38	125	2.37%	131	$60,474	155	140.22%	155	95	85	3.51%	108	143	111	8.77%	134	1,053
4.07	215	52	8.46%	141	79	87	3.11%	125	$49,598	120	115.00%	120	71	109	1.64%	160	326	43	12.72%	97	1,054
2.06	89	142	6.26%	157	83	83	5.73%	96	$44,111	95	102.28%	95	66	116	2.71%	131	215	73	15.12%	78	1,066
36.01	128	122	18.82%	20	42	120	6.22%	91	$56,783	144	131.66%	144	51	131	3.93%	86	98	136	14.20%	86	1,080
11.01	0	172	0.00%	171	8	158	21.62%	15	$26,250	5	60.87%	5	0	171	0.00%	171	7	171	20.00%	47	1,086
74.07	196	65	10.65%	115	34	130	1.84%	138	$49,570	119	114.94%	119	95	84	3.12%	125	198	82	10.76%	114	1,091
5.06	239	42	4.94%	163	73	89	1.49%	144	$56,691	142	131.45%	142	144	43	1.66%	159	385	29	7.85%	142	1,095
22.04	123	127	7.41%	151	52	113	3.17%	123	$54,920	134	127.34%	134	85	94	2.62%	133	336	41	19.41%	52	1,102
67.07	179	80	22.66%	7	38	124	4.83%	104	$40,592	76	94.12%	76	18	164	1.98%	155	35	166	4.45%	169	1,121
19.06	96	138	10.39%	120	52	112	5.61%	97	$42,315	87	98.12%	87	42	144	2.94%	128	119	126	12.99%	92	1,131
54.00	81	145	10.81%	112	55	105	7.77%	79	$45,400	97	105.27%	97	50	134	4.58%	65	53	157	7.84%	143	1,134
12.01	131	118	5.37%	159	55	108	2.26%	132	$55,388	139	128.43%	139	178	24	3.89%	88	190	85	7.76%	145	1,137
35.05	58	162	2.71%	169	29	134	1.36%	148	$55,551	140	128.81%	140	138	49	3.43%	115	382	31	17.92%	60	1,148
42.00	139	110	12.56%	88	70	91	6.33%	90	$54,033	133	125.29%	133	66	115	3.80%	92	74	149	6.61%	154	1,155
53.00	73	151	13.47%	76	52	110	9.29%	71	$43,333	90	100.48%	90	13	167	1.84%	157	61	154	12.98%	93	1,159
4.04	212	54	9.34%	132	25	139	1.12%	156	$69,083	168	160.19%	168	161	30	3.65%	99	178	94	7.79%	144	1,184
4.02	210	56	10.98%	109	55	107	2.86%	126	$60,059	152	139.26%	152	106	72	3.02%	126	121	123	6.14%	163	1,186
5.04	218	48	13.24%	79	54	109	3.36%	122	$61,272	157	142.07%	157	56	128	1.91%	156	159	103	9.52%	130	1,189
11.04	53	164	2.37%	170	10	156	0.45%	163	$30,972	20	71.82%	20	72	107	3.37%	116	137	115	6.17%	161	1,192
59.04	153	101	17.67%	29	10	155	1.21%	154	$47,721	108	110.65%	108	48	137	3.26%	120	74	148	9.01%	133	1,193
74.05	237	43	13.76%	71	60	98	3.48%	120	$55,088	138	127.73%	138	39	149	1.33%	164	116	128	6.75%	151	1,200
13.04	234	45	8.30%	143	13	152	0.46%	162	$55,086	137	127.73%	137	124	56	2.44%	143	208	79	7.39%	148	1,202
4.06	133	114	9.34%	133	32	131	2.22%	133	$50,631	123	117.40%	123	77	102	2.58%	137	158	104	11.20%	111	1,211
36.07	124	124	16.04%	45	13	150	1.72%	141	$56,957	146	132.07%	146	48	136	3.91%	87	88	139	12.63%	99	1,213
8.00	142	108	15.03%	58	65	96	6.78%	87	$56,848	145	131.82%	145	24	160	1.35%	162	95	138	9.76%	129	1,228
9.00	73	150	14.04%	67	9	157	1.79%	140	$44,432	96	103.03%	96	34	153	4.16%	77	43	163	9.05%	132	1,231
52.03	61	160	10.59%	117	19	144	3.55%	118	$47,837	109	110.92%	109	40	146	4.09%	80	66	152	11.93%	103	1,238

Table A3: COMBINED RANKING OF CENSUS TRACTS BASED ON BOTH THE NUMBER AND PERCENTAGE OF PERSONS WITH HIGH NEED CHARACTERISTICS

Census Tract	House-holds Below Poverty Level	Ranking of House-holds Below Poverty Level	% of House-holds Below the Poverty Level	Ranking of % of House-holds Below the Poverty Level	Zero Car House-holds	Ranking of Zero Car House-holds	% of Zero Car House-holds	Ranking of % of Zero Car House-holds	Median Household Income	Ranking of Median House-hold Income	% of County Median House-hold Income	Ranking of % of County Median Household Income	Total Unempl.	Ranking of Total Unempl.	% Unempl.	Ranking of % Unempl.	Female Headed House-holds	Ranking of Female Headed House-holds	Percentage of Female Headed House-holds	Ranking of Percentage of Female Headed House-holds	Sum of Rankings
13.02	123	125	16.62%	41	16	148	2.19%	135	$47,286	105	109.64%	105	36	151	3.32%	118	47	159	6.41%	159	1,246
64.00	184	77	16.76%	39	58	100	5.31%	101	$68,373	167	158.54%	167	36	152	2.33%	149	72	150	6.74%	152	1,254
35.11	88	143	4.95%	162	149	59	8.35%	75	$64,058	164	148.53%	164	52	130	1.79%	158	184	89	10.10%	123	1,267
74.04	172	86	13.18%	80	21	142	1.60%	142	$48,730	116	112.99%	116	50	135	2.08%	154	85	142	6.47%	158	1,271
13.03	241	41	7.22%	153	17	146	0.50%	161	$70,838	171	164.25%	171	143	48	2.29%	150	209	78	6.24%	160	1,279
2.02	81	146	4.32%	165	28	135	1.53%	143	$48,601	115	112.69%	115	105	75	3.50%	109	123	122	6.58%	155	1,280
5.05	109	132	10.71%	114	6	163	0.59%	158	$58,683	149	136.07%	149	81	98	4.29%	71	107	132	10.35%	119	1,285
14.03	126	123	6.37%	156	28	136	1.43%	145	$67,226	166	155.88%	166	98	82	2.45%	142	228	65	11.73%	105	1,286
2.08	139	111	7.75%	148	39	123	2.18%	136	$60,472	154	140.22%	154	85	93	2.65%	132	154	106	8.74%	135	1,292
22.01	47	166	9.79%	128	6	162	1.25%	152	$43,889	94	101.77%	94	8	168	1.03%	167	119	124	22.20%	40	1,295
5.03	194	67	12.42%	91	21	143	1.34%	149	$61,896	160	143.52%	160	59	126	2.15%	153	128	118	8.04%	140	1,307
36.11	40	167	8.75%	138	16	147	3.91%	114	$51,181	126	118.68%	126	28	156	3.63%	102	56	155	12.90%	94	1,325
68.00	138	112	13.56%	75	35	129	3.44%	121	$53,707	131	124.53%	131	19	163	1.05%	166	62	153	6.14%	162	1,343
67.06	68	156	9.74%	129	8	160	1.17%	155	$60,606	156	140.53%	156	64	118	4.58%	63	77	146	11.00%	112	1,351
12.03	149	104	7.83%	147	41	122	2.21%	134	$58,317	148	135.22%	148	27	158	0.80%	169	176	95	9.26%	131	1,356
1.05	78	148	5.59%	158	27	137	1.95%	137	$47,993	111	111.28%	111	57	127	2.48%	140	96	137	6.91%	150	1,356
74.01	78	147	13.11%	81	21	141	3.54%	119	$57,235	147	132.71%	147	39	148	3.19%	123	36	165	6.07%	164	1,382
21.06	39	168	12.07%	93	0	167	0.00%	170	$56,782	143	131.66%	143	20	162	3.43%	113	55	156	16.87%	69	1,384
7.02	101	135	10.22%	121	12	153	1.22%	153	$53,207	130	123.37%	130	15	165	0.83%	168	113	130	10.57%	116	1,401
6.02	100	137	7.74%	149	17	145	1.30%	150	$51,029	124	118.32%	124	47	139	2.37%	145	87	140	6.73%	153	1,406
73.04	131	116	21.65%	9	8	159	1.36%	147	$61,969	162	143.69%	162	0	172	0.00%	170	46	160	7.12%	149	1,406
35.10	70	155	3.67%	167	15	149	0.81%	157	$69,556	169	161.28%	169	109	67	2.90%	129	146	107	7.87%	141	1,410
4.03	130	120	13.01%	83	0	171	0.00%	166	$61,342	158	142.24%	158	44	141	2.35%	148	86	141	8.50%	137	1,423
7.03	101	136	5.24%	160	26	138	1.37%	146	$61,946	161	143.64%	161	77	103	2.37%	146	124	121	6.57%	156	1,428
5.09	52	165	4.15%	166	7	161	0.56%	160	$64,966	165	150.64%	165	62	122	2.40%	144	159	102	12.77%	96	1,446
10.02	64	159	4.48%	164	3	164	0.21%	164	$59,511	150	137.99%	150	62	123	2.29%	151	144	109	10.08%	124	1,458
71.01	92	139	30.07%	3	0	166	0.00%	171	$63,508	163	147.26%	163	5	169	1.34%	163	14	170	5.04%	168	1,475
5.07	24	169	7.41%	150	0	168	0.00%	169	$56,375	141	130.72%	141	14	166	2.35%	147	51	158	15.99%	73	1,482
2.03	123	126	9.06%	137	0	172	0.00%	165	$70,154	170	162.67%	170	28	157	1.06%	165	102	133	7.49%	147	1,542
4.01	70	154	9.55%	130	0	169	0.00%	168	$61,360	159	142.28%	159	33	154	2.45%	141	45	161	6.47%	157	1,552
3.00	0	171	0.00%	172	0	165	0.00%	172	$51,083	125	118.45%	125	0	170	0.00%	172	0	172	0.00%	172	1,616
5.08	24	170	3.10%	168	0	170	0.00%	167	$75,200	172	174.37%	172	21	161	1.45%	161	37	164	5.15%	167	1,672

Table A4

RANKING OF CENSUS TRACTS BY PERCENTAGE OF HOUSEHOLDS WITH ZERO CARS

Census Tract	Percentage of Zero Car Households
29.03	49.64%
35.09	39.01%
17.04	37.18%
32.00	31.99%
48.00	29.10%
35.08	27.99%
56.00	26.24%
25.00	25.79%
20.02	25.41%
40.01	23.77%
24.04	23.45%
24.03	23.19%
30.01	22.88%
51.01	22.69%
11.01	21.62%
65.02	21.40%
43.00	21.04%
52.01	20.90%
28.04	20.60%
55.00	19.74%
18.06	19.47%
51.02	18.69%
31.00	18.49%
59.01	18.35%
46.00	17.96%
50.00	17.41%
16.00	17.28%
26.00	17.06%
58.02	16.63%
21.05	16.44%
62.00	16.38%
44.00	16.18%
70.00	16.05%
52.02	16.03%
36.09	15.98%

Table A4

RANKING OF CENSUS TRACTS BY PERCENTAGE OF HOUSEHOLDS WITH ZERO CARS

Census Tract	Percentage of Zero Car Households
39.00	15.92%
66.01	15.92%
20.01	15.79%
18.05	15.73%
57.00	15.65%
19.02	15.24%
34.02	14.97%
27.00	14.81%
65.01	14.68%
49.00	14.63%
35.07	14.48%
18.01	14.47%
40.02	14.18%
47.00	13.65%
41.02	13.60%
59.05	13.50%
17.03	12.95%
18.02	12.76%
28.06	12.75%
12.05	12.54%
34.01	12.20%
14.05	12.17%
1.02	11.93%
30.02	11.91%
67.08	11.43%
33.00	11.23%
28.03	10.89%
61.00	10.55%
66.02	9.90%
17.06	9.71%
37.00	9.67%
28.05	9.65%
60.00	9.54%
1.03	9.53%
38.03	9.40%
53.00	9.29%
17.02	9.12%
41.01	9.10%

Table A4

RANKING OF CENSUS TRACTS BY PERCENTAGE OF HOUSEHOLDS WITH ZERO CARS

Census Tract	Percentage of Zero Car Households
22.03	8.42%
35.11	8.35%
36.10	8.25%
29.01	8.18%
24.01	7.78%
54.00	7.77%
73.98	7.67%
71.02	7.58%
1.04	7.24%
59.02	7.21%
63.00	7.15%
74.06	7.04%
19.04	6.89%
8.00	6.78%
14.04	6.45%
15.00	6.42%
42.00	6.33%
36.01	6.22%
38.01	6.20%
23.01	6.00%
2.04	5.92%
14.01	5.78%
2.06	5.73%
19.06	5.61%
17.01	5.40%
18.04	5.35%
67.04	5.32%
64.00	5.31%
67.03	5.17%
14.02	4.88%
67.07	4.83%
6.01	4.70%
21.03	4.68%
58.01	4.49%
36.05	4.33%
36.02	4.19%
7.01	4.16%
69.00	4.14%

Table A4

RANKING OF CENSUS TRACTS BY PERCENTAGE OF HOUSEHOLDS WITH ZERO CARS

Census Tract	Percentage of Zero Car Households
72.00	4.04%
73.01	4.00%
36.11	3.91%
21.04	3.91%
10.01	3.78%
19.05	3.67%
52.03	3.55%
74.01	3.54%
74.05	3.48%
68.00	3.44%
5.04	3.36%
22.04	3.17%
67.05	3.16%
4.07	3.11%
4.02	2.86%
36.08	2.83%
13.01	2.74%
35.06	2.73%
2.07	2.37%
19.01	2.37%
12.01	2.26%
4.06	2.22%
12.03	2.21%
13.02	2.19%
2.08	2.18%
1.05	1.95%
74.07	1.84%
36.06	1.84%
9.00	1.79%
36.07	1.72%
74.04	1.60%
2.02	1.53%
5.06	1.49%
14.03	1.43%
7.03	1.37%
73.04	1.36%
35.05	1.36%
5.03	1.34%

Table A4

RANKING OF CENSUS TRACTS BY PERCENTAGE OF HOUSEHOLDS WITH ZERO CARS

Census Tract	Percentage of Zero Car Households
6.02	1.30%
12.02	1.27%
22.01	1.25%
7.02	1.22%
59.04	1.21%
67.06	1.17%
4.04	1.12%
35.10	0.81%
5.05	0.59%
12.04	0.58%
5.09	0.56%
13.98	0.50%
13.04	0.46%
11.04	0.45%
10.02	0.21%
4.03	0.00%
3.00	0.00%
4.01	0.00%
71.01	0.00%
21.06	0.00%
2.03	0.00%
5.07	0.00%
5.08	0.00%

Table A5

RANKING OF CENSUS TRACTS
BY POPULATION DENSITY (PERSONS PER SQUARE MILE)

Census Tract	Population	Area (sq. mi.) (1)	Population Density
56.00	9,661	0.32	30,191
59.05	5,994	0.22	27,245
16.00	3,603	0.20	18,015
48.00	4,413	0.25	17,652
20.02	2,767	0.18	15,372
24.04	4,825	0.33	14,621
40.01	4,522	0.33	13,703
39.00	3,518	0.32	10,994
26.00	3,790	0.36	10,528
18.02	4,316	0.41	10,527
21.05	7,858	0.75	10,477
52.01	3,439	0.34	10,115
28.06	1,593	0.16	9,956
52.02	3,438	0.35	9,823
34.02	5,220	0.54	9,667
34.01	1,799	0.19	9,468
47.00	3,970	0.42	9,452
29.03	1,409	0.15	9,393
57.00	4,684	0.50	9,368
36.09	6,867	0.75	9,156
66.01	3,726	0.41	9,088
18.05	2,445	0.27	9,056
25.00	6,488	0.74	8,768
18.01	2,171	0.26	8,350
30.02	2,916	0.35	8,331
55.00	3,881	0.48	8,085
20.01	5,878	0.73	8,052
61.00	3,138	0.39	8,046
58.02	3,193	0.42	7,602
27.00	3,130	0.42	7,452
51.01	3,420	0.46	7,435
59.01	4,159	0.56	7,427
49.00	3,746	0.51	7,345
62.00	3,828	0.53	7,223
18.04	2,227	0.31	7,184

(1) The Area is the Land Area calculated by converting the Summary Tape File 3 Area Measurement for each Census Tract from square kilometers to square miles (2.59 square kilometers = 1 square mile). The Area was then rounded to two significant digits.

Table A5

RANKING OF CENSUS TRACTS
BY POPULATION DENSITY (PERSONS PER SQUARE MILE)

Census Tract	Population	Area (sq. mi.) (1)	Population Density
51.02	851	0.12	7,092
24.03	5,021	0.72	6,974
17.03	10,258	1.54	6,661
46.00	2,988	0.45	6,640
50.00	4,887	0.74	6,604
58.01	3,557	0.54	6,587
23.01	4,131	0.63	6,557
60.00	3,720	0.58	6,414
67.03	6,315	1.00	6,315
41.02	5,440	0.87	6,253
54.00	1,941	0.32	6,066
38.03	5,265	0.87	6,052
17.04	5,436	0.90	6,040
35.09	4,892	0.81	6,040
59.02	1,749	0.29	6,031
69.00	3,859	0.66	5,847
36.10	2,865	0.49	5,847
41.01	3,094	0.54	5,730
65.01	3,444	0.61	5,646
18.06	8,676	1.54	5,634
66.02	3,627	0.65	5,580
28.05	3,222	0.58	5,555
1.04	8,388	1.54	5,447
29.01	3,205	0.59	5,432
37.00	2,210	0.41	5,390
17.01	4,471	0.83	5,387
32.00	3,276	0.61	5,370
2.04	9,473	1.77	5,352
2.07	5,100	0.96	5,313
17.02	2,591	0.49	5,288
1.02	2,840	0.54	5,259
52.03	1,521	0.29	5,245
53.00	1,304	0.25	5,216
71.02	4,032	0.78	5,169
30.01	2,382	0.47	5,068
36.05	5,779	1.19	4,856
38.01	2,227	0.46	4,841
14.04	3,609	0.75	4,812

(1) The Area is the Land Area calculated by converting the Summary Tape File 3 Area Measurement for each Census Tract from square kilometers to square miles (2.59 square kilometers = 1 square mile). The Area was then rounded to two significant digits.

Table A5

RANKING OF CENSUS TRACTS
BY POPULATION DENSITY (PERSONS PER SQUARE MILE)

Census Tract	Population	Area (sq. mi.) (1)	Population Density
4.07	6,704	1.42	4,721
72.00	8,196	1.74	4,710
35.08	3,953	0.85	4,651
68.00	2,952	0.65	4,542
74.06	6,176	1.37	4,508
67.08	4,262	0.97	4,394
1.05	3,421	0.78	4,386
40.02	3,482	0.80	4,353
33.00	4,691	1.08	4,344
4.02	5,773	1.34	4,308
17.06	2,085	0.50	4,170
35.05	5,878	1.48	3,972
24.01	7,113	1.83	3,887
36.06	4,891	1.30	3,762
19.06	2,588	0.69	3,751
5.05	3,203	0.86	3,724
64.00	2,829	0.78	3,627
36.11	1,337	0.37	3,614
14.05	3,545	1.03	3,442
42.00	3,194	0.93	3,434
67.05	10,803	3.17	3,408
31.00	2,935	0.87	3,374
22.03	5,112	1.52	3,363
70.00	4,942	1.51	3,273
21.03	2,322	0.71	3,270
28.04	6,398	2.04	3,136
35.06	9,475	3.05	3,107
71.01	823	0.28	2,939
63.00	1,801	0.62	2,905
59.04	2,870	0.99	2,899
19.02	6,373	2.20	2,897
21.04	2,019	0.70	2,884
19.01	4,855	1.71	2,839
67.06	2,318	0.85	2,727
14.02	7,227	2.68	2,697
5.06	13,268	5.22	2,542
44.00	2,485	0.98	2,536
36.08	5,119	2.02	2,534

(1) The Area is the Land Area calculated by converting the Summary Tape File 3 Area Measurement for each Census Tract from square kilometers to square miles (2.59 square kilometers = 1 square mile). The Area was then rounded to two significant digits.

Table A5

RANKING OF CENSUS TRACTS
BY POPULATION DENSITY (PERSONS PER SQUARE MILE)

Census Tract	Population	Area (sq. mi.) (1)	Population Density
43.00	3,413	1.35	2,528
36.01	2,212	0.89	2,485
1.03	2,005	0.81	2,475
73.04	1,748	0.71	2,462
4.03	2,975	1.22	2,439
12.04	6,992	2.92	2,395
19.04	3,379	1.43	2,363
28.03	3,900	1.66	2,349
2.08	4,840	2.12	2,283
73.03	2,626	1.21	2,170
36.07	2,313	1.08	2,142
14.01	8,341	4.03	2,070
35.07	6,789	3.29	2,064
14.03	6,545	3.36	1,948
73.01	3,081	1.65	1,867
21.06	972	0.53	1,834
15.00	2,890	1.59	1,818
74.05	4,861	2.74	1,774
12.02	6,190	3.49	1,774
74.07	4,599	2.62	1,755
12.03	5,874	3.40	1,728
19.05	3,115	1.83	1,702
22.04	5,165	3.05	1,693
2.02	4,249	2.61	1,628
36.02	2,103	1.32	1,593
65.02	1,269	0.82	1,548
74.04	3,949	2.57	1,537
11.04	10,228	6.79	1,506
10.02	4,550	3.15	1,444
13.03	10,648	7.38	1,443
67.04	3,332	2.61	1,277
5.04	4,895	3.87	1,265
2.06	3,764	2.98	1,263
35.11	4,894	3.92	1,248
12.01	7,864	6.35	1,238
13.04	9,222	7.53	1,225
4.01	2,217	1.91	1,161
4.04	7,331	6.83	1,073

(1) The Area is the Land Area calculated by converting the Summary Tape File 3 Area Measurement for each Census Tract from square kilometers to square miles (2.59 square kilometers = 1 square mile). The Area was then rounded to two significant digits.

Table A5

RANKING OF CENSUS TRACTS
BY POPULATION DENSITY (PERSONS PER SQUARE MILE)

Census Tract	Population	Area (sq. mi.) (1)	Population Density
35.10	6,270	6.00	1,045
2.03	4,151	4.05	1,025
5.03	4,607	5.12	900
7.03	5,617	6.86	819
12.05	3,930	4.89	804
67.07	1,211	1.71	708
5.09	4,045	5.86	690
22.01	1,202	2.18	551
6.02	4,147	10.37	400
6.01	6,667	17.23	387
7.01	3,301	10.84	305
7.02	2,978	10.47	284
5.08	2,526	9.35	270
13.01	6,384	24.22	264
4.06	4,836	18.73	258
11.01	234	0.98	239
74.01	1,706	8.30	206
3.00	67	0.34	197
13.02	2,150	10.99	196
10.01	5,247	38.38	137
8.00	2,974	42.02	71
5.07	976	15.66	62
9.00	1,606	31.11	52

(1) The Area is the Land Area calculated by converting the Summary Tape File 3 Area Measurement for each Census Tract from square kilometers to square miles (2.59 square kilometers = 1 square mile). The Area was then rounded to two significant digits.

Table A6: CHANGES IN DENSITY FROM 1980 TO 1990

1980 Census Tract	1980 Population	Land Area	1980 Population Density	1990 Census Tract	1990 Population	1990 Population Density	Population Density Change
1.02	2,787	0.56	4,977	1.02	2,840	5,071	1.90%
1.03	2,076	0.89	2,333	1.03	2,005	2,253	−3.42%
1.04	5,662	1.55	3,653	1.04	8,388	5,412	48.15%
1.05	2,132	0.78	2,733	1.05	3,421	4,386	60.46%
2.02	933	2.57	363	2.02	4,249	1,653	355.41%
2.03	4,787	3.59	1,333	2.03	4,151	1,156	−13.29%
2.04	7,942	1.74	4,564	2.04	9,473	5,444	19.28%
2.05	9,924	3.04	3,264	2.07	5,100	3,270	0.16%
				2.08	4,840		
2.06	2,407	2.86	842	2.06	3,764	1,316	56.38%
3.00	310	0.30	1,033	3.00	67	223	−78.39%
4.01	2,690	1.99	1,352	4.01	2,217	1,114	−17.58%
4.02	6,769	1.46	4,636	4.02	5,773	3,954	−14.71%
4.03	3,622	1.17	3,096	4.03	2,975	2,543	−17.86%
4.04	4,438	7.38	601	4.04	7,331	993	65.19%
4.06	3,571	18.14	197	4.06	4,836	267	35.42%
4.07	5,109	1.39	3,676	4.07	6,704	4,823	31.22%
5.01	8,753	20.65	424	5.06	13,268	690	62.73%
				5.07	976		
5.02	5,039	15.32	329	5.08	2,526	429	30.40%
				5.09	4,045		
5.03	3,964	5.06	783	5.03	4,607	910	16.22%
5.04	5,497	3.86	1,424	5.04	4,895	1,268	−10.95%
5.05	3,743	0.81	4,621	5.05	3,203	3,954	−14.43%
6.01	4,845	16.49	294	6.01	6,667	404	37.61%
6.02	1,462	9.71	151	6.02	4,147	427	183.65%

Table A6: CHANGES IN DENSITY FROM 1980 TO 1990

1980 Census Tract	1980 Population	Land Area	1980 Population Density	1990 Census Tract	1990 Population	1990 Population Density	Population Density Change
7.01	3,300	12.19	271	7.01	3,301	271	0.03%
7.02	2,279	10.11	225	7.02	2,978	295	30.67%
7.03	4,713	6.64	710	7.03	5,617	846	19.18%
8.00	2,543	38.40	66	8.00	2,974	77	16.95%
9.00	1,505	30.80	49	9.00	1,606	52	6.71%
10.01	5,688	41.31	138	10.01	5,247	127	−7.75%
10.02	3,246	3.07	1,057	10.02	4,550	1,482	40.17%
11.01	219	0.90	243	11.01	234	260	6.85%
11.04	10,066	6.80	1,480	11.04	10,228	1,504	1.61%
12.01	6,037	6.55	922	12.01	7,864	1,201	30.26%
12.02	6,090	3.66	1,664	12.02	6,190	1,691	1.64%
12.03	3,978	3.40	1,170	12.03	5,874	1,728	47.66%
12.04	7,154	3.12	2,293	12.04	6,992	2,241	−2.26%
12.05	3,117	5.07	615	12.05	3,930	775	26.08%
13.01	5,102	24.98	204	13.01	6,384	256	25.13%
13.02	1,978	11.54	171	13.02	2,150	186	8.70%
13.03	7,645	7.72	990	13.98	10,648	1,379	39.28%
13.04	8,459	7.92	1,068	13.04	9,222	1,164	9.02%
14.01	7,288	3.91	1,864	14.01	8,341	2,133	14.45%
14.02	6,985	2.76	2,531	14.02	7,227	2,618	3.46%
14.03	5,764	3.22	1,790	14.03	6,545	2,033	13.55%
14.04	3,610	0.84	4,298	14.04	3,609	4,296	−0.03%
14.05	3,733	1.09	3,425	14.05	3,545	3,252	−5.04%
15.00	3,001	1.52	1,974	15.00	2,890	1,901	−3.70%
16.00	3,700	0.19	19,474	16.00	3,603	18,963	−2.62%
17.01	3,896	0.93	4,189	17.01	4,471	4,808	14.76%
17.02	2,893	0.57	5,075	17.02	2,591	4,546	−10.44%
17.03	9,483	1.45	6,540	17.03	10,258	7,074	8.17%
17.04	4,690	1.01	4,644	17.04	5,436	5,382	15.91%
17.06	1,794	0.49	3,661	17.06	2,085	4,255	16.22%

Table A6: CHANGES IN DENSITY FROM 1980 TO 1990

1980 Census Tract	1980 Population	Land Area	1980 Population Density	1990 Census Tract	1990 Population	1990 Population Density	Population Density Change
18.01	2,330	0.26	8,962	18.01	2,171	8,350	−6.82%
18.02	4,525	0.36	12,569	18.02	4,316	11,989	−4.62%
18.04	2,390	0.26	9,192	18.04	2,227	8,565	−6.82%
18.05	2,427	0.22	11,032	18.05	2,445	11,114	0.74%
18.06	8,190	1.54	5,318	18.06	8,676	5,634	5.93%
19.01	5,245	1.65	3,179	19.01	4,855	2,942	−7.44%
19.02	5,601	2.27	2,467	19.02	6,373	2,807	13.78%
19.04	3,619	1.51	2,397	19.04	3,379	2,238	−6.63%
19.05	3,046	2.04	1,493	19.05	3,115	1,527	2.27%
19.06	2,847	0.68	4,187	19.06	2,588	3,806	−9.10%
20.01	5,624	0.74	7,600	20.01	5,878	7,943	4.52%
20.02	2,882	0.19	15,168	20.02	2,767	14,563	−3.99%
21.03	2,303	0.65	3,543	21.03	2,322	3,572	0.83%
21.04	2,201	0.69	3,190	21.04	2,019	2,926	−8.27%
21.05	7,115	0.68	10,463	21.05	7,858	11,556	10.44%
21.06	740	0.53	1,396	21.06	972	1,834	31.35%
22.01	995	2.49	400	22.01	1,202	483	20.80%
22.03	4,645	1.33	3,492	22.03	5,112	3,844	10.05%
22.04	3,919	2.92	1,342	22.04	5,165	1,769	31.79%
23.01	5,287	0.88	6,008	23.01	4,131	4,694	−21.86%
23.02	1,988	0.15	13,253	24.04	4,825	13,403	ERR
24.04	2,778	0.21	13,229				
24.01	7,209	1.92	3,755	24.01	7,113	3,705	−1.33%
24.03	4,857	0.69	7,039	24.03	5,021	7,277	3.38%
25.00	6,220	0.81	7,679	25.00	6,488	8,010	4.31%
26.00	4,431	0.33	13,427	26.00	3,790	11,485	−14.47%
27.00	4,195	0.51	8,225	27.00	3,130	6,137	−25.39%
28.03	3,557	1.71	2,080	28.03	3,900	2,281	9.64%
28.04	5,942	2.07	2,871	28.04	6,398	3,091	7.67%
28.05	3,775	0.57	6,623	28.05	3,222	5,653	−14.65%

Table A6: CHANGES IN DENSITY FROM 1980 TO 1990

1980 Census Tract	1980 Population	Land Area	1980 Population Density	1990 Census Tract	1990 Population	1990 Population Density	Population Density Change
28.06	1,796	0.18	9,978	28.06	1,593	8,850	−11.30%
29.01	2,845	0.47	6,053	29.01	3,205	6,819	12.65%
29.03	978	0.16	6,113	29.03	1,409	8,806	44.07%
29.04	1,461	0.14	10,436	30.02	2,916	7,674	ERR
30.02	1,566	0.24	6,525				
30.01	2,715	0.46	5,902	30.01	2,382	5,178	−12.27%
31.00	2,859	0.87	3,286	31.00	2,935	3,374	2.66%
32.00	3,106	0.57	5,449	32.00	3,276	5,747	5.47%
33.00	5,490	1.10	4,991	33.00	4,691	4,265	−14.55%
34.01	2,211	0.19	11,637	34.01	1,799	9,468	−18.63%
34.02	5,775	0.54	10,694	34.02	5,220	9,667	−9.61%
35.04	2,450	10.19	240	35.10	6,270	1,096	355.67%
				35.11	4,894		
35.05	2,694	1.36	1,981	35.05	5,878	4,322	118.19%
35.06	5,557	2.96	1,877	35.06	9,475	3,201	70.51%
35.07	5,356	3.20	1,674	35.07	6,789	2,122	26.76%
35.08	4,343	1.02	4,258	35.08	3,953	3,875	−8.98%
35.09	4,919	0.59	8,337	35.09	4,892	8,292	−0.55%
36.01	2,448	1.08	2,267	36.01	2,212	2,048	−9.64%
36.02	2,398	1.38	1,738	36.02	2,103	1,524	−12.30%
36.05	5,587	0.95	5,881	36.05	5,779	4,856	ERR
66.04	1,087	0.24	4,529				
36.06	5,078	1.34	3,790	36.06	4,891	3,650	−3.68%
36.07	2,486	1.02	2,437	36.07	2,313	2,268	−6.96%
36.08	5,416	2.08	2,604	36.08	5,119	2,461	−5.48%
36.09	6,630	0.73	9,082	36.09	6,867	9,407	3.57%
36.10	2,706	0.44	6,150	36.10	2,865	6,511	5.88%
36.11	1,335	0.36	3,708	36.11	1,337	3,714	0.15%
37.00	2,251	0.39	5,772	37.00	2,210	5,667	−1.82%
38.01	2,245	0.44	5,102	38.01	2,227	5,061	−0.80%

Table A6: CHANGES IN DENSITY FROM 1980 TO 1990

1980 Census Tract	1980 Population	Land Area	1980 Population Density	1990 Census Tract	1990 Population	1990 Population Density	Population Density Change
38.03	5,131	0.81	6,335	38.03	5,265	6,500	2.61%
39.00	3,501	0.42	8,336	39.00	3,518	8,376	0.49%
40.01	4,342	0.39	11,133	40.01	4,522	11,595	4.15%
40.02	3,184	0.80	3,980	40.02	3,482	4,353	9.36%
41.01	1,965	0.32	6,141	41.01	3,094	9,669	57.46%
41.02	5,152	0.83	6,207	41.02	5,440	6,554	5.59%
42.00	3,979	1.03	3,863	42.00	3,194	3,101	−19.73%
43.00	3,502	1.62	2,162	43.00	3,413	2,107	−2.54%
44.00	2,408	1.14	2,112	44.00	2,485	2,180	3.20%
45.00	580	0.09	6,444	46.00	2,988	7,114	ERR
46.00	2,376	0.33	7,200				
47.00	3,886	0.42	9,252	47.00	3,970	9,452	2.16%
48.00	4,029	0.37	10,889	48.00	4,413	11,927	9.53%
49.00	3,485	0.48	7,260	49.00	3,746	7,804	7.49%
50.00	3,929	0.72	5,457	50.00	4,887	6,788	24.38%
51.01	3,240	0.53	6,113	51.01	3,420	6,453	5.56%
51.02	1,193	0.24	4,971	51.02	851	3,546	−28.67%
52.01	5,024	0.31	16,206	52.01	3,439	11,094	−31.55%
52.02	3,524	0.31	11,368	52.02	3,438	11,090	−2.44%
52.03	1,571	0.30	5,237	52.03	1,521	5,070	−3.18%
53.00	1,367	0.25	5,468	53.00	1,304	5,216	−4.61%
54.00	1,924	0.29	6,634	54.00	1,941	6,693	0.88%
55.00	3,624	0.45	8,053	55.00	3,881	8,624	7.09%
56.00	6,444	0.35	18,411	56.00	9,661	27,603	49.92%
57.00	4,670	0.52	8,981	57.00	4,684	9,008	0.30%
58.01	3,453	0.61	5,661	58.01	3,557	5,831	3.01%
58.02	2,894	0.33	8,770	58.02	3,193	9,676	10.33%
59.01	3,973	0.54	7,357	59.01	4,159	7,702	4.68%
59.02	1,683	0.30	5,610	59.02	1,749	5,830	3.92%
59.04	2,818	0.98	2,876	59.04	2,870	2,929	1.85%

Table A6: CHANGES IN DENSITY FROM 1980 TO 1990

1980 Census Tract	1980 Population	Land Area	1980 Population Density	1990 Census Tract	1990 Population	1990 Population Density	Population Density Change
59.05	5,294	0.18	29,411	59.05	5,994	33,300	13.22%
60.00	3,517	0.59	5,961	60.00	3,720	6,305	5.77%
61.00	3,451	0.39	8,849	61.00	3,138	8,046	−9.07%
62.00	3,550	0.48	7,396	62.00	3,828	7,975	7.83%
63.00	1,923	0.63	3,052	63.00	1,801	2,859	−6.34%
64.00	3,043	0.71	4,286	64.00	2,829	3,985	−7.03%
65.01	3,449	0.60	5,748	65.01	3,444	5,740	−0.14%
65.02	1,346	0.81	1,662	65.02	1,269	1,567	−5.72%
66.01	3,712	0.41	9,054	66.01	3,726	9,088	0.38%
66.02	3,540	0.64	5,531	66.02	3,627	5,667	2.46%
67.03	6,291	1.07	5,879	67.03	6,315	5,902	0.38%
67.04	3,844	2.96	1,299	67.04	3,332	1,126	−13.32%
67.05	8,008	3.01	2,660	67.05	10,803	3,589	34.90%
67.06	2,645	0.84	3,149	67.06	2,318	2,760	−12.36%
67.07	1,010	1.63	620	67.07	1,211	743	19.90%
67.08	4,399	0.91	4,834	67.08	4,262	4,684	−3.11%
68.00	3,135	0.67	4,679	68.00	2,952	4,406	−5.84%
69.00	4,136	0.73	5,666	69.00	3,859	5,286	−6.70%
70.00	3,957	1.64	2,413	70.00	4,942	3,013	24.89%
71.01	922	0.27	3,415	71.01	823	3,048	−10.74%
71.02	3,929	0.79	4,973	71.02	4,032	5,104	2.62%
72.00	8,529	1.72	4,959	72.00	8,196	4,765	−3.90%
73.01	3,585	1.77	2,025	73.01	3,081	1,741	−14.06%
73.03	2,527	0.97	2,605	73.98	2,626	2,707	3.92%
73.04	2,029	0.71	2,858	73.04	1,748	2,462	−13.85%
74.01	1,156	8.55	135	74.01	1,706	200	47.58%
74.04	3,755	2.49	1,508	74.04	3,949	1,586	5.17%
74.05	4,542	2.68	1,695	74.05	4,861	1,814	7.02%
74.06	5,088	1.26	4,038	74.06	6,176	4,902	21.38%
74.07	4,441	2.32	1,914	74.07	4,599	1,982	3.56%

Table A7

RANKING OF CENSUS TRACTS BY DENSITY OF
HOUSING UNITS IN STRUCTURES WITH TWO OR MORE UNITS

Census Tract	Total Housing Units in Two or More Unit Structures	Area	Density of Housing Units in Multi–Unit Structures (1)
59.05	2,742	0.22	12,463.6
56.00	3,048	0.32	9,525.0
48.00	2,373	0.25	9,492.0
20.02	1,183	0.18	6,572.2
40.01	2,088	0.33	6,327.3
24.04	1,601	0.33	4,851.5
16.00	878	0.20	4,390.0
21.05	2,672	0.75	3,562.7
36.09	2,570	0.75	3,426.7
59.01	1,824	0.56	3,257.1
24.03	2,310	0.72	3,208.3
67.03	2,773	1.00	2,773.0
20.01	1,915	0.73	2,623.3
29.03	374	0.15	2,493.3
18.01	642	0.26	2,469.2
18.05	653	0.27	2,418.5
52.02	843	0.35	2,408.6
55.00	1,100	0.48	2,291.7
17.02	1,052	0.49	2,146.9
52.01	723	0.34	2,126.5
35.09	1,693	0.81	2,090.1
17.04	1,825	0.90	2,027.8
51.01	862	0.46	1,873.9
25.00	1,385	0.74	1,871.6
2.04	3,233	1.77	1,826.6
50.00	1,342	0.74	1,813.5
49.00	868	0.51	1,702.0
62.00	843	0.53	1,590.6
18.06	2,326	1.54	1,510.4

(1) The data regarding structures with multiple housing units available on Summary Tape File 3 is provided as the number of housing units in various size structures (e.g. 100 units in 10 to 15 units structures, 150 units in 16 to 20 unit structures, etc.) rather than as the number of structures containing different numbers of housing units (e.g. 15 structures with 10 to 15 housing units, 25 structures with 50 or more housing units, etc.). Given the form of the data, locating multiple unit structures was accomplished by summing the number of housing units in structures having two or more housing units and dividing by the Census Tract area.

Table A7

RANKING OF CENSUS TRACTS BY DENSITY OF
HOUSING UNITS IN STRUCTURES WITH TWO OR MORE UNITS

Census Tract	Total Housing Units in Two or More Unit Structures	Area	Density of Housing Units in Multi-Unit Structures (1)
65.01	920	0.61	1,508.2
2.07	1,419	0.96	1,478.1
74.06	2,007	1.37	1,465.0
17.03	2,214	1.54	1,437.7
57.00	711	0.50	1,422.0
51.02	169	0.12	1,408.3
66.01	568	0.41	1,385.4
67.08	1,212	0.97	1,249.5
32.00	758	0.61	1,242.6
39.00	392	0.32	1,225.0
35.08	972	0.85	1,143.5
59.02	327	0.29	1,127.6
17.01	906	0.83	1,091.6
1.02	589	0.54	1,090.7
41.02	935	0.87	1,074.7
71.02	833	0.78	1,067.9
41.01	548	0.54	1,014.8
19.02	2,211	2.20	1,005.0
14.04	750	0.75	1,000.0
21.04	695	0.70	992.9
60.00	573	0.58	987.9
1.04	1,453	1.54	943.5
67.05	2,888	3.17	911.0
4.07	1,292	1.42	909.9
66.02	588	0.65	904.6
18.02	367	0.41	895.1
24.01	1,626	1.83	888.5
1.03	691	0.81	853.1
47.00	325	0.42	773.8
61.00	289	0.39	741.0
40.02	580	0.80	725.0
26.00	256	0.36	711.1

(1) The data regarding structures with multiple housing units available on Summary Tape File 3 is provided as the number of housing units in various size structures (e.g. 100 units in 10 to 15 units structures, 150 units in 16 to 20 unit structures, etc.) rather than as the number of structures containing different numbers of housing units (e.g. 15 structures with 10 to 15 housing units, 25 structures with 50 or more housing units, etc.). Given the form of the data, locating multiple unit structures was accomplished by summing the number of housing units in structures having two or more housing units and dividing by the Census Tract area.

Table A7

RANKING OF CENSUS TRACTS BY DENSITY OF
HOUSING UNITS IN STRUCTURES WITH TWO OR MORE UNITS

Census Tract	Total Housing Units in Two or More Unit Structures	Area	Density of Housing Units in Multi-Unit Structures (1)
43.00	873	1.35	646.7
19.06	443	0.69	642.0
54.00	204	0.32	637.5
38.03	549	0.87	631.0
34.02	320	0.54	592.6
30.01	278	0.47	591.5
1.05	461	0.78	591.0
17.06	295	0.50	590.0
73.01	972	1.65	589.1
30.02	196	0.35	560.0
36.10	267	0.49	544.9
53.00	136	0.25	544.0
35.06	1,656	3.05	543.0
58.02	212	0.42	504.8
67.07	784	1.71	458.5
63.00	273	0.62	440.3
70.00	663	1.51	439.1
14.02	1,118	2.68	417.2
31.00	354	0.87	406.9
46.00	183	0.45	406.7
19.04	581	1.43	406.3
14.05	415	1.03	402.9
28.04	719	2.04	352.5
2.08	745	2.12	351.4
28.05	193	0.58	332.8
2.02	860	2.61	329.5
28.03	539	1.66	324.7
22.03	439	1.52	288.8
52.03	81	0.29	279.3
74.07	695	2.62	265.3
2.06	753	2.98	252.7
33.00	262	1.08	242.6

(1) The data regarding structures with multiple housing units available on Summary Tape File 3 is provided as the number of housing units in various size structures (e.g. 100 units in 10 to 15 units structures, 150 units in 16 to 20 unit structures, etc.) rather than as the number of structures containing different numbers of housing units (e.g. 15 structures with 10 to 15 housing units, 25 structures with 50 or more housing units, etc.). Given the form of the data, locating multiple unit structures was accomplished by summing the number of housing units in structures having two or more housing units and dividing by the Census Tract area.

Table A7

RANKING OF CENSUS TRACTS BY DENSITY OF
HOUSING UNITS IN STRUCTURES WITH TWO OR MORE UNITS

Census Tract	Total Housing Units in Two or More Unit Structures	Area	Density of Housing Units in Multi-Unit Structures (1)
73.03	285	1.21	235.5
35.07	769	3.29	233.7
27.00	97	0.42	231.0
14.01	930	4.03	230.8
36.02	257	1.32	194.7
36.05	192	1.19	161.3
36.11	59	0.37	159.5
36.08	316	2.02	156.4
44.00	145	0.98	148.0
74.05	401	2.74	146.4
42.00	135	0.93	145.2
67.04	372	2.61	142.5
5.06	469	5.22	89.8
35.11	329	3.92	83.9
21.03	40	0.71	56.3
29.01	32	0.59	54.2
65.02	40	0.82	48.8
11.04	311	6.79	45.8
69.00	29	0.66	43.9
12.05	214	4.89	43.8
72.00	43	1.74	24.7
4.06	462	18.73	24.7
68.00	13	0.65	20.0
35.05	28	1.48	18.9
74.04	40	2.57	15.6
22.01	27	2.18	12.4
6.02	125	10.37	12.1
34.01	2	0.19	10.5
38.01	4	0.46	8.7
11.01	8	0.98	8.2
36.06	10	1.30	7.7
19.05	14	1.83	7.7

(1) The data regarding structures with multiple housing units available on Summary Tape File 3 is provided as the number of housing units in various size structures (e.g. 100 units in 10 to 15 units structures, 150 units in 16 to 20 unit structures, etc.) rather than as the number of structures containing different numbers of housing units (e.g. 15 structures with 10 to 15 housing units, 25 structures with 50 or more housing units, etc.). Given the form of the data, locating multiple unit structures was accomplished by summing the number of housing units in structures having two or more housing units and dividing by the Census Tract area.

Table A7

RANKING OF CENSUS TRACTS BY DENSITY OF
HOUSING UNITS IN STRUCTURES WITH TWO OR MORE UNITS

Census Tract	Total Housing Units in Two or More Unit Structures	Area	Density of Housing Units in Multi–Unit Structures (1)
5.04	29	3.87	7.5
28.06	1	0.16	6.3
6.01	107	17.23	6.2
4.03	7	1.22	5.7
58.01	3	0.54	5.6
37.00	2	0.41	4.9
4.02	6	1.34	4.5
59.04	4	0.99	4.0
64.00	3	0.78	3.8
21.06	2	0.53	3.8
22.04	10	3.05	3.3
18.04	1	0.31	3.2
23.01	2	0.63	3.2
73.04	2	0.71	2.8
35.10	16	6.00	2.7
12.02	9	3.49	2.6
19.01	4	1.71	2.3
36.01	2	0.89	2.2
10.02	6	3.15	1.9
15.00	3	1.59	1.9
36.07	2	1.08	1.9
12.04	4	2.92	1.4
67.06	1	0.85	1.2
5.03	6	5.12	1.2
5.05	1	0.86	1.2
4.04	7	6.83	1.0
14.03	3	3.36	0.9
10.01	32	38.38	0.8
13.03	6	7.38	0.8
12.01	5	6.35	0.8
7.03	5	6.86	0.7
5.09	4	5.86	0.7

(1) The data regarding structures with multiple housing units available on Summary Tape File 3 is provided as the number of housing units in various size structures (e.g. 100 units in 10 to 15 units structures, 150 units in 16 to 20 unit structures, etc.) rather than as the number of structures containing different numbers of housing units (e.g. 15 structures with 10 to 15 housing units, 25 structures with 50 or more housing units, etc.). Given the form of the data, locating multiple unit structures was accomplished by summing the number of housing units in structures having two or more housing units and dividing by the Census Tract area.

Table A7

RANKING OF CENSUS TRACTS BY DENSITY OF
HOUSING UNITS IN STRUCTURES WITH TWO OR MORE UNITS

Census Tract	Total Housing Units in Two or More Unit Structures	Area	Density of Housing Units in Multi-Unit Structures (1)
13.04	4	7.53	0.5
2.03	2	4.05	0.5
9.00	14	31.11	0.5
8.00	16	42.02	0.4
7.01	4	10.84	0.4
13.02	4	10.99	0.4
12.03	1	3.40	0.3
13.01	7	24.22	0.3
7.02	2	10.47	0.2
74.01	1	8.30	0.1
5.08	1	9.35	0.1
5.07	1	15.66	0.1
71.01	0	0.28	0.0
3.00	0	0.34	0.0
4.01	0	1.91	0.0

(1) The data regarding structures with multiple housing units available on Summary Tape File 3 is provided as the number of housing units in various size structures (e.g. 100 units in 10 to 15 units structures, 150 units in 16 to 20 unit structures, etc.) rather than as the number of structures containing different numbers of housing units (e.g. 15 structures with 10 to 15 housing units, 25 structures with 50 or more housing units, etc.). Given the form of the data, locating multiple unit structures was accomplished by summing the number of housing units in structures having two or more housing units and dividing by the Census Tract area.

Table A8

TOTAL POPULATION FOR WHOM A BUS
IS THE MEANS OF TRANSPORTATION TO WORK

Census Tract	Bus Users
56.00	1,796
18.06	912
17.03	837
17.04	803
21.05	757
25.00	653
48.00	567
59.05	547
40.01	519
19.02	476
16.00	467
24.04	466
57.00	432
59.01	417
20.01	414
51.01	411
24.03	406
18.02	395
24.01	376
14.01	332
52.01	331
49.00	331
26.00	297
20.02	284
17.01	279
52.02	278
66.01	275
36.09	275
55.00	272
58.02	267
35.09	249
41.02	244
58.01	242
13.03	240
14.04	238
47.00	238
13.04	234
35.07	233
COUNTY TOTAL	27,415

Table A8

TOTAL POPULATION FOR WHOM A BUS
IS THE MEANS OF TRANSPORTATION TO WORK

Census Tract	Bus Users
43.00	232
34.02	220
2.04	217
67.03	214
74.06	213
39.00	209
50.00	209
35.06	195
38.03	194
28.04	192
14.03	189
65.01	188
14.02	184
12.04	182
18.05	180
12.01	170
32.00	167
17.06	166
30.01	155
46.00	152
61.00	150
40.02	147
15.00	143
60.00	143
1.04	142
72.00	139
62.00	135
4.07	127
14.05	123
71.02	122
13.01	122
67.05	119
18.01	118
66.02	117
28.03	114
12.03	112
73.03	109
23.01	109
44.00	107
30.02	105
73.01	104
COUNTY TOTAL	27,415

Table A8

TOTAL POPULATION FOR WHOM A BUS
IS THE MEANS OF TRANSPORTATION TO WORK

Census Tract	Bus Users
35.05	104
31.00	99
33.00	99
35.08	98
27.00	97
19.05	96
70.00	96
18.04	95
22.03	95
29.01	90
17.02	89
28.06	87
54.00	86
22.04	86
28.05	85
5.09	85
21.04	84
29.03	80
36.08	78
4.06	77
36.10	76
51.02	73
41.01	73
36.01	71
53.00	68
69.00	68
1.03	67
11.04	66
19.04	65
63.00	62
67.04	59
2.02	59
2.08	58
34.01	55
36.02	55
2.07	54
1.02	53
35.11	53
10.01	53
36.05	52
74.05	51
COUNTY TOTAL	27,415

Table A8

TOTAL POPULATION FOR WHOM A BUS
IS THE MEANS OF TRANSPORTATION TO WORK

Census Tract	Bus Users
2.06	50
10.02	50
74.07	48
12.02	47
19.06	46
65.02	43
12.05	43
5.06	41
19.01	39
68.00	38
21.03	34
59.04	33
1.05	33
7.03	32
4.02	32
52.03	31
59.02	31
73.04	29
64.00	29
67.06	28
38.01	26
36.11	25
6.01	23
67.07	20
36.06	20
4.04	20
37.00	19
67.08	19
13.02	16
7.01	16
42.00	15
7.02	14
74.01	11
5.03	11
9.00	10
22.01	9
5.08	9
74.04	9
21.06	8
2.03	8
36.07	7
COUNTY TOTAL	27,415

Table A8

TOTAL POPULATION FOR WHOM A BUS
IS THE MEANS OF TRANSPORTATION TO WORK

Census Tract	Bus Users
5.04	7
71.01	6
8.00	5
6.02	3
3.00	0
11.01	0
5.07	0
4.01	0
4.03	0
5.05	0
35.10	0
COUNTY TOTAL	27,415

Table A9

TOTAL POPULATION FOR WHOM A TAXICAB
IS THE MEANS OF TRANSPORTATION TO WORK

Census Tract	Taxi Users
2.04	59
17.03	48
25.00	33
59.01	32
12.03	27
33.00	25
20.01	25
74.06	24
65.01	23
35.11	21
12.01	21
67.05	21
18.04	20
26.00	20
21.05	19
57.00	18
22.03	18
59.05	18
15.00	17
32.00	17
2.02	17
19.02	16
31.00	15
43.00	15
66.02	15
2.07	15
14.02	15
58.02	14
39.00	14
16.00	13
40.02	12
60.00	12
34.02	12
29.01	11
19.04	11
40.01	11
36.09	11
1.04	11
COUNTY TOTAL	969

Table A9

TOTAL POPULATION FOR WHOM A TAXICAB
IS THE MEANS OF TRANSPORTATION TO WORK

Census Tract	Taxi Users
13.04	10
65.02	9
44.00	9
14.04	9
41.02	9
6.01	9
56.00	9
30.02	8
68.00	8
52.02	8
52.01	8
47.00	8
38.03	8
35.05	8
51.02	7
52.03	7
36.06	7
18.05	6
73.01	6
7.01	6
49.00	6
2.06	6
5.03	6
36.08	6
36.05	6
36.02	5
19.06	5
73.03	5
36.10	5
17.01	5
30.01	4
27.00	4
46.00	1
3.00	0
11.01	0
71.01	0
21.06	0
5.07	0
22.01	0
67.07	0
53.00	0
COUNTY TOTAL	969

Table A9

TOTAL POPULATION FOR WHOM A TAXICAB
IS THE MEANS OF TRANSPORTATION TO WORK

Census Tract	Taxi Users
36.11	0
29.03	0
28.06	0
9.00	0
74.01	0
73.04	0
59.02	0
34.01	0
63.00	0
54.00	0
1.03	0
21.04	0
17.06	0
13.02	0
18.01	0
37.00	0
36.01	0
4.01	0
38.01	0
36.07	0
67.06	0
21.03	0
5.08	0
17.02	0
20.02	0
64.00	0
1.02	0
59.04	0
8.00	0
4.03	0
7.02	0
41.01	0
19.05	0
61.00	0
42.00	0
5.05	0
28.05	0
67.04	0
51.01	0
1.05	0
14.05	0
COUNTY TOTAL	969

Table A9

TOTAL POPULATION FOR WHOM A TAXICAB
IS THE MEANS OF TRANSPORTATION TO WORK

Census Tract	Taxi Users
58.01	0
66.01	0
62.00	0
69.00	0
55.00	0
28.03	0
12.05	0
74.04	0
35.08	0
71.02	0
5.09	0
23.01	0
6.02	0
2.03	0
67.08	0
18.02	0
48.00	0
10.02	0
74.07	0
24.04	0
4.06	0
2.08	0
19.01	0
74.05	0
50.00	0
35.09	0
5.04	0
70.00	0
24.03	0
22.04	0
10.01	0
17.04	0
7.03	0
4.02	0
12.02	0
35.10	0
67.03	0
13.01	0
28.04	0
14.03	0
4.07	0
COUNTY TOTAL	969

Table A9

TOTAL POPULATION FOR WHOM A TAXICAB
IS THE MEANS OF TRANSPORTATION TO WORK

Census Tract	Taxi Users
35.07	0
12.04	0
24.01	0
4.04	0
72.00	0
14.01	0
18.06	0
35.06	0
11.04	0
13.03	0
5.06	0
COUNTY TOTAL	969

Table A10

RANKING OF JOURNEY TO WORK TRAVEL TIME

Census Tract	Journey to Work Travel Time (60 – 89 minutes) Total Population	Ranking of Journey to to Work Travel Time (60 – 89 minutes)	Journey to Work Travel Time (90 minutes or more) Total Population	Ranking of Journey to Work Travel Time (90 minutes or more)	Sum of Rankings
21.05	607	7	161	1	8
18.06	625	5	107	6	11
14.01	573	8	109	5	13
17.03	531	11	129	3	14
5.06	1,038	1	84	13	14
56.00	970	3	84	12	15
24.01	487	14	109	4	18
2.04	539	9	91	9	18
13.03	976	2	78	16	18
10.01	428	20	97	7	27
6.01	522	13	72	18	31
17.04	428	21	89	11	32
20.01	394	25	95	8	33
19.02	412	23	90	10	33
59.05	348	33	140	2	35
35.06	619	6	56	30	36
67.05	459	16	63	23	39
13.01	454	18	64	22	40
24.03	477	15	61	27	42
36.09	457	17	62	25	42
18.02	300	42	80	15	57
25.00	370	28	50	32	60
7.03	361	30	48	34	64
17.01	325	39	61	26	65
4.02	263	51	81	14	65
12.03	392	26	41	41	67
67.03	264	50	75	17	67
12.01	671	4	26	64	68
40.01	303	41	56	29	70
12.02	398	24	38	47	71
5.09	377	27	39	45	72
5.04	338	36	46	36	72
1.04	357	31	41	42	73
COUNTY TOTAL	38,532		4,805		

Table A10

RANKING OF JOURNEY TO WORK TRAVEL TIME

Census Tract	Journey to Work Travel Time (60 – 89 minutes) Total Population	Ranking of Journey to to Work Travel Time (60 – 89 minutes)	Journey to Work Travel Time (90 minutes or more) Total Population	Ranking of Journey to Work Travel Time (90 minutes or more)	Sum of Rankings
74.06	299	44	54	31	75
14.03	427	22	35	53	75
12.04	332	37	42	39	76
35.09	233	63	66	19	82
41.02	234	62	65	20	82
10.02	366	29	27	61	90
48.00	259	53	41	40	93
24.04	440	19	20	77	96
57.00	200	74	62	24	98
35.05	529	12	16	89	101
50.00	229	64	40	43	107
7.01	197	75	42	38	113
4.06	270	48	25	66	114
11.04	179	86	59	28	114
22.03	344	34	18	81	115
28.04	238	59	31	57	116
2.02	259	52	24	68	120
35.10	258	54	24	69	123
59.01	217	69	31	55	124
17.02	218	67	27	59	126
43.00	186	83	38	46	129
36.08	267	49	19	80	129
2.07	240	58	22	72	130
34.02	171	94	46	37	131
39.00	166	97	46	35	132
35.11	328	38	15	95	133
9.00	115	119	64	21	140
23.01	140	107	49	33	140
13.04	536	10	6	137	147
20.02	246	56	15	92	148
8.00	240	57	15	93	150
29.01	143	104	37	48	152
38.03	227	66	16	87	153
52.01	188	80	21	74	154
13.02	202	73	16	84	157
COUNTY TOTAL	38,532		4,805		

Table A10

RANKING OF JOURNEY TO WORK TRAVEL TIME

Census Tract	Journey to Work Travel Time (60 – 89 minutes) Total Population	Ranking of Journey to to Work Travel Time (60 – 89 minutes)	Journey to Work Travel Time (90 minutes or more) Total Population	Ranking of Journey to Work Travel Time (90 minutes or more)	Sum of Rankings
4.03	237	60	14	97	157
16.00	176	89	23	70	159
5.03	342	35	8	125	160
66.02	175	90	23	71	161
35.08	129	113	37	49	162
17.06	139	108	28	58	166
36.06	124	115	36	51	166
18.05	142	105	26	62	167
2.08	204	72	14	100	172
74.05	209	71	13	105	176
32.00	237	61	10	116	177
52.02	174	91	16	86	177
26.00	255	55	8	123	178
70.00	111	122	31	56	178
2.03	193	76	13	104	180
19.05	188	79	13	102	181
22.04	271	47	6	136	183
36.07	90	134	36	50	184
30.01	95	132	35	52	184
28.05	80	141	39	44	185
51.01	180	85	13	103	188
1.05	158	99	15	94	193
55.00	214	70	8	124	194
73.03	188	78	9	118	196
27.00	112	120	20	76	196
7.02	168	96	13	101	197
36.05	138	109	16	88	197
66.01	184	84	9	119	203
4.04	352	32	0	171	203
5.08	191	77	7	128	205
6.02	227	65	5	140	205
41.01	95	133	20	75	208
12.05	150	101	12	108	209
35.07	324	40	0	169	209
19.04	105	125	16	85	210
COUNTY TOTAL	38,532		4,805		

Table A10

RANKING OF JOURNEY TO WORK TRAVEL TIME

Census Tract	Journey to Work Travel Time (60 – 89 minutes) Total Population	Ranking of Journey to to Work Travel Time (60 – 89 minutes)	Journey to Work Travel Time (90 minutes or more) Total Population	Ranking of Journey to Work Travel Time (90 minutes or more)	Sum of Rankings
40.02	68	150	27	60	210
36.11	52	157	31	54	211
71.02	101	128	17	83	211
4.07	300	43	0	168	211
44.00	77	145	24	67	212
74.07	282	46	0	167	213
19.06	107	123	15	91	214
14.02	296	45	0	170	215
18.01	85	138	19	79	217
1.03	55	156	25	65	221
62.00	174	92	7	131	223
19.01	188	82	4	142	224
65.01	144	103	8	122	225
49.00	170	95	7	130	225
28.03	103	127	14	99	226
22.01	59	154	21	73	227
30.02	128	114	11	113	227
61.00	71	148	17	82	230
14.04	218	68	0	163	231
31.00	22	169	26	63	232
69.00	129	112	9	120	232
47.00	135	111	9	121	232
15.00	106	124	11	112	236
14.05	111	121	11	115	236
42.00	97	130	12	107	237
5.05	159	98	5	139	237
33.00	149	102	6	135	237
60.00	151	100	4	141	241
58.01	188	81	0	162	243
73.04	32	167	19	78	245
68.00	96	131	11	114	245
58.02	177	87	0	160	247
73.01	67	151	14	98	249
4.01	123	116	6	134	250
67.06	47	161	15	90	251
COUNTY TOTAL	38,532		4,805		

Table A10

RANKING OF JOURNEY TO WORK TRAVEL TIME

Census Tract	Journey to Work Travel Time (60 – 89 minutes) Total Population	Ranking of Journey to to Work Travel Time (60 – 89 minutes)	Journey to Work Travel Time (90 minutes or more) Total Population	Ranking of Journey to Work Travel Time (90 minutes or more)	Sum of Rankings
21.03	171	93	0	158	251
46.00	76	146	12	106	252
2.06	177	88	0	164	252
54.00	52	158	14	96	254
36.10	118	118	5	138	256
37.00	78	144	9	117	261
38.01	66	152	11	110	262
1.02	135	110	0	159	269
34.01	85	137	6	133	270
51.02	45	162	11	109	271
74.01	84	139	6	132	271
67.08	141	106	0	166	272
18.04	120	117	0	157	274
64.00	72	147	7	129	276
59.04	35	166	11	111	277
53.00	56	155	7	126	281
36.02	99	129	0	155	284
63.00	50	159	7	127	286
21.04	78	143	3	143	286
67.04	103	126	0	161	287
36.01	89	135	0	156	291
29.03	78	142	0	151	293
21.06	59	153	0	148	301
74.04	88	136	0	165	301
28.06	70	149	0	153	302
67.07	37	164	2	144	308
5.07	48	160	0	149	309
72.00	81	140	0	172	312
65.02	35	165	0	150	315
52.03	43	163	0	152	315
11.01	18	170	0	146	316
3.00	0	172	0	145	317
71.01	12	171	0	147	318
59.02	23	168	0	154	322
COUNTY TOTAL	192,660		19,220		

Table A11. RANKING OF BUS USE, TAXI, USE, AND JOURNEY TO WORK TRAVEL TIME

Census Tract	Bus Users	Ranking of Bus Users	Taxi Users	Ranking of Taxi Users	Journey to Work Travel Time (60 – 89 minutes) Total Population	Ranking of Journey to Work Travel Time (60 – 89 minutes)	Journey to Work Travel Time (90 minutes or more) Total Population	Ranking of Journey to Work Travel Time (90 minutes or more)	Sum of Rankings
12.04	182	52	0	125	332	37	42	39	253
66.02	117	72	15	23	175	90	23	71	256
35.11	53	117	21	12	328	38	15	95	262
12.02	47	124	0	76	398	24	38	47	271
50.00	209	44	0	121	229	64	40	43	272
2.07	54	115	15	27	240	58	22	72	272
29.01	90	89	11	34	143	104	37	48	275
13.01	122	69	0	166	454	18	64	22	275
18.05	180	53	6	61	142	105	26	62	281
28.04	192	48	0	117	238	59	31	57	281
65.01	188	50	23	9	144	103	8	122	284
36.08	78	98	6	58	267	49	19	80	285
10.01	53	116	0	144	428	20	97	7	287
14.02	184	51	15	24	296	45	0	170	290
10.02	50	121	0	90	366	29	27	61	301
40.02	147	60	12	33	68	150	27	60	303
58.02	267	30	14	29	177	87	0	160	306
7.03	32	135	0	108	361	30	48	34	307
COUNTY TOTAL	27,415		969		38,532		4,805		

Table A11. RANKING OF BUS USE, TAXI, USE, AND JOURNEY TO WORK TRAVEL TIME

Census Tract	Bus Users	Ranking of Bus Users	Taxi Users	Ranking of Taxi Users	Journey to Work Travel Time (60 – 89 minutes) Total Population	Ranking of Journey to Work Travel Time (60 – 89 minutes)	Journey to Work Travel Time (90 minutes or more) Total Population	Ranking of Journey to Work Travel Time (90 minutes or more)	Sum of Rankings
49.00	331	21	6	63	170	95	7	130	309
4.02	32	134	0	110	263	51	81	14	309
14.04	238	36	9	43	218	68	0	163	310
30.01	155	57	4	70	95	132	35	52	311
20.02	284	24	0	141	246	56	15	92	313
47.00	238	35	8	48	135	111	9	121	315
5.04	7	162	0	81	338	36	46	36	315
15.00	143	61	17	19	106	124	11	112	316
7.01	16	149	6	57	197	75	42	38	319
5.09	85	95	0	153	377	27	39	45	320
33.00	99	81	25	6	149	102	6	135	324
44.00	107	77	9	42	77	145	24	67	331
60.00	143	62	12	31	151	100	4	141	334
73.03	109	76	5	65	188	78	9	118	337
31.00	99	82	15	25	22	169	26	63	339
51.01	411	16	0	136	180	85	13	103	340
17.06	166	56	0	126	139	108	28	58	348
27.00	97	84	4	69	112	120	20	76	349
COUNTY TOTAL	27,415		969		38,532		4,805		

Table A11. RANKING OF BUS USE, TAXI, USE, AND JOURNEY TO WORK TRAVEL TIME

Census Tract	Bus Users	Ranking of Bus Users	Taxi Users	Ranking of Taxi Users	Journey to Work Travel Time (60 – 89 minutes) Total Population	Ranking of Journey to Work Travel Time (60 – 89 minutes)	Journey to Work Travel Time (90 minutes or more) Total Population	Ranking of Journey to Work Travel Time (90 minutes or more)	Sum of Rankings
30.02	105	78	8	47	128	114	11	113	352
19.04	65	108	11	38	105	125	16	85	356
55.00	272	29	0	138	214	70	8	124	361
4.06	77	99	0	148	270	48	25	66	361
36.06	20	145	7	54	124	115	36	51	365
35.07	233	38	0	119	324	40	0	169	366
9.00	10	155	0	75	115	119	64	21	370
66.01	275	27	0	142	184	84	9	119	372
5.03	11	154	6	60	342	35	8	125	374
11.04	66	107	0	154	179	86	59	28	375
18.04	95	88	20	13	120	117	0	157	375
36.05	52	119	6	62	138	109	16	88	378
23.01	109	75	0	164	140	107	49	33	379
46.00	152	58	1	71	76	146	12	106	381
19.05	96	86	0	116	188	79	13	102	383
74.05	51	120	0	88	209	71	13	105	384
17.02	89	90	0	168	218	67	27	59	384
73.01	104	80	6	56	67	151	14	98	385
COUNTY TOTAL	27,415		969		38,532		4,805		

Table A11. RANKING OF BUS USE, TAXI, USE, AND JOURNEY TO WORK TRAVEL TIME

Census Tract	Bus Users	Ranking of Bus Users	Taxi Users	Ranking of Taxi Users	Journey to Work Travel Time (60 – 89 minutes) Total Population	Ranking of Journey to Work Travel Time (60 – 89 minutes)	Journey to Work Travel Time (90 minutes or more) Total Population	Ranking of Journey to Work Travel Time (90 minutes or more)	Sum of Rankings
58.01	242	33	0	123	188	81	0	162	399
19.06	46	125	5	66	107	123	15	91	405
4.07	127	66	0	130	300	43	0	168	407
12.05	43	127	0	72	150	101	12	108	408
35.08	98	83	0	165	129	113	37	49	410
1.05	33	133	0	87	158	99	15	94	413
13.02	16	150	0	107	202	73	16	84	414
74.07	48	123	0	78	282	46	0	167	414
61.00	150	59	0	127	71	148	17	82	416
71.02	122	68	0	137	101	128	17	83	416
8.00	5	164	0	106	240	57	15	93	420
2.03	8	159	0	83	193	76	13	104	422
70.00	96	85	0	160	111	122	31	56	423
36.10	76	100	5	68	118	118	5	138	424
68.00	38	130	8	51	96	131	11	114	426
7.02	14	152	0	79	168	96	13	101	428
51.02	73	102	7	55	45	162	11	109	428
62.00	135	65	0	143	174	92	7	131	431
COUNTY TOTAL	27,415		969		38,532		4,805		

Table A11. RANKING OF BUS USE, TAXI, USE, AND JOURNEY TO WORK TRAVEL TIME

Census Tract	Bus Users	Ranking of Bus Users	Taxi Users	Ranking of Taxi Users	Journey to Work Travel Time (60 – 89 minutes) Total Population	Ranking of Journey to Work Travel Time (60 – 89 minutes)	Journey to Work Travel Time (90 minutes or more) Total Population	Ranking of Journey to Work Travel Time (90 minutes or more)	Sum of Rankings
3.00	0	171	0	84	0	172	0	145	0
35.10	0	166	0	100	258	54	24	69	0
4.03	0	172	0	172	237	60	14	97	0
11.01	0	170	0	111	18	170	0	146	0
5.05	0	168	0	103	159	98	5	139	0
5.07	0	169	0	104	48	160	0	149	0
4.01	0	167	0	93	123	116	6	134	0
17.03	837	3	48	2	531	11	129	3	19
21.05	757	5	19	15	607	7	161	1	28
20.01	414	15	25	7	394	25	95	8	55
56.00	1,796	1	9	41	970	3	84	12	57
2.04	217	41	59	1	539	9	91	9	60
59.05	547	8	18	18	348	33	140	2	61
19.02	476	10	16	22	412	23	90	10	65
25.00	653	6	33	3	370	28	50	32	69
36.09	275	28	11	35	457	17	62	25	105
40.01	519	9	11	37	303	41	56	29	116
67.05	119	70	21	11	459	16	63	23	120
COUNTY TOTAL	27,415		969		38,532		4,805		

Table A11. RANKING OF BUS USE, TAXI, USE, AND JOURNEY TO WORK TRAVEL TIME

Census Tract	Bus Users	Ranking of Bus Users	Taxi Users	Ranking of Taxi Users	Journey to Work Travel Time (60 – 89 minutes) Total Population	Ranking of Journey to Work Travel Time (60 – 89 minutes)	Journey to Work Travel Time (90 minutes or more) Total Population	Ranking of Journey to Work Travel Time (90 minutes or more)	Sum of Rankings
74.06	213	43	24	8	299	44	54	31	126
57.00	432	13	18	16	200	74	62	24	127
12.01	170	54	21	10	671	4	26	64	132
59.01	417	14	32	4	217	69	31	55	142
12.03	112	74	27	5	392	26	41	41	146
17.01	279	25	5	67	325	39	61	26	157
41.02	244	32	9	45	234	62	65	20	159
17.04	803	4	0	133	428	21	89	11	169
1.04	142	63	11	36	357	31	41	42	172
14.01	332	20	0	140	573	8	109	5	173
18.06	912	2	0	161	625	5	107	6	174
24.01	376	19	0	139	487	14	109	4	176
13.03	240	34	0	129	976	2	78	16	181
24.03	406	17	0	131	477	15	61	27	190
43.00	232	39	15	26	186	83	38	46	194
16.00	467	11	13	30	176	89	23	70	200
34.02	220	40	12	32	171	94	46	37	203
35.06	195	46	0	122	619	6	56	30	204
COUNTY TOTAL	27,415		969		38,532		4,805		

Table A11. RANKING OF BUS USE, TAXI, USE, AND JOURNEY TO WORK TRAVEL TIME

Census Tract	Bus Users	Ranking of Bus Users	Taxi Users	Ranking of Taxi Users	Journey to Work Travel Time (60 – 89 minutes) Total Population	Ranking of Journey to Work Travel Time (60 – 89 minutes)	Journey to Work Travel Time (90 minutes or more) Total Population	Ranking of Journey to Work Travel Time (90 minutes or more)	Sum of Rankings
39.00	209	45	14	28	166	97	46	35	205
18.02	395	18	0	132	300	42	80	15	207
26.00	297	23	20	14	255	55	8	123	215
5.06	41	128	0	73	1,038	1	84	13	215
6.01	23	143	9	44	522	13	72	18	218
22.03	95	87	18	17	344	34	18	81	219
52.01	331	22	8	46	188	80	21	74	222
13.04	234	37	10	39	536	10	6	137	223
67.03	214	42	0	120	264	50	75	17	229
35.05	104	79	8	50	529	12	16	89	230
48.00	567	7	0	134	259	53	41	40	234
35.09	249	31	0	124	233	63	66	19	237
14.03	189	49	0	118	427	22	35	53	242
24.04	466	12	0	135	440	19	20	77	243
2.02	59	110	17	21	259	52	24	68	251
32.00	167	55	17	20	237	61	10	116	252
38.03	194	47	8	52	227	66	16	87	252
52.02	278	26	8	49	174	91	16	86	252
COUNTY TOTAL	27,415		969		38,532		4,805		

Table A11. RANKING OF BUS USE, TAXI, USE, AND JOURNEY TO WORK TRAVEL TIME

Census Tract	Bus Users	Ranking of Bus Users	Taxi Users	Ranking of Taxi Users	Journey to Work Travel Time (60 – 89 minutes) Total Population	Ranking of Journey to Work Travel Time (60 – 89 minutes)	Journey to Work Travel Time (90 minutes or more) Total Population	Ranking of Journey to Work Travel Time (90 minutes or more)	Sum of Rankings
2.06	50	122	6	59	177	88	0	164	433
19.01	39	129	0	80	188	82	4	142	433
2.08	58	112	0	157	204	72	14	100	441
36.07	7	161	0	96	90	134	36	50	441
22.04	86	92	0	170	271	47	6	136	445
28.05	85	94	0	167	80	141	39	44	446
4.04	20	146	0	98	352	32	0	171	447
14.05	123	67	0	145	111	121	11	115	448
18.01	118	71	0	162	85	138	19	79	450
5.08	9	157	0	89	191	77	7	128	451
41.01	73	101	0	149	95	133	20	75	458
36.02	55	113	5	64	99	129	0	155	461
28.03	114	73	0	163	103	127	14	99	462
21.03	34	131	0	82	171	93	0	158	464
36.11	25	142	0	115	52	157	31	54	468
1.02	53	118	0	85	135	110	0	159	472
1.03	67	106	0	147	55	156	25	65	474
22.01	9	158	0	91	59	154	21	73	476
COUNTY TOTAL	27,415		969		38,532		4,805		

Table A11. RANKING OF BUS USE, TAXI, USE, AND JOURNEY TO WORK TRAVEL TIME

Census Tract	Bus Users	Ranking of Bus Users	Taxi Users	Ranking of Taxi Users	Journey to Work Travel Time (60 – 89 minutes) Total Population	Ranking of Journey to Work Travel Time (60 – 89 minutes)	Journey to Work Travel Time (90 minutes or more) Total Population	Ranking of Journey to Work Travel Time (90 minutes or more)	Sum of Rankings
65.02	43	126	9	40	35	165	0	150	481
6.02	3	165	0	112	227	65	5	140	482
69.00	68	105	0	146	129	112	9	120	483
67.06	28	140	0	102	47	161	15	90	493
42.00	15	151	0	109	97	130	12	107	497
73.04	29	138	0	114	32	167	19	78	497
74.01	11	153	0	77	84	139	6	132	501
59.04	33	132	0	94	35	166	11	111	503
52.03	31	136	7	53	43	163	0	152	504
72.00	139	64	0	128	81	140	0	172	504
37.00	19	147	0	97	78	144	9	117	505
38.01	26	141	0	105	66	152	11	110	508
64.00	29	139	0	101	72	147	7	129	516
54.00	86	93	0	171	52	158	14	96	518
67.08	19	148	0	99	141	106	0	166	519
74.04	9	156	0	74	88	136	0	165	531
21.04	84	96	0	152	78	143	3	143	534
53.00	68	104	0	151	56	155	7	126	536
COUNTY TOTAL	27,415		969		38,532		4,805		

Table A11. RANKING OF BUS USE, TAXI, USE, AND JOURNEY TO WORK TRAVEL TIME

Census Tract	Bus Users	Ranking of Bus Users	Taxi Users	Ranking of Taxi Users	Journey to Work Travel Time (60 – 89 minutes) Total Population	Ranking of Journey to Work Travel Time (60 – 89 minutes)	Journey to Work Travel Time (90 minutes or more) Total Population	Ranking of Journey to Work Travel Time (90 minutes or more)	Sum of Rankings
34.01	55	114	0	159	85	137	6	133	543
36.01	71	103	0	150	89	135	0	156	544
21.06	8	160	0	86	59	153	0	148	547
67.07	20	144	0	95	37	164	2	144	547
29.03	80	97	0	158	78	142	0	151	548
63.00	62	109	0	155	50	159	7	127	550
67.04	59	111	0	156	103	126	0	161	554
28.06	87	91	0	169	70	149	0	153	562
59.02	31	137	0	113	23	168	0	154	572
71.01	6	163	0	92	12	171	0	147	573
COUNTY TOTAL	27,415		969		38,532		4,805		

Table A12

DENSITY OF EMPLOYMENT

Census Tract	Employees	Land Area	Density (1)
72.00	14,544	1.74	8,359
59.01	3,947	0.56	7,048
19.04	9,695	1.43	6,780
33.00	4,416	1.08	4,089
43.00	5,356	1.35	3,967
18.02	1,456	0.41	3,551
63.00	1,989	0.62	3,208
24.01	5,810	1.83	3,175
35.09	2,512	0.81	3,101
36.02	3,874	1.32	2,935
35.08	2,426	0.85	2,854
20.02	493	0.18	2,739
71.02	2,067	0.78	2,650
67.05	8,186	3.17	2,582
74.07	6,760	2.62	2,580
22.04	7,255	3.05	2,379
42.00	2,209	0.93	2,375
58.01	1,275	0.54	2,361
32.00	1,401	0.61	2,297
21.03	1,559	0.71	2,196
18.01	531	0.26	2,042
67.03	2,018	1.00	2,018
73.03	2,415	1.21	1,996
1.03	1,538	0.81	1,899
74.04	4,666	2.57	1,816
73.04	1,279	0.71	1,801
40.02	1,393	0.80	1,741
52.03	493	0.29	1,700
34.02	882	0.54	1,633
31.00	1,333	0.87	1,532
56.00	489	0.32	1,528
36.09	1,119	0.75	1,492
36.10	729	0.49	1,488
21.04	965	0.70	1,379
62.00	663	0.53	1,251
14.05	1,284	1.03	1,247
1.04	1,828	1.54	1,187
19.05	2,142	1.83	1,170
46.00	493	0.45	1,096
19.02	2,366	2.20	1,075

(1) The Density was calculated using only employment sites with 50 or more employees.

Table A12

DENSITY OF EMPLOYMENT

Census Tract	Employees	Land Area	Density (1)
60.00	621	0.58	1,071
49.00	543	0.51	1,065
36.08	2,148	2.02	1,063
51.02	121	0.12	1,008
30.02	344	0.35	983
38.01	449	0.46	976
74.05	2,665	2.74	973
1.05	740	0.78	949
28.04	1,838	2.04	901
22.03	1,287	1.52	847
68.00	538	0.65	828
66.01	336	0.41	820
2.02	2,104	2.61	806
67.07	1,370	1.71	801
36.11	290	0.37	784
35.11	3,069	3.92	783
67.04	1,933	2.61	741
61.00	288	0.39	738
51.01	297	0.46	646
70.00	942	1.51	624
35.06	1,862	3.05	610
50.00	432	0.74	584
22.01	1,260	2.18	578
27.00	242	0.42	576
12.03	1,885	3.40	554
74.01	4,449	8.30	536
44.00	518	0.98	529
1.02	279	0.54	517
12.02	1,719	3.49	493
24.03	353	0.72	490
4.02	630	1.34	470
18.04	141	0.31	455
55.00	207	0.48	431
26.00	154	0.36	428
65.02	337	0.82	411
65.01	243	0.61	398
36.05	462	1.19	388
47.00	163	0.42	388
18.05	104	0.27	385
35.07	1,240	3.29	377
35.05	556	1.48	376
24.04	121	0.33	367

(1) The Density was calculated using only employment sites with 50 or more employees.

Table A12

DENSITY OF EMPLOYMENT

Census Tract	Employees	Land Area	Density (1)
36.06	462	1.30	355
57.00	177	0.50	354
40.01	115	0.33	348
4.07	477	1.42	336
67.08	320	0.97	330
69.00	211	0.66	320
35.10	1,823	6.00	304
6.02	3,073	10.37	296
66.02	189	0.65	291
12.01	1,818	6.35	286
52.02	98	0.35	280
41.02	241	0.87	277
59.04	227	0.99	229
37.00	93	0.41	227
2.04	396	1.77	224
12.04	632	2.92	216
17.04	180	0.90	200
4.06	3,740	18.73	200
29.01	111	0.59	188
54.00	60	0.32	188
38.03	159	0.87	183
10.02	516	3.15	164
14.04	122	0.75	163
14.02	432	2.68	161
2.03	634	4.05	157
12.05	763	4.89	156
30.01	73	0.47	155
52.01	52	0.34	153
21.06	71	0.53	134
5.08	1,250	9.35	134
18.06	188	1.54	122
19.06	82	0.69	119
36.07	121	1.08	112
4.01	204	1.91	107
19.01	173	1.71	101
14.01	363	4.03	90
11.01	88	0.98	90
74.06	122	1.37	89
13.03	634	7.38	86
2.08	162	2.12	76
15.00	119	1.59	75
5.03	368	5.12	72

(1) The Density was calculated using only employment sites with 50 or more employees.

Table A12

DENSITY OF EMPLOYMENT

Census Tract	Employees	Land Area	Density (1)
5.05	61	0.86	71
11.04	477	6.79	70
21.05	52	0.75	69
5.04	258	3.87	67
7.02	698	10.47	67
64.00	51	0.78	65
7.01	703	10.84	65
36.01	55	0.89	62
14.03	189	3.36	56
2.07	50	0.96	52
13.02	554	10.99	50
5.06	257	5.22	49
6.01	762	17.23	44
4.04	295	6.83	43
28.03	58	1.66	35
17.03	51	1.54	33
5.07	515	15.66	33
7.03	218	6.86	32
13.04	232	7.53	31
5.09	118	5.86	20
2.06	52	2.98	17
10.01	619	38.38	16
9.00	333	31.11	11
13.01	165	24.22	7
8.00	94	42.02	2
67.06	0	0.85	0
3.00	0	0.34	0
4.03	0	1.22	0
71.01	0	0.28	0
73.01	0	1.65	0
20.01	0	0.73	0
17.01	0	0.83	0
16.00	0	0.20	0
23.01	0	0.63	0
25.00	0	0.74	0
17.06	0	0.50	0
28.05	0	0.58	0
29.03	0	0.15	0
17.02	0	0.49	0
59.05	0	0.22	0
59.02	0	0.29	0
34.01	0	0.19	0

(1) The Density was calculated using only employment sites with 50 or more employees.

Table A12

DENSITY OF EMPLOYMENT

Census Tract	Employees	Land Area	Density (1)
39.00	0	0.32	0
41.01	0	0.54	0
48.00	0	0.25	0
53.00	0	0.25	0
58.02	0	0.42	0
28.06	0	0.16	0

(1) The Density was calculated using only employment sites with 50 or more employees.

APPENDIX B

NUMBER OF PEAK PERIOD EMPLOYEE RESIDENCIES BY CENSUS TRACT

Table B1
Number of Peak Period Employee Residences by Prince George's County Census Tract

Census Tract	Beltsville E4,E5,E6	Hyattsville PG Plaza E13,E14,E15	Washington &Hanson Palmer Business Parks E19	Columbia Park Rd Industrial Center E20	Southern Maryland Hospital E27	Bowie State University E29	Inglewood Office Complex OD5
1.02	126	21	18	5	0	2	6
1.03	108	20	16	4	0	1	5
1.04	207	34	30	8	0	3	10
1.05	90	15	13	4	0	1	4
2.02	207	34	30	8	0	3	10
2.03	198	32	29	8	0	2	10
2.04	189	42	32	7	0	2	10
2.06	65	14	11	2	0	1	3
2.07	100	22	17	4	0	1	5
2.08	153	34	26	5	0	2	8
3.00	2	2	3	0	0	0	0
4.01	20	13	35	6	0	3	7
4.02	54	36	95	16	1	7	20
4.03	34	23	60	10	1	4	13
4.04	90	81	105	20	2	7	26
4.06	117	54	62	13	1	5	19
4.07	57	28	61	20	1	1	18
5.03	53	40	83	15	1	6	20
5.04	63	42	110	19	1	8	23
5.05	37	25	65	11	1	5	14
5.06	84	80	233	54	3	7	58
5.07	19	15	46	17	5	2	25
5.08	18	11	8	5	1	1	18
5.09	10	5	17	13	7	1	24
6.01	28	13	49	38	20	3	69
6.02	15	7	26	20	10	2	37
7.01	15	6	24	21	8	2	34
7.02	13	6	23	18	9	2	33
7.03	17	8	29	22	12	2	41
8.00	19	10	31	31	12	3	49
9.00	2	1	1	5	0	0	5
10.01	10	5	7	21	2	2	21
10.02	28	5	17	21	13	1	31
11.01	0	0	0	0	0	0	0
11.04	0	0	0	0	0	0	1
12.01	10	3	17	26	54	1	23
12.02	7	2	12	18	38	1	16
12.03	8	2	14	20	41	1	18
12.04	17	10	15	18	17	1	20
12.05	8	3	14	16	28	1	19
13.01	10	6	10	25	22	1	16
13.02	6	4	3	9	0	1	0
13.03	19	22	20	27	26	1	29
13.04	15	17	16	22	22	1	23
14.01	10	12	11	15	14	0	16

Table B1 (Continued)
Number of Peak Period Employee Residences by Prince George's County Census Tract

Census Tract	Beltsville E4,E5,E6	Hyattsville PG Plaza E13,E14,E15	Washington &Hanson Palmer Business Parks E19	Columbia Park Rd Industrial Center E20	Southern Maryland Hospital E27	Bowie State University E29	Inglewood Office Complex OD5
14.02	9	10	10	13	13	0	14
14.03	11	11	13	16	16	0	17
14.04	3	2	6	6	5	0	5
14.05	4	2	8	7	6	0	7
15.00	3	1	5	5	4	0	4
16.00	3	1	5	5	4	0	4
17.01	10	2	7	8	7	1	10
17.02	4	2	3	3	3	0	4
17.03	11	5	17	18	15	0	16
17.04	3	1	6	5	5	0	5
17.06	4	1	3	3	3	0	4
18.01	4	1	3	3	3	0	4
18.02	7	2	5	6	5	0	7
18.04	7	2	5	6	5	0	7
18.05	4	1	3	3	3	0	4
18.06	15	4	13	14	12	1	16
19.01	18	5	14	16	14	1	19
19.02	16	3	10	14	11	1	13
19.04	12	3	8	10	8	1	11
19.05	15	3	8	13	10	0	11
19.06	8	1	4	7	5	0	5
20.01	14	2	8	13	9	0	10
20.02	5	1	3	5	3	0	4
21.03	9	5	12	14	4	1	14
21.04	3	2	5	6	1	0	5
21.05	6	3	7	9	2	0	8
21.06	4	2	5	6	2	0	6
22.01	7	3	12	9	5	1	16
22.03	16	9	21	25	6	1	24
22.04	16	8	20	24	5	1	23
23.01	13	8	18	21	5	1	20
24.01	16	3	9	15	11	0	12
24.03	6	3	7	9	2	0	9
24.04	3	2	4	4	1	0	4
25.00	15	4	14	20	3	1	20
26.00	9	2	9	13	1	1	13
27.00	14	4	14	20	1	1	20
28.03	11	3	11	16	1	1	16
28.04	12	3	13	18	1	1	18
28.05	6	2	6	9	1	0	9
28.06	5	1	5	7	1	0	7
29.01	11	3	11	16	1	1	16
29.03	5	1	5	7	1	0	7
30.01	12	3	13	18	1	1	18
30.02	10	5	11	13	1	0	19

Table B1 (Continued)
Number of Peak Period Employee
Residences by Prince George's County Census Tract

Census Tract	Beltsville E4,E5,E6	Hyattsville PG Plaza E13,E14,E15	Washington &Hanson Palmer Business Parks E19	Columbia Park Rd Industrial Center E20	Southern Maryland Hospital E27	Bowie State University E29	Inglewood Office Complex OD5
31.00	11	4	12	16	1	1	18
32.00	8	5	9	10	0	0	18
33.00	24	15	28	29	1	1	53
34.01	5	3	6	6	0	0	11
34.02	8	5	9	10	0	0	18
35.05	10	5	17	13	7	1	24
35.06	17	8	29	22	12	2	41
35.07	23	14	26	27	1	1	49
35.08	25	13	28	13	0	1	17
35.09	9	5	10	7	0	0	12
35.10	43	33	30	16	2	2	37
35.11	40	25	23	18	2	1	49
36.01	21	12	24	17	1	0	28
36.02	20	11	22	15	1	0	25
36.05	59	24	37	26	2	1	41
36.06	59	30	64	21	1	1	19
36.07	37	18	40	13	0	1	12
36.08	65	33	70	23	1	1	21
36.09	23	9	17	10	1	0	16
36.10	28	11	21	12	1	0	18
36.11	14	6	13	5	0	0	6
37.00	26	9	16	12	1	0	20
38.01	21	8	13	10	1	0	16
38.03	37	21	16	12	1	1	20
39.00	4	10	5	3	0	0	7
40.01	8	5	3	3	0	0	2
40.02	38	26	14	13	2	0	12
41.01	14	9	17	18	1	0	32
41.02	34	14	24	21	1	1	35
42.00	21	14	25	26	1	1	47
43.00	31	27	24	18	1	0	30
44.00	15	13	7	6	0	0	5
46.00	26	20	10	8	0	0	9
47.00	31	20	7	3	0	1	13
48.00	14	9	3	2	0	0	6
49.00	22	38	5	3	0	0	4
50.00	25	52	6	3	0	0	3
51.01	17	34	4	2	0	0	2
51.02	5	4	2	1	0	0	2
52.01	31	13	8	2	0	1	3
52.02	23	11	6	1	0	0	2
52.03	11	9	2	1	0	0	2
53.00	9	7	2	1	0	0	2
54.00	10	8	2	1	0	0	2
55.00	27	14	6	2	0	0	3

Table B1 (Continued)
Number of Peak Period Employee
Residences by Prince George's County Census Tract

Census Tract	Beltsville E4,E5,E6	Hyattsville PG Plaza E13,E14,E15	Washington &Hanson Palmer Business Parks E19	Columbia Park Rd Industrial Center E20	Southern Maryland Hospital E27	Bowie State University E29	Inglewood Office Complex OD5
56.00	21	9	5	1	0	0	2
57.00	38	16	10	2	0	1	3
58.01	39	25	10	3	0	1	3
58.02	31	24	8	2	0	1	3
59.01	5	10	1	1	0	0	1
59.02	15	15	4	1	0	0	1
59.04	48	21	12	3	1	1	4
59.05	10	4	3	1	0	0	1
60.00	23	48	6	3	0	0	3
61.00	21	44	6	4	0	0	4
62.00	10	21	7	4	0	0	8
63.00	5	12	6	4	0	0	8
64.00	38	79	9	5	0	1	4
65.01	33	27	10	7	1	1	13
65.02	28	20	7	5	1	1	9
66.01	29	22	8	6	1	1	10
66.02	29	22	8	6	1	1	10
67.03	65	33	15	5	1	0	13
67.04	79	37	18	5	1	0	15
67.05	168	84	60	19	1	1	36
67.06	32	16	22	7	0	0	9
67.07	35	17	8	3	0	0	7
67.08	74	40	20	6	1	0	16
68.00	50	17	4	5	0	0	6
69.00	82	28	7	8	0	0	9
70.00	123	42	10	11	1	1	14
71.01	14	5	1	1	0	0	2
71.02	68	23	6	6	0	0	8
72.00	28	8	9	2	0	0	3
73.01	41	14	4	4	0	0	5
73.03	45	19	11	3	1	1	4
73.04	31	13	8	2	0	1	3
74.01	161	16	8	2	0	1	5
74.04	381	41	19	6	0	1	14
74.05	395	46	20	8	0	1	15
74.06	97	13	7	2	0	0	4
74.07	198	20	10	3	0	1	7
	6,396	2,645	3,092	1,832	653	154	2,456

NOTE: These totals may not match the totals shown at the zip code level due to rounding.

APPENDIX C

NON-TRADITIONAL TRANSIT POTENTIAL BY CENSUS TRACT

Table C1
Non-Traditional Transit Potential for the Beltsville (E-4-5-6) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential
1.02	4.875	126	6	2.04	8.625	189	16
1.03	3.000	108	3	74.07	6.750	198	13
1.04	4.875	207	10	74.05	3.000	395	12
1.05	4.875	90	4	74.04	3.000	381	11
2.02	4.875	207	10	67.05	6.750	168	11
2.03	4.875	198	10	2.02	4.875	207	10
2.04	8.625	189	16	1.04	4.875	207	10
2.06	4.875	65	3	2.03	4.875	198	10
2.07	6.750	100	7	4.06	6.750	117	8
2.08	3.000	153	5	2.07	6.750	100	7
3.00	4.875	2	0	5.06	8.000	84	7
4.01	4.875	20	1	74.06	6.750	97	7
4.02	4.875	54	3	1.02	4.875	126	6
4.03	4.875	34	2	70.00	4.875	123	6
4.04	4.875	90	4	74.01	3.000	161	5
4.06	6.750	117	8	2.08	3.000	153	5
4.07	4.875	57	3	1.05	4.875	90	4
5.03	4.875	53	3	67.03	6.750	65	4
5.04	6.125	63	4	4.04	4.875	90	4
5.05	6.125	37	2	5.04	6.125	63	4
5.06	8.000	84	7	67.08	4.875	74	4
5.07	8.000	19	2	71.02	4.875	68	3
5.08	8.000	18	1	57.00	8.625	38	3
5.09	6.125	10	1	1.03	3.000	108	3
6.01	8.000	28	2	36.08	4.875	65	3
6.02	7.375	15	1	2.06	4.875	65	3
7.01	8.000	15	1	41.02	8.625	34	3
7.02	9.250	13	1	36.05	4.875	59	3
7.03	9.250	17	2	36.06	4.875	59	3
8.00	9.250	19	2	4.07	4.875	57	3
9.00	9.250	2	0	35.11	6.750	40	3
10.01	9.250	10	1	52.01	8.625	31	3
10.02	9.250	28	3	43.00	8.625	31	3
11.01	9.250	0	0	4.02	4.875	54	3
11.04	9.250	0	0	10.02	9.250	28	3
12.01	11.125	10	1	5.03	4.875	53	3
12.02	11.125	7	1	38.03	6.750	37	2
12.03	11.125	8	1	69.00	3.000	82	2
12.04	9.250	17	2	68.00	4.875	50	2
12.05	9.250	8	1	67.04	3.000	79	2

Table C1 (Continued)
Non-Traditional Transit Potential for the Beltsville (E-4-5-6) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential
13.01	11.125	10	1	59.04	4.875	48	2
13.02	9.250	6	1	5.05	6.125	37	2
13.03	9.250	19	2	6.01	8.000	28	2
13.04	9.250	15	1	73.03	4.875	45	2
14.01	9.250	10	1	50.00	8.625	25	2
14.02	7.375	9	1	35.10	4.875	43	2
14.03	9.250	11	1	58.02	6.750	31	2
14.04	7.375	3	0	52.02	8.625	23	2
14.05	7.375	4	0	36.09	8.625	23	2
15.00	7.375	3	0	66.01	6.750	29	2
16.00	11.125	3	0	66.02	6.750	29	2
17.01	9.250	10	1	58.01	4.875	39	2
17.02	7.375	4	0	55.00	6.750	27	2
17.03	11.125	11	1	56.00	8.625	21	2
17.04	11.125	3	0	36.07	4.875	37	2
17.06	7.375	4	0	13.03	9.250	19	2
18.01	8.000	4	0	8.00	9.250	19	2
18.02	9.875	7	1	67.07	4.875	35	2
18.04	6.125	7	0	35.08	6.750	25	2
18.05	6.125	4	0	4.03	4.875	34	2
18.06	9.875	15	1	33.00	6.750	24	2
19.01	7.375	18	1	65.01	4.875	33	2
19.02	9.875	16	2	24.01	9.875	16	2
19.04	7.375	12	1	19.02	9.875	16	2
19.05	6.125	15	1	7.03	9.250	17	2
19.06	6.125	8	0	12.04	9.250	17	2
20.01	9.875	14	1	67.06	4.875	32	2
20.02	8.000	5	0	35.07	6.750	23	2
21.03	6.125	9	1	60.00	6.750	23	2
21.04	6.125	3	0	5.07	8.000	19	2
21.05	9.875	6	1	73.04	4.875	31	2
21.06	6.125	4	0	49.00	6.750	22	1
22.01	6.125	7	0	25.00	9.875	15	1
22.03	8.000	16	1	18.06	9.875	15	1
22.04	6.125	16	1	5.08	8.000	18	1
23.01	6.125	13	1	13.04	9.250	15	1
24.01	9.875	16	2	20.01	9.875	14	1
24.03	9.875	6	1	36.10	4.875	28	1
24.04	9.875	3	0	35.06	8.000	17	1
25.00	9.875	15	1	19.01	7.375	18	1

Table C1 (Continued)
Non-Traditional Transit Potential for the Beltsville (E-4-5-6) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential
26.00	9.875	9	1	22.03	8.000	16	1
27.00	8.000	14	1	37.00	4.875	26	1
28.03	8.000	11	1	46.00	4.875	26	1
28.04	8.000	12	1	73.01	3.000	41	1
28.05	6.125	6	0	17.03	11.125	11	1
28.06	4.875	5	0	48.00	8.625	14	1
29.01	8.625	11	1	7.02	9.250	13	1
29.03	6.750	5	0	7.01	8.000	15	1
30.01	6.750	12	1	51.01	6.750	17	1
30.02	6.750	10	1	40.02	3.000	38	1
31.00	6.750	11	1	64.00	3.000	38	1
32.00	8.625	8	1	27.00	8.000	14	1
33.00	6.750	24	2	12.01	11.125	10	1
34.01	6.750	5	0	13.01	11.125	10	1
34.02	8.625	8	1	6.02	7.375	15	1
35.05	8.000	10	1	38.01	4.875	21	1
35.06	8.000	17	1	61.00	4.875	21	1
35.07	6.750	23	2	36.01	4.875	21	1
35.08	6.750	25	2	42.00	4.875	21	1
35.09	8.625	9	1	14.03	9.250	11	1
35.10	4.875	43	2	22.04	6.125	16	1
35.11	6.750	40	3	4.01	4.875	20	1
36.01	4.875	21	1	36.02	4.875	20	1
36.02	4.875	20	1	28.04	8.000	12	1
36.05	4.875	59	3	29.01	8.625	11	1
36.06	4.875	59	3	47.00	3.000	31	1
36.07	4.875	37	2	14.01	9.250	10	1
36.08	4.875	65	3	10.01	9.250	10	1
36.09	8.625	23	2	17.01	9.250	10	1
36.10	4.875	28	1	19.05	6.125	15	1
36.11	4.875	14	1	12.03	11.125	8	1
37.00	4.875	26	1	26.00	9.875	9	1
38.01	4.875	21	1	19.04	7.375	12	1
38.03	6.750	37	2	28.03	8.000	11	1
39.00	8.625	4	0	59.05	8.625	10	1
40.01	8.625	8	1	65.02	3.000	28	1
40.02	3.000	38	1	72.00	3.000	28	1
41.01	4.875	14	1	30.01	6.750	12	1
41.02	8.625	34	3	35.05	8.000	10	1
42.00	4.875	21	1	23.01	6.125	13	1

Table C1 (Continued)
Non-Traditional Transit Potential for the Beltsville (E-4-5-6) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential
43.00	8.625	31	3	12.02	11.125	7	1
44.00	4.875	15	1	35.09	8.625	9	1
46.00	4.875	26	1	31.00	6.750	11	1
47.00	3.000	31	1	12.05	9.250	8	1
48.00	8.625	14	1	44.00	4.875	15	1
49.00	6.750	22	1	59.02	4.875	15	1
50.00	8.625	25	2	18.02	9.875	7	1
51.01	6.750	17	1	40.01	8.625	8	1
51.02	4.875	5	0	32.00	8.625	8	1
52.01	8.625	31	3	34.02	8.625	8	1
52.02	8.625	23	2	71.01	4.875	14	1
52.03	4.875	11	1	36.11	4.875	14	1
53.00	4.875	9	0	41.01	4.875	14	1
54.00	4.875	10	0	30.02	6.750	10	1
55.00	6.750	27	2	14.02	7.375	9	1
56.00	8.625	21	2	5.09	6.125	10	1
57.00	8.625	38	3	21.05	9.875	6	1
58.01	4.875	39	2	24.03	9.875	6	1
58.02	6.750	31	2	13.02	9.250	6	1
59.01	8.625	5	0	21.03	6.125	9	1
59.02	4.875	15	1	52.03	4.875	11	1
59.04	4.875	48	2	19.06	6.125	8	0
59.05	8.625	10	1	62.00	4.875	10	0
60.00	6.750	23	2	54.00	4.875	10	0
61.00	4.875	21	1	53.00	4.875	9	0
62.00	4.875	10	0	59.01	8.625	5	0
63.00	3.000	5	0	18.04	6.125	7	0
64.00	3.000	38	1	22.01	6.125	7	0
65.01	4.875	33	2	20.02	8.000	5	0
65.02	3.000	28	1	28.05	6.125	6	0
66.01	6.750	29	2	39.00	8.625	4	0
66.02	6.750	29	2	34.01	6.750	5	0
67.03	6.750	65	4	29.03	6.750	5	0
67.04	3.000	79	2	16.00	11.125	3	0
67.05	6.750	168	11	17.04	11.125	3	0
67.06	4.875	32	2	18.01	8.000	4	0
67.07	4.875	35	2	24.04	9.875	3	0
67.08	4.875	74	4	17.02	7.375	4	0
68.00	4.875	50	2	14.05	7.375	4	0
69.00	3.000	82	2	17.06	7.375	4	0

Table C1 (Continued)
Non-Traditional Transit Potential for the Beltsville (E-4-5-6) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential
70.00	4.875	123	6	21.06	6.125	4	0
71.01	4.875	14	1	18.05	6.125	4	0
71.02	4.875	68	3	28.06	4.875	5	0
72.00	3.000	28	1	51.02	4.875	5	0
73.01	3.000	41	1	15.00	7.375	3	0
73.03	4.875	45	2	14.04	7.375	3	0
73.04	4.875	31	2	9.00	9.250	2	0
74.01	3.000	161	5	21.04	6.125	3	0
74.04	3.000	381	11	63.00	3.000	5	0
74.05	3.000	395	12	3.00	4.875	2	0
74.06	6.750	97	7	11.04	9.250	0	0
74.07	6.750	198	13	11.01	9.250	0	0
		6,396	349			6,396	349

Table C2
Non-Traditional Transit Potential for the Hyatsville/Prince George's Plaza (E-13, 14, 15) Cluster

Sorted by Census Tract			Non-Traditional Transit Potential	Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (percent)	Workers		Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
1.02	4.875	21	1	5.06	8.000	80	6
1.03	4.875	20	1	67.05	6.750	84	6
1.04	6.750	34	2	4.04	6.125	81	5
1.05	4.875	15	1	4.06	6.750	54	4
2.02	6.750	34	2	2.04	8.625	42	4
2.03	4.875	32	2	50.00	6.750	52	4
2.04	8.625	42	4	70.00	6.750	42	3
2.06	4.875	14	1	5.04	6.125	42	3
2.07	6.750	22	1	5.03	6.125	40	2
2.08	4.875	34	2	64.00	3.000	79	2
3.00	4.875	2	0	60.00	4.875	48	2
4.01	6.125	13	1	2.02	6.750	34	2
4.02	6.125	36	2	1.04	6.750	34	2
4.03	6.125	23	1	67.03	6.750	33	2
4.04	6.125	81	5	4.02	6.125	36	2
4.06	6.750	54	4	13.03	9.250	22	2
4.07	4.875	28	1	74.04	4.875	41	2
5.03	6.125	40	2	49.00	4.875	38	2
5.04	6.125	42	3	65.01	6.750	27	2
5.05	6.125	25	2	43.00	6.750	27	2
5.06	8.000	80	6	67.04	4.875	37	2
5.07	8.000	15	1	35.11	6.750	25	2
5.08	8.000	11	1	2.08	4.875	34	2
5.09	6.125	5	0	51.01	4.875	34	2
6.01	8.000	13	1	35.10	4.875	33	2
6.02	7.375	7	1	36.08	4.875	33	2
7.01	8.000	6	0	13.04	9.250	17	2
7.02	8.000	6	0	2.03	4.875	32	2
7.03	9.250	8	1	5.05	6.125	25	2
8.00	9.250	10	1	66.02	6.750	22	1
9.00	9.250	1	0	2.07	6.750	22	1
10.01	9.250	5	0	66.01	6.750	22	1
10.02	9.250	5	0	36.06	4.875	30	1
11.01	9.250	0	0	4.03	6.125	23	1
11.04	8.000	0	0	74.05	3.000	46	1
12.01	11.125	3	0	57.00	8.625	16	1
12.02	9.875	2	0	4.07	4.875	28	1
12.03	9.875	2	0	74.07	6.750	20	1
12.04	8.000	10	1	61.00	3.000	44	1
12.05	8.000	3	0	58.01	4.875	25	1
13.01	11.125	6	1	41.02	8.625	14	1
13.02	9.250	4	0	67.08	3.000	40	1
13.03	9.250	22	2	5.07	8.000	15	1
13.04	9.250	17	2	58.02	4.875	24	1

Table C2 (Continued)
Non-Traditional Transit Potential for the
Hyatsville/Prince George's Plaza (E-13, 14, 15) Cluster

Sorted by Census Tract			Non-Traditional Transit Potential	Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (percent)	Workers		Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
14.01	8.000	12	1	71.02	4.875	23	1
14.02	6.125	10	1	6.01	8.000	13	1
14.03	8.000	11	1	38.03	4.875	21	1
14.04	4.875	2	0	1.02	4.875	21	1
14.05	6.125	2	0	62.00	4.875	21	1
15.00	6.125	1	0	33.00	6.750	15	1
16.00	9.875	1	0	65.02	4.875	20	1
17.01	8.000	2	0	1.03	4.875	20	1
17.02	6.125	2	0	46.00	4.875	20	1
17.03	9.875	5	0	14.01	8.000	12	1
17.04	8.625	1	0	35.07	6.750	14	1
17.06	4.875	1	0	8.00	9.250	10	1
18.01	6.750	1	0	14.03	8.000	11	1
18.02	8.625	2	0	5.08	8.000	11	1
18.04	4.875	2	0	36.07	4.875	18	1
18.05	4.875	1	0	35.08	6.750	13	1
18.06	8.625	4	0	52.01	6.750	13	1
19.01	6.125	5	0	39.00	8.625	10	1
19.02	8.625	3	0	59.01	8.625	10	1
19.04	6.125	3	0	69.00	3.000	28	1
19.05	4.875	3	0	67.07	4.875	17	1
19.06	4.875	1	0	12.04	8.000	10	1
20.01	8.625	2	0	4.01	6.125	13	1
20.02	6.750	1	0	67.06	4.875	16	1
21.03	4.875	5	0	74.01	4.875	16	1
21.04	4.875	2	0	40.02	3.000	26	1
21.05	8.625	3	0	56.00	8.625	9	1
21.06	4.875	2	0	52.02	6.750	11	1
22.01	6.125	3	0	7.03	9.250	8	1
22.03	6.750	9	1	1.05	4.875	15	1
22.04	4.875	8	0	59.02	4.875	15	1
23.01	4.875	8	0	36.05	3.000	24	1
24.01	8.625	3	0	55.00	4.875	14	1
24.03	8.625	3	0	2.06	4.875	14	1
24.04	8.625	2	0	13.01	11.125	6	1
25.00	8.625	4	0	44.00	4.875	13	1
26.00	8.625	2	0	74.06	4.875	13	1
27.00	6.750	4	0	59.04	3.000	21	1
28.03	6.750	3	0	14.02	6.125	10	1
28.04	6.750	3	0	48.00	6.750	9	1
28.05	4.875	2	0	36.09	6.750	9	1
28.06	4.875	1	0	22.03	6.750	9	1
29.01	8.625	3	0	47.00	3.000	20	1

Table C2 (Continued)
Non-Traditional Transit Potential for the
Hyatsville/Prince George's Plaza (E-13, 14, 15) Cluster

Sorted by Census Tract			Non-Traditional Transit Potential	Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (percent)	Workers		Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
29.03	6.750	1	0	36.01	4.875	12	1
30.01	6.750	3	0	73.03	3.000	19	1
30.02	6.750	5	0	35.06	6.750	8	1
31.00	4.875	4	0	36.10	4.875	11	1
32.00	8.625	5	0	36.02	4.875	11	1
33.00	6.750	15	1	6.02	7.375	7	1
34.01	6.750	3	0	68.00	3.000	17	1
34.02	8.625	5	0	17.03	9.875	5	0
35.05	6.750	5	0	7.01	8.000	6	0
35.06	6.750	8	1	7.02	8.000	6	0
35.07	6.750	14	1	10.01	9.250	5	0
35.08	6.750	13	1	10.02	9.250	5	0
35.09	8.625	5	0	37.00	4.875	9	0
35.10	4.875	33	2	41.01	4.875	9	0
35.11	6.750	25	2	52.03	4.875	9	0
36.01	4.875	12	1	34.02	8.625	5	0
36.02	4.875	11	1	32.00	8.625	5	0
36.05	3.000	24	1	40.01	8.625	5	0
36.06	4.875	30	1	35.09	8.625	5	0
36.07	4.875	18	1	42.00	3.000	14	0
36.08	4.875	33	2	73.01	3.000	14	0
36.09	6.750	9	1	73.04	3.000	13	0
36.10	4.875	11	1	23.01	4.875	8	0
36.11	4.875	6	0	38.01	4.875	8	0
37.00	4.875	9	0	22.04	4.875	8	0
38.01	4.875	8	0	13.02	9.250	4	0
38.03	4.875	21	1	63.00	3.000	12	0
39.00	8.625	10	1	18.06	8.625	4	0
40.01	8.625	5	0	25.00	8.625	4	0
40.02	3.000	26	1	53.00	4.875	7	0
41.01	4.875	9	0	35.05	6.750	5	0
41.02	8.625	14	1	30.02	6.750	5	0
42.00	3.000	14	0	12.01	11.125	3	0
43.00	6.750	27	2	5.09	6.125	5	0
44.00	4.875	13	1	19.01	6.125	5	0
46.00	4.875	20	1	36.11	4.875	6	0
47.00	3.000	20	1	59.05	6.750	4	0
48.00	6.750	9	1	27.00	6.750	4	0
49.00	4.875	38	2	21.05	8.625	3	0
50.00	6.750	52	4	19.02	8.625	3	0
51.01	4.875	34	2	29.01	8.625	3	0
51.02	4.875	4	0	24.03	8.625	3	0
52.01	6.750	13	1	24.01	8.625	3	0

Table C2 (Continued)
Non-Traditional Transit Potential for the
Hyatsville/Prince George's Plaza (E-13, 14, 15) Cluster

Sorted by Census Tract			Non-Traditional Transit Potential	Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (percent)	Workers		Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
52.02	6.750	11	1	71.01	4.875	5	0
52.03	4.875	9	0	21.03	4.875	5	0
53.00	4.875	7	0	12.05	8.000	3	0
54.00	3.000	8	0	72.00	3.000	8	0
55.00	4.875	14	1	54.00	3.000	8	0
56.00	8.625	9	1	28.04	6.750	3	0
57.00	8.625	16	1	30.01	6.750	3	0
58.01	4.875	25	1	34.01	6.750	3	0
58.02	4.875	24	1	28.03	6.750	3	0
59.01	8.625	10	1	12.03	9.875	2	0
59.02	4.875	15	1	12.02	9.875	2	0
59.04	3.000	21	1	51.02	4.875	4	0
59.05	6.750	4	0	31.00	4.875	4	0
60.00	4.875	48	2	19.04	6.125	3	0
61.00	3.000	44	1	22.01	6.125	3	0
62.00	4.875	21	1	26.00	8.625	2	0
63.00	3.000	12	0	20.01	8.625	2	0
64.00	3.000	79	2	18.02	8.625	2	0
65.01	6.750	27	2	24.04	8.625	2	0
65.02	4.875	20	1	17.01	8.000	2	0
66.01	6.750	22	1	19.05	4.875	3	0
66.02	6.750	22	1	14.05	6.125	2	0
67.03	6.750	33	2	17.02	6.125	2	0
67.04	4.875	37	2	16.00	9.875	1	0
67.05	6.750	84	6	21.06	4.875	2	0
67.06	4.875	16	1	21.04	4.875	2	0
67.07	4.875	17	1	14.04	4.875	2	0
67.08	3.000	40	1	3.00	4.875	2	0
68.00	3.000	17	1	28.05	4.875	2	0
69.00	3.000	28	1	18.04	4.875	2	0
70.00	6.750	42	3	9.00	9.250	1	0
71.01	4.875	5	0	17.04	8.625	1	0
71.02	4.875	23	1	29.03	6.750	1	0
72.00	3.000	8	0	20.02	6.750	1	0
73.01	3.000	14	0	18.01	6.750	1	0
73.03	3.000	19	1	15.00	6.125	1	0
73.04	3.000	13	0	19.06	4.875	1	0
74.01	4.875	16	1	17.06	4.875	1	0
74.04	4.875	41	2	28.06	4.875	1	0
74.05	3.000	46	1	18.05	4.875	1	0
74.06	4.875	13	1	11.01	9.250	0	0
74.07	6.750	20	1	11.04	8.000	0	0
		2,645	142			2,645	142

Table C3
Non-Traditional Transit Potential for the Washington and Hanson Palmer Business Parks (E19) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
1.02	6.125	18	1	5.06	6.750	233	16
1.03	6.125	16	1	5.04	4.875	110	5
1.04	8.000	30	2	4.04	4.875	105	5
1.05	6.125	13	1	4.02	4.875	95	5
2.02	6.750	30	2	4.06	6.750	62	4
2.03	6.125	29	2	67.05	6.750	60	4
2.04	8.625	32	3	5.03	4.875	83	4
2.06	4.875	11	1	6.01	6.750	49	3
2.07	6.750	17	1	5.05	4.875	65	3
2.08	4.875	26	1	36.06	4.875	64	3
3.00	4.875	3	0	5.07	6.750	46	3
4.01	4.875	35	2	4.07	4.875	61	3
4.02	4.875	95	5	4.03	4.875	60	3
4.03	4.875	60	3	8.00	9.250	31	3
4.04	4.875	105	5	2.04	8.625	32	3
4.06	6.750	62	4	1.04	8.000	30	2
4.07	4.875	61	3	7.03	8.000	29	2
5.03	4.875	83	4	36.08	3.000	70	2
5.04	4.875	110	5	43.00	8.625	24	2
5.05	4.875	65	3	2.02	6.750	30	2
5.06	6.750	233	16	35.06	6.750	29	2
5.07	6.750	46	3	36.07	4.875	40	2
5.08	6.750	8	1	33.00	6.750	28	2
5.09	4.875	17	1	35.08	6.750	28	2
6.01	6.750	49	3	13.03	9.250	20	2
6.02	6.125	26	2	7.02	8.000	23	2
7.01	6.750	24	2	36.05	4.875	37	2
7.02	8.000	23	2	2.03	6.125	29	2
7.03	8.000	29	2	35.07	6.750	26	2
8.00	9.250	31	3	4.01	4.875	35	2
9.00	9.250	1	0	17.03	9.875	17	2
10.01	9.250	7	1	12.01	9.875	17	2
10.02	8.000	17	1	41.02	6.750	24	2
11.01	8.000	0	0	7.01	6.750	24	2
11.04	8.000	0	0	6.02	6.125	26	2
12.01	9.875	17	2	35.11	6.750	23	2
12.02	9.875	12	1	13.04	9.250	16	1
12.03	9.875	14	1	35.10	4.875	30	1
12.04	8.000	15	1	22.03	6.750	21	1
12.05	8.000	14	1	12.03	9.875	14	1
13.01	11.125	10	1	10.02	8.000	17	1
13.02	9.250	3	0	67.03	8.625	15	1

Table C3 (Continued)
Non-Traditional Transit Potential for the Washington and Hanson Palmer Business Parks (E19) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
13.03	9.250	20	2	18.06	9.875	13	1
13.04	9.250	16	1	2.08	4.875	26	1
14.01	8.000	11	1	25.00	8.625	14	1
14.02	6.125	10	1	14.03	9.250	13	1
14.03	9.250	13	1	12.04	8.000	15	1
14.04	6.125	6	0	12.02	9.875	12	1
14.05	6.125	8	0	2.07	6.750	17	1
15.00	6.125	5	0	35.05	6.750	17	1
16.00	9.875	5	0	36.09	6.750	17	1
17.01	8.000	7	1	12.05	8.000	14	1
17.02	6.125	3	0	13.01	11.125	10	1
17.03	9.875	17	2	1.02	6.125	18	1
17.04	9.875	6	1	67.06	4.875	22	1
17.06	6.125	3	0	36.10	4.875	21	1
18.01	8.000	3	0	19.02	9.875	10	1
18.02	9.875	5	0	1.03	6.125	16	1
18.04	6.125	5	0	22.04	4.875	20	1
18.05	4.875	3	0	67.08	4.875	20	1
18.06	9.875	13	1	74.05	4.875	20	1
19.01	6.125	14	1	29.01	8.625	11	1
19.02	9.875	10	1	27.00	6.750	14	1
19.04	6.125	8	0	74.04	4.875	19	1
19.05	4.875	8	0	14.01	8.000	11	1
19.06	4.875	4	0	23.01	4.875	18	1
20.01	8.625	8	1	30.01	6.750	13	1
20.02	6.750	3	0	28.04	6.750	13	1
21.03	4.875	12	1	67.04	4.875	18	1
21.04	4.875	5	0	57.00	8.625	10	1
21.05	8.625	7	1	35.09	8.625	10	1
21.06	4.875	5	0	19.01	6.125	14	1
22.01	4.875	12	1	5.09	4.875	17	1
22.03	6.750	21	1	1.05	6.125	13	1
22.04	4.875	20	1	38.03	4.875	16	1
23.01	4.875	18	1	24.01	8.625	9	1
24.01	8.625	9	1	26.00	8.625	9	1
24.03	8.625	7	1	34.02	8.625	9	1
24.04	8.625	4	0	42.00	3.000	25	1
25.00	8.625	14	1	30.02	6.750	11	1
26.00	8.625	9	1	28.03	6.750	11	1
27.00	6.750	14	1	36.01	3.000	24	1
28.03	6.750	11	1	20.01	8.625	8	1
28.04	6.750	13	1	52.01	8.625	8	1

Table C3 (Continued)
Non-Traditional Transit Potential for the
Washington and Hanson Palmer Business Parks (E19) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
28.05	4.875	6	0	40.02	4.875	14	1
28.06	4.875	5	0	46.00	6.750	10	1
29.01	8.625	11	1	70.00	6.750	10	1
29.03	6.750	5	0	65.01	6.750	10	1
30.01	6.750	13	1	74.07	6.750	10	1
30.02	6.750	11	1	36.02	3.000	22	1
31.00	4.875	12	1	10.01	9.250	7	1
32.00	6.750	9	1	14.02	6.125	10	1
33.00	6.750	28	2	32.00	6.750	9	1
34.01	6.750	6	0	21.05	8.625	7	1
34.02	8.625	9	1	24.03	8.625	7	1
35.05	6.750	17	1	17.04	9.875	6	1
35.06	6.750	29	2	59.04	4.875	12	1
35.07	6.750	26	2	22.01	4.875	12	1
35.08	6.750	28	2	21.03	4.875	12	1
35.09	8.625	10	1	31.00	4.875	12	1
35.10	4.875	30	1	17.01	8.000	7	1
35.11	6.750	23	2	66.02	6.750	8	1
36.01	3.000	24	1	66.01	6.750	8	1
36.02	3.000	22	1	58.02	6.750	8	1
36.05	4.875	37	2	5.08	6.750	8	1
36.06	4.875	64	3	2.06	4.875	11	1
36.07	4.875	40	2	73.03	4.875	11	1
36.08	3.000	70	2	52.02	8.625	6	1
36.09	6.750	17	1	50.00	8.625	6	1
36.10	4.875	21	1	41.01	3.000	17	1
36.11	3.000	13	0	18.02	9.875	5	0
37.00	3.000	16	0	16.00	9.875	5	0
38.01	3.000	13	0	19.04	6.125	8	0
38.03	4.875	16	1	14.05	6.125	8	0
39.00	8.625	5	0	58.01	4.875	10	0
40.01	8.625	3	0	37.00	3.000	16	0
40.02	4.875	14	1	62.00	6.750	7	0
41.01	3.000	17	1	44.00	6.750	7	0
41.02	6.750	24	2	74.06	6.750	7	0
42.00	3.000	25	1	72.00	4.875	9	0
43.00	8.625	24	2	64.00	4.875	9	0
44.00	6.750	7	0	56.00	8.625	5	0
46.00	6.750	10	1	39.00	8.625	5	0
47.00	4.875	7	0	71.02	6.750	6	0
48.00	8.625	3	0	55.00	6.750	6	0
49.00	6.750	5	0	34.01	6.750	6	0

Table C3 (Continued)
Non-Traditional Transit Potential for the
Washington and Hanson Palmer Business Parks (E19) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
50.00	8.625	6	1	60.00	6.750	6	0
51.01	6.750	4	0	73.04	4.875	8	0
51.02	4.875	2	0	67.07	4.875	8	0
52.01	8.625	8	1	74.01	4.875	8	0
52.02	8.625	6	1	38.01	3.000	13	0
52.03	4.875	2	0	36.11	3.000	13	0
53.00	4.875	2	0	19.05	4.875	8	0
54.00	4.875	2	0	14.04	6.125	6	0
55.00	6.750	6	0	24.04	8.625	4	0
56.00	8.625	5	0	47.00	4.875	7	0
57.00	8.625	10	1	69.00	4.875	7	0
58.01	4.875	10	0	65.02	4.875	7	0
58.02	6.750	8	1	29.03	6.750	5	0
59.01	8.625	1	0	49.00	6.750	5	0
59.02	4.875	4	0	15.00	6.125	5	0
59.04	4.875	12	1	18.04	6.125	5	0
59.05	8.625	3	0	61.00	4.875	6	0
60.00	6.750	6	0	28.05	4.875	6	0
61.00	4.875	6	0	63.00	4.875	6	0
62.00	6.750	7	0	13.02	9.250	3	0
63.00	4.875	6	0	51.01	6.750	4	0
64.00	4.875	9	0	59.05	8.625	3	0
65.01	6.750	10	1	40.01	8.625	3	0
65.02	4.875	7	0	48.00	8.625	3	0
66.01	6.750	8	1	21.06	4.875	5	0
66.02	6.750	8	1	28.06	4.875	5	0
67.03	8.625	15	1	21.04	4.875	5	0
67.04	4.875	18	1	18.01	8.000	3	0
67.05	6.750	60	4	20.02	6.750	3	0
67.06	4.875	22	1	19.06	4.875	4	0
67.07	4.875	8	0	59.02	4.875	4	0
67.08	4.875	20	1	73.01	4.875	4	0
68.00	4.875	4	0	68.00	4.875	4	0
69.00	4.875	7	0	17.06	6.125	3	0
70.00	6.750	10	1	17.02	6.125	3	0
71.01	4.875	1	0	18.05	4.875	3	0
71.02	6.750	6	0	3.00	4.875	3	0
72.00	4.875	9	0	52.03	4.875	2	0
73.01	4.875	4	0	54.00	4.875	2	0
73.03	4.875	11	1	51.02	4.875	2	0
73.04	4.875	8	0	53.00	4.875	2	0
74.01	4.875	8	0	9.00	9.250	1	0

Table C3 (Continued)
Non-Traditional Transit Potential for the
Washington and Hanson Palmer Business Parks (E19) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
74.04	4.875	19	1	59.01	8.625	1	0
74.05	4.875	20	1	71.01	4.875	1	0
74.06	6.750	7	0	11.04	8.000	0	0
74.07	6.750	10	1	11.01	8.000	0	0
		3,092	189			3,092	189

Table C4
Non-Traditional Transit Potential for the Columbia Park Road Industrial Center (E20) Cluster

Sorted By Census Tract				Sorted By Non-Trditional Transit Users			
Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
1.02	6.125	5	0	5.06	6.750	54	4
1.03	6.125	4	0	8.00	9.250	31	3
1.04	8.000	8	1	13.01	11.125	25	3
1.05	6.125	4	0	12.01	9.875	26	3
2.02	8.000	8	1	6.01	6.750	38	3
2.03	6.125	8	0	13.03	8.000	27	2
2.04	9.875	7	1	33.00	6.750	29	2
2.06	6.125	2	0	10.01	9.250	21	2
2.07	8.000	4	0	12.02	9.875	18	2
2.08	6.125	5	0	7.03	8.000	22	2
3.00	4.875	0	0	13.04	8.000	22	2
4.01	6.125	6	0	12.03	8.625	20	2
4.02	4.875	16	1	22.03	6.750	25	2
4.03	4.875	10	0	10.02	8.000	21	2
4.04	4.875	20	1	17.03	8.625	18	2
4.06	6.750	13	1	43.00	8.625	18	2
4.07	4.875	20	1	35.06	6.750	22	1
5.03	4.875	15	1	7.01	6.750	21	1
5.04	6.125	19	1	41.02	6.750	21	1
5.05	4.875	11	1	5.07	8.000	17	1
5.06	6.750	54	4	25.00	6.750	20	1
5.07	8.000	17	1	35.07	4.875	27	1
5.08	6.750	5	0	67.05	6.750	19	1
5.09	4.875	13	1	14.03	8.000	16	1
6.01	6.750	38	3	42.00	4.875	26	1
6.02	6.125	20	1	36.05	4.875	26	1
7.01	6.750	21	1	6.02	6.125	20	1
7.02	6.750	18	1	35.11	6.750	18	1
7.03	8.000	22	2	12.04	6.750	18	1
8.00	9.250	31	3	7.02	6.750	18	1
9.00	9.250	5	0	18.06	8.625	14	1
10.01	9.250	21	2	19.02	8.625	14	1
10.02	8.000	21	2	22.04	4.875	24	1
11.01	8.000	0	0	5.04	6.125	19	1
11.04	6.750	0	0	20.01	8.625	13	1
12.01	9.875	26	3	36.08	4.875	23	1
12.02	9.875	18	2	29.01	6.750	16	1
12.03	8.625	20	2	31.00	6.750	16	1
12.04	6.750	18	1	12.05	6.750	16	1
12.05	6.750	16	1	23.01	4.875	21	1

Table C4 (Continued)
Non-Traditional Transit Potential for the
Columbia Park Road Industrial Center (E20) Cluster

Sorted By Census Tract				Sorted By Non-Trditional Transit Users			
Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
13.01	11.125	25	3	36.06	4.875	21	1
13.02	9.250	9	1	24.01	6.750	15	1
13.03	8.000	27	2	14.01	6.750	15	1
13.04	8.000	22	2	27.00	4.875	20	1
14.01	6.750	15	1	4.04	4.875	20	1
14.02	4.875	13	1	4.07	4.875	20	1
14.03	8.000	16	1	30.01	4.875	18	1
14.04	4.875	6	0	41.01	4.875	18	1
14.05	4.875	7	0	28.04	4.875	18	1
15.00	4.875	5	0	35.05	6.750	13	1
16.00	8.625	5	0	4.06	6.750	13	1
17.01	6.750	8	1	26.00	6.750	13	1
17.02	4.875	3	0	36.09	8.625	10	1
17.03	8.625	18	2	32.00	8.625	10	1
17.04	8.625	5	0	13.02	9.250	9	1
17.06	4.875	3	0	36.01	4.875	17	1
18.01	6.750	3	0	38.03	6.750	12	1
18.02	8.625	6	1	4.02	4.875	16	1
18.04	4.875	6	0	28.03	4.875	16	1
18.05	4.875	3	0	35.10	4.875	16	1
18.06	8.625	14	1	19.01	4.875	16	1
19.01	4.875	16	1	21.05	8.625	9	1
19.02	8.625	14	1	70.00	6.750	11	1
19.04	4.875	10	0	5.03	4.875	15	1
19.05	4.875	13	1	36.02	4.875	15	1
19.06	4.875	7	0	2.04	9.875	7	1
20.01	8.625	13	1	21.03	4.875	14	1
20.02	6.750	5	0	34.02	6.750	10	1
21.03	4.875	14	1	2.02	8.000	8	1
21.04	4.875	6	0	1.04	8.000	8	1
21.05	8.625	9	1	30.02	4.875	13	1
21.06	4.875	6	0	36.07	4.875	13	1
22.01	4.875	9	0	5.09	4.875	13	1
22.03	6.750	25	2	35.08	4.875	13	1
22.04	4.875	24	1	19.05	4.875	13	1
23.01	4.875	21	1	14.02	4.875	13	1
24.01	6.750	15	1	40.02	4.875	13	1
24.03	6.750	9	1	24.03	6.750	9	1
24.04	8.625	4	0	36.10	4.875	12	1

Table C4 (Continued)
Non-Traditional Transit Potential for the Columbia Park Road Industrial Center (E20) Cluster

Sorted By Census Tract				Sorted By Non-Trditional Transit Users			
Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
25.00	6.750	20	1	37.00	4.875	12	1
26.00	6.750	13	1	46.00	6.750	8	1
27.00	4.875	20	1	17.01	6.750	8	1
28.03	4.875	16	1	5.05	4.875	11	1
28.04	4.875	18	1	18.02	8.625	6	1
28.05	3.000	9	0	2.03	6.125	8	0
28.06	3.000	7	0	19.04	4.875	10	0
29.01	6.750	16	1	4.03	4.875	10	0
29.03	6.750	7	0	38.01	4.875	10	0
30.01	4.875	18	1	35.09	6.750	7	0
30.02	4.875	13	1	65.01	6.750	7	0
31.00	6.750	16	1	29.03	6.750	7	0
32.00	8.625	10	1	9.00	9.250	5	0
33.00	6.750	29	2	22.01	4.875	9	0
34.01	4.875	6	0	67.03	8.625	5	0
34.02	6.750	10	1	17.04	8.625	5	0
35.05	6.750	13	1	16.00	8.625	5	0
35.06	6.750	22	1	71.02	6.750	6	0
35.07	4.875	27	1	66.01	6.750	6	0
35.08	4.875	13	1	66.02	6.750	6	0
35.09	6.750	7	0	44.00	6.750	6	0
35.10	4.875	16	1	69.00	4.875	8	0
35.11	6.750	18	1	74.05	4.875	8	0
36.01	4.875	17	1	4.01	6.125	6	0
36.02	4.875	15	1	24.04	8.625	4	0
36.05	4.875	26	1	19.06	4.875	7	0
36.06	4.875	21	1	67.06	4.875	7	0
36.07	4.875	13	1	14.05	4.875	7	0
36.08	4.875	23	1	5.08	6.750	5	0
36.09	8.625	10	1	20.02	6.750	5	0
36.10	4.875	12	1	2.07	8.000	4	0
36.11	4.875	5	0	1.02	6.125	5	0
37.00	4.875	12	1	2.08	6.125	5	0
38.01	4.875	10	0	74.04	4.875	6	0
38.03	6.750	12	1	18.04	4.875	6	0
39.00	8.625	3	0	34.01	4.875	6	0
40.01	8.625	3	0	14.04	4.875	6	0
40.02	4.875	13	1	21.04	4.875	6	0
41.01	4.875	18	1	67.08	4.875	6	0

Table C4 (Continued)
Non-Traditional Transit Potential for the
Columbia Park Road Industrial Center (E20) Cluster

Sorted By Census Tract				Sorted By Non-Trditional Transit Users			
Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
41.02	6.750	21	1	21.06	4.875	6	0
42.00	4.875	26	1	28.05	3.000	9	0
43.00	8.625	18	2	62.00	6.750	4	0
44.00	6.750	6	0	39.00	8.625	3	0
46.00	6.750	8	1	50.00	8.625	3	0
47.00	4.875	3	0	40.01	8.625	3	0
48.00	8.625	2	0	1.05	6.125	4	0
49.00	6.750	3	0	1.03	6.125	4	0
50.00	8.625	3	0	36.11	4.875	5	0
51.01	6.750	2	0	65.02	4.875	5	0
51.02	4.875	1	0	64.00	4.875	5	0
52.01	8.625	2	0	67.04	4.875	5	0
52.02	8.625	1	0	68.00	4.875	5	0
52.03	4.875	1	0	15.00	4.875	5	0
53.00	4.875	1	0	74.07	8.000	3	0
54.00	4.875	1	0	28.06	3.000	7	0
55.00	6.750	2	0	18.01	6.750	3	0
56.00	8.625	1	0	60.00	6.750	3	0
57.00	8.625	2	0	49.00	6.750	3	0
58.01	4.875	3	0	63.00	4.875	4	0
58.02	6.750	2	0	73.01	4.875	4	0
59.01	8.625	1	0	61.00	4.875	4	0
59.02	4.875	1	0	48.00	8.625	2	0
59.04	4.875	3	0	57.00	8.625	2	0
59.05	8.625	1	0	52.01	8.625	2	0
60.00	6.750	3	0	17.02	4.875	3	0
61.00	4.875	4	0	73.03	4.875	3	0
62.00	6.750	4	0	67.07	4.875	3	0
63.00	4.875	4	0	18.05	4.875	3	0
64.00	4.875	5	0	59.04	4.875	3	0
65.01	6.750	7	0	47.00	4.875	3	0
65.02	4.875	5	0	58.01	4.875	3	0
66.01	6.750	6	0	17.06	4.875	3	0
66.02	6.750	6	0	51.01	6.750	2	0
67.03	8.625	5	0	74.06	6.750	2	0
67.04	4.875	5	0	55.00	6.750	2	0
67.05	6.750	19	1	58.02	6.750	2	0
67.06	4.875	7	0	2.06	6.125	2	0
67.07	4.875	3	0	73.04	4.875	2	0

Table C4 (Continued)
Non-Traditional Transit Potential for the
Columbia Park Road Industrial Center (E20) Cluster

Sorted By Census Tract				Sorted By Non-Trditional Transit Users			
Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
67.08	4.875	6	0	74.01	4.875	2	0
68.00	4.875	5	0	72.00	4.875	2	0
69.00	4.875	8	0	56.00	8.625	1	0
70.00	6.750	11	1	59.01	8.625	1	0
71.01	4.875	1	0	59.05	8.625	1	0
71.02	6.750	6	0	52.02	8.625	1	0
72.00	4.875	2	0	71.01	4.875	1	0
73.01	4.875	4	0	59.02	4.875	1	0
73.03	4.875	3	0	53.00	4.875	1	0
73.04	4.875	2	0	54.00	4.875	1	0
74.01	4.875	2	0	52.03	4.875	1	0
74.04	4.875	6	0	51.02	4.875	1	0
74.05	4.875	8	0	11.04	6.750	0	0
74.06	6.750	2	0	11.01	8.000	0	0
74.07	8.000	3	0	3.00	4.875	0	0
		1,832	118			1,832	118

Table C5
Non-Traditional Transit Potential for the Southern Maryland Hospital (E27) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
1.02	9.250	0	0	12.01	8.625	54	5
1.03	9.250	0	0	12.03	8.625	41	4
1.04	11.125	0	0	12.02	8.625	38	3
1.05	9.250	0	0	13.01	8.625	22	2
2.02	11.125	0	0	13.04	8.625	22	2
2.03	9.250	0	0	12.05	6.750	28	2
2.04	13.000	0	0	13.03	8.625	26	2
2.06	9.250	0	0	17.03	10.500	15	2
2.07	11.125	0	0	6.01	8.625	20	2
2.08	9.250	0	0	14.01	8.625	14	1
3.00	9.250	0	0	12.04	8.625	17	1
4.01	9.250	0	0	18.06	10.500	12	1
4.02	9.250	1	0	5.09	8.000	7	1
4.03	9.250	1	0	17.04	10.500	5	1
4.04	9.250	2	0	24.01	10.500	11	1
4.06	9.250	1	0	17.01	8.625	7	1
4.07	9.250	1	0	6.02	6.750	10	1
5.03	9.250	1	0	14.02	6.750	13	1
5.04	9.250	1	0	7.01	6.750	8	1
5.05	9.250	1	0	19.04	6.750	8	1
5.06	9.875	3	0	7.02	6.750	9	1
5.07	8.000	5	0	20.01	10.500	9	1
5.08	8.000	1	0	7.03	6.750	12	1
5.09	8.000	7	1	18.02	10.500	5	1
6.01	8.625	20	2	8.00	6.750	12	1
6.02	6.750	10	1	14.03	8.625	16	1
7.01	6.750	8	1	35.05	9.875	7	1
7.02	6.750	9	1	19.05	6.750	10	1
7.03	6.750	12	1	35.06	8.625	12	1
8.00	6.750	12	1	19.01	6.750	14	1
9.00	8.000	0	0	22.03	8.625	6	1
10.01	6.750	2	0	19.02	10.500	11	1
10.02	6.750	13	1	10.02	6.750	13	1
11.01	6.750	0	0	29.01	11.750	1	0
11.04	6.750	0	0	36.02	8.000	1	0
12.01	8.625	54	5	11.04	6.750	0	0
12.02	8.625	38	3	36.05	9.250	2	0
12.03	8.625	41	4	10.01	6.750	2	0
12.04	8.625	17	1	36.06	9.250	1	0
12.05	6.750	28	2	5.08	8.000	1	0
13.01	8.625	22	2	36.07	9.250	0	0
13.02	6.750	0	0	5.06	9.875	3	0

Table C5 (Continued)
Non-Traditional Transit Potential for the Southern Maryland Hospital (E27) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
13.03	8.625	26	2	36.08	8.000	1	0
13.04	8.625	22	2	5.05	9.250	1	0
14.01	8.625	14	1	36.09	11.750	1	0
14.02	6.750	13	1	5.03	9.250	1	0
14.03	8.625	16	1	36.10	8.000	1	0
14.04	6.750	5	0	4.06	9.250	1	0
14.05	6.750	6	0	36.11	8.000	0	0
15.00	6.750	4	0	14.05	6.750	6	0
16.00	10.500	4	0	37.00	8.000	1	0
17.01	8.625	7	1	16.00	10.500	4	0
17.02	6.750	3	0	38.01	8.000	1	0
17.03	10.500	15	2	17.02	6.750	3	0
17.04	10.500	5	1	38.03	9.875	1	0
17.06	9.250	3	0	4.02	9.250	1	0
18.01	8.625	3	0	39.00	11.750	0	0
18.02	10.500	5	1	18.01	8.625	3	0
18.04	6.750	5	0	40.01	11.750	0	0
18.05	6.750	3	0	18.04	6.750	5	0
18.06	10.500	12	1	40.02	8.000	2	0
19.01	6.750	14	1	3.00	9.250	0	0
19.02	10.500	11	1	41.01	8.000	1	0
19.04	6.750	8	1	2.07	11.125	0	0
19.05	6.750	10	1	41.02	11.750	1	0
19.06	6.750	5	0	2.04	13.000	0	0
20.01	10.500	9	1	42.00	8.000	1	0
20.02	8.625	3	0	2.03	9.250	0	0
21.03	6.750	4	0	43.00	11.750	1	0
21.04	6.750	1	0	21.03	6.750	4	0
21.05	10.500	2	0	44.00	9.875	0	0
21.06	6.750	2	0	21.05	10.500	2	0
22.01	6.750	5	0	46.00	9.875	0	0
22.03	8.625	6	1	22.01	6.750	5	0
22.04	6.750	5	0	47.00	8.000	0	0
23.01	6.750	5	0	22.04	6.750	5	0
24.01	10.500	11	1	48.00	11.750	0	0
24.03	10.500	2	0	1.05	9.250	0	0
24.04	10.500	1	0	49.00	9.875	0	0
25.00	10.500	3	0	24.04	10.500	1	0
26.00	10.500	1	0	50.00	13.000	0	0
27.00	8.625	1	0	26.00	10.500	1	0
28.03	8.625	1	0	51.01	11.125	0	0
28.04	8.625	1	0	28.03	8.625	1	0

Table C5 (Continued)
Non-Traditional Transit Potential for the Southern Maryland Hospital (E27) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
28.05	8.000	1	0	51.02	9.250	0	0
28.06	8.000	1	0	28.05	8.000	1	0
29.01	11.750	1	0	52.01	13.000	0	0
29.03	11.125	1	0	1.02	9.250	0	0
30.01	9.875	1	0	52.02	13.000	0	0
30.02	9.875	1	0	30.01	9.875	1	0
31.00	9.875	1	0	52.03	9.250	0	0
32.00	11.750	0	0	31.00	9.875	1	0
33.00	9.875	1	0	53.00	9.250	0	0
34.01	9.875	0	0	33.00	9.875	1	0
34.02	11.750	0	0	54.00	9.250	0	0
35.05	9.875	7	1	34.02	11.750	0	0
35.06	8.625	12	1	55.00	11.125	0	0
35.07	9.875	1	0	1.03	9.250	0	0
35.08	9.875	0	0	56.00	13.000	0	0
35.09	11.750	0	0	35.08	9.875	0	0
35.10	8.000	2	0	57.00	13.000	0	0
35.11	9.875	2	0	35.10	8.000	2	0
36.01	8.000	1	0	58.01	9.250	0	0
36.02	8.000	1	0	36.01	8.000	1	0
36.05	9.250	2	0	58.02	11.125	0	0
36.06	9.250	1	0	9.00	8.000	0	0
36.07	9.250	0	0	59.01	13.000	0	0
36.08	8.000	1	0	13.02	6.750	0	0
36.09	11.750	1	0	59.02	9.250	0	0
36.10	8.000	1	0	4.07	9.250	1	0
36.11	8.000	0	0	59.04	9.250	1	0
37.00	8.000	1	0	15.00	6.750	4	0
38.01	8.000	1	0	59.05	13.000	0	0
38.03	9.875	1	0	4.03	9.250	1	0
39.00	11.750	0	0	60.00	11.125	0	0
40.01	11.750	0	0	4.01	9.250	0	0
40.02	8.000	2	0	61.00	8.000	0	0
41.01	8.000	1	0	2.08	9.250	0	0
41.02	11.750	1	0	62.00	9.875	0	0
42.00	8.000	1	0	19.06	6.750	5	0
43.00	11.750	1	0	63.00	8.000	0	0
44.00	9.875	0	0	21.04	6.750	1	0
46.00	9.875	0	0	64.00	9.250	0	0
47.00	8.000	0	0	2.02	11.125	0	0
48.00	11.750	0	0	65.01	9.875	1	0
49.00	9.875	0	0	24.03	10.500	2	0

Table C5 (Continued)
Non-Traditional Transit Potential for the Southern Maryland Hospital (E27) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
50.00	13.000	0	0	65.02	9.250	1	0
51.01	11.125	0	0	27.00	8.625	1	0
51.02	9.250	0	0	66.01	9.875	1	0
52.01	13.000	0	0	28.06	8.000	1	0
52.02	13.000	0	0	66.02	11.125	1	0
52.03	9.250	0	0	30.02	9.875	1	0
53.00	9.250	0	0	67.03	13.000	1	0
54.00	9.250	0	0	34.01	9.875	0	0
55.00	11.125	0	0	67.04	9.250	1	0
56.00	13.000	0	0	35.07	9.875	1	0
57.00	13.000	0	0	67.05	11.125	1	0
58.01	9.250	0	0	35.11	9.875	2	0
58.02	11.125	0	0	67.06	9.250	0	0
59.01	13.000	0	0	5.07	8.000	5	0
59.02	9.250	0	0	67.07	9.250	0	0
59.04	9.250	1	0	14.04	6.750	5	0
59.05	13.000	0	0	67.08	9.250	1	0
60.00	11.125	0	0	17.06	9.250	3	0
61.00	8.000	0	0	68.00	9.250	0	0
62.00	9.875	0	0	2.06	9.250	0	0
63.00	8.000	0	0	69.00	9.250	0	0
64.00	9.250	0	0	21.06	6.750	2	0
65.01	9.875	1	0	70.00	11.125	1	0
65.02	9.250	1	0	25.00	10.500	3	0
66.01	9.875	1	0	71.01	9.250	0	0
66.02	11.125	1	0	29.03	11.125	1	0
67.03	13.000	1	0	71.02	11.125	0	0
67.04	9.250	1	0	1.04	11.125	0	0
67.05	11.125	1	0	72.00	9.250	0	0
67.06	9.250	0	0	11.01	6.750	0	0
67.07	9.250	0	0	73.01	9.250	0	0
67.08	9.250	1	0	4.04	9.250	2	0
68.00	9.250	0	0	73.03	9.250	1	0
69.00	9.250	0	0	20.02	8.625	3	0
70.00	11.125	1	0	73.04	9.250	0	0
71.01	9.250	0	0	28.04	8.625	1	0
71.02	11.125	0	0	74.01	9.250	0	0
72.00	9.250	0	0	35.09	11.750	0	0
73.01	9.250	0	0	74.04	9.250	0	0
73.03	9.250	1	0	18.05	6.750	3	0
73.04	9.250	0	0	74.05	9.250	0	0
74.01	9.250	0	0	32.00	11.750	0	0

Table C5 (Continued)
Non-Traditional Transit Potential for the Southern Maryland Hospital (E27) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
74.04	9.250	0	0	23.01	6.750	5	0
74.05	9.250	0	0	5.04	9.250	1	0
74.06	11.125	0	0	74.06	11.125	0	0
74.07	9.250	0	0	74.07	9.250	0	0
		653	48			653	48

Table C6
Non-Traditional Transit Potential for the Bowie State Univeristy (E29) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential
1.02	4.875	2	0	4.04	4.875	7	0
1.03	6.125	1	0	5.06	4.875	7	0
1.04	6.750	3	0	4.06	6.750	5	0
1.05	4.875	1	0	8.00	9.250	3	0
2.02	6.750	3	0	5.05	4.875	5	0
2.03	4.875	2	0	6.01	8.000	3	0
2.04	8.625	2	0	5.04	3.000	8	0
2.06	4.875	1	0	4.02	3.000	7	0
2.07	6.750	1	0	1.04	6.750	3	0
2.08	4.875	2	0	2.02	6.750	3	0
3.00	4.875	0	0	7.02	9.250	2	0
4.01	4.875	3	0	10.01	9.250	2	0
4.02	3.000	7	0	7.03	9.250	2	0
4.03	3.000	4	0	5.03	3.000	6	0
4.04	4.875	7	0	2.04	8.625	2	0
4.06	6.750	5	0	7.01	8.000	2	0
4.07	4.875	1	0	35.06	8.000	2	0
5.03	3.000	6	0	6.02	7.375	2	0
5.04	3.000	8	0	4.01	4.875	3	0
5.05	4.875	5	0	5.07	6.750	2	0
5.06	4.875	7	0	4.03	3.000	4	0
5.07	6.750	2	0	13.01	11.125	1	0
5.08	6.750	1	0	12.02	11.125	1	0
5.09	4.875	1	0	18.06	11.125	1	0
6.01	8.000	3	0	19.02	11.125	1	0
6.02	7.375	2	0	12.03	11.125	1	0
7.01	8.000	2	0	12.01	11.125	1	0
7.02	9.250	2	0	29.01	9.875	1	0
7.03	9.250	2	0	52.01	9.875	1	0
8.00	9.250	3	0	57.00	9.875	1	0
9.00	9.250	0	0	25.00	9.875	1	0
10.01	9.250	2	0	26.00	9.875	1	0
10.02	9.250	1	0	2.08	4.875	2	0
11.01	9.250	0	0	1.02	4.875	2	0
11.04	9.250	0	0	2.03	4.875	2	0
12.01	11.125	1	0	12.04	9.250	1	0
12.02	11.125	1	0	10.02	9.250	1	0
12.03	11.125	1	0	13.04	9.250	1	0
12.04	9.250	1	0	13.02	9.250	1	0
12.05	9.250	1	0	13.03	9.250	1	0
13.01	11.125	1	0	17.01	9.250	1	0

Table C6 (Continued)
Non-Traditional Transit Potential for the
Bowie State Univeristy (E29) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential
13.02	9.250	1	0	12.05	9.250	1	0
13.03	9.250	1	0	41.02	8.625	1	0
13.04	9.250	1	0	28.03	8.000	1	0
14.01	9.250	0	0	28.04	8.000	1	0
14.02	7.375	0	0	33.00	8.000	1	0
14.03	9.250	0	0	65.01	8.000	1	0
14.04	7.375	0	0	27.00	8.000	1	0
14.05	7.375	0	0	30.01	8.000	1	0
15.00	7.375	0	0	22.03	8.000	1	0
16.00	11.125	0	0	58.02	8.000	1	0
17.01	9.250	1	0	31.00	8.000	1	0
17.02	7.375	0	0	19.04	7.375	1	0
17.03	11.125	0	0	19.01	7.375	1	0
17.04	11.125	0	0	74.07	6.750	1	0
17.06	7.375	0	0	5.08	6.750	1	0
18.01	9.250	0	0	67.05	6.750	1	0
18.02	11.125	0	0	38.03	6.750	1	0
18.04	7.375	0	0	35.05	6.750	1	0
18.05	7.375	0	0	35.07	6.750	1	0
18.06	11.125	1	0	2.07	6.750	1	0
19.01	7.375	1	0	66.01	6.750	1	0
19.02	11.125	1	0	70.00	6.750	1	0
19.04	7.375	1	0	35.11	6.750	1	0
19.05	7.375	0	0	66.02	6.750	1	0
19.06	7.375	0	0	47.00	6.125	1	0
20.01	11.125	0	0	22.01	6.125	1	0
20.02	8.000	0	0	1.03	6.125	1	0
21.03	6.125	1	0	73.03	6.125	1	0
21.04	6.125	0	0	21.03	6.125	1	0
21.05	9.875	0	0	22.04	6.125	1	0
21.06	6.125	0	0	59.04	6.125	1	0
22.01	6.125	1	0	23.01	6.125	1	0
22.03	8.000	1	0	42.00	6.125	1	0
22.04	6.125	1	0	64.00	6.125	1	0
23.01	6.125	1	0	58.01	6.125	1	0
24.01	9.875	0	0	73.04	6.125	1	0
24.03	9.875	0	0	35.10	3.000	2	0
24.04	9.875	0	0	36.08	4.875	1	0
25.00	9.875	1	0	1.05	4.875	1	0
26.00	9.875	1	0	36.07	4.875	1	0

Table C6 (Continued)
Non-Traditional Transit Potential for the
Bowie State Univeristy (E29) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential
27.00	8.000	1	0	74.04	4.875	1	0
28.03	8.000	1	0	36.06	4.875	1	0
28.04	8.000	1	0	4.07	4.875	1	0
28.05	6.125	0	0	36.05	4.875	1	0
28.06	6.125	0	0	65.02	4.875	1	0
29.01	9.875	1	0	5.09	4.875	1	0
29.03	8.000	0	0	74.01	4.875	1	0
30.01	8.000	1	0	74.05	4.875	1	0
30.02	8.000	0	0	2.06	4.875	1	0
31.00	8.000	1	0	35.08	4.875	1	0
32.00	9.875	0	0	49.00	8.000	0	0
33.00	8.000	1	0	53.00	6.125	0	0
34.01	6.750	0	0	19.05	7.375	0	0
34.02	8.625	0	0	54.00	6.125	0	0
35.05	6.750	1	0	34.02	8.625	0	0
35.06	8.000	2	0	55.00	8.000	0	0
35.07	6.750	1	0	18.05	7.375	0	0
35.08	4.875	1	0	56.00	9.875	0	0
35.09	6.750	0	0	19.06	7.375	0	0
35.10	3.000	2	0	16.00	11.125	0	0
35.11	6.750	1	0	30.02	8.000	0	0
36.01	3.000	0	0	15.00	7.375	0	0
36.02	3.000	0	0	36.01	3.000	0	0
36.05	4.875	1	0	14.05	7.375	0	0
36.06	4.875	1	0	20.01	11.125	0	0
36.07	4.875	1	0	59.01	9.875	0	0
36.08	4.875	1	0	20.02	8.000	0	0
36.09	8.625	0	0	59.02	6.125	0	0
36.10	4.875	0	0	36.09	8.625	0	0
36.11	4.875	0	0	14.04	7.375	0	0
37.00	3.000	0	0	36.11	4.875	0	0
38.01	4.875	0	0	59.05	9.875	0	0
38.03	6.750	1	0	38.01	4.875	0	0
39.00	9.875	0	0	60.00	8.000	0	0
40.01	8.625	0	0	39.00	9.875	0	0
40.02	6.125	0	0	61.00	6.125	0	0
41.01	6.125	0	0	40.02	6.125	0	0
41.02	8.625	1	0	62.00	8.000	0	0
42.00	6.125	1	0	17.06	7.375	0	0
43.00	9.875	0	0	63.00	6.125	0	0

Table C6 (Continued)
Non-Traditional Transit Potential for the
Bowie State Univeristy (E29) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential
44.00	8.000	0	0	43.00	9.875	0	0
46.00	8.000	0	0	14.03	9.250	0	0
47.00	6.125	1	0	46.00	8.000	0	0
48.00	9.875	0	0	14.02	7.375	0	0
49.00	8.000	0	0	48.00	9.875	0	0
50.00	9.875	0	0	28.05	6.125	0	0
51.01	8.000	0	0	50.00	9.875	0	0
51.02	6.125	0	0	14.01	9.250	0	0
52.01	9.875	1	0	51.02	6.125	0	0
52.02	9.875	0	0	21.04	6.125	0	0
52.03	6.125	0	0	52.02	9.875	0	0
53.00	6.125	0	0	67.03	8.625	0	0
54.00	6.125	0	0	34.01	6.750	0	0
55.00	8.000	0	0	67.04	4.875	0	0
56.00	9.875	0	0	18.04	7.375	0	0
57.00	9.875	1	0	3.00	4.875	0	0
58.01	6.125	1	0	18.02	11.125	0	0
58.02	8.000	1	0	67.06	4.875	0	0
59.01	9.875	0	0	29.03	8.000	0	0
59.02	6.125	0	0	67.07	4.875	0	0
59.04	6.125	1	0	36.10	4.875	0	0
59.05	9.875	0	0	67.08	4.875	0	0
60.00	8.000	0	0	18.01	9.250	0	0
61.00	6.125	0	0	68.00	4.875	0	0
62.00	8.000	0	0	41.01	6.125	0	0
63.00	6.125	0	0	69.00	4.875	0	0
64.00	6.125	1	0	44.00	8.000	0	0
65.01	8.000	1	0	11.04	9.250	0	0
65.02	4.875	1	0	24.04	9.875	0	0
66.01	6.750	1	0	71.01	4.875	0	0
66.02	6.750	1	0	17.02	7.375	0	0
67.03	8.625	0	0	71.02	6.750	0	0
67.04	4.875	0	0	32.00	9.875	0	0
67.05	6.750	1	0	72.00	6.125	0	0
67.06	4.875	0	0	36.02	3.000	0	0
67.07	4.875	0	0	73.01	6.125	0	0
67.08	4.875	0	0	37.00	3.000	0	0
68.00	4.875	0	0	11.01	9.250	0	0
69.00	4.875	0	0	17.04	11.125	0	0
70.00	6.750	1	0	21.05	9.875	0	0

Table C6 (Continued)
Non-Traditional Transit Potential for the
Bowie State Univeristy (E29) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (Percent)	Workers	Non-Traditional Transit Potential
71.01	4.875	0	0	51.01	8.000	0	0
71.02	6.750	0	0	21.06	6.125	0	0
72.00	6.125	0	0	35.09	6.750	0	0
73.01	6.125	0	0	24.01	9.875	0	0
73.03	6.125	1	0	40.01	8.625	0	0
73.04	6.125	1	0	24.03	9.875	0	0
74.01	4.875	1	0	52.03	6.125	0	0
74.04	4.875	1	0	17.03	11.125	0	0
74.05	4.875	1	0	28.06	6.125	0	0
74.06	8.000	0	0	74.06	8.000	0	0
74.07	6.750	1	0	9.00	9.250	0	0
		154	10			154	10

Table C7
Non-Traditional Transit Potential for the Inglewood Office Complex (OD5) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
1.02	6.125	6	0	5.06	6.750	58	4
1.03	6.125	5	0	8.00	8.000	49	4
1.04	8.000	10	1	33.00	6.750	53	4
1.05	6.125	4	0	41.02	8.625	35	3
2.02	8.000	10	1	7.03	8.000	41	3
2.03	6.125	10	1	43.00	8.625	30	3
2.04	9.875	10	1	35.07	6.750	49	3
2.06	6.125	3	0	13.03	9.250	29	3
2.07	8.000	5	0	6.01	4.875	69	3
2.08	6.125	8	0	32.00	8.625	18	2
3.00	4.875	0	0	10.02	8.000	31	2
4.01	4.875	7	0	12.04	8.000	20	2
4.02	4.875	20	1	35.10	4.875	37	2
4.03	4.875	13	1	12.03	9.875	18	2
4.04	4.875	26	1	35.11	4.875	49	2
4.06	6.750	19	1	22.03	6.750	24	2
4.07	4.875	18	1	67.05	6.750	36	2
5.03	4.875	20	1	5.07	6.750	25	2
5.04	4.875	23	1	36.05	4.875	41	2
5.05	4.875	14	1	12.02	9.875	16	2
5.06	6.750	58	4	41.01	4.875	32	2
5.07	6.750	25	2	35.06	4.875	41	2
5.08	6.750	18	1	10.01	8.000	21	2
5.09	4.875	24	1	13.04	8.000	23	2
6.01	4.875	69	3	42.00	4.875	47	2
6.02	4.875	37	2	6.02	4.875	37	2
7.01	6.750	34	2	7.01	6.750	34	2
7.02	6.750	33	2	13.01	11.125	16	2
7.03	8.000	41	3	12.01	9.875	23	2
8.00	8.000	49	4	25.00	8.625	20	2
9.00	9.250	5	0	7.02	6.750	33	2
10.01	8.000	21	2	36.07	4.875	12	1
10.02	8.000	31	2	31.00	6.750	18	1
11.01	8.000	0	0	46.00	6.750	9	1
11.04	6.750	1	0	23.01	4.875	20	1
12.01	9.875	23	2	74.07	8.000	7	1
12.02	9.875	16	2	24.01	8.625	12	1
12.03	9.875	18	2	5.09	4.875	24	1
12.04	8.000	20	2	66.01	6.750	10	1
12.05	6.750	19	1	74.04	4.875	14	1
13.01	11.125	16	2	66.02	6.750	10	1

Table C7 (Continued)
Non-Traditional Transit Potential for the Inglewood Office Complex (OD5) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
13.02	9.250	0	0	5.05	4.875	14	1
13.03	9.250	29	3	67.03	8.625	13	1
13.04	8.000	23	2	5.03	4.875	20	1
14.01	8.000	16	1	40.02	4.875	12	1
14.02	6.125	14	1	14.01	8.000	16	1
14.03	8.000	17	1	24.03	8.625	9	1
14.04	6.125	5	0	14.03	8.000	17	1
14.05	4.875	7	0	26.00	8.625	13	1
15.00	6.125	4	0	17.03	8.625	16	1
16.00	9.875	4	0	39.00	8.625	7	1
17.01	6.750	10	1	18.06	8.625	16	1
17.02	4.875	4	0	38.03	6.750	20	1
17.03	8.625	16	1	19.02	8.625	13	1
17.04	8.625	5	0	38.01	4.875	16	1
17.06	4.875	4	0	19.05	4.875	11	1
18.01	6.750	4	0	37.00	4.875	20	1
18.02	8.625	7	1	20.01	8.625	10	1
18.04	4.875	7	0	27.00	6.750	20	1
18.05	4.875	4	0	21.05	8.625	8	1
18.06	8.625	16	1	36.10	4.875	18	1
19.01	4.875	19	1	4.07	4.875	18	1
19.02	8.625	13	1	36.09	8.625	16	1
19.04	4.875	11	1	4.04	4.875	26	1
19.05	4.875	11	1	36.08	4.875	21	1
19.06	4.875	5	0	4.02	4.875	20	1
20.01	8.625	10	1	28.03	6.750	16	1
20.02	6.750	4	0	22.04	4.875	23	1
21.03	4.875	14	1	36.06	4.875	19	1
21.04	4.875	5	0	47.00	4.875	13	1
21.05	8.625	8	1	67.04	4.875	15	1
21.06	4.875	6	0	74.05	6.125	15	1
22.01	4.875	16	1	36.02	3.000	25	1
22.03	6.750	24	2	65.01	6.750	13	1
22.04	4.875	23	1	36.01	4.875	28	1
23.01	4.875	20	1	12.05	6.750	19	1
24.01	8.625	12	1	28.04	6.750	18	1
24.03	8.625	9	1	17.01	6.750	10	1
24.04	8.625	4	0	29.01	8.625	16	1
25.00	8.625	20	2	19.01	4.875	19	1
26.00	8.625	13	1	35.09	8.625	12	1

Table C7 (Continued)
Non-Traditional Transit Potential for the Inglewood Office Complex (OD5) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
27.00	6.750	20	1	1.04	8.000	10	1
28.03	6.750	16	1	35.08	4.875	17	1
28.04	6.750	18	1	22.01	4.875	16	1
28.05	4.875	9	0	67.08	4.875	16	1
28.06	4.875	7	0	4.03	4.875	13	1
29.01	8.625	16	1	2.02	8.000	10	1
29.03	6.750	7	0	48.00	8.625	6	1
30.01	6.750	18	1	35.05	4.875	24	1
30.02	6.750	19	1	5.08	6.750	18	1
31.00	6.750	18	1	34.02	6.750	18	1
32.00	8.625	18	2	14.02	6.125	14	1
33.00	6.750	53	4	34.01	4.875	11	1
34.01	4.875	11	1	19.04	4.875	11	1
34.02	6.750	18	1	2.03	6.125	10	1
35.05	4.875	24	1	4.06	6.750	19	1
35.06	4.875	41	2	70.00	6.750	14	1
35.07	6.750	49	3	2.04	9.875	10	1
35.08	4.875	17	1	62.00	6.750	8	1
35.09	8.625	12	1	18.02	8.625	7	1
35.10	4.875	37	2	30.02	6.750	19	1
35.11	4.875	49	2	71.02	6.750	8	1
36.01	4.875	28	1	21.03	4.875	14	1
36.02	3.000	25	1	5.04	4.875	23	1
36.05	4.875	41	2	30.01	6.750	18	1
36.06	4.875	19	1	63.00	4.875	8	0
36.07	4.875	12	1	53.00	4.875	2	0
36.08	4.875	21	1	2.07	8.000	5	0
36.09	8.625	16	1	54.00	4.875	2	0
36.10	4.875	18	1	2.08	6.125	8	0
36.11	4.875	6	0	55.00	6.750	3	0
37.00	4.875	20	1	68.00	4.875	6	0
38.01	4.875	16	1	56.00	8.625	2	0
38.03	6.750	20	1	67.07	4.875	7	0
39.00	8.625	7	1	18.05	4.875	4	0
40.01	8.625	2	0	28.05	4.875	9	0
40.02	4.875	12	1	18.04	4.875	7	0
41.01	4.875	32	2	9.00	9.250	5	0
41.02	8.625	35	3	57.00	8.625	3	0
42.00	4.875	47	2	3.00	4.875	0	0
43.00	8.625	30	3	18.01	6.750	4	0

Table C7 (Continued)
Non-Traditional Transit Potential for the Inglewood Office Complex (OD5) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
44.00	6.750	5	0	24.04	8.625	4	0
46.00	6.750	9	1	17.06	4.875	4	0
47.00	4.875	13	1	65.02	4.875	9	0
48.00	8.625	6	1	17.04	8.625	5	0
49.00	6.750	4	0	49.00	6.750	4	0
50.00	8.625	3	0	58.01	4.875	3	0
51.01	6.750	2	0	50.00	8.625	3	0
51.02	4.875	2	0	17.02	4.875	4	0
52.01	8.625	3	0	51.01	6.750	2	0
52.02	8.625	2	0	58.02	6.750	3	0
52.03	4.875	2	0	51.02	4.875	2	0
53.00	4.875	2	0	16.00	9.875	4	0
54.00	4.875	2	0	52.01	8.625	3	0
55.00	6.750	3	0	15.00	6.125	4	0
56.00	8.625	2	0	52.02	8.625	2	0
57.00	8.625	3	0	14.05	4.875	7	0
58.01	4.875	3	0	1.02	6.125	6	0
58.02	6.750	3	0	14.04	6.125	5	0
59.01	8.625	1	0	52.03	4.875	2	0
59.02	4.875	1	0	59.01	8.625	1	0
59.04	4.875	4	0	69.00	4.875	9	0
59.05	8.625	1	0	59.02	4.875	1	0
60.00	6.750	3	0	28.06	4.875	7	0
61.00	4.875	4	0	59.04	4.875	4	0
62.00	6.750	8	1	36.11	4.875	6	0
63.00	4.875	8	0	72.00	4.875	3	0
64.00	4.875	4	0	40.01	8.625	2	0
65.01	6.750	13	1	73.01	4.875	5	0
65.02	4.875	9	0	4.01	4.875	7	0
66.01	6.750	10	1	13.02	9.250	0	0
66.02	6.750	10	1	21.04	4.875	5	0
67.03	8.625	13	1	73.03	4.875	4	0
67.04	4.875	15	1	1.05	6.125	4	0
67.05	6.750	36	2	59.05	8.625	1	0
67.06	4.875	9	0	19.06	4.875	5	0
67.07	4.875	7	0	73.04	6.125	3	0
67.08	4.875	16	1	29.03	6.750	7	0
68.00	4.875	6	0	74.01	4.875	5	0
69.00	4.875	9	0	71.01	4.875	2	0
70.00	6.750	14	1	64.00	4.875	4	0

Table C7 (Continued)
Non-Traditional Transit Potential for the Inglewood Office Complex (OD5) Cluster

Sorted by Census Tract				Sorted by Non-Traditional Transit Potential			
Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential	Census Tract	Attractiveness (percent)	Workers	Non-Traditional Transit Potential
71.01	4.875	2	0	21.06	4.875	6	0
71.02	6.750	8	1	60.00	6.750	3	0
72.00	4.875	3	0	1.03	6.125	5	0
73.01	4.875	5	0	11.04	6.750	1	0
73.03	4.875	4	0	67.06	4.875	9	0
73.04	6.125	3	0	11.01	8.000	0	0
74.01	4.875	5	0	20.02	6.750	4	0
74.04	4.875	14	1	44.00	6.750	5	0
74.05	6.125	15	1	2.06	6.125	3	0
74.06	8.000	4	0	74.06	8.000	4	0
74.07	8.000	7	1	61.00	4.875	4	0
		2,456	148			2,456	148