

DART First State

Delaware Paratransit Services Study

**A Review of Service Characteristics,
Policy Implications and Options**

by

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Emily Falcon**

**Institute for Public Administration
College of Human Services, Education & Public Policy
University of Delaware**

June 2003

DELAWARE CENTER FOR TRANSPORTATION

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Abstract

This study involved an examination of the scope and character of Delaware’s statewide ADA paratransit service, as currently provided by DART First State, and the county-by-county variations within service categories. Projections of service needs – developed from Delaware population estimates that reflect the proportion of persons, by age, expected to have disabilities that will affect their capacity to travel without assistance – indicate that these county-by-county disparities will become more significant in the future. Delaware’s paratransit policies and procedures were reviewed in the context of the requirements of the ADA and the typical range of paratransit services provided in other jurisdictions. Cost estimates were developed to illustrate the policy implications associated with the continuation of the status quo, and the potentially disparate impact (by county) of program modification options which may be considered as service demand outpaces available resources. The option of adopting a policy model incorporating aspects of the “Seattle Plan” which has been implemented by King County Metro Transit in the state of Washington was examined in detail.

Introduction and Study Approach

The *Americans with Disabilities Act (ADA) of 1990*, Public Law 101-336, ensures equal rights to persons with disabilities. Section 223 of the ADA requires that individuals with disabilities be guaranteed the same level of access to public transportation services as the general population. DART First State therefore provides complementary paratransit services for persons with disabilities who are unable to use their more than 60 public fixed bus routes. DART First State's paratransit eligibility, in accordance with the ADA, is determined based upon a review of an individual's ability to independently navigate the fixed route system, as well as the accessibility of routes and stops to meet that individual's transportation needs. As summarized on the DART First State website, there are three categories under which a person can be eligible for ADA paratransit services:

1. The person is unable, as the result of a physical or mental impairment, to independently, get on or get off a bus on the fixed route; or
2. The person needs the assistance of a wheelchair lift or other boarding assistance and is able to get on, ride, and get off a bus, but such fixed route bus is not available on the route when the individual wants to travel; or
3. The person has a specific impairment-related condition that prevents travel to or from a bus stop in the system. (<http://www.DartFirstState.com/paratransit/>)

Currently, ADA paratransit service in Delaware is provided without regard to customers' proximity to fixed bus routes, a practice which by far exceeds the ADA mandate to address the transportation needs of persons with disabilities who are located within zones that extend outward $\frac{3}{4}$ mile from the paths of existing fixed bus routes. New applications for paratransit service were received at a rate of approximately 200 per month during FY02. DART First State's paratransit vehicles also transport renal care patients for dialysis treatments and (on a space-available basis in Kent and Sussex Counties) persons aged 60 years or older who do not have disabilities. As is the case with ADA eligible customers, these services are provided without regard to fixed bus route proximity.

During FY96, Delaware's paratransit services required 30% of DART First State's total expenditure of approximately \$23 million in subsidies for bus transportation operating costs. By FY02, DART First State's bus transportation operating subsidies had risen to approximately \$44 million, and paratransit services accounted for more than 43% of that total. It is therefore very appropriate that current service delivery methods and operating policies be reviewed to ensure consistency with available resources.

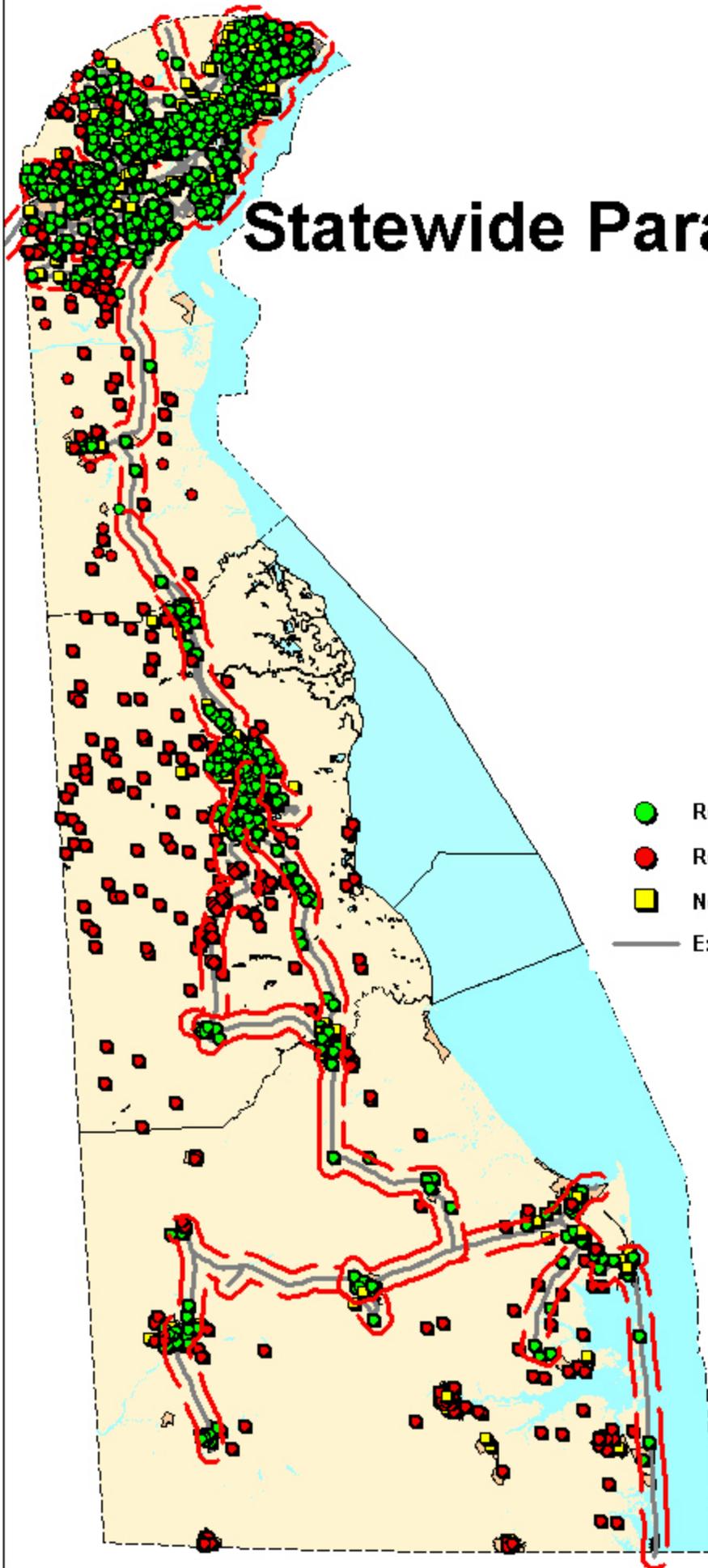
This study involved a detailed assessment of current DART First State paratransit policies and operating procedures, including the review of published and unpublished agency materials, site visits to the call taking and scheduling facility located in Dover, and attendance at regular meetings of the Elderly and Disabled Transportation Advisory Committee [EDTAC] and the May 2003 Transit Advisory Forum "Working the Partnership." Significant attention has already been given to the methods by which the eligibility of DART First State's applicants for paratransit service are determined, consistent with the ADA. Eligibility issues were addressed in the Delaware Transportation Institute studies *ADA Eligibility Determination Model for DART First State Paratransit* (Denson, 1999) and *Y2000 ADA Eligibility Determination for DART First State Paratransit* (Denson & Kyler, 2001). The implementation of a more comprehensive eligibility review protocol was undertaken in 2002, which, along with the acquisition of new vehicles during that year which made DART First State's entire fixed route fleet accessible, is expected to mitigate the growing demand for additional complementary paratransit service. As these changes were being made during the course of this study, insufficient data was available to assess their impact on trend projections. For purposes of estimating future service demands, it was therefore assumed that growth would parallel Delaware's projected population of persons with disabilities that affect their ability to go outside the home alone.

As previously noted, paratransit customers are currently being served by DART First State irrespective of their proximity to fixed bus routes. Customers with disabilities who reside in locations that are not served by fixed bus routes will not have their

transportation needs met directly through the acquisition of a fully accessible fixed route fleet, however. It was that population, in particular, which became a focus of this study. FY02 data that delineated the geographic and other ADA-relevant characteristics of DART First State's paratransit ridership was examined on a county-by-county basis to develop a model from which future service demand forecasts could be developed. Short- and long-term paratransit service demand was estimated based upon Delaware Population Consortium projections for each county and Census 2000 sample data reflecting the numbers of Delawareans with a go-outside-the-home disability. Current DART First State paratransit trip cost data was then applied to the demand forecast model to illustrate the potential cost of growing the service to meet future demand under today's policy framework.

The characteristics of DART First State's paratransit program policies were then reviewed in the context of other jurisdictions' responses to the requirements of the ADA. The "Seattle Plan" which has been implemented by King County Metro Transit in the state of Washington was examined in detail. Policy options are discussed with the goal of maintaining the inclusive nature of Delaware's paratransit service while exploring alternative demand management and cost recovery strategies.

Statewide Paratransit Activity



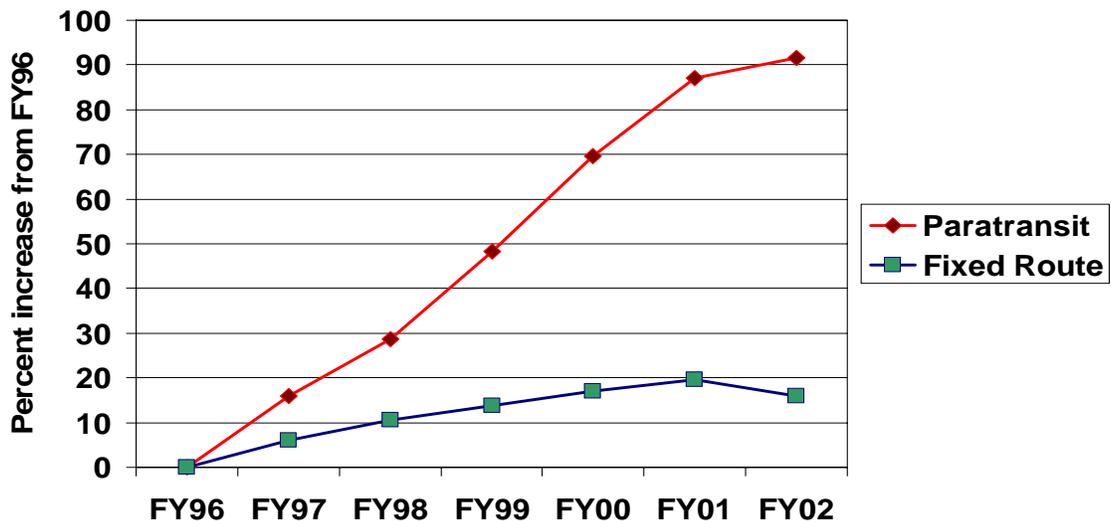
- Residential Locations within 3/4 Mile Buffer
- Residential Locations Beyond 3/4 Mile Buffer
- Non-Residential Paratransit Activity
- Existing Transit Network

Findings

Delaware's paratransit service is provided by DART First State, which is operated by the Delaware Transit Corporation (DTC), a division of the Delaware Department of Transportation (DelDOT). Delaware's DART First State paratransit service operates statewide, unlike the typical paratransit authority that may operate only within a given metropolitan area or county. During FY02, DART First State provided 553,960 paratransit trips, an increase of 133% over FY94's service level. On average, DART First State provided 1,810 paratransit trips per operating day during FY02.

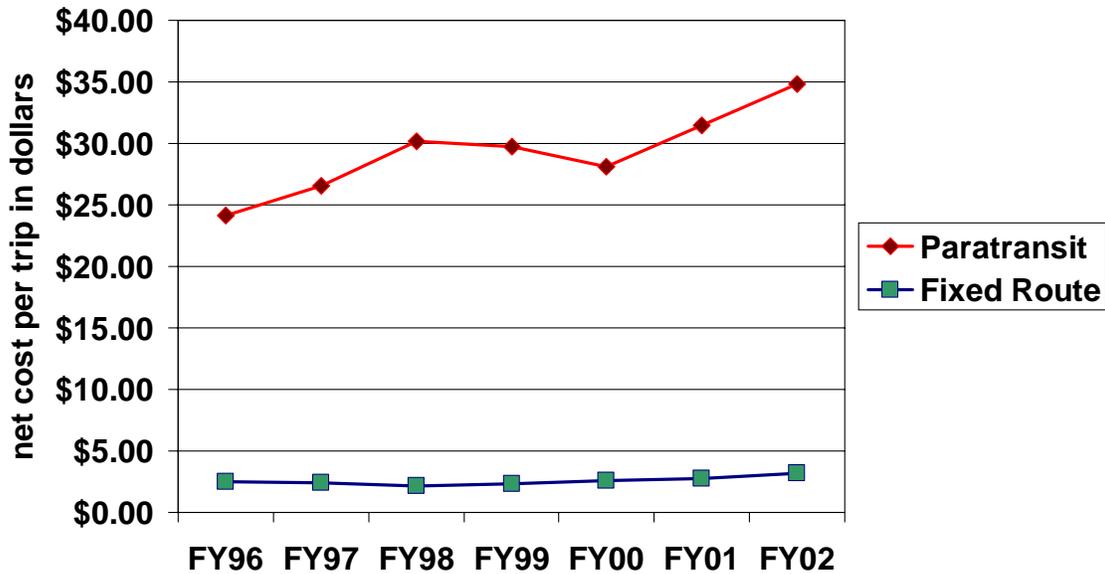
During FY02 the majority of DART First State's paratransit trips were provided in New Castle County (56%), followed by Kent County (23%) and Sussex County (21%). However, this distribution of service was in marked contrast to DART First State's FY02 fixed route bus ridership of more than 7.7 million passengers, which was centered predominantly (90%) in New Castle County. Also quite striking is the contrast in rates of ridership growth since FY96, with paratransit's increase of 92% during that six-year period exceeding DART First State's fixed route ridership gain of 16% by more than five fold, as illustrated in Figure 1.

**Figure 1. DART First State Ridership Growth:
Paratransit vs. Fixed Route since FY96**



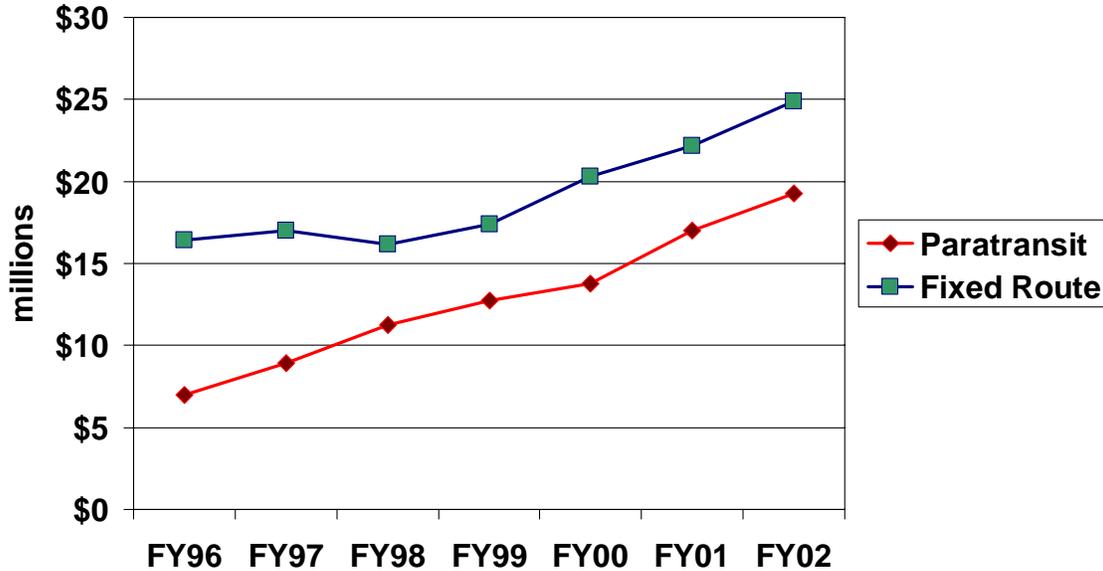
Not only has paratransit ridership been growing dramatically, DART First State's net cost per paratransit trip, after fare revenue, has also increased more rapidly than the net cost of fixed route service. Net operating cost after fare revenue will be the standard system of expense measurement used in this report. The average net cost per paratransit trip increased by 44% over six years, from \$24.18 in FY96 to \$34.82 in FY02. During the same six year period, the average net cost for a fixed route trip rose from \$2.46 to \$3.22, an increase of 31%. These trends are illustrated in Figure 2.

Figure 2. DART First State Average Net Cost per Trip: Paratransit vs. Fixed Route since FY96



Considered on an annual basis, the total after-revenue operating cost of providing paratransit service has risen even more dramatically than the utilization of the system, increasing by 176% from FY96 to an FY02 total in excess of \$19 million. Over the same six-year period, net after-revenue operating costs for DART First State's fixed route service increased by 52% to nearly \$25 million. These trends are illustrated in Figure 3 on the following page.

Figure 3. DART First State Annual Net Operating Cost: Paratransit vs. Fixed Route since FY96



The criteria which determine an individual's eligibility ADA paratransit services are detailed on the DART First State website, as follows:

DART ADA PARATRANSIT ELIGIBILITY CRITERIA

DART Paratransit Eligibility, in accordance with the Americans With Disabilities Act, is determined based upon a review of the individual's ability to independently navigate the fixed route system, as well as the accessibility of routes and stops to meet that individual's transportation needs.

The application process includes an application to be completed by, or on behalf of the applicant, and a Medical/ Professional Verification Form.

Upon review of the completed application, DART may contact individuals for an in-person interview if it is determined that fixed route may be an option or a determination cannot be made based upon information provided. If needed, transportation to the required interview will be provided by DART at no cost to the applicant.

ADA PARATRANSIT ELIGIBILITY AS DEFINED IN THE REGULATIONS

Eligibility for complementary paratransit service is directly related to the inability of a person with a disability to use the existing fixed route service.

- A person's inability to use the fixed route service could be related to the fact that the system has not yet been made fully accessible. It could also result from the nature of a person's disability.
- The person may not be able, due to their disability, to get to or from the system or to board, ride, and disembark from the vehicles even if they are fully accessible.

While eligibility is conferred on individuals, it is conferred based on the fact that there are certain **trips** that the person cannot make on the fixed route system. For some individuals their disabilities may prohibit them from ever using fixed route service. For others, however, they may not be able to use the fixed route service under certain circumstances. ADA paratransit eligibility can, therefore, be considered as having two elements.

1. An **individual** is considered ADA paratransit eligible if there are **any circumstances** under which the fixed route system cannot be used.
2. The extent of eligibility is conferred on an individual depends on the conditions and circumstances under which they are not able to travel on the fixed route service.

Individuals who can never use the fixed route service are **unconditionally eligible**.

Persons who can use fixed route service in certain circumstances are **conditionally eligible** and the limitations on their eligibility should be determined.

ADA regulations describe three specific circumstances under which a person would be considered **ADA paratransit eligible**. Within the transit industry, these have been referred to as the three "categories" of eligibility.

Category 1 Eligibility

The first category of eligibility includes those persons unable to use fully accessible fixed route services. Included in this category is:

"Any individual with a disability who is unable, as the result of a physical or mental impairment (including a vision impairment), and without the assistance of another individual (except the operator of a wheelchair lift or other boarding assistance device), to board, ride, or disembark from any vehicle on the system which is readily accessible to and usable by individuals with disabilities." [37.123(e)(1)]

Examples of eligibility under this category would include:

- A person with a mental disability who cannot "navigate the system". Navigating the system might involve obtaining and understanding system information, recognizing and boarding the correct vehicle, having available the correct fare and/or using the fare collection system, recognizing destinations, and understanding transfers that might have to be made.
- A person with a vision impairment who cannot "navigate the system". Entering and traveling through a busy station or transit center may not be possible. Recognizing and boarding the correct vehicle, and recognizing the appropriate destination - even though announcements are made - are also considerations.
- A person with a physical disability who cannot stand on a crowded bus when seats, including priority seats, may not be available.
- A person with a physical disability who uses a wheelchair and who cannot get on or off the lift or to or from the wheelchair securement area without assistance.

It is important to realize that eligibility under this category depends on the complexity of the fixed route system. The type and extent of disability that would confer eligibility in a rural area with a one or two route bus system such as Sussex County would be different from that in larger urban system such as New Castle.

Other key issues and questions associated with this category of eligibility:

Travel Training: Many persons who cannot negotiate the entire fixed route system can be travel trained for certain trips. Typically, training is provided for trips that the person makes frequently, such as to work or school. These individuals would only be ADA paratransit eligible for trips they have not been trained to make. As part of the application and determination process, it should be determined if such training has been provided.

Operator Assistance: Eligibility under this category is not necessarily based on a person's ability to get on and off the lift, up and down a ramp, to and from the securement area, or secure their mobility device. While the regulation states that a person is eligible for paratransit service if they cannot independently use the fixed route system, operator assistance is assumed. Section 37.165(f) of the regulations states that "the drivers or other personnel must provide assistance with the use of lifts, ramps, and securement devices." Beyond this level of required assistance, however, public entities may choose to offer additional assistance, such as assistance getting to and from the securement area, in order to enable persons to utilize the fixed route service. If the individual is able to use the fixed route system with this assistance, complementary paratransit service does not have to be provided.

Assistance of another person: With the exception of assistance provided by the driver or other employees of the service, eligibility under this category is based on a person's ability to **independently** use the service. A person traveling with a friend or attendant

is still eligible for paratransit service even if they would be able to use the fixed route system with this other person's help.

Accommodating mobility aids: The regulations set standards for vehicle and stop accessibility. To be considered accessible, equipment and facilities must be able to accommodate mobility aids of a certain size and persons and mobility aids up to a certain weight. The regulations define a "common wheelchair" as a "wheelchair" which does not exceed 30 inches in width and 48 inches in length (measured two inches above the ground) and which does not weight more than 600 pounds when occupied. A "wheelchair" is defined as any mobility aid belonging to any class of three or four-wheeled devices, usable indoors, designed for and use by individuals with mobility impairments, whether operated manually or powered.

All common wheelchairs and their users are to be accommodated on accessible fixed route and complementary paratransit systems. The regulations do not, however, require public entities to provide service to persons using mobility aids that are not "common wheelchairs". An individual would not be eligible for paratransit service under category 1 if they could not use an accessible bus because their mobility aid is too large or too heavy for the lift.

Standees on lifts: The regulations require public entities to allow persons with ambulatory disabilities who do not use wheelchairs (e.g., person who use leg braces and canes) to enter the vehicle by standing on the lift. Therefore, individuals who cannot climb the steps to get into a bus would not be eligible for paratransit service if they could enter the vehicle using the lift.

Category 2 Eligibility

The second category of eligibility includes:

"Any individual with a disability who needs the assistance of a wheelchair lift or other boarding assistance device and is able, with such assistance, to board, ride, and disembark from any vehicle which is readily accessible to and usable by individuals with disabilities if the individual wants to travel on a route of the system during the hours of operation of the system at a time, or within a reasonable period of such time, when such a vehicle is not being used to provide designated public transportation on the route." [37.123(e)(2)]

The majority of persons eligible under this category would be those with ambulatory disabilities who could not enter an inaccessible facility or would need to travel on a vehicle with a lift or ramp and other accessibility features. This would include persons who use wheelchairs as well as persons who use other mobility aids such as walkers, leg braces, or canes.

Eligibility under this category depends on the accessibility of vehicles and stops. A person is eligible for paratransit service if the fixed route on which they want to travel

is not yet accessible. Guidance on exactly what constitutes "accessible" fixed route is provided in the regulations and explanatory appendix. For example:

- A person is eligible if the bus route on which they want to travel is not 100 percent accessible. The requested trip would be eligible if the fixed route that would otherwise be used is only partially accessible (e.g., every other bus is accessible).
- An individual is eligible for paratransit if a vehicle's lift or boarding device cannot be deployed at the stop which they want to use.

Category 3 Eligibility

The third category of eligibility includes:

"Any individual with a disability who has a specific impairment-related condition which prevents such individual from traveling to a boarding location or from a disembarking location on such system." [37.123(e)(3)]

Environmental conditions and architectural barriers are not always under the control of DART, and when considered alone, do not confer eligibility. If, however, travel to or from a boarding location is prevented when these factors are combined with the person's specific impairment-related condition, paratransit service must be provided.

Examples of architectural and environmental factors that, in combination with certain disabilities, could prevent travel include:

- a lack of curb-cuts
- the distance from the stop to the trip origin or destination
- steep terrain
- snow and/or ice
- extremes in temperature (hot/cold)
- major intersections or other difficult to negotiate architectural barriers
- temporary construction projects
- severe air pollution

The specific impairment-related condition must prevent the person from using the fixed route system. Conditions which make getting to or from stops difficult do not confer eligibility.

Considerable judgment is required to determine if travel is truly prevented as well as the relationship between environmental conditions and an individual's disability.

Temporary Disabilities

Persons with temporary disabilities are to be considered for ADA paratransit eligibility under the following circumstances:

- someone with a medical condition such as a broken leg who temporarily is unable to use the fixed route service;
 - someone who has recently undergone an operation or other medical treatment and who is unable to use the fixed route service; or
 - someone with a cognitive disability that can be expected to be resolved over time through treatment or medication.
- (<http://www.DartFirstState.com/paratransit/eligibility/>)
-

Not addressed in this statement of DART First State's paratransit eligibility criteria is the fact the ADA has established a proximity threshold of $\frac{3}{4}$ from the route of fixed route bus service, beyond which the provision of complementary paratransit is not required. During FY02, one out of every three (34%) of DART First State's paratransit trips, statewide, involved the transportation of customers with ADA-eligible disabilities to or from points that were more than $\frac{3}{4}$ mile from existing fixed bus routes. The geographic distribution of the residential and other locations which are served by paratransit vehicles throughout the state of Delaware is illustrated by the map of Statewide Paratransit Activity which appears on page 4 of this report. DART First State also exceeds the service requirements of the ADA by providing a small number (>2% during FY02) of trips to persons with ADA-eligible disabilities outside of the hours of their normal fixed route service.

In addition to serving persons who meet the ADA criteria, DART First State's paratransit vehicles provide transportation to renal care patients for dialysis treatments. During FY02, this category of service accounted for 5% of all paratransit trips, statewide. In Kent and Sussex Counties, persons aged 60 years or older who do not have disabilities are provided with access to DART First State door-to-door paratransit services on a space-available shared ride basis. Proof of age is the only requirement to apply, and upon certification as "Elderly," these customers' trip requests are accommodated to the extent that vehicle capacity is available. Inadequate capacity may result in the proposal, by the scheduler, of an alternative trip time or, if an accommodation can not be reached, denial of the request. Statewide, service to elderly-only customers accounted for fewer than 3% of all paratransit trips during FY02, but represented 8% of trips within Kent County. As is the case with ADA eligible customers, transportation services for renal care patients

and elderly-only customers are provided without regard to their proximity to DART First State's fixed bus routes.

Recognizing that with current utilization levels, the demand for paratransit services on any given day may exceed DART First State's capacity to respond, a contingency protocol has been developed that assigns trips to one of eight priority levels. Of highest priority, of course, is service that is mandated by the ADA to be provided to eligible persons with disabilities. The eight levels, in descending order of priority, are:

- ADA customers requesting any trips originating and terminating within $\frac{3}{4}$ mile of a fixed bus route during normal service hours
- Dialysis-only customers taking any trips to renal care centers
- ADA customers requesting subscription trips outside of normal service hours
- ADA customers requesting subscription trips outside of the $\frac{3}{4}$ mile ADA-mandated service area
- ADA customers requesting non-subscription trips outside of normal service hours
- ADA customers requesting non-subscription trips outside of the $\frac{3}{4}$ mile ADA-mandated service area
- Elderly-only customers requesting trips within the $\frac{3}{4}$ mile ADA service area
- Elderly-only customers requesting trips outside of the $\frac{3}{4}$ mile ADA service area

Through this identification and ranking of customers' priority levels, DART First State has determined a system for the allocation of paratransit resources that is intended to meet essential service needs by shedding load volume, as required, working upward from the bottom of the list. Table 1 on the following page displays DART First State's FY02 average daily paratransit ridership, by county, for each of the eight categories of service. (DART data presented at EDTAC meetings, July and September 2002).

**Table 1. FY02 Average Daily Paratransit Ridership
by County and DART First State Resource Allocation Priority**

DART First State FY02 Average Daily Paratransit Trips				
	New Castle Co.	Kent Co.	Sussex Co.	Total
ADA Mandatory	712	198	113	1023
Dialysis-only	44	26	25	95
ADA subscription outside hours	6	3	2	11
ADA subscription outside area	176	54	122	352
ADA casual outside hours	4	7	6	17
ADA casual outside area	80	94	93	267
Elderly-only within area	0	22	5	27
Elderly-only outside area	0	13	5	18

Although DART First State has made a distinction, for priority-setting purposes, between “subscription” and “non-subscription” services which exceed the mandate of the ADA, it is the place and/or time characteristics of such trips that set them apart from the requirements of the law. The transportation of non-ADA-eligible elderly persons is similarly outside the scope of the ADA mandate, regardless of the location of such service. Therefore, for the purposes of this study, the eight DART First State priority levels have been collapsed into the following five subsets, or “service categories”:

- ADA Mandatory
- Renal Care
- Outside of Hours
- Outside of Area
- Elderly-only

The distribution, by county, of FY02 paratransit trips among these five service categories is illustrated in Figure 4.

Figure 4. FY02 Average Daily Paratransit Ridership by Service Category and County

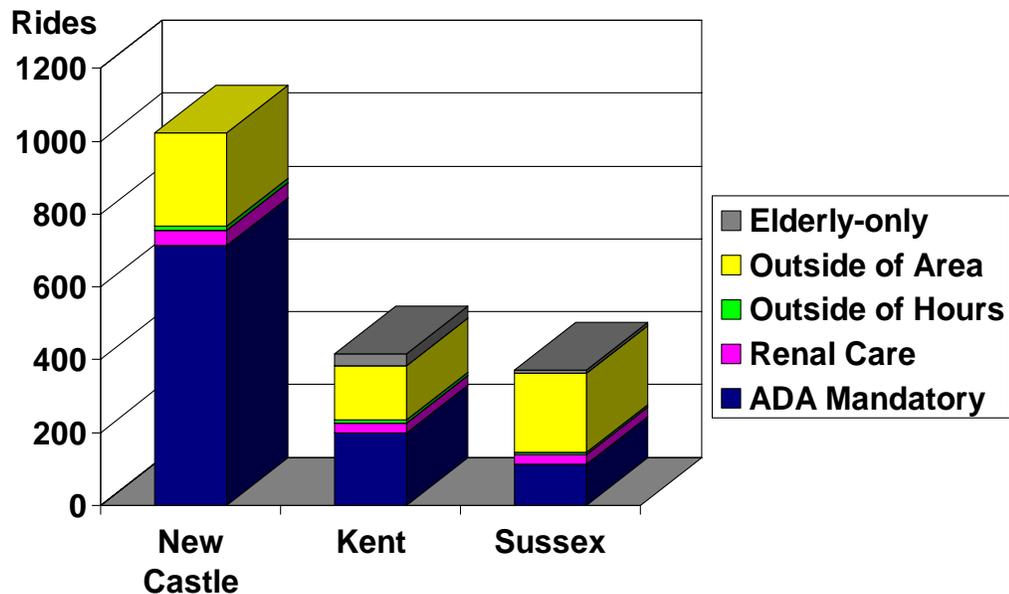


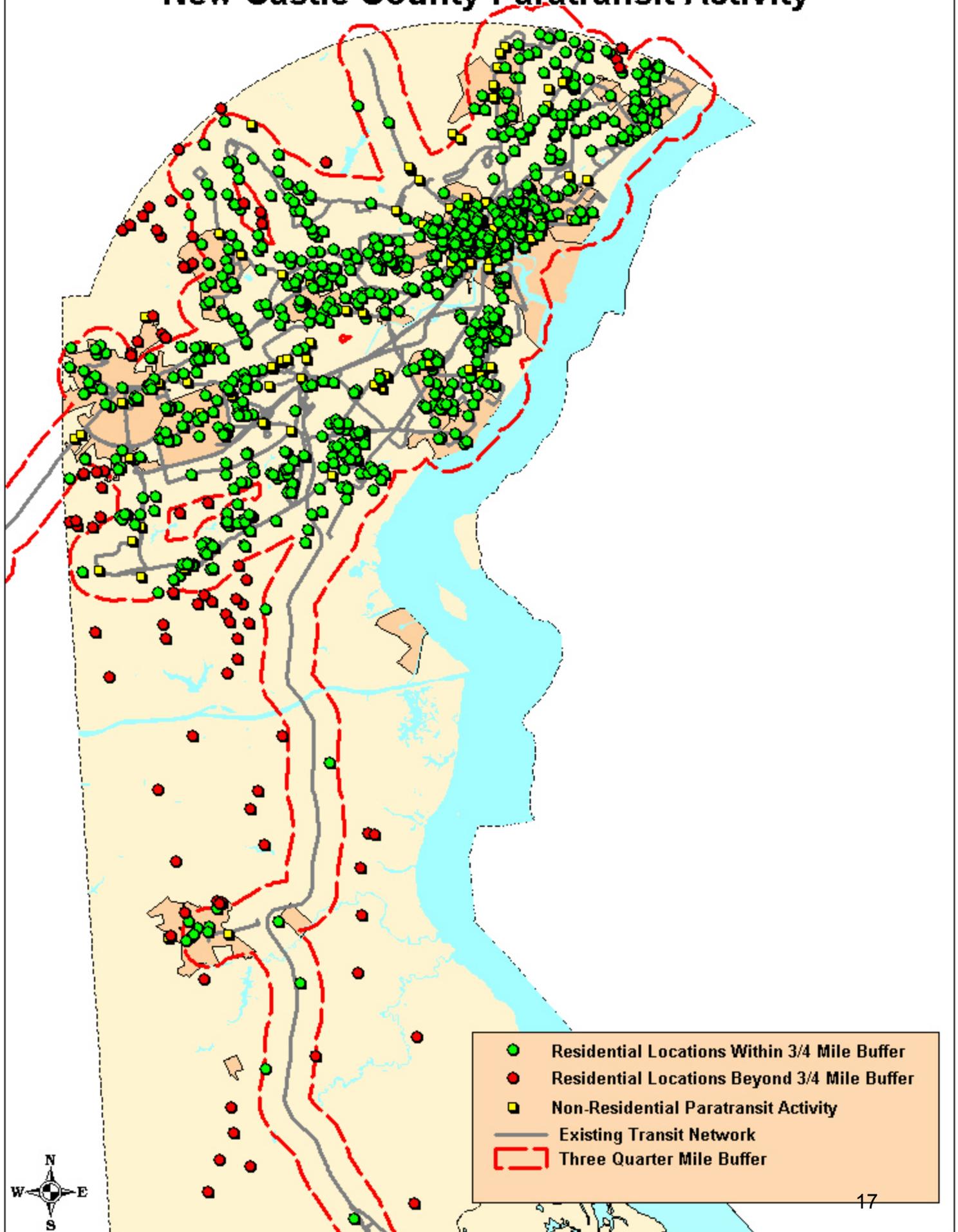
Figure 4 clearly illustrates the dissimilar character of contemporary paratransit services among Delaware's three counties. During FY02, ADA mandatory trips accounted for 70% of the paratransit service that was provided in New Castle County, 48% of the service in Kent County, and only 31% of the service in Sussex County. While DART First State is a statewide provider of both fixed route and paratransit bus service (and is therefore rather unique among the nation's transit operators), the varied nature of the services that are provided in each of Delaware's three counties demand separate consideration in order to fully appreciate their individual contributions to the whole.

As is evident from the map on page 17, northern New Castle County is home to the preponderance of DART First State's fixed routes. Even so, there are a significant number of paratransit service locations that lie beyond the $\frac{3}{4}$ mile ADA boundary. During FY02, those locations generated fully one quarter of all of the paratransit trips that were provided in New Castle County.

A map of Kent County paratransit service locations in appears on page 18. Although the total volume of paratransit trips in Kent County during FY02 was only about 40% that of New Castle County, more than one third of the paratransit trips in Kent County involved locations beyond the $\frac{3}{4}$ mile ADA boundary. It is also evident from the map that there is relatively little in the way of clustering among those "outside area" service locations in Kent County.

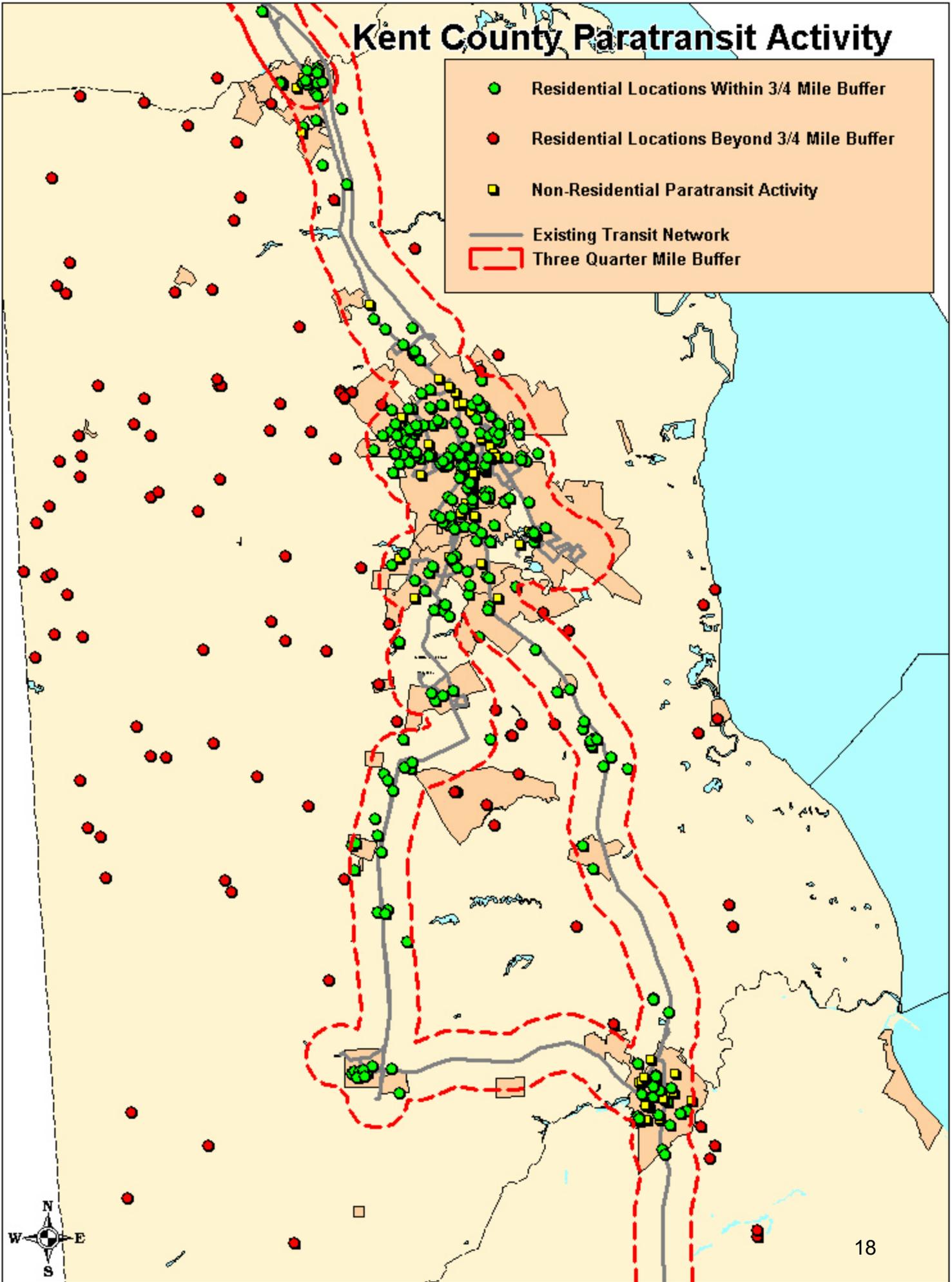
Sussex County paratransit activity is displayed in a map on page 19. The majority (58%) of the trips that were provided in Sussex County during FY02 involved the transportation of persons with ADA-eligible disabilities to and/or from locations more than $\frac{3}{4}$ mile from fixed bus routes. Unlike the widely dispersed sites in Kent and southern New Castle Counties, however, there is some degree of clustering among Sussex County's "outside area" service locations.

New Castle County Paratransit Activity

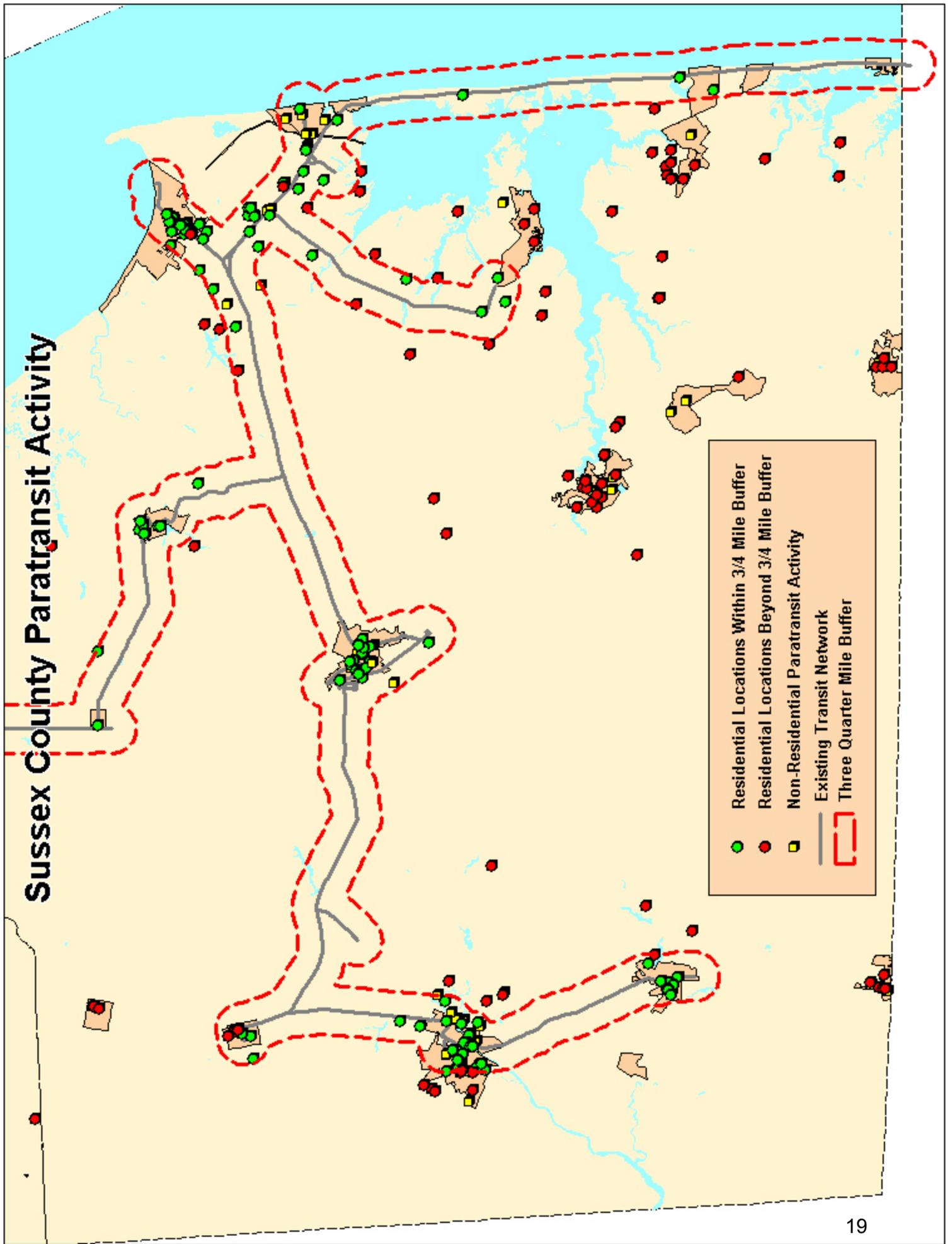


Kent County Paratransit Activity

- Residential Locations Within 3/4 Mile Buffer
- Residential Locations Beyond 3/4 Mile Buffer
- Non-Residential Paratransit Activity
- Existing Transit Network
- ▭ Three Quarter Mile Buffer



Sussex County Paratransit Activity



The variations in geography and service categories among the three counties are also reflected in the relative cost of providing a paratransit ride. While the average net cost, after revenue, of a Delaware paratransit trip was \$34.82 during FY02, there was a significant variation between Sussex and the other two counties. DART First State reported providing an average of 2.3 paratransit trips per hour of service in both New Castle and Kent Counties, but only 1.7 trips per hour in Sussex County. In order to more accurately reflect per-county cost variations, the statewide per-trip average was disaggregated by county based upon trips per hour. This calculation yielded an average net cost per trip of **\$32.31** for New Castle and Kent Counties for FY02, and an average net cost per trip of **\$44.58** for Sussex County. In Figure 5, below, these per-trip costs have been applied to the distribution of paratransit service categories by county to reflect the actual fiscal impact of each type of service, by location.

Figure 5. FY02 Delaware Paratransit Cost Distribution by Service Category and County

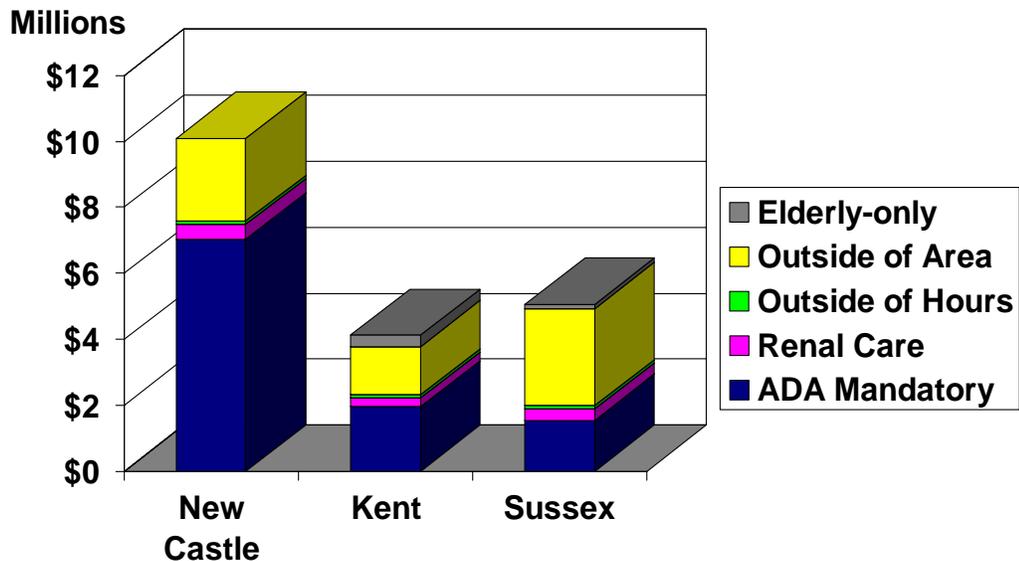
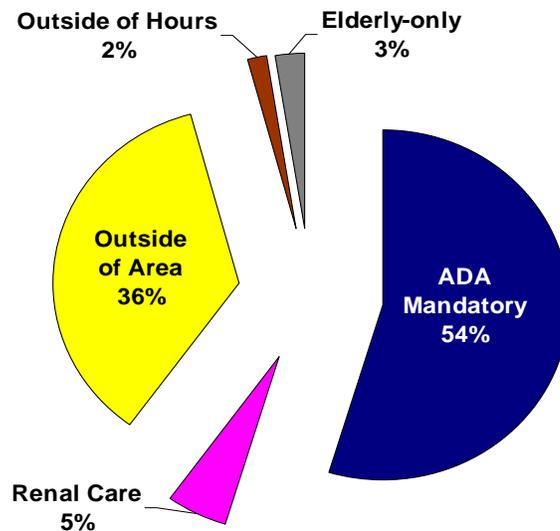


Figure 6 on the following page displays the re-aggregation of these county-specific net costs to reflect the statewide fiscal impact of the various categories of service provided by DART First State during FY02.

Figure 6. FY02 Delaware Statewide Paratransit Net Cost Distribution by Service Category



This cost distribution reflects the services provided during FY02 to DART First State’s paratransit customer base. The Delaware Transit Corporation’s long range plan highlights the expectation that Delaware’s elderly population is projected to grow three times as fast as its below-65 population through 2025, with the result that one in every five persons in the state will then be “eligible for paratransit services – based strictly on age” (DART First State Long Range Plan 2000-2025). The “elderly-only” population currently accounts for fewer than 3% of DART First State’s paratransit trips, however, and would be the first group of customers to be denied service in the event of inadequate resources, as detailed in the priority order shown in Table 1 on page 14. Rather than relying upon age-based data alone, this study brings together the projections of the Delaware Population Consortium for 2000 through 2030 and data regarding transit-related disabilities from *Census 2000*. The intent is to develop projections of the growth in numbers, by county, that can be expected among Delawareans with disabilities that may make them eligible for ADA paratransit services.

The 2000 Census long form questionnaire included the following two items related to disability status.

16. Does this person have any of the following long-lasting conditions:

- a. Blindness, deafness, or a severe vision or hearing impairment?
- b. A condition that substantially limits one or more basic physical activities such as walking, climbing stairs, reaching, lifting, or carrying?

17. Because of a physical, mental, or emotional condition lasting 6 months or more, does this person have any difficulty in doing any of the following activities:

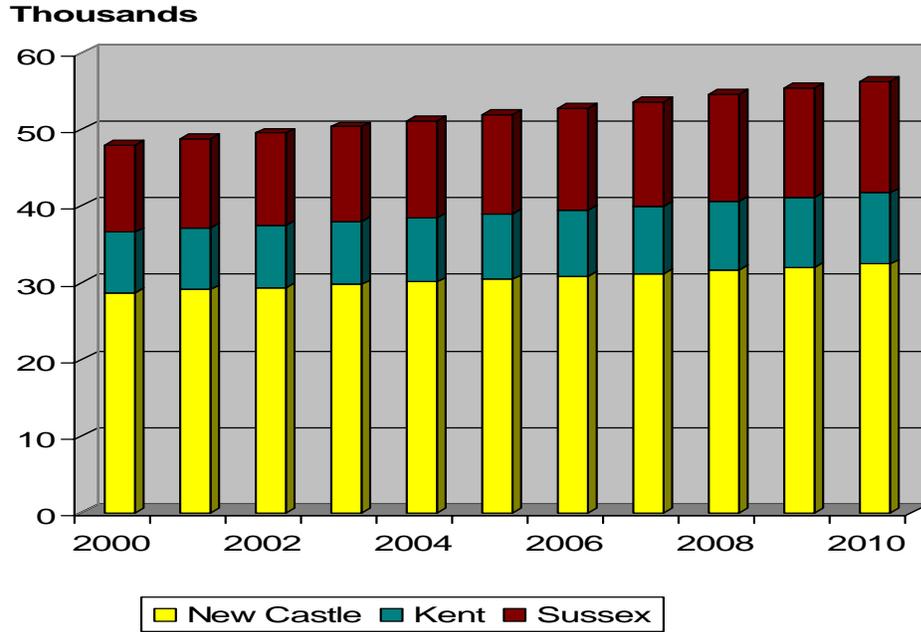
- a. Learning, remembering, or concentrating?
- b. Dressing, bathing, or getting around inside the home?
- c. (Answer if this person is 16 YEARS OLD OR OVER) Going outside the home alone to shop or visit a doctor's office?
- d. (Answer if this person is 16 YEARS OLD OR OVER) Working as a job or business? (Census 2000)

The responses of the sample population to long form questionnaire item 17c were reported as the number of persons with a “go-outside-the-home disability,” by gender and age (16 to 20 years, 21 to 64 years, 65 to 74 years, and 75+ years), in Census 2000 Summary File 4 (SF 4) Table PCT75. Table PCT75 data for the state of Delaware, by county, appears in Appendix B.

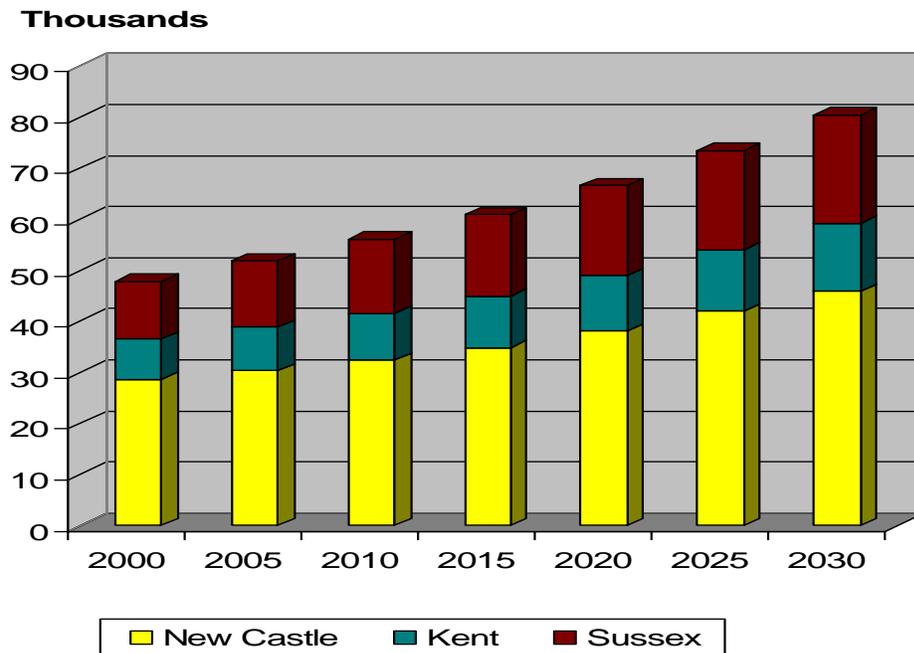
The percentages of the population in each county reflected in Table PCT75 as having a go-outside-the-home disability were applied to the Delaware Population Consortium data for each of the appropriate age groups to develop the projections that are presented in this study. While many more variables than the presence of a go-outside-the-home disability are involved in the certification of an individual as eligible for ADA paratransit services (see pp. 7-12), trends within this population demographic serve as a reasonable proxy for the growth that can be anticipated in DART First State's potential paratransit customer base. Figure 7 on the following page illustrates short-term (through 2010) and long-term (through 2030) projections of the population of Delawareans over the age of 16 with a go-outside-the-home disability, by county.

Figure 7. Projected Population of Delawareans Over Age 16 with a Go-Outside-the-Home Disability - by County

Short Term



Long Term

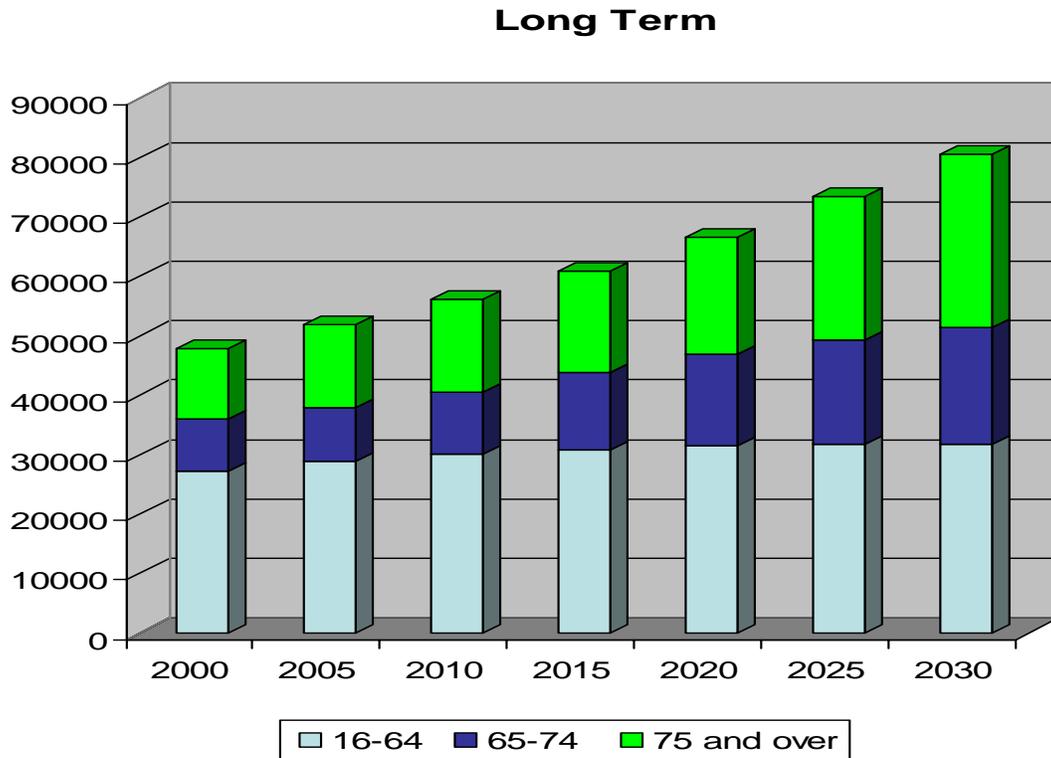
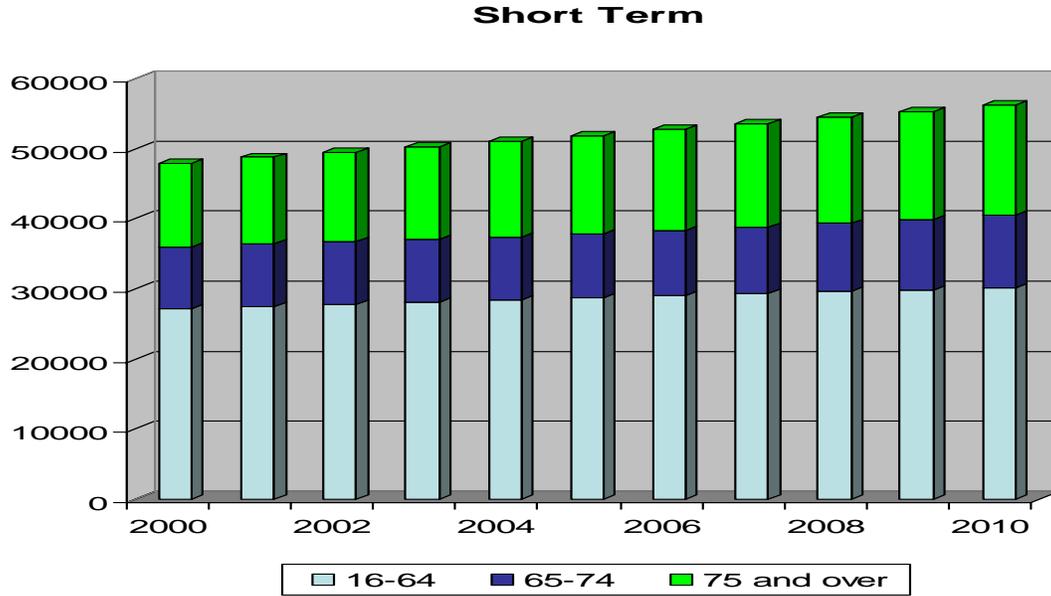


From 2002 through 2010, the number of Delawareans over the age of 16 who have a disability that results in difficulty going outside the home alone to shop or visit a doctor's office can be expected to increase by 14%, statewide. By county, the projected rates of growth through the end of this decade are: New Castle +10%, Kent +14%, and Sussex +21%. Looking at the long-term, the statewide over-age-16 population with a go-outside-the-home disability is projected to increase by 63% from 2002 through 2030. By county, the projected rates of growth through 2030 are: New Castle +56%, Kent +64%, and Sussex +78%.

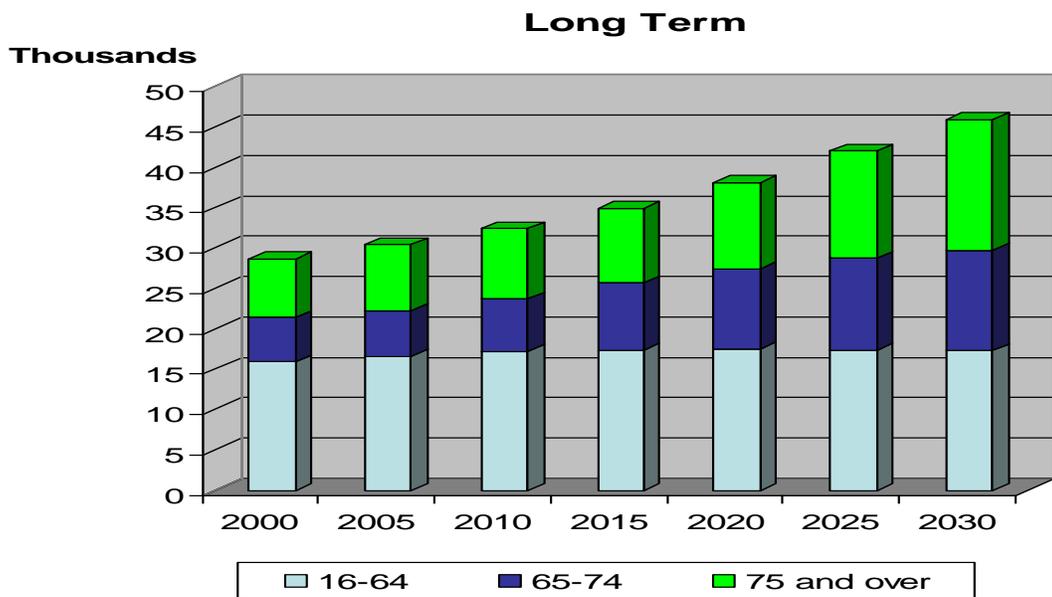
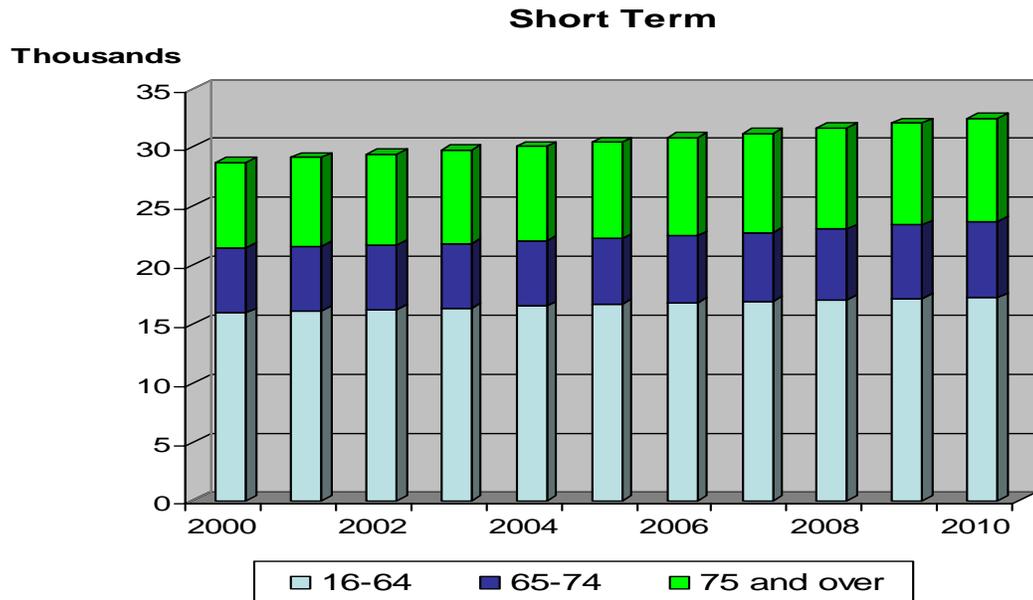
The Delaware Transit Corporation's long range plan highlights the issue of the "graying" of Delaware's population and the prospect that the largest rates of growth will be found among the 75-and-over age group, who are more likely to be transit-dependent. The *Census 2000* data indicates that this age group is also the most likely subset of the population to have a go-outside-the-home disability. The implications for DART First State's ADA paratransit program are significant. Figure 8 on the following page illustrates the short- and long-term population projections for Delawareans over age 16 with a go-outside-the-home disability, statewide, by age group (16 to 64, 65 to 74, and 75+). Currently, 26% of all Delawareans over 16 with a go-outside-the-home disability are age 75 or older. By 2030, this age group is projected to increase in number by 128%, statewide, with the result that it will constitute 37% of the total over-age-16 population with a go-outside-the-home disability.

Figures 9, 10 and 11 on the following pages illustrate the projected population, by age group, of persons over age 16 with a go-outside-the-home disability for New Castle, Kent, and Sussex Counties, respectively. Note that the rates of growth for Sussex County are the highest not only among the age 75+ population (+184% through 2030), but also among the age 16-64 population (+38% through 2030; more than twice the statewide rate of increase for that age group and nearly five times the rate of growth for New Castle County). While the 75+ age group may be the most generally transit-dependent, the 16 to 64 population is much more likely to require employment-related paratransit services.

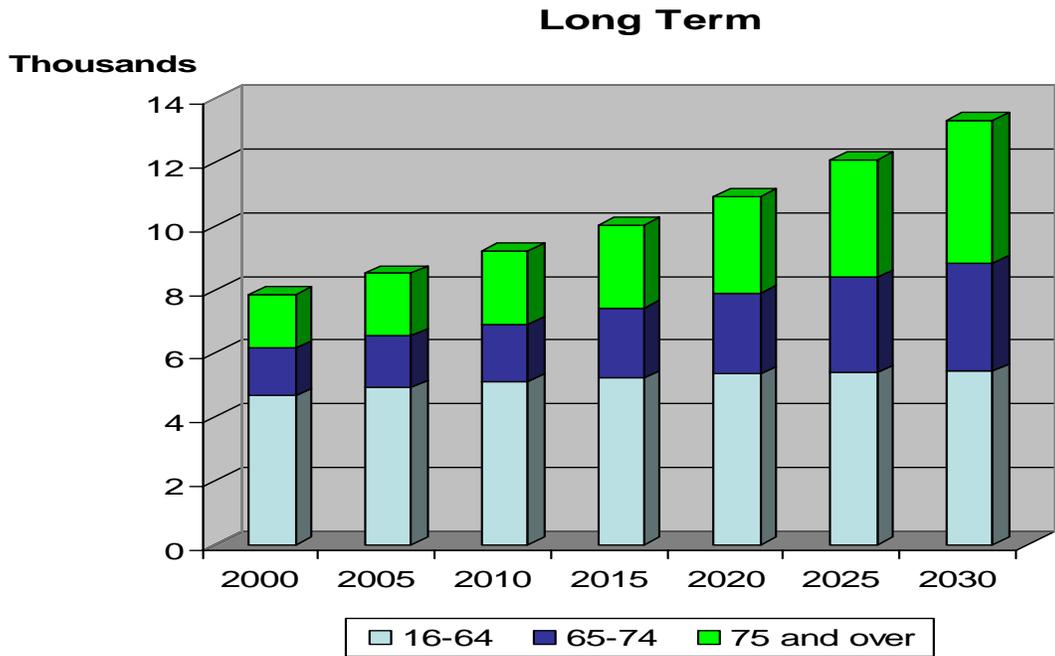
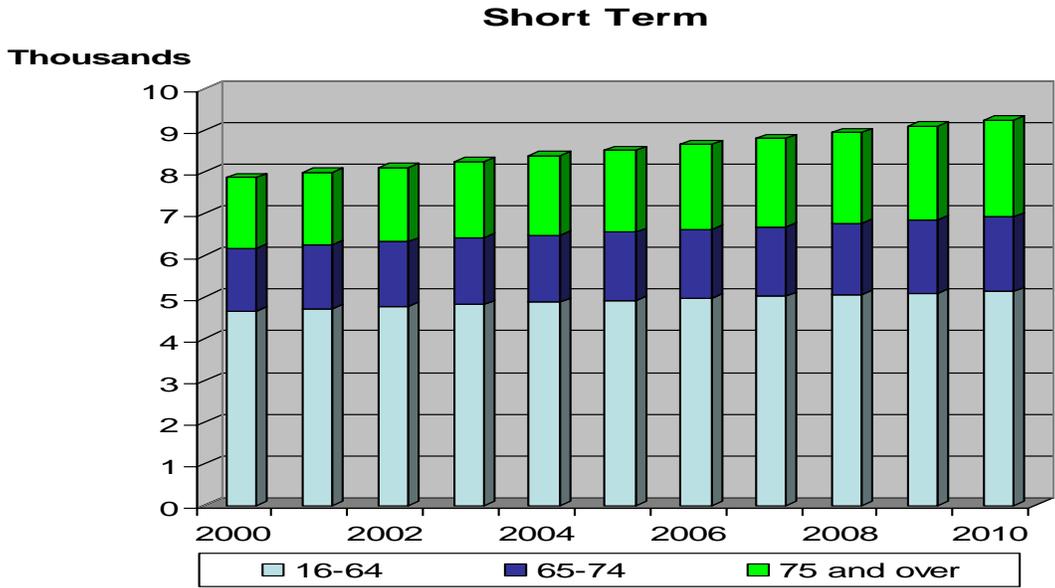
Figure 8. Projected Population of Delawareans Over Age 16 with a Go-Outside-the-Home Disability - Statewide - by Age



**Figure 9. Projected Population of Persons over age 16 with a Go-Outside-the-Home Disability
New Castle County**



**Figure 10. Projected Population of Persons Over Age 16 with a Go-Outside-the-Home Disability
Kent County**



**Figure 11. Projected Population of Persons Over Age 16 with a Go-Outside-the-Home Disability
Sussex County**

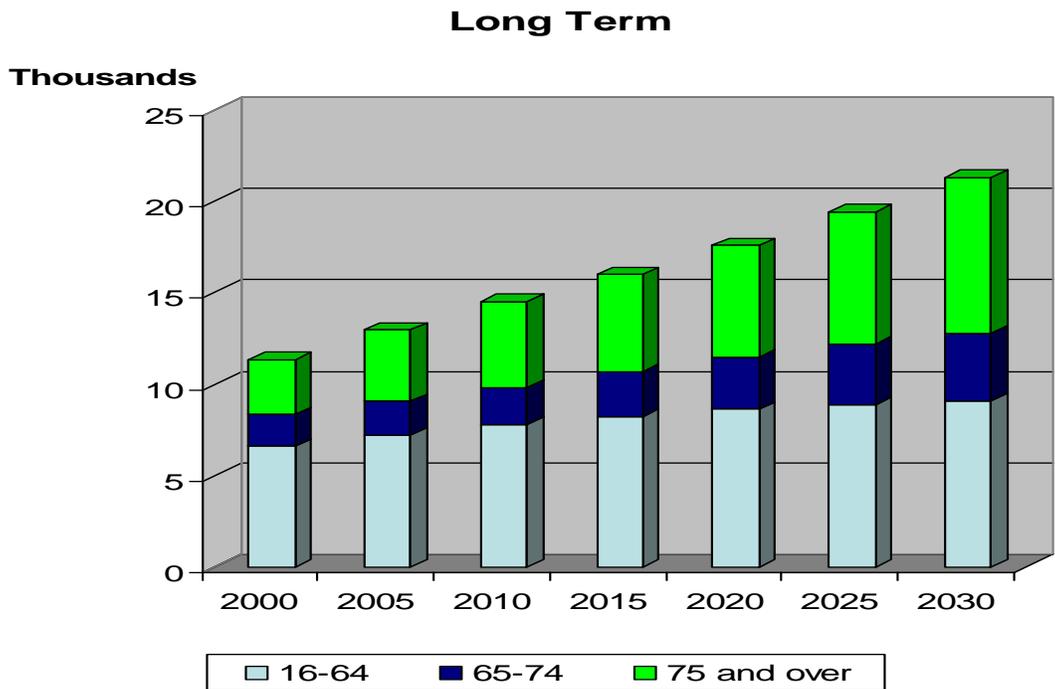
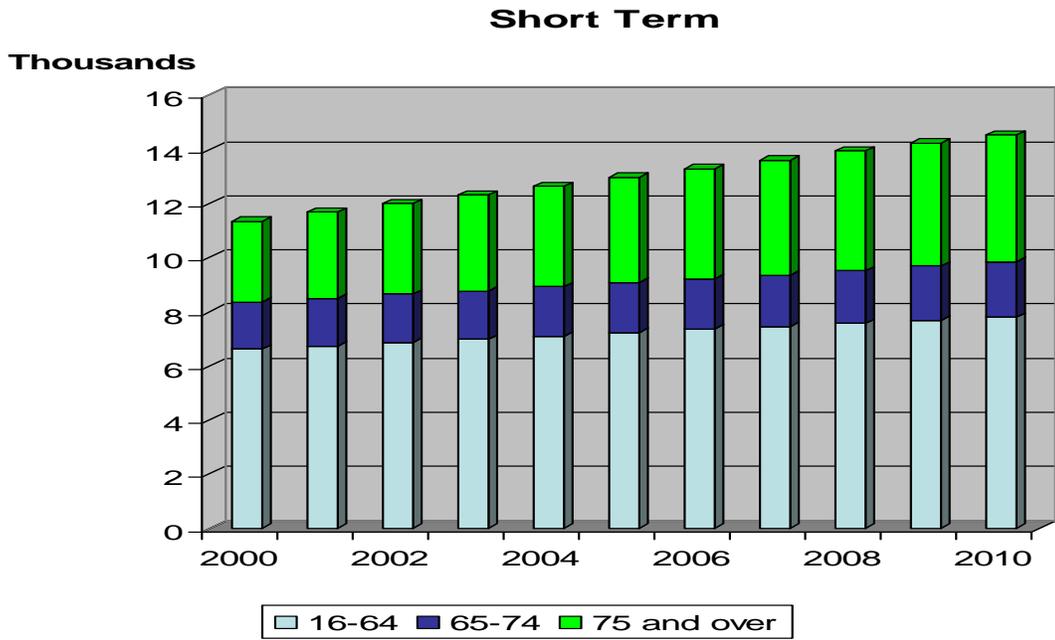
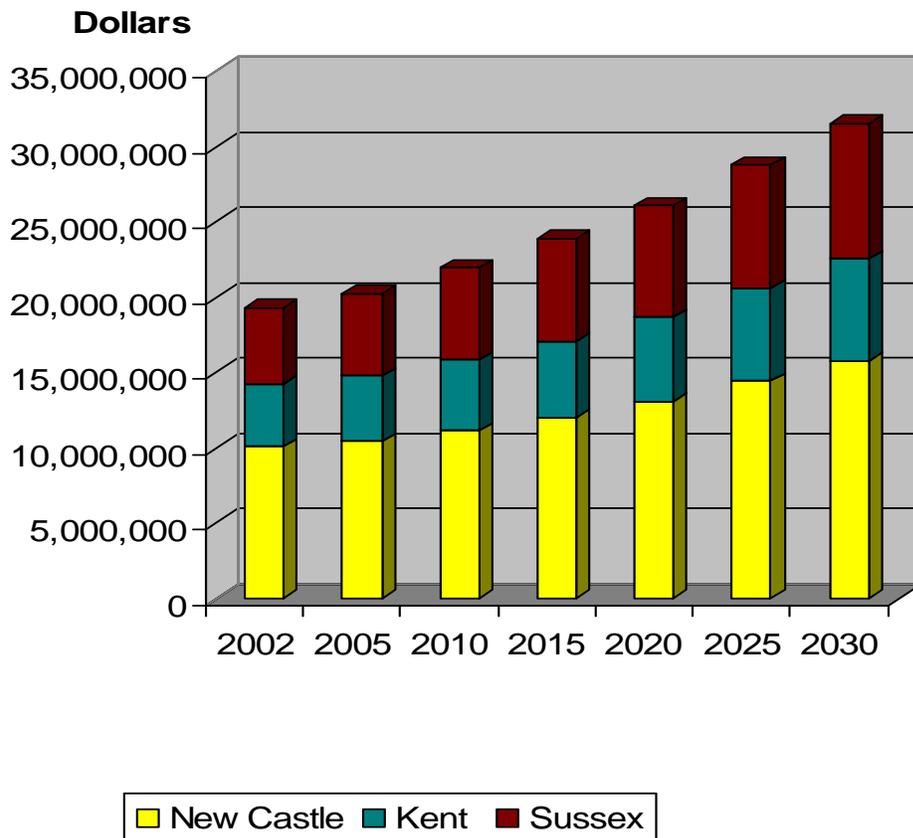


Figure 12, below, illustrates the projected long-term growth in net paratransit operating costs that would occur if service levels were to increase no more rapidly than the population of Delawareans with a go-outside-the-home disability. Costs are shown in constant 2002 dollars. Given the historic rate of growth in demand for paratransit service, these assumptions produce a very conservative estimate.

Figure 12. Projected Impact of Population Growth on Paratransit Costs (in 2002 Dollars)



Discussion of Policy Options

DART First State currently provides door-to-door paratransit service to all persons in Delaware who meet the ADA eligibility requirements, without regard to customers' proximity to fixed bus routes. Paratransit rides are also available, statewide, to persons who are in need of transportation to renal care centers for dialysis treatments and, in Kent and Sussex Counties, to persons aged 60 years or older who do not have disabilities. This practice of extending paratransit service irrespective of the ADA mandated zones of $\frac{3}{4}$ mile from the paths of existing fixed bus routes is without parallel among other major transit providers. The major theme of research that has been conducted in Delaware and elsewhere has been related to strict ADA eligibility certification procedures (Weiner, 1998; Denson, 1999; Denson & Kyler, 2001). Given this lack of direct comparability with other providers, measures such as the percentage of an agency's budget that is expended for paratransit shed little light on the relative performance of Delaware's program. But the recent development of a trip priority system, to be employed on a day-to-day basis when paratransit resources are inadequate to meet service demands, clearly illustrates that extended continuation of the status quo is likely to be an untenable strategy.

A Transit Advisory Forum entitled "Working the Partnership" was hosted by DART First State and its Elderly and Disabled Transit Advisory Committee on May 9, 2003. Attendees including representatives of paratransit service providers from Pennsylvania, Maryland, and New Jersey, participated in a series of discussion sessions and heard a brief presentation regarding this study. The outcomes of the group sessions, which were facilitated by Dr. Carol Denson of the University of Delaware's Department of Consumer Studies, will be the subject of another report. It was clear to the staff involved with this study, however, that the forum participants from other jurisdictions found the extent of Delaware's paratransit services to be truly remarkable. It was equally clear that they recognized the distinction between the mandate of the ADA and the dictate of state policy. Given finite resources, the question then becomes how current policy

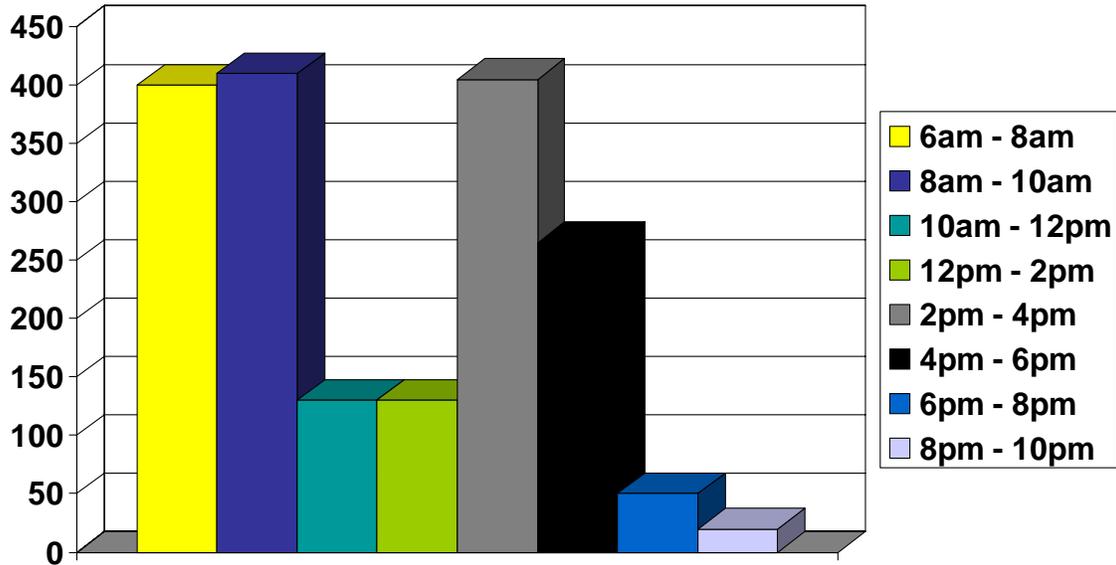
might be adapted to continue discretionary service to the broadest population of Delawareans while ensuring compliance with the standard of the ADA.

Currently, the DART First State paratransit eligibility criteria make no reference to the importance of the $\frac{3}{4}$ mile distance from a fixed bus route in establishing one's place in the order of trip priorities, yet it will become a key determinant in the application of the agency's load management protocol. Only elderly (age 60 or older) persons who do not have disabilities are informed at the time of application that they will be provided transportation on a space-available basis, and that they may therefore be asked to travel at alternate times when capacity is limited. During FY02, those elderly-only passengers accounted for fewer than 3% of paratransit trips, statewide (8.4% of trips within Kent County and 2.7% of trips within Sussex County). Although the elderly-only customers are appropriately ranked as the lowest-priority category of service, it is unlikely that a capacity shortfall in New Castle County (the site of more than half of all paratransit trips) on any given day could be effectively addressed by redeploying vehicles and operators normally assigned to the southern counties. The DART First State resource allocation protocol would therefore quickly begin to involve New Castle County riders in category 3 (non-subscription ADA-eligible passengers traveling to and/or from locations outside of the $\frac{3}{4}$ mile zone).

The DART First State denial-of-service priority rankings are rational and defensible, but they owe their existence largely to the current policy of providing uniform paratransit service to all, irrespective of location of trip purpose. Trip purpose would seem to be a logical component of any decision system which would be utilized to match load to available resources. Because all ADA-mandatory paratransit trips are considered to be of equal priority (just as riders of fixed route service do not need to articulate a reason for their use of transit), the possibility of having to negotiate an alternate schedule based upon trip purpose is expressed only to elderly customers who do not have disabilities. A revision of the scheduling system that acknowledged the priority level of each trip at the time of its request could enable load shifting to off-peak hours for certain non-ADA-mandatory trips, as determined by a ranking of the trips' purposes. As

illustrated below in Figure 13, there are definite “peaks” and “valleys” in the distribution of paratransit trips across the hours of the day (DART paratransit services presentation).

Figure 13. FY02 Average Distribution of Paratransit Trips By Time of Day



One alternative to the status quo, therefore, would be to draw a more clear distinction between those paratransit trips that are mandated by the ADA and those that are undertaken on a discretionary basis, but to continue to operate what appears to be a unitary system. Another alternative which merits consideration is the approach that has been taken by King County Metro Transit, the agency that serves Seattle, Washington and the surrounding area. As reported in the August 2002 issue of *Metro Magazine*, King County Metro Transit has received national attention regarding its innovative paratransit operation. Referred to as “the Seattle model,” the King County program involves a bare-bones ADA paratransit service operating within a larger, more flexible paratransit system. Called Metro ACCESS, this “premium service” offers increased flexibility when scheduling rides as well as other benefits.

At 3,500 daily trips, the King County paratransit program handles nearly double the volume of DART First State, yet it has been described as having only 5% of its service mandated by the requirements of the ADA. The other 95% of trips provided by Metro ACCESS, which are classified as “premium service,” involve scheduling flexibility beyond the requirements of the ADA, including service to a wider area and “hand-to-hand” as well as door-to-door service for customers who require additional assistance. It is felt that the differentiation between mandatory and premium services provides a level of protection when addressing complaints against the system. If the trip in question is not ADA mandatory, then any complaint that might arise would be addressed by the agency internally but would not constitute a civil rights claim under the ADA (Hirano, 2002).

At the operational level, there is currently no discernable difference between Metro ACCESS premium service and ADA paratransit service in Seattle. The same fare is charged, the same vehicles are used, and in all customer contact aspects, procedures are the same. Many of the rides that are considered “premium” are only classified as such because of the flexible scheduling policies of Metro ACCESS. For example, a trip that otherwise meets all ADA criteria but is scheduled more than 7 days in advance is considered a “premium service” under the Metro ACCESS program. The increased lead time in scheduling accounts for 40 to 50% of the premium service provided by King County Metro.

The additional premium rides involve various other services that Metro ACCESS offers, including door-to-door and hand-to-hand services, scheduling to an appointment time rather than a pick-up time, and an expanded service area of 1½ miles from fixed routes on one side of the county. As King County Metro does not provide subscription service under its ADA operations, all subscription trips are offered as a premium service through Metro ACCESS. The door-to-door and hand-to-hand services are available only to customers who indicate on their applications such services are required. Upon approval of their application, the customer will always receive this “premium” service. The Metro ACCESS premium service option of scheduling a pick-up time such that the

trip will terminate at a client-identified appointment time is analogous to the process of scheduling an airport shuttle, in which the call taker will determine when to pick up the customer based upon his or her flight departure time. Once a customer specifies a destination and an appointment time, the Metro Access scheduling representative takes such factors as vehicle availability and projected trip duration at that time of day into account and determines the customer's be-ready time. This is in marked contrast to the regular scheduling process in which the customer simply tells the scheduling representative when he or she desires to be picked up.

Upon analysis, it appears that the representation that 95% of the paratransit rides provided by King County Metro are not ADA mandatory somewhat overstates the case. Nearly half of the trips that Metro ACCESS provides would be considered ADA mandatory if they were scheduled the day before the ride. Most of the clients who currently receive the premium door-to-door and hand-to-hand services are ADA-eligible and their rides would be considered mandatory if they were not receiving the additional services. Were the perceived quality of King County's premium services to decline, many of their clients could change their behavior to "become" entitled to ADA mandatory trips. Nonetheless, the King County approach to wrapping custom services around an ADA mandated program results in significant opportunities for policy flexibility and should not be ruled out as an option for Delaware. The King County enabling legislation appears in Appendix C.

Delaware's current "premium" service, though not formally identified as such, is truly above and beyond the requirements of the ADA. One third of the trips provided by DART First State involve locations that are more than ¾ mile distant from fixed routes, while an additional 4% are provided either outside of normal service hours or to elderly-only customers. All trips within the ADA ¾ mile zone that are provided on a subscription basis could be considered "premium" service as well. The identification of a premium level of paratransit service, provided through the same system as the ADA mandatory service with the goal of serving the maximum number of transit-dependent Delawareans, could result in increased flexibility and efficiency.

Possible options within a “mandatory + premium” framework include the establishment of differential fare structures, hours of service, and scheduling requirements for premium service customers. While a change from the status quo would not be welcomed in all quarters, neither would the frequent implementation of a denial-of-service protocol. Simply designating non-ADA-mandatory trips as such and putting them under the heading of “premium service” would increase public awareness of the laudable scope of services currently being provided by DART First State. Should the cost of paratransit service reach a breaking point, the differentiation of “premium service” would introduce the option of differential fares (something which has not yet been initiated in King County, Washington). Assuming that the demand for paratransit service is relatively inelastic, an increase in the fare for “premium service” would result in increased revenue. Escape from the ADA-mandated fare restrictions would also permit the implementation of a cost-sharing incentive program whereby ride pooling, off-peak travel, or other schedule flexibility on the part of the customer could be rewarded through discounted fees. Consideration could also be given to the adjustment of fares to reflect extended travel distances.

Other options for “premium” paratransit service might include limiting less critical trips, such as shopping, to certain times of day and/or days of the week for those customers who live outside the ADA service area; formally implementing a “schedule based on appointment time” service for customers who request it (from observation of the call-taking process, this presently occurs informally as scheduling representatives work with customers to determine their best be-ready times); and separately designating non-ADA-required subscription services to permit greater flexibility in coordinating trips by frequent riders.

Finally, a formal differentiation between ADA-mandatory and “premium” services would pave the way for informed discussions with constituent groups regarding the scheduling of both fixed route and paratransit services. DART First State has been scrupulous about limiting access to frequency-of-use data regarding the paratransit

system's customers. Requests made during the course of this study for enhanced maps that would indicate frequency of usage for non-ADA locations of service were politely declined, citing concerns about customer confidentiality (inasmuch as sharing data on frequency of use might lead to questions about ride purpose that are impermissible under the ADA). The sensitivity to this matter is appreciated, and quite appropriate in the context of ADA-mandated paratransit service. When it comes to the sizable portion of DART First State's service load that is over and above the ADA mandate, however, the availability of anonymous frequency of use data could enhance the quality of policy deliberations.

Conclusion

Delaware's paratransit service, provided by DART First State, has experienced dramatic increases in both ridership and operating cost since the early 1990s. DART First State's paratransit program is distinguished from those of other providers across the nation not only by its statewide scope, but by the extent to which it exceeds the requirements of the ADA. During FY02, one out of every three of DART First State's paratransit trips, statewide, involved the transportation of customers with ADA-eligible disabilities to or from points that were more than ¾ mile from existing fixed bus routes. ADA mandatory trips accounted for 70% of the paratransit service that was provided in New Castle County, 48% of the service in Kent County, and only 31% of the service in Sussex County. In total, DART First State's services above and beyond the mandate of the ADA accounted for 46% of net paratransit operating expenses.

The majority of the trips that were provided in Sussex County during FY02 involved the transportation of persons with ADA-eligible disabilities to and/or from locations more than ¾ mile from fixed bus routes, and an examination of ridership and unit cost data reveals that operating expenses in Sussex County significantly exceed the statewide average. Delaware's over-age-16 population with a go-outside-the-home disability is projected to increase by 63% from 2002 through 2030, statewide, and by 78% in Sussex County. The projected rates of growth for Sussex County are the highest in the state not only among the age 75+ population, but also among the age 16-64 population, a group that is much more likely to require employment-related paratransit services.

DART First State has developed a strategy for demand management that will assist in meeting the challenge of limited resources on a day-by-day basis for the short-term. Among the options to consider for the long-term is a system-wide approach to the issues that clearly recognizes the divergence of Delaware's current paratransit service from the complementary-to-fixed-route program required by the ADA. A model that has

been identified for further review and consideration is the blend of ADA-mandatory and “premium” paratransit services currently being provided to the Seattle, Washington vicinity by King County Metro Transit. As a first step, clearly designating non-ADA-mandatory trips as such and putting them under the heading of “premium service” would increase public awareness of the laudable scope of services currently being provided by DART First State. A formal differentiation between ADA-mandatory and “premium” services would also set the stage for informed discussions with constituent groups regarding alternative approaches to scheduling priorities and fare determinations.

References

Census 2000 website <http://factfinder.census.gov>.

DART First State web site <http://www.DartFirstState.com/paratransit/>.

DART First State Long Range Plan 2000-2025.

DART First State paratransit utilization statistics provided at July and September 2002 EDTAC meetings and otherwise upon request.

Delaware Population Consortium Population Projection Series (October 8, 2002).

Denson, C.R. (1999). ADA Eligibility Determination Model for DART First State Paratransit. Delaware Transportation Institute. Newark, DE.

Denson, C.R. & Kyler, J (2001). T2000 ADA Eligibility Determination for DART First State Paratransit. Delaware Transportation Institute. Newark, DE

Hirano, S. "The "Seattle Plan"". Metro Magazine. August 2002. <http://www.metro-magazine.com>.

Weiner, R. (1998). ADA Paratransit Eligibility Certification Practices. National Academy Press. Washington, DC.

Appendix A

Implementation Plan

This paper addresses a matter public policy, rather than a technical or engineering issue. As such, the first step toward implementing the recommended review of current practices should involve the assessment of FY03 paratransit system utilization and cost data to identify congruence or deviation from past trends. If DART First State's ongoing eligibility certification and rider training initiatives, coupled with the acquisition of additional accessible vehicles, have made significant impacts on the rate of system usage growth, there may be ample opportunity for wide-ranging option development and deliberation. If the growth in non-ADA-mandatory ridership continues unabated, however, time is of the essence.

The evident parallels between King County, Washington's and Delaware's scopes and styles of service should be the subject of further investigation. Research should also be undertaken internally within DART First State to assess the efficacy of adapting the current system of service location mapping to display trip frequency, time of day, and trip purpose data related to sites that are outside of the $\frac{3}{4}$ mile ADA service zone. Recognizing that individual customer confidentiality should be maintained, aggregate display methodologies should be considered as a means of supporting informed discussion concerning service style options and possible future modifications to nearby fixed bus routes. Whatever policy discussions may ensue, they should consistently involve active participation by the Elderly and Disabled Transit Advisory Committee and other key paratransit stakeholders.

[Detailed Tables](#)**PCT75. SEX BY AGE BY GO-OUTSIDE-HOME DISABILITY BY EMPLOYMENT STATUS FOR THE CIVILIAN NONINSTITUTIONALIZED POPULATION 16 YEARS AND OVER [43] - Universe:**Civilian noninstitutionalized population 16 years and overData Set: [Census 2000 Summary File 4 \(SF 4\) - Sample Data](#)NOTE: Data based on a sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions see <http://factfinder.census.gov/home/en/datanotes/expsf4.htm>.

	Kent County, Delaware	New Castle County, Delaware	Sussex County, Delaware
Total:	91,579	380,889	122,205
Male:	42,233	180,186	58,237
16 to 20 years:	4,428	17,801	4,276
With a go-outside-home disability:	249	738	250
Employed	94	296	122
Not employed	155	442	128
No go-outside-home disability:	4,179	17,063	4,026
Employed	1,938	7,855	2,198
Not employed	2,241	9,208	1,828
21 to 64 years:	31,819	139,514	41,332
With a go-outside-home disability:	1,856	6,412	2,656
Employed	895	3,514	1,438
Not employed	961	2,898	1,218
No go-outside-home disability:	29,963	133,102	38,676
Employed	25,267	112,354	31,139
Not employed	4,696	20,748	7,537
65 to 74 years:	3,873	13,987	8,109

With a go-outside-home disability	430	1,225	888
No go-outside-home disability	3,443	12,762	7,221
75 years and over:	2,113	8,884	4,520
With a go-outside-home disability	475	1,873	954
No go-outside-home disability	1,638	7,011	3,566
Female:	49,346	200,703	63,968
16 to 20 years:	4,958	18,860	4,392
With a go-outside-home disability:	189	527	218
Employed	90	198	113
Not employed	99	329	105
No go-outside-home disability:	4,769	18,333	4,174
Employed	2,324	8,585	2,075
Not employed	2,445	9,748	2,099
21 to 64 years:	36,581	149,314	44,326
With a go-outside-home disability:	2,081	7,664	3,217
Employed	751	3,302	1,357
Not employed	1,330	4,362	1,860
No go-outside-home disability:	34,500	141,650	41,109
Employed	24,511	105,650	27,563
Not employed	9,989	36,000	13,546
65 to 74 years:	4,371	16,955	8,822
With a go-outside-home disability	584	2,135	826
No go-outside-home disability	3,787	14,820	7,996
75 years and over:	3,436	15,574	6,428

With a go-outside-home disability	985	4,661	1,786
No go-outside-home disability	2,451	10,913	4,642

U.S. Census Bureau
Census 2000

Standard Error/Variance documentation for this dataset:

[Accuracy of the Data: Census 2000 Summary File 4 \(SF 4\) - Sample Data \(PDF 141.5KB\)](#)

The letters PDF or symbol Adobe PDF indicate a document is in the [Portable Document Format \(PDF\)](#). To view the file you will need the [Adobe® Acrobat® Reader](#), which is available for **free** from the Adobe web site.

Title 28

METROPOLITAN FUNCTIONS

Chapters:

I. GENERAL PROVISIONS

- 28.01 Establishment
- 28.02 Definitions

II. ADMINISTRATIVE PROCEDURES

- 28.20 Minority/women business enterprise and contract compliance
- 28.48 Transitional procedures

III. WATER POLLUTION ABATEMENT

- 28.81 Establishment and policy
- 28.82 Definitions
- 28.84 Water Pollution Abatement

IV. WASTEWATER TREATMENT

- 28.86 Wastewater treatment

V. PUBLIC TRANSIT

- 28.91 Establishment and goals
- 28.92 Definitions
- 28.94 Public transit
- 28.95 Severability
- 28.96 Regulation of conduct on transit property

~~**28.94.030 Public transit zones.** The system of zones for public transit service described in this section is hereby established. The director may provide for other special and buffer zones for particular periods of time or purposes and may impose special conditions, regulations or limitations on travel and fares within said zones. Public transit zones within the boundaries of the county shall be described as follows:~~

~~A. "Zone 1 Seattle" is that portion of King County lying east of Puget Sound and west of Lake Washington; and bounded on the north by a line beginning in Puget Sound on the westerly projection of Northwest 145th Street, thence easterly along said projection and Northwest 145th Street and North 145th Street and Northeast 145th Street including any straight line projections to discontinuous sections of said streets to Lake Washington; and bounded on the south by the following described line: beginning at a point where the City of Seattle King County boundary intersects the shoreline of Puget Sound at Seola Beach Drive Southwest, thence northerly and easterly along the City of Seattle King County boundary to Olson Place Southwest, thence northerly along Olson Place Southwest and 1st Avenue South to South Cloverdale Street, thence easterly along South Cloverdale Street to 14th Avenue South, thence northerly along 14th Avenue South and 16th Avenue South, thence southerly along East Marginal Way South to South Boeing Access Road, thence easterly along South Boeing Access Road and South Ryan Way to the City of Seattle King County boundary at 51st Avenue South, thence easterly along the City of Seattle King County boundary to the west shoreline of Lake Washington on the easterly projection of South Ryan Street.~~

~~B. "Zone 2 county" is that portion of King County lying outside the boundaries of Zone 1 Seattle. (Ord. 11033 § 6, 1993).~~

28.94.035 ADA paratransit program. A. As required in 49 C.F.R. pt. 37, subpart F, the county shall provide paratransit or other special services, referred to in this section, K.C.C. 28.94.045 and K.C.C. 28.94.245 as "ADA paratransit services," to individuals eligible under the federal Americans with Disabilities Act of 1990, referred to in this section, K.C.C. 28.94.045 and K.C.C. 28.94.245 as "ADA". The county may supplement the ADA paratransit services with other service described in K.C.C. 28.94.045.

B. ADA paratransit services shall be provided during the same hours and days as regular, fixed, non-commuter bus service, within corridors that extend three-fourths of a mile on either side of the regular, fixed, non-commuter bus routes, as the routes may be amended from time to time.

C. ADA paratransit services shall be provided on a curb-to-curb basis.

D. ADA paratransit services shall be provided on an advance reservations basis, on the day before the occurrence of the ride requested.

E. ADA paratransit services may include requiring riders to transfer from one paratransit vehicle to another as part of the trip requested by the rider.

F. Subscription service shall not be provided as part of the ADA paratransit services.

G. ADA paratransit services may include feeder service to and from an accessible bus zone for individuals who are able to use the fixed route system.

H. In furtherance of the ADA paratransit program, the director may:

1. Organize and manage the provision of ADA paratransit services, including but not limited to call-taking, scheduling, dispatching, operations and vehicle maintenance, and, subject to applicable contracting and procurement requirements, enter into agreements with public and private agencies and entities for the provision of one or more of the services;

2. Develop and implement procedures in accordance with 49 C.F.R. pt. 37, subpart F, for the certification of ADA paratransit eligibility and the suspension of ADA paratransit service to eligible individuals with a documented pattern or practice of missing scheduled rides. The suspensions shall not be processed according to the procedures dealing with suspensions related to violations of rules of conduct on transit property and facilities as set forth elsewhere in K.C.C. chapter 28.96;
3. Develop and implement procedures for ADA paratransit service, and establish eligibility, administrative and operations procedures and referral services for the services;
4. Encourage the participation of, and enter into agreements with, public and private agencies and entities to coordinate their transportation resources as provided in this section;
5. Enter into agreements with other transit agencies to establish procedures for allocating paratransit trips and the cost of paratransit services to ADA-eligible riders seeking to transfer between transportation systems or cross jurisdictional boundaries and allocate the costs of providing paratransit services where the paratransit services of the other agencies overlap the county's ADA paratransit services; and
6. Submit plans, reports and information to the Federal Transit Administration as may be required under applicable federal regulations. (Ord. 13441 § 2, 1999).

28.94.045 King County metro community transportation program and services.

A. The King County metro community transportation program is hereby established to supplement available public and private transportation services operating in King County that are targeted to individuals with special transportation needs. Individuals with special transportation needs shall include those individuals who, because of physical or mental disability, income status, or age are unable to transport themselves or to purchase appropriate transportation. Services provided under this section may be implemented and updated by the director as provided in this chapter and within annual appropriations.

B. King County metro community transportation program paratransit services may be provided daily between the hours of six a.m. and ten p.m. unless otherwise specified in this section, and may include:

1. For individuals who meet the eligibility criteria for ADA paratransit services, services provided in the area of the county within corridors that extend three-quarter miles on either side of regular, fixed, non-commuter bus routes, as the routes may be amended from time to time. The area shall expand and contract during the same days and hours as the regular, fixed, non-commuter bus routes; provided further that the easternmost paratransit service corridor shall extend one and one-half miles to the east of the easternmost regular, fixed, non-commuter bus route; and provided further that when such paratransit service corridors as specified herein result in areas within the King County Urban Growth Boundary being surrounded on all sides by paratransit service corridors, such areas shall be included in the service area for King County metro community transportation program paratransit services.

2. For individuals who meet the eligibility criteria for ADA paratransit services, services provided with door-to-door driver assistance when such assistance is determined to be essential, using criteria established by the director. The director or designee shall determine the days and hours and the conditions under which these services can be provided safely and when they will be provided outside the established King County metro community transportation service hours and service area in response to the special transportation needs of individual riders;

3. For individuals who meet the eligibility criteria for ADA paratransit services, services provided with hand-to-hand driver assistance when such assistance is determined to be essential, using criteria established by the director, and when such individuals are sponsored by an agency or other organization that enters into a contract with the county for the assistance. The director or designee shall determine the days and hours and conditions under which these services can be provided safely and when they will be provided outside the established King County metro community transportation service hours and service area in response to the special transportation needs of individual riders;

4. For individuals who meet the eligibility criteria for ADA paratransit services, an advance reservation period that may be extended up to seven days in advance of the occurrence of the ride requested. However, any extension of the reservation period shall not adversely affect the system capacity for scheduling ADA paratransit program rides requested;

5. For individuals who meet the eligibility criteria for ADA paratransit services, subscription service arranged for individuals who establish a recurrent pattern of travel that, under criteria established by the director, provides for the efficient operation of the services. However, the arrangements shall not adversely affect the system capacity for scheduling ADA paratransit program rides requested; and

6. For individuals who have a valid regional reduced fare permit, are at least eighteen years of age and have an annual income at or below seventy percent of the median income for the state of Washington, as determined from time to time by the Washington State Department of Social and Health Services and adjusted for family size, and who live too far from regular, fixed, non-commuter bus routes or general public dial-a-ride service, transportation services to and from the bus routes or dial-a-ride service may be provided. The director or designee shall determine the days and hours and conditions under which these services can be provided safely and when they will be provided outside the established King County metro community transportation service hours and service area in response to the special transportation needs of individual riders. The services shall not be provided if the individual can make other public or private transportation arrangements.

C. King County metro community transportation program paratransit services may be provided to public and private agencies who share in the cost of service delivery and whose participants:

1. Meet the eligibility criteria for ADA paratransit services;

2. Have a valid regional reduced fare permit, are at least eighteen years of age and have an annual income at or below seventy percent of the median income for the state of Washington, as determined from time to time by the Washington State Department of Social and Health Services and adjusted for family size;

3. Are deemed eligible as participants to attend programs at or with agencies that participate in the county's community partnership services under D of this section; or

4. Have special transportation needs and are participants, customers or clients at programs, agencies or other entities that enter into contracts with the county to coordinate or share their transportation resources with the county and its service providers for the purpose of maximizing the provision of transportation services and the use of all available county and non-county resources. The director or designee shall determine when such paratransit services may be provided outside the established King County metro community transportation program service area in response to the special transportation needs of individual riders. Insofar as practicable, the county shall secure commitments from the public and private agencies so that by the 2004 their share of the costs of providing the services is not less than twenty-five percent. Cost participation by agencies may include direct or in-kind cost contributions.

D. Community partnership services, including but not limited to operating, capital and technical support and resources, to support volunteer and other transportation services may be provided and updated by the director as provided in this chapter. The individuals identified in C of this section are eligible for the services. The services shall be allocated, subject to applicable contracting and procurement requirements, to public or private non-profit entities and municipalities within King County that provide or sponsor social services to eligible individuals and to other entities whose participation enhances the county's transportation and transportation-related human and community services goals and objectives. Planning for community partnership services shall include those agencies in King County are responsible for establishing service goals for eligible populations. This may include, but is not limited to, the King County department of human services, the Area Agency on Aging and the Seattle-King County public health department.

E. Services to assist individuals in using the most cost-effective, appropriate and available transportation resource or resources may be made available to individuals eligible under C of this section, and may include:

1. Bus travel training and orientation services; and
2. Information and referral services.

F. The executive shall initiate an effort to increase the availability of accessible vehicles in the local taxicab industry that do not charge rates greater than for nonaccessible vehicles. The goal of such an effort must be to achieve at least ten percent accessibility in the taxicabs licensed by the county by the year 2001.

G. In furtherance of the King County metro community transportation program, the director may:

1. Organize and manage the provision of King County metro community transportation program paratransit services, including but not limited to call-taking, scheduling, dispatching, operations and vehicle maintenance, and, subject to applicable contracting and procurement requirements, enter into agreements with public and private agencies and entities for the provision of one or more of the services;

2. Develop and implement procedures, and establish eligibility, administrative and operations procedures and referral services, for the King County metro community transportation program;

3. Encourage the participation and enter into agreements with public and private agencies and entities to coordinate their transportation resources as provided in this section; and

4. Enter into agreements with other transit agencies to establish procedures for allocating King County metro community transportation program paratransit trips and the cost of King County metro community transportation program paratransit services for riders seeking to transfer between transportation systems or cross jurisdictional boundaries and to allocate the costs of providing paratransit services where the paratransit services of the other agencies overlap the county's paratransit services. (Ord. 13441 § 3, 1999).

Delaware Center for Transportation University of Delaware Newark, Delaware 19716

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