

FINAL
City of Montgomery
Montgomery Area Transit System



PREPARED BY:

First  **Transit**

**In Cooperation with the City of Montgomery Department of
Planning and Development Department, Transportation
Planning Division**

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MATS Transit Development Plan

CHAPTER 1- TRANSIT ENVIRONMENT

This chapter examines a variety of demographic, socioeconomic, employment and land use information. The objective is to increase our understanding of local conditions that affect the design and operation of the current transit system. These conditions are important because they can also affect the type of improvements that might be effective over the next five years. For example, low auto ownership rates usually identify geographic areas that have potentially higher demand for public transportation.

The data used for this review of the transit environment was taken from the 2000 U.S. Census and projects that were carried out by the Metropolitan Planning Organization (MPO).

HISTORICAL PERSPECTIVE

The City of Montgomery has been served by public transportation since 1886. In fact, Montgomery had the first citywide electric trolley system. After many years of successful operation, the trolley system was replaced with a privately operated bus transit system in 1936. As in many other cities, the City purchased the Montgomery Area Transit System in 1974 about the same time the federal government started offering financial support to local governments to operate public transportation. By the 1990s, the transit system had experienced a long decline in usage so the City replaced the fixed-route system in 1998 with a call-in program called Demand and Response Transit (DART). Unfortunately, the new name and new approach did not slow the decline in service quality or ridership.

On March 6, 2000, the City decided to try a new approach that involved the implementation of three fixed routes. Restoring fixed-route service that the public had been familiar with for so many years appeared to be what they were looking for because ridership started growing again. Due to steady increases in ridership, six more routes were added on March 9, 2001, and three more were added on March 18, 2003.

DOWNTOWN MASTER PLAN

In January 2007, the City of Montgomery received a Draft Downtown Master Plan developed by Dover Kohl & Associates. This plan describes a comprehensive and exciting effort to strengthen and revitalize the downtown. The plan covers street improvements, infill development, new retail, housing, land use, zoning, and other issues relevant to improving the downtown environment.

One of the issues is transportation. In the category of “In Our Generation” improvements, the plan recommends restoring electric trolley service to Downtown. Formerly known as the “Lightning Route”, electric trolleys operated in the downtown for nearly fifty years before they were replaced by rubber-tire buses. According to the plan, electric trolley service would expand transportation opportunities and enhance the “walkability” of downtown.

The proposed electric trolley service would operate along an alignment that is similar to the Green Loop and Gold Loop bus trolley routes currently operated by MATS. The electric trolleys would

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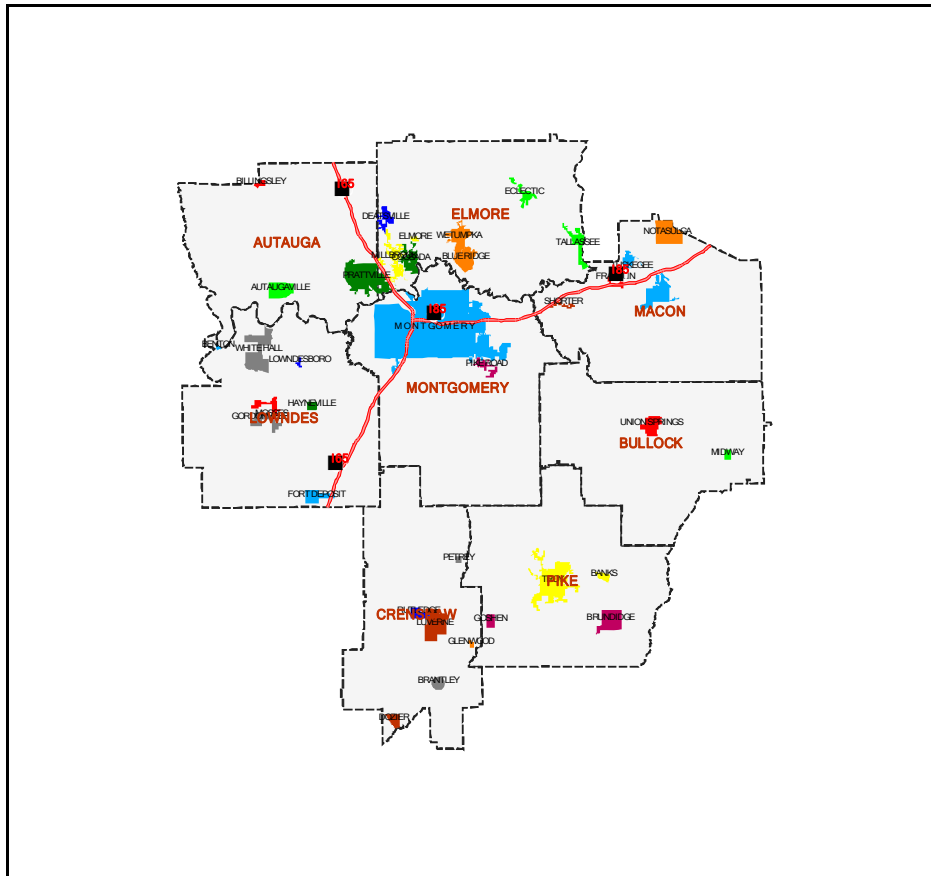
run mostly along Commerce Street and Dexter Avenue between Union Station and the Capitol. Further details will be provided as a part of a Dexter Avenue Streetscape Plan.

Fixed-route transit is identified in the plan as one of the characteristics of a vibrant downtown. Furthermore, the Lightning Route should be brought back to offer a new transportation choice and help improve the environment for economic development.

STUDY AREA

The City of Montgomery is located in south central Alabama approximately 135 miles from the Gulf of Mexico. Montgomery is the state capital and second largest city in the state. As shown in the following exhibit, the City is situated in Montgomery County and is bordered by seven other counties including Autauga, Elmore, Macon, Bullock, Pike, Crenshaw, and Lowndes.

Exhibit 1-1
Geographic Setting



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GENERAL POPULATION

As shown in the U.S. Census Bureau data presented in Exhibit 1-2, the population of Montgomery and Montgomery County has not changed very much over the last eight years. Overall, the City has experienced a very slight decrease. The county population was also shrinking, but the 2006 estimates indicate it may be starting to grow.

Although the City contains only 20 percent of the county's land area, approximately 90 percent of the county's population resides within the city limits. Montgomery County has the third highest population in the State of Alabama. The county population grew about 32 percent between 1960 and 2000, but it has not changed very much since the 2000 U.S. Census.

Exhibit 1-2 also shows the estimated population for Autauga and Elmore counties. Together, these three counties comprise the Metropolitan Planning Organization area. According to the 2000 and 2006 estimates, Autauga County has grown 13.9 percent and Elmore County has grown 14.9 percent. These sizeable increases, which take in the nearby cities of Prattville, Millbrook, and Wetumpka among others, help explain some of the slower growth occurring in Montgomery. However, the number of military personnel assigned to local facilities may also contribute to population decline. In contrast, the population of the other cities is estimated to have grown 16.3 percent, 32.6 percent and 16.8 percent, respectively, between July 1, 2000 and July 1, 2005.

Exhibit 1-2
U.S. Census Population Estimates

Year	Montgomery City	MPO Counties		
		Montgomery	Autauga	Elmore
April 1, 2000	201,716	223,510	43,671	65,874
July 1, 2000	201,593	223,385	43,911	66,261
July 1, 2001	201,012	222,789	44,724	67,651
July 1, 2002	201,039	222,957	45,566	69,039
July 1, 2003	200,609	222,319	46,323	70,547
July 1, 2004	200,223	221,802	47,458	71,829
July 1, 2005	200,127	221,619	48,612	73,937
July 1, 2006	201,996	223,571	49,730	75,688

In most cities, a large portion of residential and commercial growth has shifted to suburban and rural areas. Meanwhile, growth in the older, established urbanized area slows down or remains constant, some cities start losing population. It appears Montgomery has experienced a slight increase in population. Regardless, changes in population and development patterns will probably influence travel patterns by increasing commute distances and creating new, suburban job sites.

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MARKET REVIEW

To determine how well the current bus routes serve major market groups in Montgomery, a set of maps was prepared that compare the existing route alignments to several characteristics that affect travel and transit demand. Exhibit 1-3 through Exhibit 1-11 compares the MATS routes to the following variables:

- Population Density
- Female population
- Senior (over 65) population
- Youth (under 18) population
- African-American population
- Hispanic population
- Low income population (under \$20,000 household income)
- Major transit trip generators
- Occupied housing units with no vehicles

These characteristics were chosen because of their effect on transit demand and selected characteristics of current passengers that were identified in a survey conducted on board MATS buses for the TDP. The maps show data for census block groups, which are a statistical subdivision of a larger census tract. Block groups are the lowest level geographic entity for which decennial census data is tabulated. They usually contain between 300-3000 people with the optimum size being 1500 people.

Population Density

Exhibit 1-3 shows how well the existing routes serve the census block groups with the highest population densities. Density of population is a reliable indicator of potential ridership because large numbers of people in a small area offer an opportunity to provide efficient transit service.

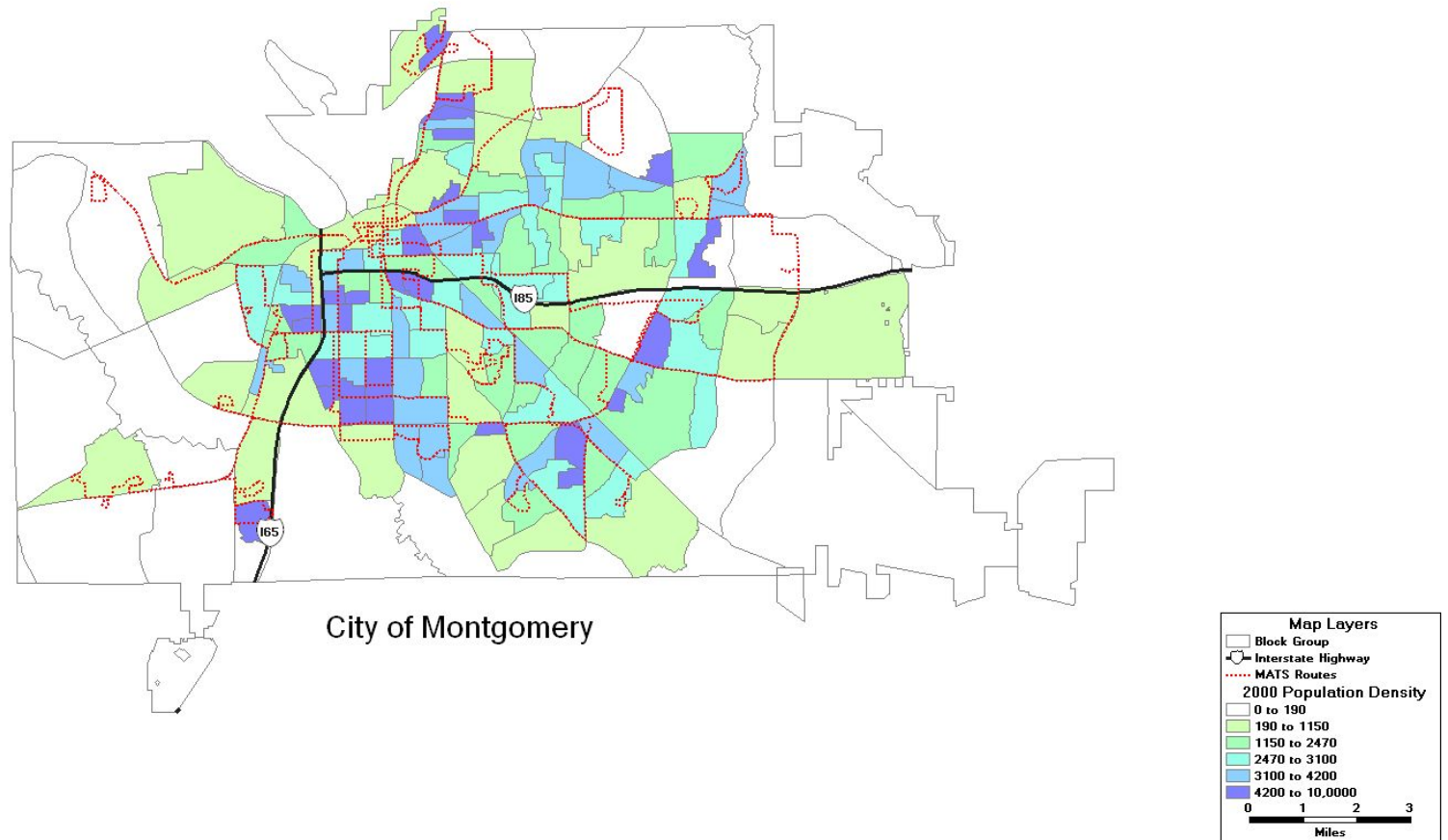
The Transit Capacity and Quality of Service Manual - 2nd Edition created by the Transportation Research Board in 2003 discusses the concept of “transit-supportive areas”. Research used in this document suggests that four jobs or three households per acre are capable of supporting hourly transit service. These levels are equal to about 5,000 persons per square mile. In Exhibit 1-3, the areas with this much density are shown in dark blue.

Female Population Density

While population density is a common predictor of transit ridership, providing service to selected groups that are known to be more dependent on transit is also important. According to the survey of existing passengers conducted for the TDP, 62.9 percent of MATS’ riders are female. A high percentage of female riders might indicate that transit services need to consider security, marketing and transit-oriented developments. For example, locating day care facilities at major

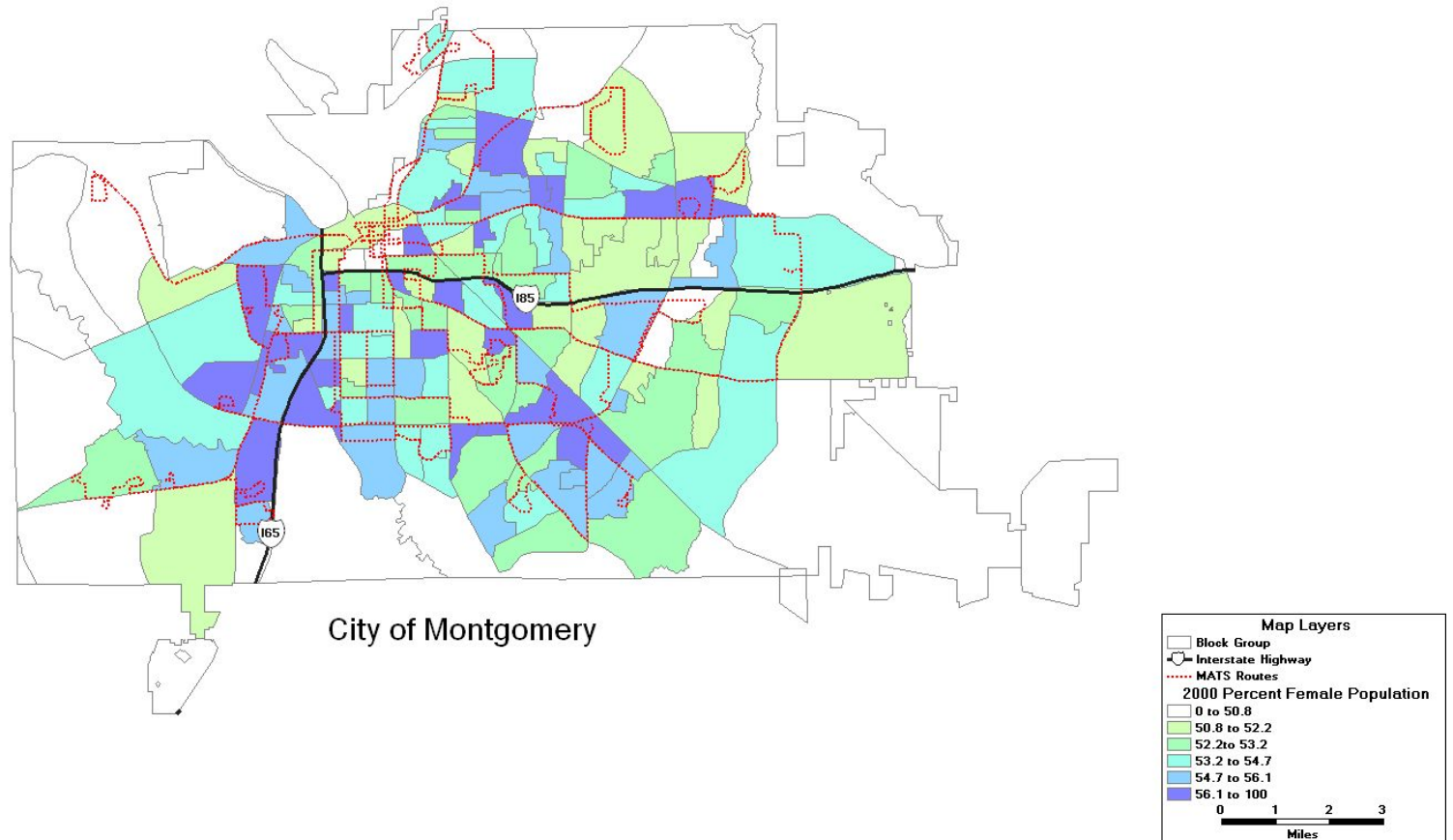
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Exhibit 1-3
Existing Transit System Compared to Population Density



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Exhibit 1-4
Existing Transit System Compared to Female Population Density



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transfer centers is how some systems have recognized the importance of female passengers that need to drop off and pick up young children on their way to and from work.

Senior and Youth Population Density

Seniors age 65 and older and youth aged 10-19 are two other groups that are usually more dependent on transit. Some of the reasons they use transit include not having a driver license or a car, lower incomes, and diminished driving ability. Currently, only 4.5 percent of MATS passengers fall in the senior category while 12.1 percent are under the age of 18. Seniors were identified as a group that is important to serve by several stakeholders interviewed for this study. This group is particularly important due to the projected growth in the number of retired persons.

For seniors, it is important that transit routes be located as close as possible to their trip origins and destinations. Commonly accepted walking distance standards (1/4 mile) are not feasible for all seniors.

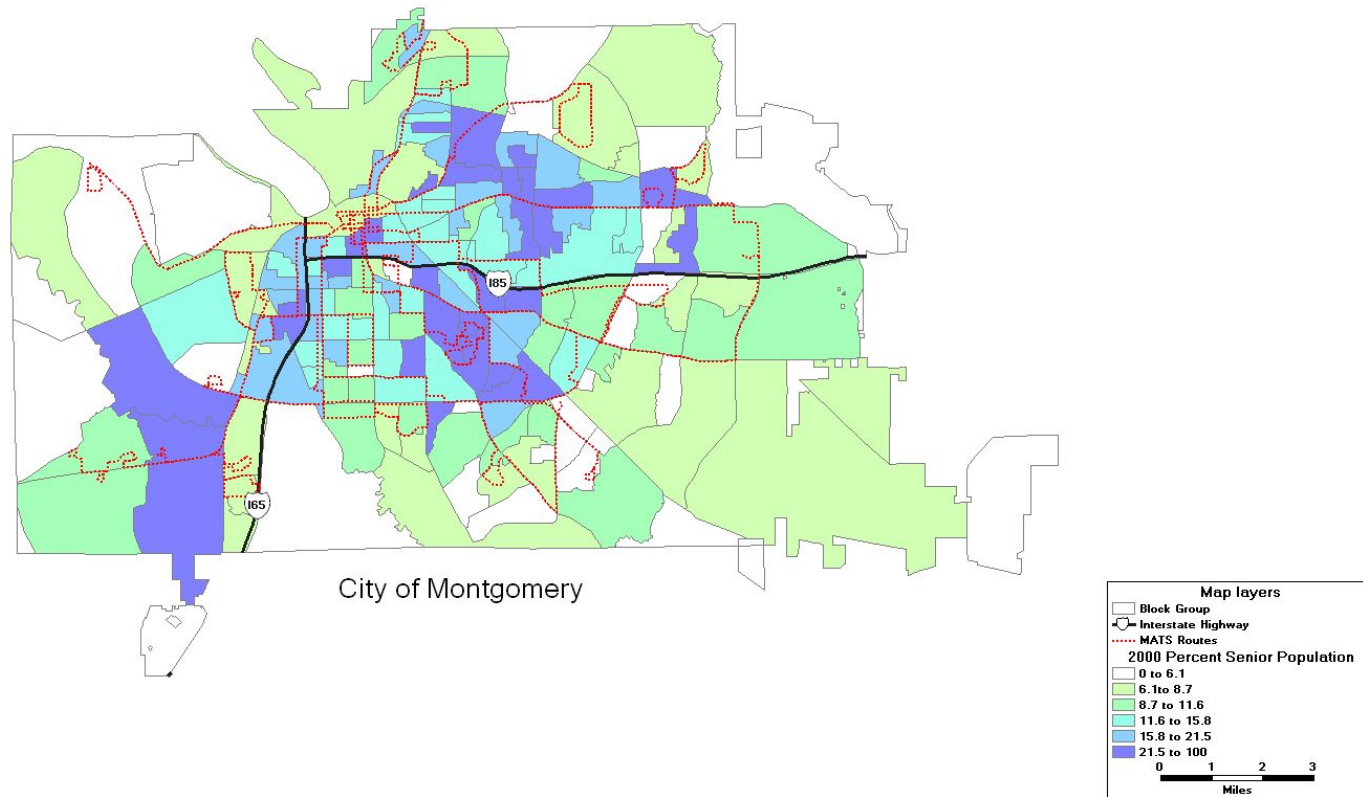
Density of African-American Population

According to the 2000 Census, African-Americans represent approximately 50 percent of the total population. As the following exhibit illustrates, this population group is concentrated in the census block groups found in close proximity to downtown Montgomery, within the I-65 corridor, and in southeastern Montgomery in an area bisected by Woodley Road. The passenger survey found that 83.6 percent of current riders are African-American.

Many of the block groups that contain high concentrations of African-Americans are within walking distance of existing transit routes. Although many block groups contain significant numbers of African-Americans, it will be important to explore the need for improved services in the areas with the highest densities.

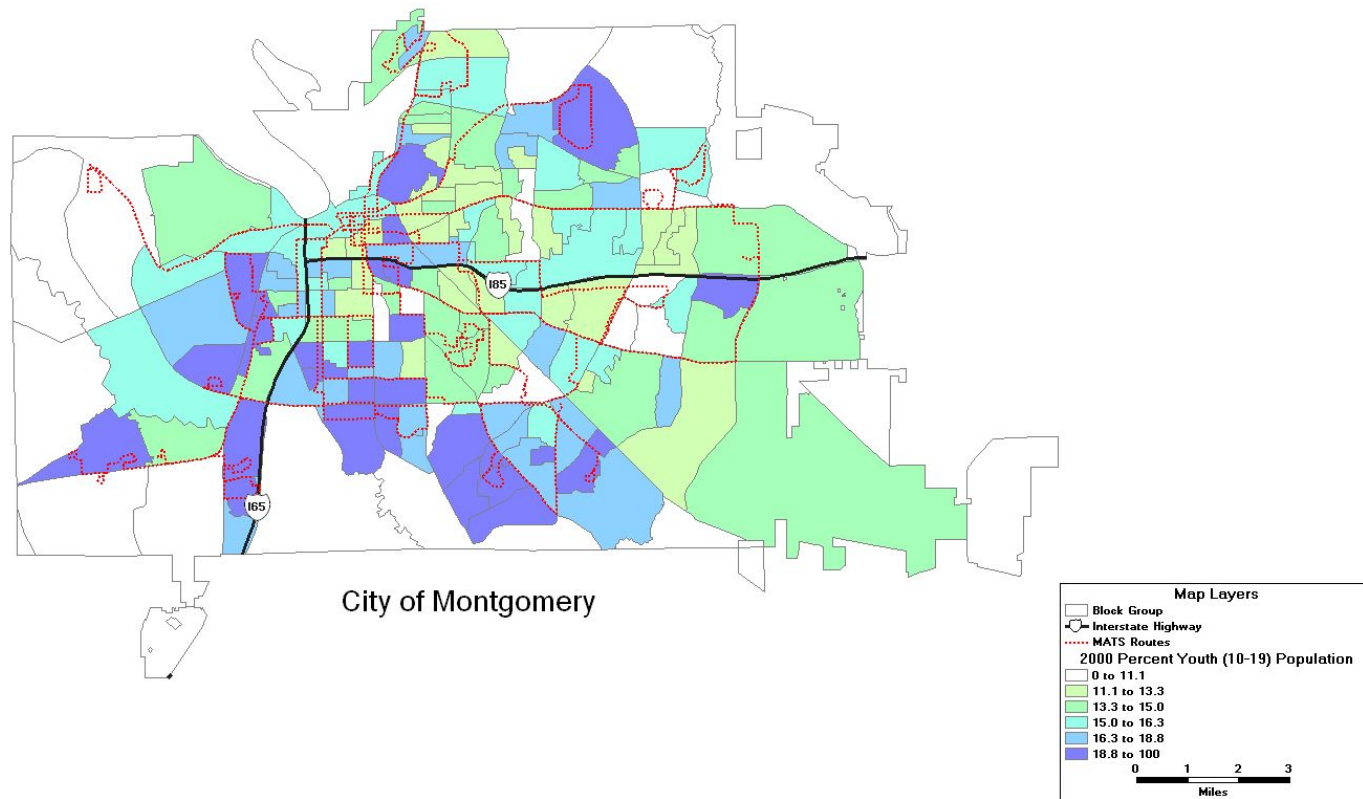
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Exhibit 1-5
Existing Transit System Compared to Senior Population Density



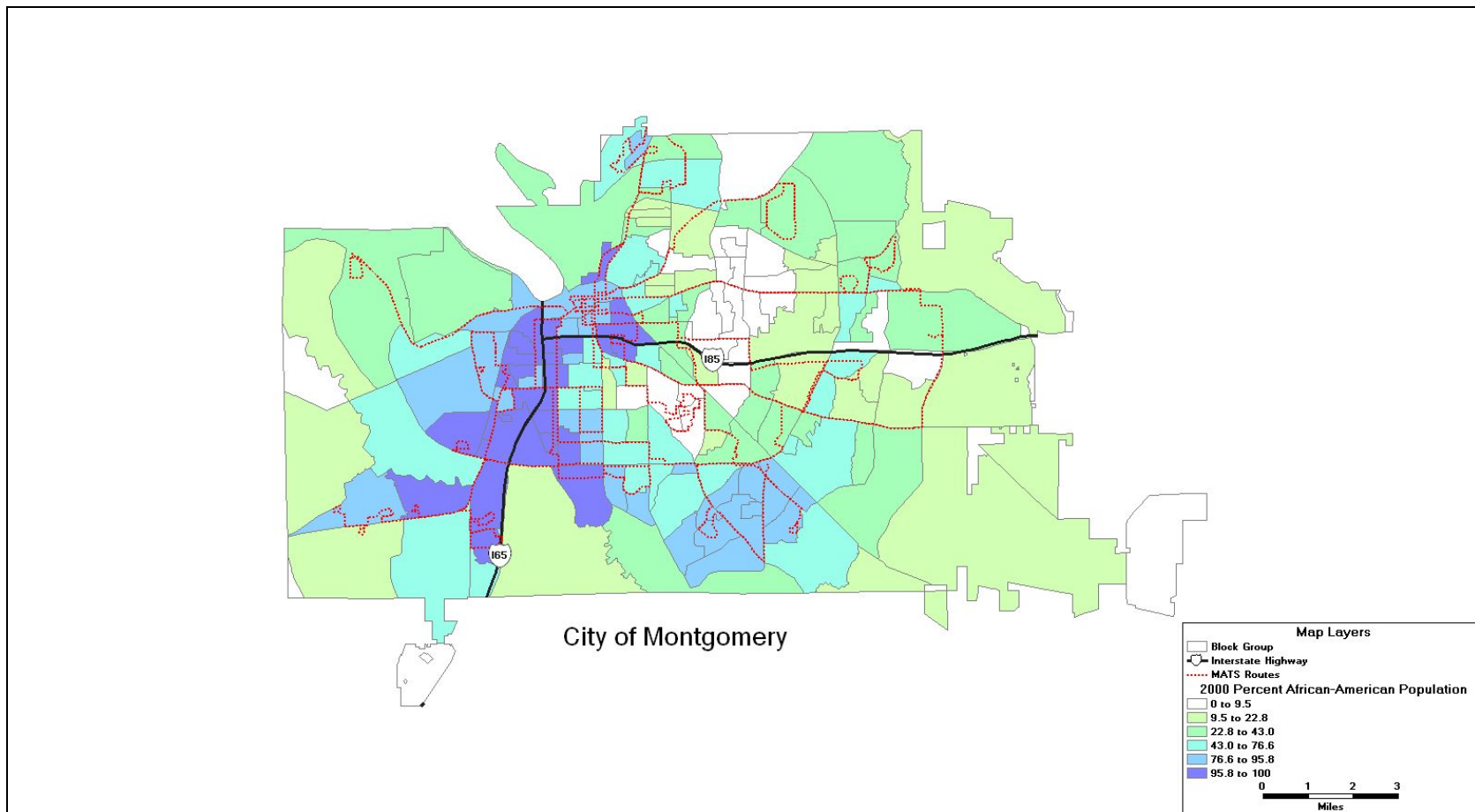
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Exhibit 1-6
Existing Transit System Compared to Youth Population Density



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Exhibit 1-7
Existing Transit System Compared to African-American Population



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Density of Hispanic Population

The Hispanic population was identified by the Montgomery Transportation Coalition, along with the homeless, residents of public housing and persons with disabilities, as the groups with the greatest transportation needs. In 2004, the MTC engaged a consultant to conduct a random telephone survey of the entire Montgomery population and in-person interviews with a sample of the four special needs groups.

According to this survey, approximately five percent of Hispanic adults use public transportation. More importantly, almost all Hispanics indicated they would use public transportation if it served their neighborhood. In the 2000 Census, 2,484 Hispanics or Latinos were residing in Montgomery. None of the census block groups has very high concentrations of Hispanics. The following exhibit shows that many of the block groups with the highest numbers currently do have access to public transportation. The 2007 passenger survey indicated that less than one percent of MATS' riders are of Hispanic origin.

Density of Low Income Population

Income is another key indicator of the need for public transportation. For this analysis, the MATS system was compared to the distribution of individuals 18 years and over that are below poverty level. Exhibit 1-9 shows that most of the areas with a concentration of persons that fit this category are pretty well served. Many of the routes that operate in these areas have high weekday ridership.

Density of Occupied Housing Units with 0 Cars Available

Another key indicator of transportation demand is the distribution of households that do not have any cars available. Not having any vehicles available indicates the members of that household must rely on relatives or friends for transportation, walk, or use public transportation. To further increase the importance of public transportation in these areas, the block groups with the highest concentration of households with no car are similar to the areas that have the highest concentration of other characteristics that usually suggest a strong need for public transportation.

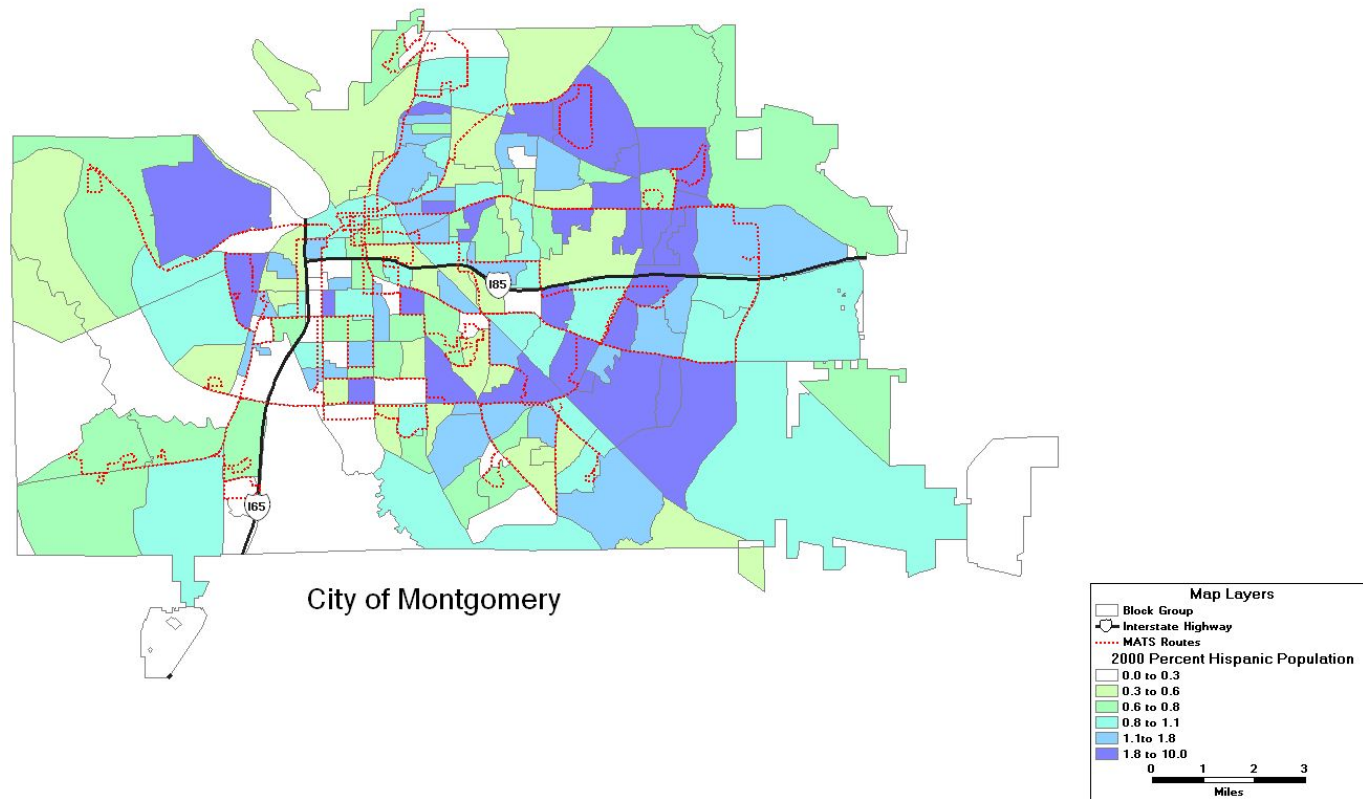
These areas include those in close proximity to downtown Montgomery, west of downtown and southwest Montgomery. These areas are recognized as some of Montgomery's older residential neighborhoods.

Employment

The last exhibit, which was prepared by the City of Montgomery - Transportation Planning Division, shows the total employment by traffic analysis zone. The exhibit also shows that MATS operates through or in close proximity to all the areas with the highest employment. Some of

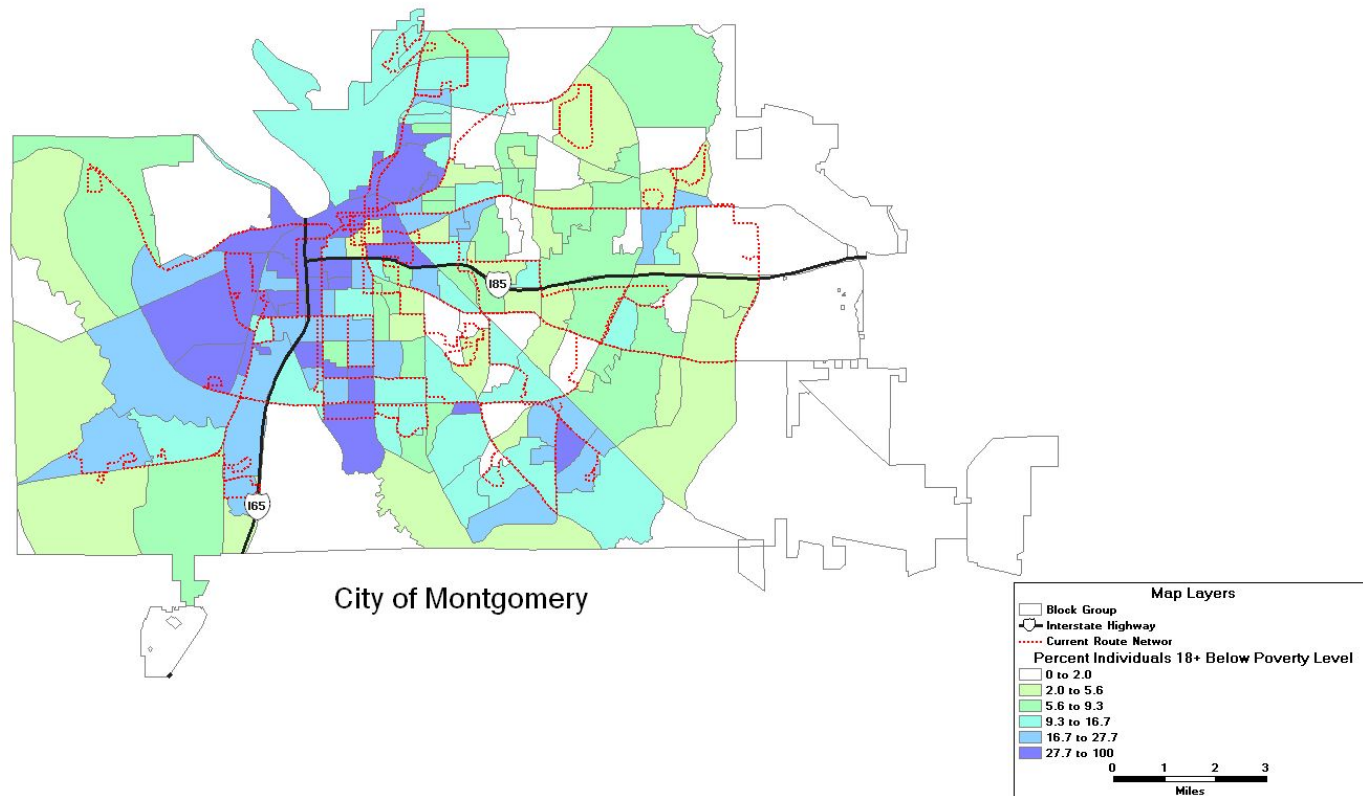
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Exhibit 1-8
Existing Transit System Compared to Hispanic Population Density



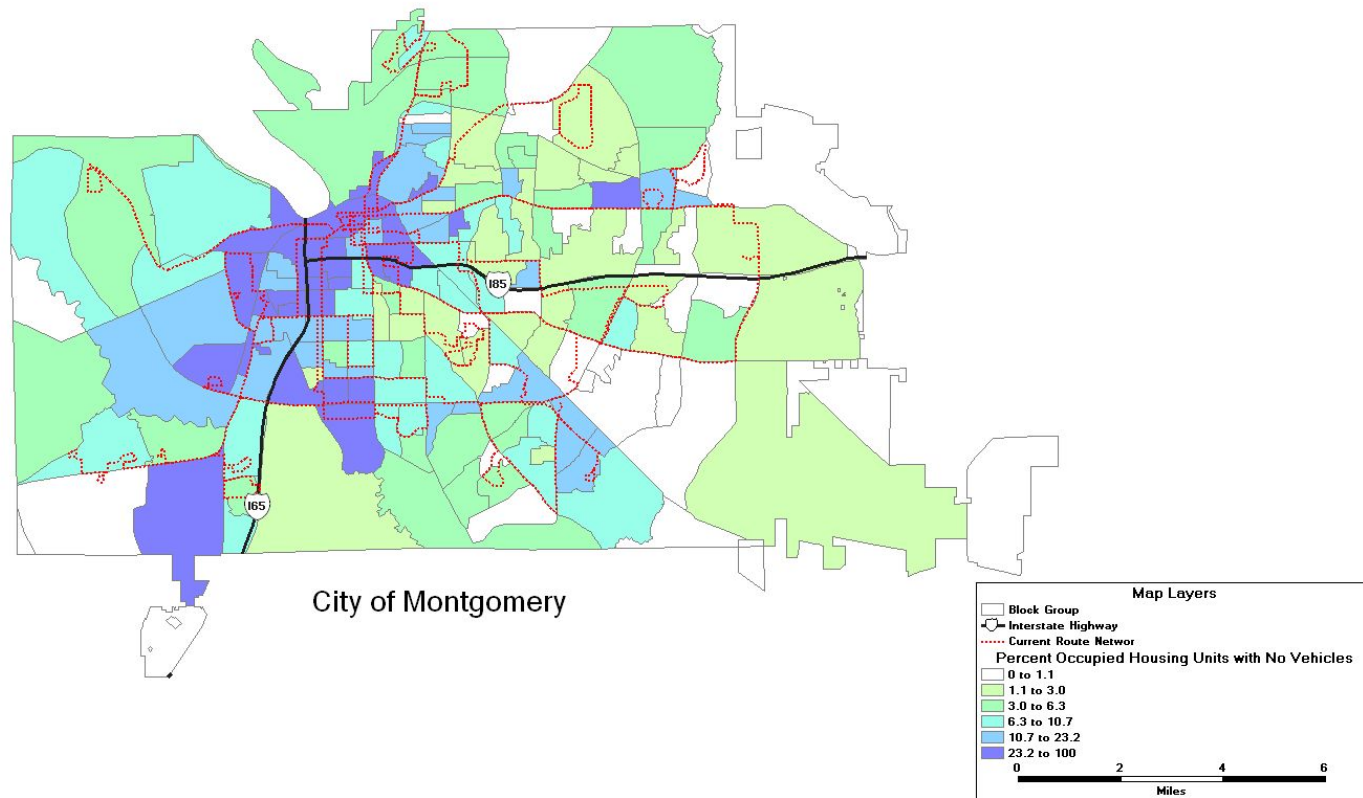
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Exhibit 1-9
Existing Transit System Compared to 18+ Population Below Poverty Level



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Exhibit 1-10
Existing Transit System Compared to Households with No Cars

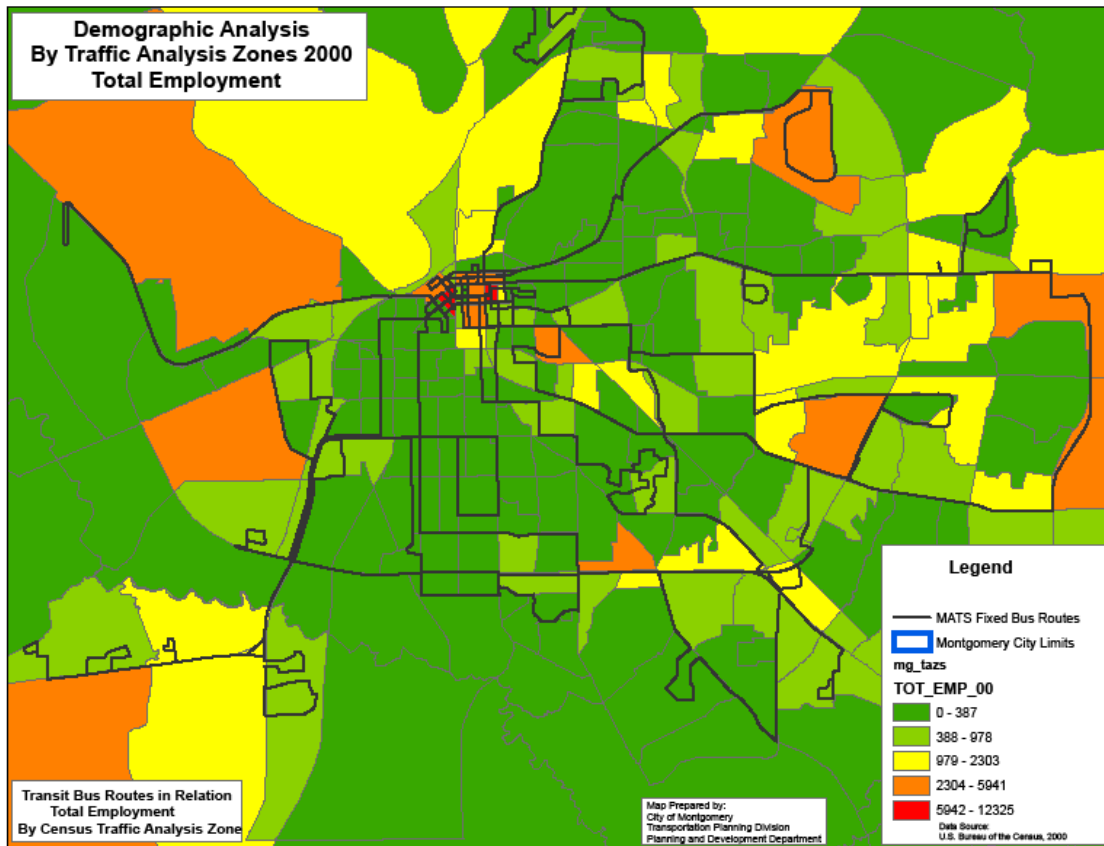


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these areas include the Gunter Industrial Park, downtown/state government, and the light-industrial zone south of Selma Highway.

Exhibit 1-11
Year 2000 Total Employment



MATS Transit Development Plan

CHAPTER 2 - REVIEW OF EXISTING SERVICES

This chapter presents an inventory of the existing routes, which is an important element of all transit system reviews. Current levels of service and the resources associated with operating the existing routes and schedules are covered. Recent trends are also reviewed to assess how MATS arrived at the current service levels. One of the major purposes of this review is to identify the resources that might be available for service improvements. Parts of the service data are also used in the development of a cost allocation model and route-level financial performance review described in Chapter 4.

OVERALL SYSTEM DESIGN

The history of public transportation in the City of Montgomery is reviewed in Exhibit 2-1. Transit service has been offered since 1886 when a private company began operating the first citywide electric trolley system. Like many other cities, the trolleys were eventually replaced by a rubber-tired transit system. The City purchased the transit system in the mid-1970s when many private companies were abandoning public transportation and the federal government began offering transit, operating subsidies. After the City purchased the transit system, they contracted with a private company to manage and operate the system.

Beginning in 1998, the City embarked on a two-year trial with a form of demand-response public transportation that replaced all the local routes. The new service was, arguably, the reason for a major decline the quality of public transportation service and a steep decrease in ridership. Based on a desire to improve service, the City reintroduced fixed route transit in March 2000 and has re-established a public transportation system that currently consists of 18 fixed routes.

MATS operates three types of public transportation service within the City of Montgomery, which are described in the following sections. In accordance with the Americans with Disabilities Act (ADA), MATS also operates a complementary paratransit service for disabled persons.

Local Routes

MATS provides local transit service on 14 local routes that are shown in Exhibit 2-2. These routes operate all day Monday through Saturday. Five of the routes originate at the MATS Transfer Center located near the intersection of Fairview Avenue and the Mobile Highway; eight routes start and end in downtown Montgomery, and one route originates at the Montgomery Mall.

Downtown Trolley Routes

With the initiation of a new Lunch Trolley Express in April 2007, MATS now operates two trolley routes in downtown Montgomery. The second trolley route, the Lightning Route, actually consists of two separate loops called the Green Loop and Gold Loop. Both loops originate at the historic Union Station building, which also houses the Montgomery Convention and Visitors Bureau. The route alignments for the trolley routes are shown in Exhibit 2-3.

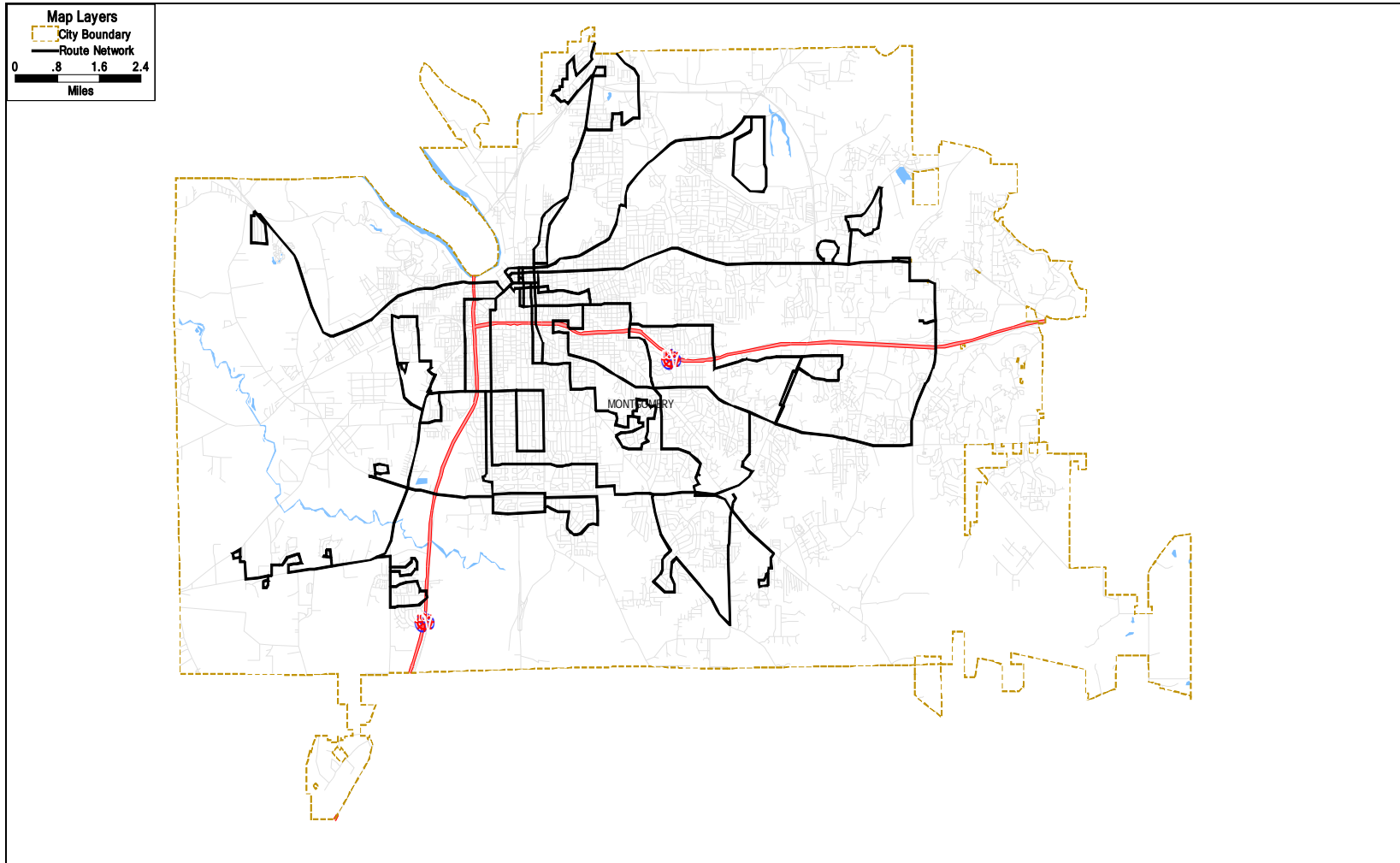
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Exhibit 2-1
History of Public Transportation in Montgomery

PHASE	YEAR	IMPROVEMENTS
	1886	Capital City Railway Company inaugurated America's first citywide electric trolley system known as the Lightning Route
	1936	Electric trolley cars replaced by rubber-tired buses
	1974	City purchased the Montgomery Area Transit System and contracted with private company to manage the system
	1998	Existing system, consisting of 17 fixed routes, replaced with Demand and Response Transit (DART) system. DART was a call-in reservation service designed to provide more effective service.
	2000	Due to concern about the effectiveness of DART, the City reintroduced fixed-route transit on a trial basis with three new routes: <ul style="list-style-type: none"> ▪ Route 1 AUM ▪ Route 2 Eastdale Mall ▪ Route 3 Montgomery Commons
I.	2001	Six new fixed routes added to system including: <ul style="list-style-type: none"> ▪ Route 4 Boylston ▪ Route 5 Montgomery Mall ▪ Route 6 Southlawn Twin Gates ▪ Route 7 Maxwell ▪ Route 8 Gunter Annex ▪ Route 9 Virginia Loop Road
II.	2002	<ol style="list-style-type: none"> 1. Expanded transit system by adding three new routes - Route 10 South Court Street, Route 11 Ridgecrest and Route 12 Smiley Court/Gibbs Village 2. Modified three existing routes - moved Route 1 off I-85; Route 2 expanded to Wares Ferry Road Elementary School, and moved Route 4 to N. Decatur St. instead of N. Ripley St. and decreased frequency from 45 minutes to 60 minutes.
III.	2003	<ol style="list-style-type: none"> 1. Added new Route 15, operating during peak only 2. Extended Route 1 AUM to Wal-Mart on Atlanta Highway 3. Increased peak (6am-9am and 2pm-6pm) frequency from 60 minutes to 30 minutes on Route 2 Eastdale Mall, Route 5 Montgomery Mall and Route 12 Smiley Court/Gibbs Village
IV.	2004	Implemented fixed route service on Saturdays
V.	2005/2006	<ol style="list-style-type: none"> 1. Streamlined Route 1 AUM alignment; increase peak frequency. 2. Extended Route 9 Virginia Loop to Regency Park Community 3. Increased Route 10 Court Street peak frequency to 30 minutes from 60 minutes 4. Extended Route 11 Ridgecrest to serve Catholic Social Service complex on Narrow Lane Road 5. Expanded Route 15 Allendale Road weekday service to 12-hour daily operation; add Saturday service 6. Added new Route 16 Twin Oaks 7. On Saturdays, added one hour of morning service to all routes 8. Completed dissolution of Demand and Response Transit (DART)
VI.	2007	<ol style="list-style-type: none"> 1. Extended weekday hours of operation by two hours to 9:45 PM 2. Extended Saturday hours of operation to 7:30 PM 3. Extended Route 6 Southlawn/Twin Gates to Dannelly Pines subdivision and Montgomery Regional Airport 4. Created new downtown Lunch Trolley Express 5. Modified Route 7 Maxwell alignment to provide service to Hunters Walk and Brick Yard Estates

Exhibit 2-2
MATS Local Route Network



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Exhibit 2-3
MATS Downtown Trolley Routes



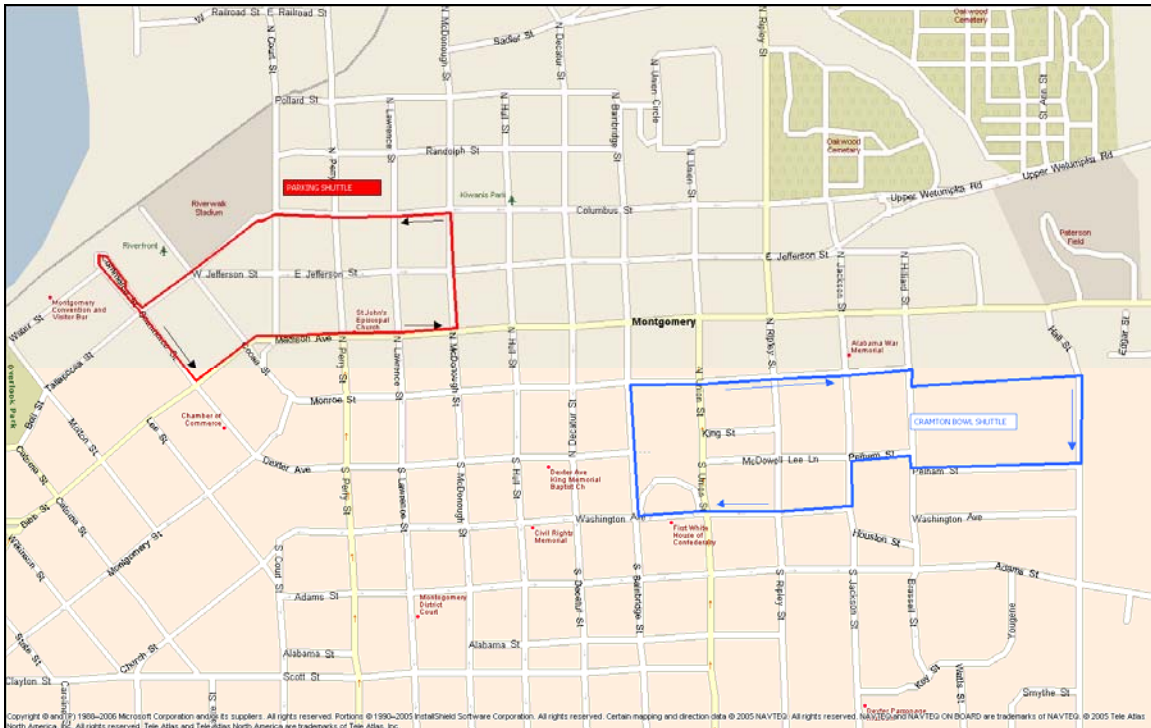
Parking Shuttles

Currently, two dedicated parking shuttles are operated in downtown Montgomery. These shuttles run during the mornings and afternoons only. The parking shuttle alignments are illustrated in Exhibit 2-4.

The parking shuttle that serves the western portion of the downtown area will be discontinued after the new hotel is completed.

CHAPTER 2 - REVIEW OF EXISTING SERVICES

Exhibit 2-4
MATS Parking Shuttles



ROUTE-LEVEL OPERATING CHARACTERISTICS

The MATS operates a combination of fixed routes, parking shuttles and downtown trolley services. This section examines the basic features of the individual routes and the amount of service currently provided.

Some routes are interlined with another route for scheduling purposes. This means the amount of time required to complete one round trip on one route is combined with another route so that an improved frequency of service can be provided on both routes. Another use for route interlining is to create headways so all the routes can meet at a common transfer point at the same time to facilitate passenger transfers. The existing weekday route interlines include Route 3/Route 11 and Route 7/Route 8. The Saturday combinations include Route 4/Route 15, Route 7/Route 8, and Route 6/Route 11.

Exhibit 2-6 through Exhibit 2-9 describes some of the key characteristics of the existing routes.

CHAPTER 2 - REVIEW OF EXISTING SERVICES

Span of Service

Exhibit 2-6 shows the current span of service on weekdays and Saturdays. The span of service, or hours of operation, represent the time the first bus starts running in the morning and the time the last bus on that route stops running in the evening.

MATS recently expanded the hours of operation by extending the time service ends on all the local routes. Most routes had approximately two additional hours of service added to their previous schedule. In the morning, most local routes are start running between 5:20 AM and 6:35 AM. The exception is Route 11 Ridgecrest, which starts at 4:40 AM. The same routes stop running between 9:05 PM and 9:35 PM, with the exception of Route 15, which ends at 4:35 PM.

Frequency of Service

The hours that transit operates and how often the buses run have a strong effect on the attractiveness of public transportation. If the buses have a higher frequency of service, passengers do not have to wait as long if they miss a bus or do not know the actual schedule. One comment heard during the public input tasks involved two-hour waits on some routes when a passenger missed a bus. Other comments concerned how the current service frequencies limit the times when passengers must start their trips. For example, a route that operates every hour versus one that operates every 30 minutes might force a passenger to leave 30 minutes earlier and, perhaps, wait another 30 minutes longer to start their return trip.

As noted earlier, the City is rebuilding the fixed route transit service that was supplanted in 1998. At this time, the frequency of service on most routes is, arguably, the minimal level of desired service. Passenger productivity and financial feasibility will be reviewed to determine if any improvements can be made to service frequency. The current frequency on all the routes is shown in Exhibit 2-7.

CHAPTER 2 - REVIEW OF EXISTING SERVICES

Exhibit 2-6
Current Span of Service

ROUTE	WEEKDAY	SATURDAY
1 AUM	5:35am - 9:21pm	7:35am - 7:35pm
2 Eastdale Mall	5:35am - 9:35pm	7:35am - 7:35pm
3 Montgomery Commons	5:20am - 9:05pm	7:20am - 7:20pm
4 Boylston	5:35am - 9:35pm	8:35am - 7:35pm
5 Montgomery Mall	5:35am - 9:35pm	7:35am - 7:35pm
6 Southlawn/Twin Gates	5:20am - 9:20pm	7:20am - 8:00pm
7 Maxwell	5:35am - 9:05pm	8:35am - 7:35pm
8 Gunter Annex	5:35am - 9:10pm	7:35am - 6:35pm
9 Virginia Loop	6:00am - 9:29pm	7:20am - 7:20pm
10 S. Court	5:20am - 9:20pm	7:20am - 7:20pm
11 Ridgecrest	4:40am - 9:20pm	8:20am - 7:00pm
12 West Smiley Court/Gibbs Village	5:40am - 9:20pm	6:50am - 7:20pm
12 East Smiley Court/Gibbs Village	6:20am - 9:20pm	7:20am - 6:50pm
13 Cramton Bowl Shuttle	6:30am - 8:30am 3:30pm - 5:30pm	No Service
Parking Shuttle	6:30am - 8:30am 3:30pm - 5:30pm	No Service
14 Lightning Route-Gold	9:00am - 6:00pm	9:00am - 6:00pm
14 Lightning Route-Green	9:20am - 5:40pm	9:20am - 5:40pm
15 Allendale	6:35am - 4:35pm	7:35am - 4:35pm
16 Twin Oaks	5:35am - 9:35pm	7:35am - 7:35pm

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Exhibit 2-7
Current Frequency of Service

ROUTE	FREQUENCY OF SERVICE			
	Peak	Midday	Evening	Saturday
1 AUM	45	45	45	90
2 Eastdale Mall	30	15-30-60	30	60
3 Montgomery Commons	60	60	60	80
4 Boylston	60	60	60	120,60
5 Montgomery Mall	30	60	60	60
6 Southlawn/Twin Gates	60	60	60	100
7 Maxwell	40 & 45	35-55	40,45	120
8 Gunter Annex	30-55	30-55	40,45	120
9 Virginia Loop	45	45	45	45
10 S. Court	30	60	60	60
11 Ridgecrest	60	60	60	100
12 West Smiley Court/Gibbs Village	30	60	60	60
12 East Smiley Court/Gibbs Village	30	60	60	60
13 Cramton Bowl Shuttle	10	-	-	-
Parking Shuttle	10	-	-	-
14 Lightning Route-Gold	20	20	-	20
14 Lightning Route-Green	20	20	-	20
15 Allendale	60	60	-	120
16 Twin Oaks	60	60	60	60

Scheduled Trips

The trips that are provided on any transit route are a function of several factors. Included are the length of the route, amount of time needed to complete one trip, and the number of vehicles assigned to the route. Exhibit 2-8 shows the number of trips operated in each direction on weekdays and Saturdays. The lower number of Saturday trips is due to the shorter hours of operation and less frequent service. The shuttles and the Lightning Route have a high number of trips due to the short alignments. The shuttle vehicles can complete a round trip in about 10 minutes while the Lightning Route only takes 20 minutes to complete the Gold Loop or the Green Loop.

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Exhibit 2-8
Scheduled Trips

ROUTE	OUTBOUND		INBOUND	
	Weekday	Saturday	Weekday	Saturday
1 AUM	21	8	20	8
2 Eastdale Mall	25	12	25	12
3 Montgomery Commons	16	9	15	9
4 Boylston	16	7	16	7
5 Montgomery Mall	23	12	23	12
6 Southlawn/Twin Gates	16	8	16	8
7 Maxwell	22	6	22	6
8 Gunter Annex	22	6	22	6
9 Virginia Loop	21	16	21	16
10 S. Court	23	12	23	12
11 Ridgecrest	17	7	17	7
12 West Smiley Court/Gibbs Village	24	13	24	13
12 East Smiley Court/Gibbs Village	23	12	23	12
13 Cramton Bowl Shuttle	12am 12 pm	-	-	-
Parking Shuttle	12am 12 pm	-	-	-
14 Lightning Route-Gold	27	27	-	-
14 Lightning Route-Green	27	27	-	-
15 Allendale	10	5	10	5
16 Twin Oaks	16	12	16	12

Route Mileage, Scheduled Run Time, and Average Speed

Exhibit 2-9 describes the remaining basic operating and service characteristics. These elements are closely associated with transit scheduling.

The round trip distance of a transit route is important because it can control the level of service that is feasible. For example, providing a higher frequency of service on a long route would require a much higher number of vehicles. If those vehicles are not available or they are too expensive to operate, the desired service frequency cannot be provided. Very long routes sometimes experience more delays due to traffic congestion, which can result in poor on-time performance. The average speed of the transit vehicle and the amount of time that it takes to complete a round trip also affect the frequency of service. Average vehicle speeds are critical because of their relationship to vehicle and passenger safety.

CHAPTER 2 - REVIEW OF EXISTING SERVICES

Exhibit 2-9
Route Distances, Run Times and Average Speeds

ROUTE	ROUND TRIP	SCHEDULED RUN TIME		AVERAGE MPH	
	DISTANCE	Weekday	Saturday	Weekday	Saturday
1 AUM	27.6	90	90	18.4	18.4
2 Eastdale Mall	18.9	60	60	18.9	18.9
3 Montgomery Commons	16.1	80	80	12.1	12.1
4 Boylston	14.4	60	60	14.4	14.4
5 Montgomery Mall	16.8	60	60	16.8	16.8
6 Southlawn/Twin Gates	18.5	60	60	18.5	18.5
7 Maxwell	15.2	20-50	60	varies	15.2
8 Gunter Annex	14.8	40,45,50	60	varies	14.8
9 Virginia Loop	12.4	45	45	16.5	16.5
10 S. Court	11.5	60	60	11.5	11.5
11 Ridgecrest	12.3	40	40	18.5	18.5
12 West Smiley Court/Gibbs Village	9.0	30	30	18.0	18.0
12 East Smiley Court/Gibbs Village	8.6	30	30	17.2	17.2
13 Cramton Bowl Shuttle	1.3	10	-	7.8	-
Parking Shuttle	1.5	10	-	9.0	-
14 Lightning Route-Gold	2.8	20	20	8.4	8.4
14 Lightning Route-Green	3.0	20	20	9.0	9.0
15 Allendale	12.6	60	60	12.6	12.6
16 Twin Oaks	14.9	60	60	14.9	14.9

Vehicle Requirement

The vehicles needed to operate the existing levels of service described in the preceding sections are identified in Exhibit 2-10.

FIXED-ROUTE FLEET

According to the Federal Transit Administration, the service life of a transit vehicle begins on the day the vehicle is placed in revenue service. The federal minimum service life for buses is:

- Large (35'-40' and articulated) heavy-duty buses - 12 years of service or 500,000 miles
- Medium-size (30') heavy-duty buses - 10 years or 350,000 miles
- Medium-size (30') medium-duty buses - 7 years or 200,000 miles
- Medium-size (25'-35') light-duty buses - 5 years or 150,000 miles
- Other light-duty vehicles such as small buses and regular and specialized vans - 4 years or 100,000 miles

CHAPTER 2 - REVIEW OF EXISTING SERVICES

Exhibit 2-10
Transit Vehicles Required for Current Schedule

ROUTE	VEHICLES	
	Weekday	Saturday
1 AUM Campus	2	1
2 Eastdale Mall	2	1
3 Montgomery Commons	1	1
4 Boylston	1	0.5
5 Montgomery Mall	2	1
6 Southlawn/Twin Gates	1	0.5
7 Maxwell	1	0.5
8 Gunter Annex	1	0.5
9 Virginia Loop	1	1
10 S. Court	2	1
11 Ridgecrest	1	0.5
12 Smiley Court/Gibbs Village	2	1
13 Crampton Bowl Shuttle	1	0
Parking Shuttle	1	0
14 Gold Loop	1	1
14 Green Loop	1	1
15 Allendale	1	0.5
16 Twin Oaks	1	1
TOTAL	23.0	13.0

Source: Montgomery Area Transit System

Exhibit 2-11 shows the current fixed route fleet. Because fixed route service was brought back in 2000-2001, the vehicles are relatively young and replacement vehicles will not required for several years.

The current fixed route fleet contains three types of vehicles and three different sizes for the Thomas-built vehicles. The size and seated capacity of these vehicles are shown in the following table.

Vehicle Sizes and Capacity

Vehicle	Size	Seated Capacity
Chance	Trolley	28
Thomas	30'	28
Thomas	32"	31
Thomas	35'	31
Ford Goshen		10

CHAPTER 2 - REVIEW OF EXISTING SERVICES

Exhibit 2-11

Roster of Fixed Route Transit Vehicles

Bus No.	Year	Make	Model	Placed in Service	End of Service
1956	1956	GMC	S376	08.18.04	Unknown
8543	1985	Chance	VS24	08.03.87	Unknown
9982	1999	Chance	AH28	04.01.99	04.01.11
9983	1999	Chance	AH28	04.01.99	04.01.11
9984	1999	Chance	AH28	04.01.99	04.01.11
0185	2000	Thomas	SLF	02.21.01	02.21.12
0400	2002	Thomas	SLF235	10.06.04	10.06.14
0401	2002	Thomas	SLF235	10.06.04	10.06.14
0393	2003	Thomas	SLF230	09.19.03	09.19.13
0394	2003	Thomas	SLF230	09.19.03	09.19.13
0395	2003	Thomas	SLF230	09.19.03	09.19.13
0396	2003	Thomas	SLF230	09.19.03	09.19.13
0397	2003	Thomas	SLF230	09.19.03	09.19.13
0398	2003	Thomas	SLF230	09.19.03	09.19.13
0386	2003	Thomas	SLF230	10.20.02	10.20.12
0387	2003	Thomas	SLF230	10.20.02	10.20.12
0388	2003	Thomas	SLF230	10.20.02	10.20.12
0389	2003	Thomas	SLF230	10.20.02	10.20.12
0390	2003	Thomas	SLF230	10.20.02	10.20.12
0391	2003	Thomas	SLF230	10.20.02	10.20.12
0392	2003	Thomas	SLF230	10.20.02	10.20.12
0502	2005	Thomas	SLF232	01.03.06	01.06.16
0503	2005	Thomas	SLF232	01.03.06	01.06.16
0621	2006	FORD	GOSHEN	02.10.06	02.10.16
0623	2006	FORD	GOSHEN	02.10.06	02.10.16
0618	2006	FORD	GOSHEN	02.13.06	02.13.16
0624	2006	FORD	GOSHEN	02.13.06	02.13.16
0616	2006	FORD	GOSHEN	02.14.06	02.14.16
0617	2006	FORD	GOSHEN	02.17.06	02.17.16
0620	2006	FORD	GOSHEN	02.17.06	02.17.16
0615	2006	FORD	GOSHEN	02.24.06	02.24.16
0619	2006	FORD	GOSHEN	02.24.06	02.24.16
0622	2006	FORD	GOSHEN	02.24.06	02.24.16

FARE STRUCTURE

The fare structure is illustrated in the following table. The base adult fare for a one-way trip is \$1.00. Transfer slips, which are given to passengers that need to use more than one route to reach their final destination, are free.

CHAPTER 2 - REVIEW OF EXISTING SERVICES

MATS Fare Structure

SINGLE RIDE: (one-way trip)	
Fixed Route	\$1.00
Transfer	Free
Senior/Disabled	\$0.50
Student	\$0.50

In order to comply with federal requirements, recipients of transit systems that receive Section 5307 funds must allow elderly and disabled persons and all Medicare cardholders to ride fixed route services during the off-peak period for a fare that is one-half the base fare charged to other persons during the peak period. MATS exceeds this requirement by offering the elderly and disabled fare during all hours of operation. Senior riders are defined as those 65 years of age and older. Passengers that qualify for the senior, disabled, or Medicare fares must present their documentation at the MATS office and obtain a free photo identification card that can be used to receive the reduced fares.

MATS also provides two pre-paid fare options, or passes, as shown in the following table.

Pre-Paid Fare Options

WEEKLY PASS:	
Regular Fare	\$10.00
Student	\$7.50
Senior/Disabled	\$5.00
MONTHLY PASS:	
Regular Fare	\$35.00
Student	\$17.50
Senior/Disabled	\$17.50

MATS Transit Development Plan

CHAPTER 3 - SURVEY FINDINGS

A key element of the TDP is a set of surveys and other tasks that were completed to discern local public transportation issues, travel needs and the characteristics of current transit passengers. This section presents the findings of the:

- Stakeholder interviews
- Bus operator survey
- Public meeting
- On-board passenger survey

The surveys were undertaken so the opinions of individuals and groups that use transit or have a genuine interest in helping improve public transportation are carefully considered in the development of the recommended transit improvements. The findings also helped update the transit goals and objectives.

STAKEHOLDER INTERVIEWS

The primary purpose of stakeholder interviews is to obtain feedback from community leaders and key staff about the transit system and the service it supplies. One-on-one and group interviews were conducted. Representatives from the City administration, City planning/MPO staff, Montgomery Public Schools, Department of Human Resources, Visitors and Convention Bureau, Montgomery Transportation Coalition, and other organizations were interviewed during the week of April 23, 2007. A City Transportation Planning Department Division Head and the MATS General Manager helped identify the persons interviewed. The persons that participated in this phase of the project include:

City of Montgomery

Mr. Jeff Downes, Executive Assistant to the Mayor
Mr. Michael Briddell, Executive Assistant to the Mayor
Mr. Mike Washington, Department of Parks and Recreation

City of Montgomery, Department of Planning and Development

Mr. Ken J. Groves, Jr., Director
Mr. Robert E. Smith, Jr., Senior Planner, Transportation Planning Division Head
Mr. Kelvin L. Miller, Montgomery Area Transit System, General Manager
Ms. Lynda Wool, Senior Planner
Mr. James Askew, Analyst, Transportation Planning
Ms. Aisha McGough, Grants Coordinator-City of Montgomery
Mr. Desmond Wilson, Grants Coordinator-Community Development
Ms. Margaret Ball, Grants Coordinator-Community Development
Ms. Erin Hardin, GIS Coordinator
Ms. Kathryn B. Chamberlain, GIS Analyst
Ms. Allison Settles, Planner
Mr. Jonathon Langley, Planner
Ms. Christy Anderson, Planner

Ms. Lynn Beshear, Envision 2020, Executive Director
Mr. Craig G. Cornwell, U.S. Department of Agriculture, Office of the General Counsel, Assistant Regional Attorney
Ms. Bobbie Murphy, Alabama Department of Human Resources

MATS Transit Development Plan

CHAPTER 3 - SURVEY FINDINGS

Ms. Tiffany Arington, Alabama Department of Human Resources
Mr. Johnny Jackson, Montgomery Transportation Coalition
Mr. David Barley, Montgomery Transportation Coalition
Mr. Jon Broadway, Montgomery Transportation Coalition
Mr. Michael B. Cox, Montgomery Public Schools
Mr. Willie J. Thomas, Montgomery Public Schools
Ms. Ann Clemons, Montgomery Chamber, Convention and Visitors Bureau
Ms. Derrin H. McNear, Montgomery County Community Corrections

The primary objectives of the individual interviews and group discussions were to:

- Identify community issues
- Understand the importance of public transportation
- Measure level of satisfaction with improvements made since 2000
- List MATS' strengths and weaknesses
- Seek suggestions for future improvements

A set of eight general questions was used to help guide the interviews. Broad, general questions were selected to allow the interviews to be flexible and provide an opportunity to explore the specific interests of each individual. The following summarizes the central themes and comments that were discussed. All these comments were considered during the development of recommended service improvements.

Image

Most stakeholders believe that the image of MATS has improved in recent years. The principal reason for the improvement is the reinstatement of fixed-route services. Prior to 2000, the former fixed-route transit system had been mostly replaced with a demand-response system that was not very well received.

System Strengths

Many of the stakeholders recognized that restoring fixed-route transit service in Montgomery was a very positive development. The role of public transportation in the revitalization of downtown Montgomery was also mentioned. Other strengths the stakeholders identified include:

- Cleanliness of buses
- On-time performance
- Helpfulness of drivers
- Downtown trolley service
- Historic bus

MATS Transit Development Plan

CHAPTER 3 - SURVEY FINDINGS

System Challenges

The current system is the product of a series of improvements initiated in 2000. Not surprisingly, the stakeholders identified a number of challenges that still need to be addressed or modifications they believe are needed to sustain the long-term growth of the transit system. Some of the major examples include:

- Serving new employment sites and work schedules
- Working with merchants and employers to garner additional support for public transit
- Improved transit marketing
- Americans with Disabilities Act compliance
- Probable loss of federal operating funds following next U.S. Census
- Current transit enabling legislation and State funding (State legislature to allow a small percentage of highway dollars to be spent on transit)

While it is generally agreed the current system is a “good start”, most of the stakeholders believe there is clear need to expand the current system. Specific improvements they cited include additional routes and higher frequency schedules. City planning staff believes that nothing less frequent than 30-minute service should be provided on all routes.

Several stakeholders stated the system needed to be more user-friendly. One example is timetables with better maps and schedules. Another suggested improvement was a rider’s guide that shows all the routes and schedules in one booklet. For some people, a rider’s guide is easier to understand because it shows the entire system and how the routes are interrelated. Other suggestions to improve customer satisfaction included providing additional shelters, benches and making system information available at a wider range of locations.

Inaccessible bus stops and a lack of pedestrian amenities were identified as major weaknesses. Numerous stakeholders mentioned the problems created by bus stops that are located too close to the street, lack of sidewalks and curb cuts, and the overall condition of many bus stops.

A survey of the current passengers shows that MATS is used extensively by Montgomery residents for work commutes. The stakeholder interviews indicate that workforce mobility and a growing senior population are the two groups that may offer the greatest opportunity for future services.

A steady increase in the number of routes and hours of service has led to significant annual increases in systemwide ridership. MATS will probably have to continue showing similar progress to demonstrate the need for additional investment. This will be particularly true if the City loses Federal funding for day-to-day transit operations due to a growing population.

MATS Transit Development Plan

CHAPTER 3 - SURVEY FINDINGS

Overall, most stakeholders appear to have an understanding of the challenges facing MATS such as a growing service area, the need for new connections between the city and county(s), and funding limitations.

BUS OPERATOR SURVEY

Prior to the TDP update effort, MATS drivers participated in a survey that was focused on current routes and operations. The survey was distributed on February 21, 2007, and the drivers were given approximately three weeks to return the survey forms. Seventeen surveys were returned. The route specific comments submitted by the drivers are summarized below.

Route 1 AUM

- Unpredictable traffic congestion can create schedule problems (e.g. Ann St., Zelda Rd., and Vaughn Rd.)
- Bus stop signs are in poor locations
- Delete either inbound or outbound section that goes through AUM
- Should use only small buses
- Location of bus stop near East Chase should be reevaluated

Route 2 Eastdale Mall

- Discontinue Burbank and Pinebrook area due to very low or no ridership; this would improve schedule even if all trips go to V.A. Hospital
- Serve Burbank area every other trip
- Not enough running time
- Do not enter mall
- Provide new connection between mall and downtown that uses interstate highway to avoid congestion along Atlanta Highway

Route 3 Montgomery Commons

- Enough ridership to operate Route 3 and Route 11 separately
- Not enough bus stop signs
- Add stop sign and bench in front of BP station on South Blvd.
- Mall and Wal-Mart traffic
- Add recovery time at Wal-Mart to improve connection with Route 5

Route 4 Boylston

- Occasional problem with trains at Wetumpka and Decatur
- Location of stops, rail crossings, speed changes, school zones, stop signs, and parked cars along Milton Rd., Conrad Rd. and Tyler Rd. have major impact on schedule
- Dangerous left turn at Chisholm and Lower Wetumpka

Route 5 Montgomery Mall

- Hutchinson and Hall Street segments should be discontinued due to little or no ridership
Hutchinson St. is also hazardous due to on street parking in both directions
- Needs more running time (i.e. 15 minutes due to busy school zone)
- Delete Hutchinson, S. Jackson, and N. University
- Eliminate Hutchinson, S. Jackson and N. University segments; turn left on Hall outbound and continue along current alignment
- Operate Eastern Blvd. loop in clockwise direction to avoid four, long left-turn signals; or extend route north along Eastern Blvd. to Park Blvd. and then to Fairlane

MATS Transit Development Plan

CHAPTER 3 - SURVEY FINDINGS

Route 6 Southlawn/Twin Gates

- Running time may be too short; needs 5-10 additional minutes
- Add bus stop at Big Lots store
- Add Dannelly Pines (just north of regional airport) to route alignment

Route 7 Maxwell AFB

- Rush hour traffic on Birmingham Highway can affect schedule
- Needs bus stop signs
- Delete Highway 31 segment between West Blvd. and Trinity Rd.; modify alignment to operate along West Blvd., Old Selma Rd., and Trinity Rd.

Route 8 Gunter Annex

- Needs bus stop signs
- Extend route to Madison Park area for workers that walk to service jobs along Highway 231

Route 9 Virginia Loop Road

- Reevaluate locations of bus stop signs and benches
- Make only one trip to McKee School at 6:45 AM (not shown on maps or schedules)
- Need bus stop sign near Fitzpatrick Elementary School

Route 10 South Court Street

- Need left turn arrow at Fairview and Rosa Parks

Route 11 Ridgecrest

- Running time may be insufficient due to expanded service coverage
- Needs bus stop sign at Unemployment Office

Route 12 Gibbs Village

- Route needs total reconstruction including additional running time, improved connections with other routes, and relocation away from train tracks on Terminal Rd.
- Little or no ridership in Highland Village
- Speed bumps in Smiley Court and Gibbs Village
- Shorten alignment in Smiley Court to operate just the main loop (Terminal, Mobile and Air Base Blvd.)

Route 14 Green Line

- Too many unproductive segments
- Assign two trolleys at all times

Route 14 Gold Line

- Too many unproductive segments
- Assign two trolleys at all times

Route 15 Allendale Road

Route 16 Twin Oaks

- Needs about 10 minutes extra running time due to heavy traffic congestion
- High St. segment is dangerous due to encroaching utility poles and signs
- Needs bus stop sign in front of Popeye's on service lane at Eastern Bypass and Vaughn

State Shuttle

- Modify alignment to run by new building on Ripley St.

MATS Transit Development Plan

CHAPTER 3 - SURVEY FINDINGS

For the TDP update, a follow-up driver survey was distributed on May 15, 2007. Similarly, this survey focused on identifying current service issues and suggested route improvements. A total of 14 surveys were returned. Some of the key driver comments are summarized below.

- Add more running time
- Eliminate on-street passenger transfers
- Evaluate new service for Haneyville-Western Boulevard area
- Increase running time on first three trips of Route 7 Maxwell and Route 8 Gunter Annex
- Modify Maxwell route alignment to serve Old Selma area
- Consider shuttle service between Montgomery Mall and Eastdale Mall
- Increase service frequency on Route 12 E. Smiley Court/Gibbs Village during morning and midday service periods
- Increase hours of operation on Route 12

PUBLIC MEETINGS

In addition to the stakeholder interviews, which involved individuals from a variety of local agencies and organizations along with representatives from the City of Montgomery, two general public meetings were held. The objective was to provide an opportunity for others to comment on the transit system and make suggestions for improvements.

Two meetings were held at the City of Montgomery's Council Chambers on Wednesday, May 15, 2007. The first meeting ran from 10:00 AM to 12:00 PM; the second meeting ran from 4:00 PM to 6:00 PM. The Council Chambers are wheelchair accessible and in close proximity to the transfer point for most of the existing transit routes. The meetings were moderated by Mr. Robert Smith, who manages the City's Transportation Planning Division. The meeting attendees are listed below along with a summary of the comments received.

First Public Meeting (10:00 AM - 12:00 PM)

Attendees:

- Mr. Johnny Jackson
- Ms. Barbara Sawyer
- Mr. William L. Winn
- Mr. Travis Barrett
- Mr. Andre Coe, Montgomery Advertiser
- Robert Smith, City of Montgomery
- April Delchamps, City of Montgomery
- James Askew, City of Montgomery
- Jonathan Langle, City of Montgomery
- Kelvin Miller, MATS General Manager

MATS Transit Development Plan

CHAPTER 3 - SURVEY FINDINGS

- Robyn Rhymes, MATS

Comments:

- Implement a Sunday route at least in the morning.
- How do I get an idea for the paratransit?
- Fill out an application and provide a doctor's note.
- Transit system needs to have better advertising for new routes.
- Update the information in pods.
- Revisit bus/bench/shelter design.
- Why can't all the busses leave at 4:40 am? Need earlier service.
- Extend Saturday service times to 9:45 pm like weekdays.
- Extend service area to include areas beyond current service. Extend routes.
- Routes 2, 5, 3, 10, and 12 are the most used.
- Rename route after Rosa Parks (S. Court St.).

Second Public Meeting (4:00 PM - 6:00 PM)

Attendees:

- Mr. Steve Hixon
- Ms. Marie Hixon
- Mr. Ken Gilbert
- Mr. Leon Patterson
- Ms. Barbara Sawyer
- Ms. Ruth Postell
- Mr. Fred Murray
- Ms. Carolyn McBride
- Robert Smith, City of Montgomery
- James Askew, City of Montgomery
- Kelvin Miller, MATS General Manager
- Terry Mason, MATS Marketing
- Ernest A. Jackson, MATS

Comments:

- Need a route/service in Western Hills- Hill Street.
- Evening Service on Saturdays (MAP). No service after 7:30 pm. Extend hours to 9:45 pm like weekdays.
- Houston Hills area needs MAP service later on Saturdays.
- More MATS advertisement in media.
- You have to devote 2 to 3 hours for a paratransit trip because they are so busy. Half of the time your call is dropped or the line is busy.
- When will MATS project for scheduling and automatic vehicle location be up and running?

MATS Transit Development Plan

CHAPTER 3 - SURVEY FINDINGS

- There were three new paratransit busses in 2008. These busses are already getting worn and torn up. The new busses have no leg room.
- There are a lot of new drivers on MAP. Do they know how to get to places? Will GPS help them?
- I am worried about driver fatigue. They are working 8 to 13 hour shifts.
- Only a 50% of riders on paratransit can be permanent.
- Thank you for new drivers.
- No one wants the Route with Frazier because it is a split shift.
- Sometimes it takes forever to go from Maxwell to Atlanta Highway. You are taken all over before you are taken home.
- There should be a limit to how long the drivers can work in a day. Drivers are working long hours.
- Why are bus stops not ADA compliant? All stops should be compliant since the transit system is receiving money from FTA.
- You can't get to the switch at stop on Ann Street in front of Wal-Mart.
- Woodmere is not compliant.
- The City of Montgomery does not have a Transition Plan for becoming ADA compliant as required by the federal government.
- Curb cuts need to be done still.
- Streets are tearing up busses.
- I-65 and I-85 will be repaved this summer.
- Need Sunday service
- What are the Pike Road area boundaries?
- The line is always busy at MATS.
- Night service fills up to fast on MATS. More busses are needed.
- Use smaller vehicles so you use less gas.
- Lobbyists are fighting rail system in area.
- Transit riders need more exposure on bills and laws that affect transit.
- Follow-up on returning paratransit riders to eliminate fraud.
- Thank you for current service.
- Need service in Ashley Street/Hayneville Road area. Hayneville School children need to get to school.
- Smiley Court Route could be expanded to cover Hayneville Road and Ashley Road.

MATS Transit Development Plan

CHAPTER 3 - SURVEY FINDINGS

CUSTOMER SURVEY

On-board passenger surveys are an effective and low-cost method for collecting information about current transit users. A questionnaire was designed by the consultant with input from the City's project manager and the MATS General Manager. It was designed to be easy to understand and short enough to be completed while the passenger was on-board the bus. Twelve of the 14 questions offered multiple-choice responses. The questions that inquired about the route the respondents were riding and new areas where they would like transit service were open-ended questions. The purpose of the this survey was to gather passenger demographic data, travel characteristics, level of satisfaction with certain features of the current system, and opinions about selected service improvements.

Surveys were offered to each passenger that boarded a bus on the first, scheduled work shift for each route. The objectives of this approach were to gain access to the largest concentration of regular users and avoid receiving a large number of duplicative surveys. About 1800 passengers accepted a survey and 840 valid surveys were returned for a 47 percent response rate. The passenger survey was carried out at the same time the systemwide passenger count was conducted. The following table shows the percentage of survey responses by route.

Route No.	Route Name	Weekday Passengers	Percent of Wkdy Pass.	Survey Respondents	Percent of Respondents
1	AUM	162	4.5%	21	2.5%
2	Eastdale Mall	569	15.8%	59	7.0%
3	Mont Comm Mall	273	7.6%	52	6.2%
4	Boylston	316	8.8%	39	4.6%
5	Montgomery Mall	305	8.5%	79	9.4%
6	Twin Gates/South	150	4.2%	79	9.4%
7	Maxwell AFB	105	2.9%	12	1.4%
8	Gunter Annex	57	1.6%	8	1.0%
9	Virginia Loop	81	2.3%	15	1.8%
10	South Court	517	14.4%	167	19.9%
11	Ridgecrest	161	4.5%	23	2.7%
12	Smiley Ct	465	12.9%	54	6.4%
13	Cramton Bowl	119	3.3%	51	6.1%
14	Gold&Green Loops	104	2.9%	43	5.1%
15	Allendale Road	27	0.8%	11	1.3%
16	Twin Oaks	180	5.0%	127	15.1%
		3591		840	

A copy of the survey form and a detailed listing of all the questions and response rates can be found in Appendix B. The following sections discuss some of the key findings.

MATS Transit Development Plan

CHAPTER 3 - SURVEY FINDINGS

Sex, Race and Age

The distribution of female passengers (about 63 percent) and male passengers (37 percent) is rather standard. The number of women in the workforce and not having two cars available in families with a second wage earner are common explanations for the proportion of female riders. Although about one-half of the respondents have a valid driver's license, only 22 percent had a car available to make the trip they were on when they completed the survey. These findings are significant because a majority female user group could affect the approach followed in future marketing efforts, the choice of advertising media, and the importance of vehicle and bus stop safety features.

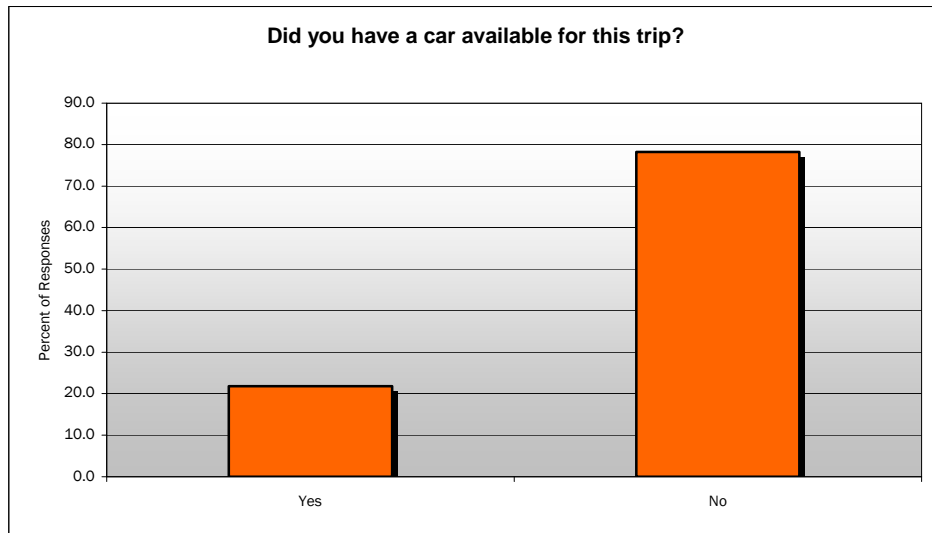
Almost 84 percent of current MATS riders are African-American. Caucasians account for 12.7 percent of the ridership, while Hispanic, Asian and all other races total just 3.7 percent.

The majority of the respondents are between the ages of 25 and 54. Approximately 12 percent of the riders are under 18 years of age, but only 4.5 percent are over the age of 65. This appears to give emphasis to one of the important challenges mentioned in the stakeholder interviews, which was a need to reach out to the elderly market.

Car Availability

When asked to explain why they use transit, many people indicated it is because they do not own a car or the car was not available for that particular trip. Interestingly, almost 22 percent of the MATS respondents indicated they did have a car available.

Exhibit 3 - 1



MATS Transit Development Plan CHAPTER 3 - SURVEY FINDINGS

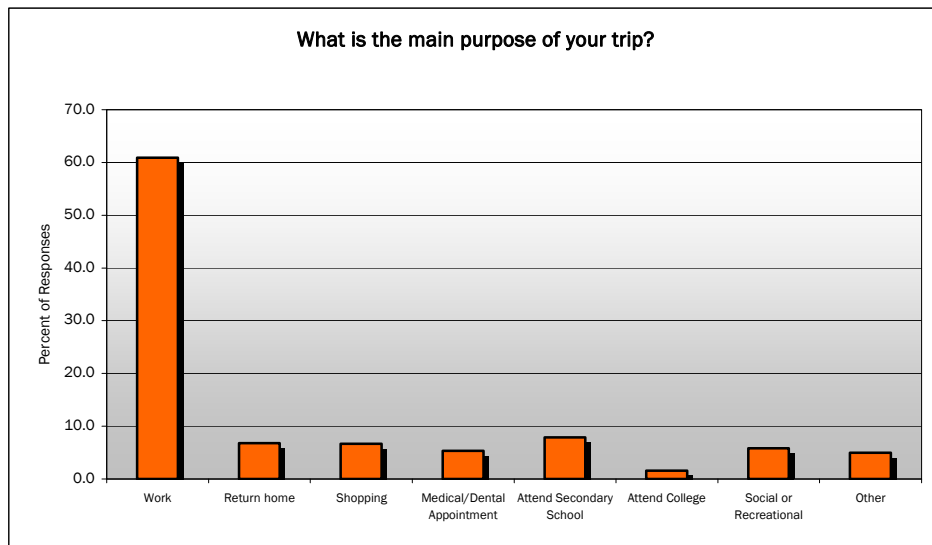
A recurring goal in the transit industry is to design services that are appealing to “choice” riders, or people that are not dependent on public transportation. According to the survey, almost 22 percent of the respondents had a car available to make the trip so it could be said they represent “choice” riders.

Trip Purpose

Trip purpose data partially explains why people use transit so Exhibit 3 -2 illustrates one of the most significant findings of the survey. Almost two-thirds of the respondents or 60.9 percent of the respondents use MATS to travel to and from work. The remaining seven trip purposes all received similar response rates.

About eight percent of the respondents indicated they were attending a secondary school and 1.6 percent checked that they were traveling to a college.

Exhibit 3 - 2



The trip purpose data provides valuable information about travel needs and scheduling necessities that could affect the design of the overall system or just a specific route. In view of the survey results, one type of improvement that should be considered is new service or improved routes that service major employers. This was also mentioned as a potential need by the stakeholders.

The final question in the survey asked the riders to identify areas where route extensions or new services might be needed. In addition to a general request for service to industrial parks, specific requests were provided including:

- Montgomery Regional Airport

MATS Transit Development Plan CHAPTER 3 - SURVEY FINDINGS

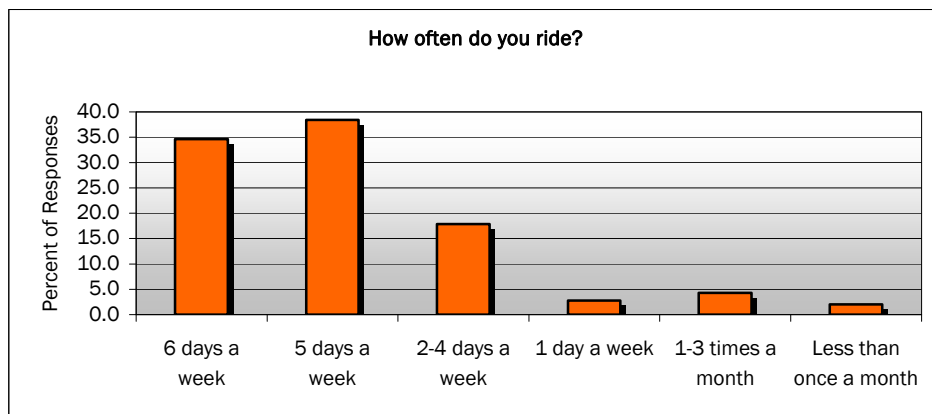
- East Chase
- Harbor Freight
- Hyundai
- Lane Corporation
- UPS

These destinations represent potential employment sites where expanded or new transit service might be viable. A related need is to coordinate transit schedules, to the extent possible, with the start and end times at some work sites to increase the attractiveness of transit service to this extremely important segment of the current riders.

Frequency of Use

Because work trips are the dominant reason current passengers use MATS, it is no surprise the majority of respondents use public transportation 5-6 days per week. The trip frequencies and percentage of responses is illustrated in the following exhibit.

Exhibit 3 - 3



Frequent riders generate most of the annual ridership carried by MATS. Therefore, they are extremely important contributors to the productivity and efficiency of the existing system. It is likely that they are also long time users. An ill-timed recommendation to change the system in a way that would render the service less useable by this group and decrease their rate of usage would have a severe impact on the transit system. One of the goals of a Transit Development Plan is to sustain the strengths of the existing system. Therefore, any short-range service improvements should help retain these riders.

MATS Transit Development Plan CHAPTER 3 - SURVEY FINDINGS

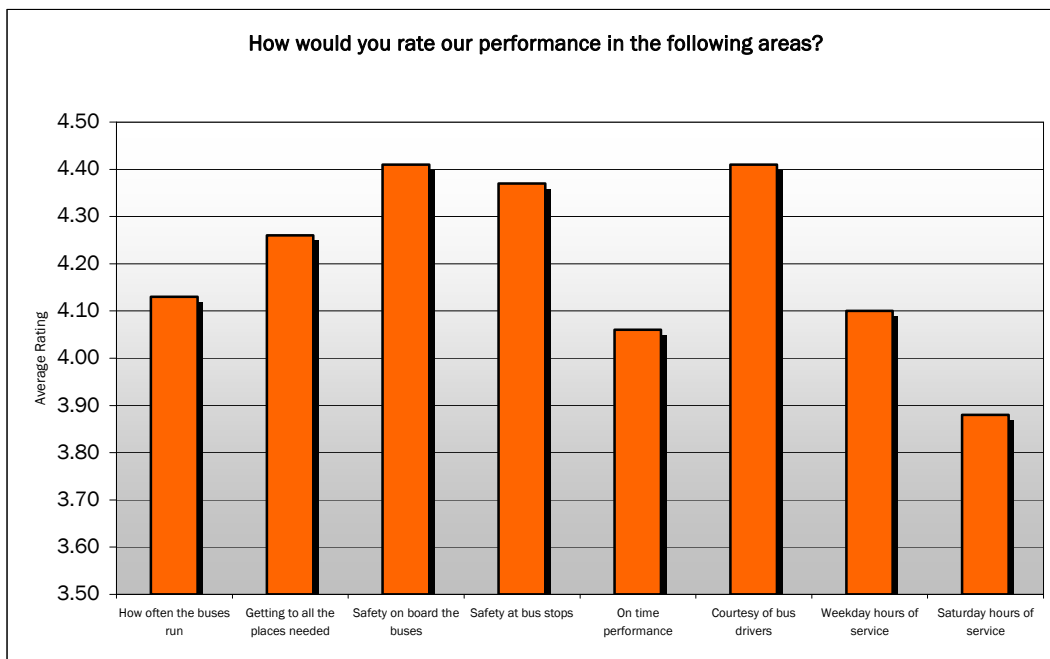
Customer Satisfaction

Two of the survey questions asked the respondents to rate MATS' performance in certain areas and a set of potential service improvements. The following set of designated responses were offered to rate the existing service characteristics.

- 1 = very poor
- 2 = poor
- 3 = fair
- 4 = good
- 5 = excellent

The highest scoring characteristics, by a slim margin, were safety on board the buses and driver courtesy. All of the characteristics received an average rating between good and excellent except Saturday service. Still, this particular characteristic received a positive average rating of fair to good.

Exhibit 3 - 4



The average ratings suggest an overall satisfaction with the fixed route service currently provided by MATS, but it does not imply that further improvements are not desired.

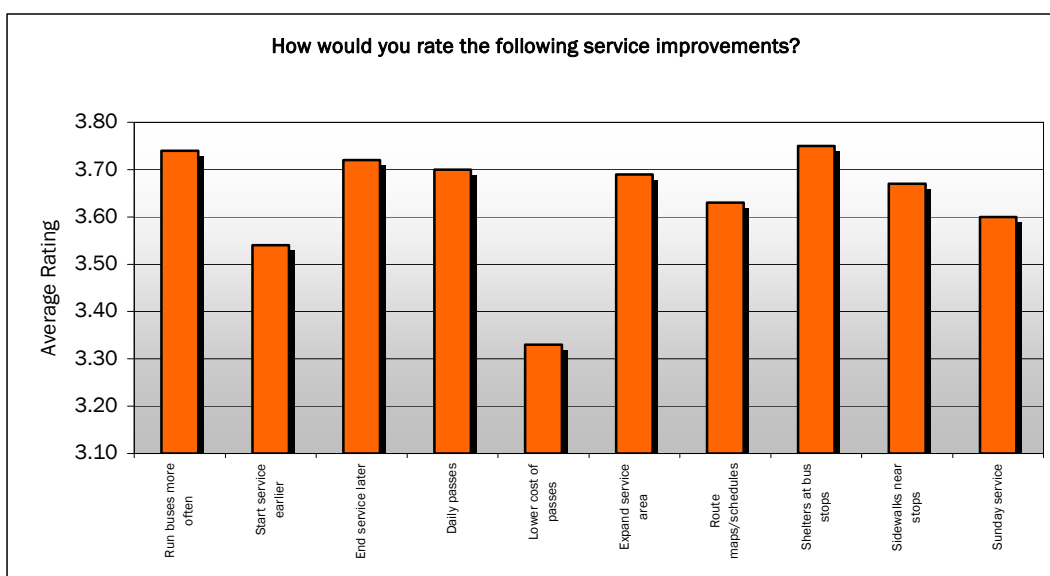
The next question asked the respondents to rate a set of service improvements commonly found in Transit Development Plans. The object of this question was to get the customers to help

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identify the improvements that should receive the most consideration in the final recommendations. For this question, a rating scheme that ranged from 1 (not at all important) to 4 (very important) was used.

The three highest rated service improvements included bus stop shelters, more frequent service, and more hours of service in the evening. It should be mentioned the need for additional evening trips was already under consideration and they were added shortly after the survey was completed.

Exhibit 3 - 5



Selected demographic data from the 2000 U.S. Census of Montgomery city are compared to the passenger survey results in the following table. Some of the key observations include:

- The percentage of transit users that do not have a car available is significantly higher than the general city population.
- The proportion of female riders is slightly higher than the general population.
- The percentage of riders less than 18 years of age and over 65 years of age is quite a bit lower than the general population.
- African-Americans represent a much higher portion of transit users than the general population.
- A much higher percentage of transit users have annual household incomes below \$10,000.

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Exhibit 3-6

Passenger Survey and Census Comparison

Characteristic	Passenger Survey	2000 Census
car available	21.8%	-
no car available	78.2%	10.2%
female	62.9%	53.1%
male	37.1%	46.9%
under 18	12.1%	22.4%
18-24	9.2%	8.6%
25-34	23.9%	14.7%
35-44	18.2%	15.1%
45-54	21.2%	12.6%
55-65	10.8%	7.8%
over 65	4.5%	11.8%
African-American	83.6%	49.6%
Caucasian	12.7%	47.7%
Hispanic	0.6%	1.2%
Asian	1.0%	1.1%
Other	2.1%	-
<\$10,000	53.1%	13.1%
\$10,000-\$19,999	22.7%	-
\$20,000-\$29,999	9.7%	-
\$30,000-\$39,999	6.7%	-
\$40,000-\$49,999	2.5%	-
>\$50,000	5.2%	34.6%

PREVIOUS SURVEYS

In August 2004, the Southeast Research Inc., in cooperation with the Montgomery Transportation Coalition (MTC) undertook two surveys designed to collect information regarding unmet transportation needs within the City of Montgomery. The two surveys included a random telephone survey of the general population and in-person surveys that focused on four, distinct population groups.

A few of the important findings from the telephone survey that are relative to the fixed-route transit service analysis are:

- About 1.5 percent of the population use public transportation to travel within the city
- About 3 percent of persons with a disability use public transportation
- Only 14 percent of households with a disabled person feel MATS provides poor quality service to the disabled
- Twenty-nine percent of residents who are not served by public transportation said they would use transit if it were available

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- Forty-two percent of adults gave public transportation a rating of either excellent or good
- Among those with access to public transportation, one out ten have used transit during the past 12 months
- Forty-one percent think that transit is better than it was the prior year
- User satisfaction with various service characteristics was relatively high as shown below:

CHARACTERISTIC	PERCENT
Overall Satisfaction	71%
Sidewalks and curbs near stops	71%
Rain shelters	47%
Number of stops	65%
Bus stop signage	82%
Route maps and other information	71%
Telephone assistance	65%
Bus driver assistance	59%
On-time performance	65%
Vehicle maintenance	89%

- Forty-one percent said they would use transit, if it was available, to travel to rural parts of Montgomery County and surrounding counties
- Seventy-one percent of current users wanted bus stops to be closer together

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Chapter Three reviewed the *quantity* of transit service provided by MATS. This chapter examines the *quality* or performance of the existing routes. Detailed service and operational data collected for the TDP or provided by MATS is summarized and analyzed for each route. A performance analysis is an important component of the TDP because it helps identify the routes that are working well and those that may need attention.

SERVICE COVERAGE

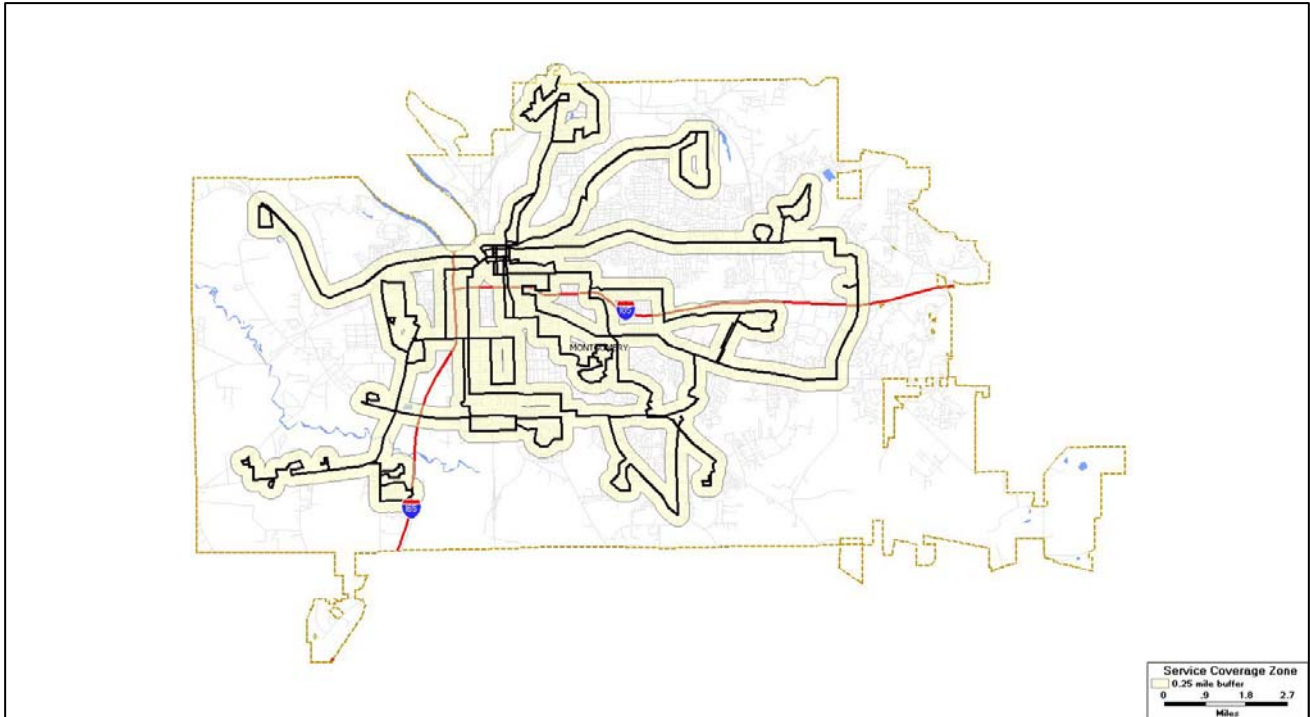
Because the transit system is owned and operated by the City, the basic service area is defined as Montgomery's city limits. The following exhibit shows the areas of Montgomery covered by the existing route network. For this analysis, a common industry standard was used to determine service coverage. Based on this standard, which consists of a ¼-mile zone on both sides of a route alignment, MATS provides very good service coverage throughout most of Montgomery. The most heavily populated areas of Montgomery including the older, urban, neighborhoods are well covered by the existing routes. Most of the sectors that are not within the ¼-mile buffer zone have a low-density population and higher income levels, which usually indicate very low transit potential.

Some of the factors that influence network design and its associated service coverage are the locations of major retail, employment, and medical centers. Street patterns, population densities, and other socioeconomic characteristics like income and auto ownership also influence network design and service coverage. The distance between route alignments is also closely related to the objective of providing good service coverage. Effective route spacing is achieved when a transit system provides extensive service coverage with minimum route duplication. Exceptions to this standard are found when there are limited access roads to a certain area or when multiple routes serve major activity centers (e.g. downtown, transfer centers, shopping centers, etc.).

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Exhibit 4-1
Current Service Coverage



ROUTE-LEVEL RIDERSHIP

Ridership Trend

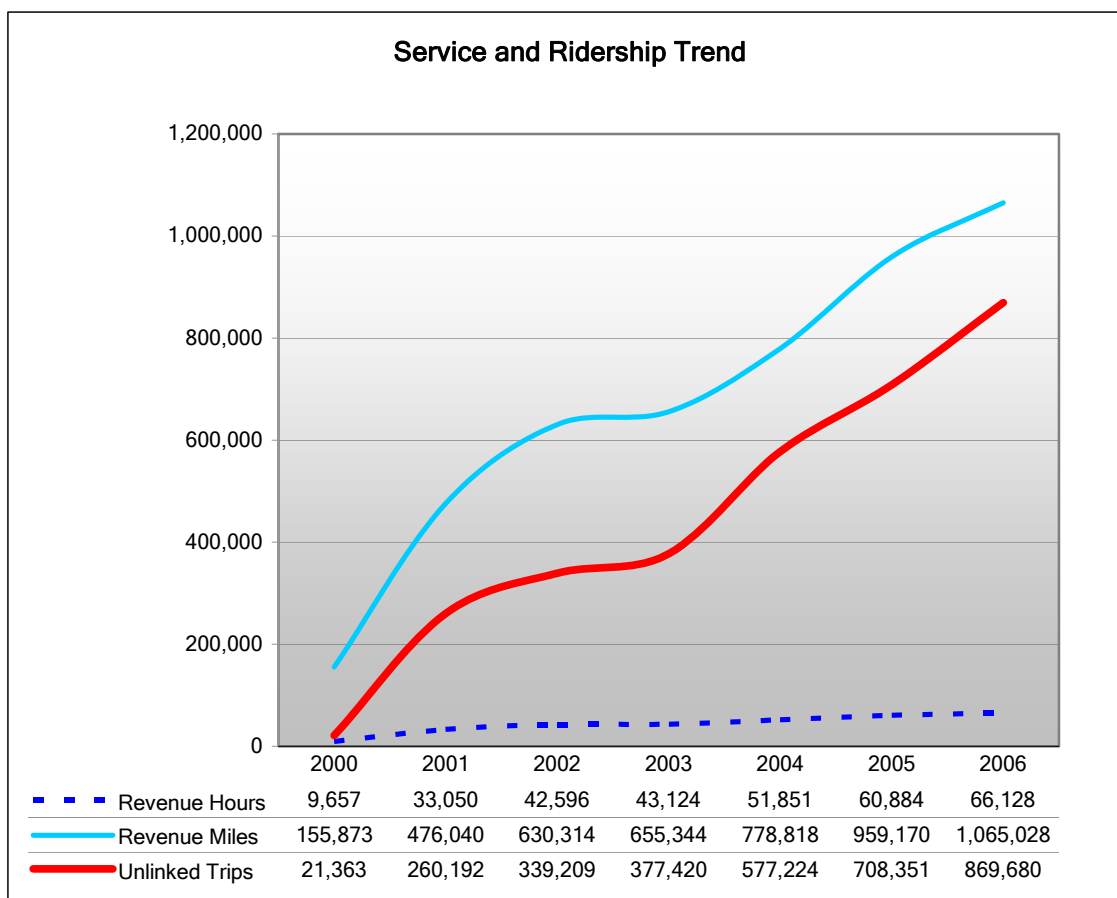
The number of annual transit trips has grown concurrently with the amount of service provided. Between 2002 and 2006, the revenue hours of service grew by 56 percent as the City continued to expand the service and improve existing routes and schedules. Revenue hours are all the hours that buses are available to the public. They include the time scheduled for vehicle layovers and driver recovery at transit centers or other locations, but they do not include time spent between the bus storage facility and the route starting point.

According to the National Transit Database reports submitted to the Federal Transit Administration by MATS, transit trips increased from 339,209 in 2002 to 869,680 in 2006. This represents a 157 percent increase in transit trips. Exhibit 4-2 shows the trend in revenue hours and miles of service and one-way transit trips since MATS started shifting back to a traditional, fixed route transit system.

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Exhibit 4-2
Annual Levels of Service and Transit Trips



The significant annual increases in service levels have had a major impact on the associated growth in transit trips. As the system matures and fewer hours and miles of service can be added each year, major increases similar to those in recent years will be more difficult to achieve.

Current Ridership

One of the most important tasks completed for the TDP update was a system-wide passenger count. The count was completed in May 2007 using a group of temporary surveyors provided by a Montgomery temporary help firm. The surveyors were screened and trained by a subcontractor with extensive experience conducting transit surveys. Each day, the surveyors were assigned to ride a set of scheduled trips to record passenger on/off data and related schedule information. This data was collected for each route by travel direction (outbound and inbound) and day of week. Route-level passenger activity is crucial to the analysis and understanding of the routes and the development of route improvements. The schedule related information provides valuable

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information about on-time performance and scheduled versus actual running time data between timepoints. Timepoints are selected bus stops publicized in the route schedule that specify where the bus is scheduled to be at a prearranged time. A detailed series of these reports was provided to MATS for on-going service evaluation.

Weekday and Saturday ridership is presented in the following exhibit. Based on the average daily ridership data from the passenger count, MATS should record approximately 992,359 one-way passenger trips in an average year.

Exhibit 4-3
Current Passenger Trips

Route Number and Name	Passengers	
	Weekday	Saturday
1 AUM Campus	162	57
2 Eastdale Mall	569	217
3 Montgomery Commons	273	113
4 Boylston	316	79
5 Montgomery Mall	305	118
6 Southlawn/Twin Gates	150	37
7 Maxwell	105	19
8 Gunter Annex	57	14
9 Virginia Loop	81	30
10 S. Court	517	197
11 Ridgecrest	161	37
12 Smiley Court/Gibbs Village	465	141
13 Crampton Bowl Shuttle	119	0
Parking Shuttle	30	0
14 Gold Loop	59	58
14 Green Loop	45	84
15 Allendale	27	9
16 Twin Oaks	180	117
TOTAL	3621	1327

On weekdays, Route 2 Eastdale Mall and Route 10 S. Court have the largest number of passenger boardings. Although total boardings decrease significantly, they also carry the highest number of passengers on Saturday. Several routes carry a very small number of passengers. If their productivity is equally low, appropriate modifications will be reviewed.

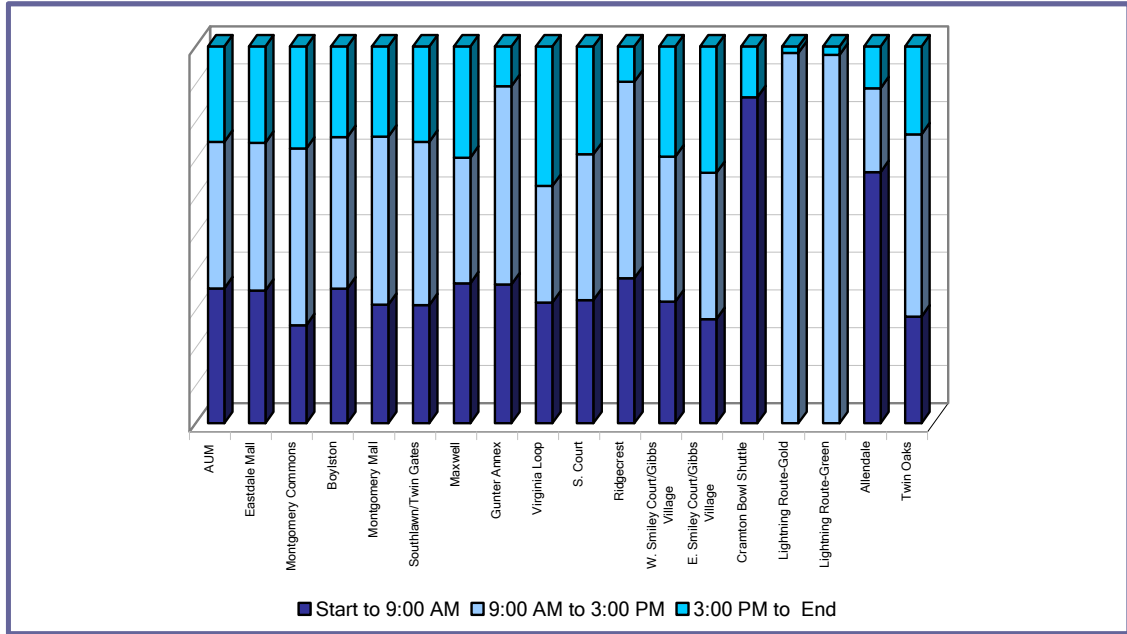
[Weekday Ridership by Time of Day](#)

Exhibit 4-4 shows how the daily passenger trips are distributed among the morning and afternoon peak periods and the midday segment that falls between the peak periods. The purpose of this type of analysis is to determine if ridership is higher in one period compared to the other periods. If it is, varying the frequency of service might bring the level of service more in line with demand.

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Exhibit 4-4
Weekday Ridership by Time of Day



Based on this data, selected observations about weekday ridership include:

- Route 8 Gunter Annex and Route 11 Ridgecrest have very little ridership after 3:00 PM.
- The Crampton Bowl shuttle route carries 87 percent of its passengers during the morning service period.
- Both the Green and Gold Loops of the Lightning Route pick up almost 100 percent of their daily passengers before 3:00 PM. The remaining 7-8 trips do not carry any passengers.

These findings are based on data that was collected before the evening hours were extended.

MAXIMUM PASSENGER LOAD

An analysis of maximum passenger loads identifies the bus stop(s) where the largest number of passengers is on board the bus. The maximum load point is normally associated with a single bus stop, but the passenger load can also stretch out over several stops. Maximum load points or segments can also be found at several different locations along a route alignment.

Maximum load point data is valuable because it can be used to identify the bus stops or route segments where the number of passengers on board the bus exceeds the seated capacity of the bus. If this occurs on a regular basis, it can indicate a need for additional service. Typical responses include increasing the frequency of service or placing a “tripper” bus in service at a

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particular time to avoid overcrowding. Maximum passenger load points can also help identify bus stops where additional passenger amenities like shelters might be appropriate.

Another important use for maximum load data is to examine the feasibility of utilizing smaller transit vehicles. All transit systems experience a wide range of passenger loads throughout the day. Commute times, special events, retail activity, passenger demographics, and service frequencies are just a few of the factors that cause variations in the number of passengers on board a bus at different times of the day. This means that transit buses are not always full, and this has created a perceptual problem in many cities.

Transit systems have to meet a wide range of customer expectations and cost constraints. This means they have to balance things like peak passenger loads, safety, capital and operating costs, storage capacity, and customer convenience when they make decisions about the size and seated capacity of the vehicles they purchase and operate. For example, using smaller vehicles with fewer seats could result in standing loads on some peak trips, which might bring up questions about passenger safety and convenience. One solution would be to increase the frequency of service to provide more capacity, but that would require additional operating and capital expenditures. Choosing a vehicle that will meet current and future demand and help management provide the best transit service at the lowest cost is a very complex matter. For example, the average life of a heavy-duty transit coach is 12 years according to the Federal Transit Administration. The potential for higher ridership growth due to rising fuel costs, long-term vehicle maintenance issues, indeterminate land use changes, socioeconomic trends and other factors can affect the usefulness of transit vehicles over such a long period.

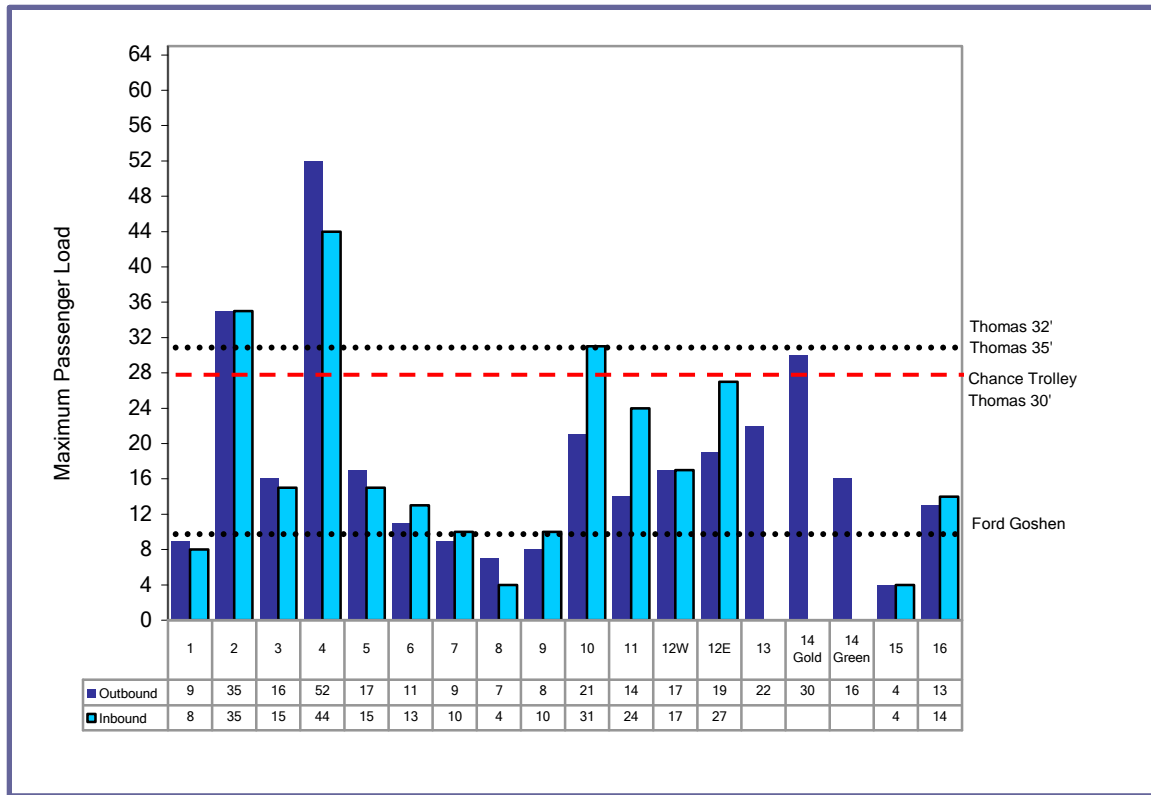
Concern about the number of riders observed on board the buses at various times in small to medium-sized transit systems is nearly universal. Maximum load information was collected and analyzed for the TDP update because some comments were made during the study about the feasibility of using smaller vehicles. In actuality, MATS already has a fleet that includes a number of smaller transit vehicles. The existing rolling stock includes 30', 32', and 35' medium-duty buses and 21' medium-duty modified transit vehicles.

The following exhibit shows the maximum load data taken from the system-wide ridecheck. The largest number of passengers on board any trip for outbound and inbound trips is compared to the seated capacity of the vehicles currently in use at MATS.

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Exhibit 4-5
Weekday Maximum Passenger Loads and Vehicle Capacity



As the exhibit shows, four routes experience a maximum load on at least one trip that exceeds the seated capacity of all three sizes of Thomas buses. Exhibit 4-6 was prepared to provide additional detail regarding the trips that exceed the seated capacity of the existing MATS rolling stock.

The following exhibit shows the specific trips with maximum passenger loads that exceed 28 seated passengers. It also shows the start time and travel direction for each of these trips. Last, Exhibit 4-6 shows the alignment segment where the maximum, seated capacity is exceeded. According to MATS, some of these trips can be attributed to school trips.

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Exhibit 4-6
Trips Exceeding Vehicle Seated Capacity

Route	Direction	Trip Start	From	To	Maximum Load
2	OB	6:35am	Bainbridge/Monroe	Madison/Pennsylvania	35
2	OB	7:35am	Perry/Dexter	Madison/Capitol Heights	35
2	IB	2:30pm	Madison/Ann	Madison/Bainbridge	35
4	OB	2:35pm	Lower Wetumpka/Broadway	Briarbrook/Flair	52
4	OB	3:35pm	Dexter/Perry	N. Decatur/Howe	36
4	IB	7:10am	Alabama River Pkwy/Coliseum Blvd.	Vandiver/Ingle	44
10	IB	7:20am	Rosa Parks/Wade	Montgomery/Molton	31
14 Gold	-	11:00am	Dexter/Bainbridge	Union Station	30

SCHEDULING

One of the most important details of transit scheduling is assigning the right amount of running time to each route segment and to the entire round trip. Buses are subject to changing traffic and operating conditions throughout the period of operation so running time is important to daily operations and customer satisfaction. Once the proper running times are established, service reliability is usually judged by on-time performance. On-time performance is how closely the buses arrive/depart from designated bus stops compared to the published schedule.

Determining the impact of on-time performance and schedule adherence is complicated. It is possible for a bus to be late at some points but still get a passenger to their destination according to the published schedule. At the same time, most passengers want to minimize the time they wait for a bus so it is important to arrive as close as possible to the published time.

Scheduled and Actual Running Time

Vehicle running times were cited by MATS drivers as a possible issue on some routes so an analysis of scheduled and actual running time was conducted. The data was collected during the system ridecheck.

MATS staff and bus drivers suspect that particular routes do not have enough running time, at least on certain trips or during portions of the day. This potential problem is particularly important to MATS because many routes are supposed to meet at the transfer points at the same time for greater passenger convenience. This is known as a pulse schedule, and it requires that all the routes meeting at a central transfer location have the same running time.

Over time, route modifications, traffic conditions and other factors can affect a bus driver's ability to stay on schedule. It must also be recognized, however, that other normal events can periodically cause a bus to take longer than the scheduled time to complete a trip. Examples include railroad crossing delays, high passenger boardings, wheelchair boardings, unscheduled stops, auto accidents, driver proficiency, unexpected detours, and other things. This is the reason

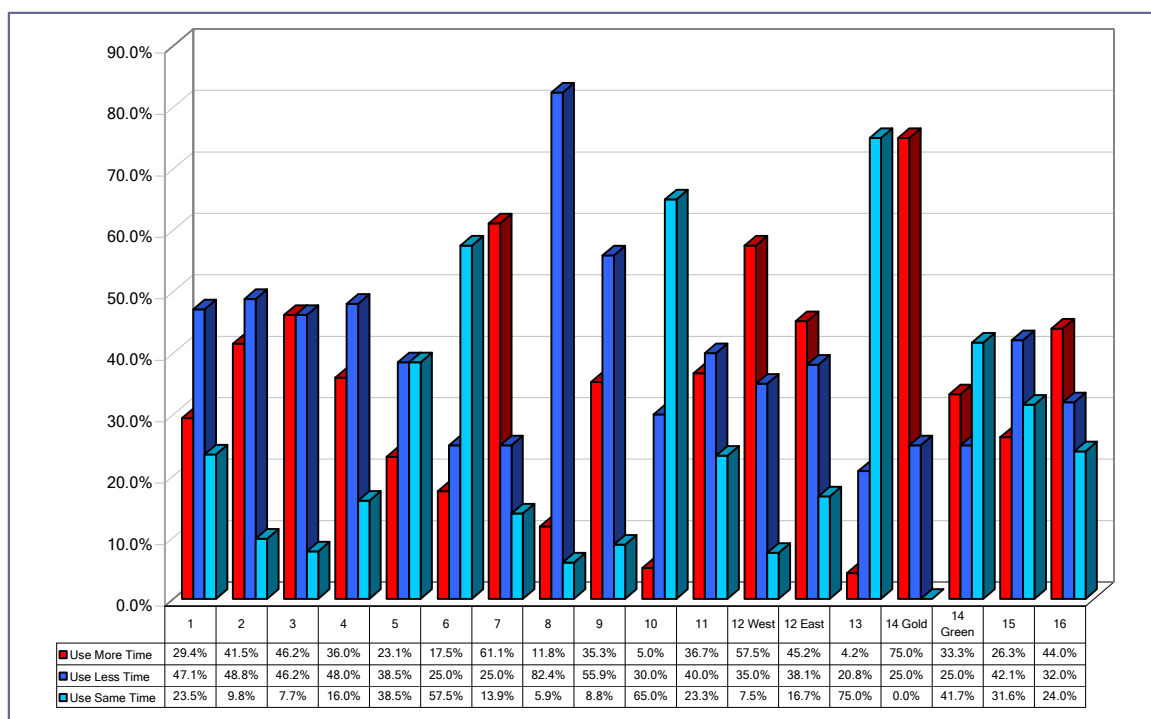
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transit schedules usually include a few minutes of layover/recovery time. It is important to note that the amount of running time allotted for a given trip can vary. Often, the running time is shortened, which makes it virtually impossible for a bus to stay on schedule.

The following exhibit shows the percentage of trips that use the same, more, and not as much running time as the amount that is scheduled to complete a round trip. The scheduled time is taken from MATS schedule data, and the actual time is from the ridecheck survey.

Exhibit 4-7
Comparison of Weekday Scheduled and Actual Running Times



The Lightning Route-Gold Loop (75 percent), Route 7 Maxwell (61.1 percent), and Route 12 West Smiley Court/Gibbs Village (57.5 percent) have the highest percentage of trips that took longer than the scheduled running time. The average, additional time it took to complete those trips was 5.7 minutes, 3.0 minutes and 7.9 minutes, respectively. Several other routes have almost 50 percent of their trips requiring more than the scheduled run time.

Interestingly, many routes have a relatively large percentage of trips that take less than the scheduled time to complete a round trip. This might indicate that the scheduled running times are adequate except for certain trips or just during periods with heavy traffic. While there are ways to address the issue, some of them would require major changes to the way MATS operates. For example, increasing the running time on some routes would mean they could no longer pulse with other routes. This change would increase wait times at the transfer center for some passengers

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and diminish the level of service. Another possible solution would be to simply shorten or modify the alignments so they could be completed in the preferred running time.

Service changes like these usually lead to a loss of selected route segments and passengers. Consequently, any changes must be weighed very carefully as they can bring about fundamental changes to the essential nature of the transit system. Further monitoring is recommended before any sweeping changes are made.

Schedule Adherence

On-time performance is measured by the percentage of buses reaching specified time-points (designated bus stops) within a certain window of time. For this analysis, the window is defined as not more than two minutes before and five minutes after the scheduled arrival/departure time shown in the public timetable. Exhibit 4-8 shows the MATS on-time performance at all bus stops based on observations recorded during the ridecheck.

**Exhibit 4-8
Weekday Schedule Adherence**

Route	Timepoints Checked	On-time Departures		Early Departures		Late Departures	
		Number	Percent	Number	Percent	Number	Percent
1	153	105	68.6%	9	5.9%	39	25.5%
2	126	61	48.4%	4	3.2%	61	48.4%
3	104	90	86.5%	6	5.8%	8	7.7%
4	65	48	73.8%	3	4.6%	14	21.5%
5	140	54	38.6%	0	0.0%	86	61.4%
6	100	95	95.0%	0	0.0%	5	5.0%
7	90	57	63.3%	4	4.4%	29	32.2%
8	85	59	69.4%	12	14.1%	14	16.5%
9	102	84	82.4%	5	4.9%	13	12.7%
10	140	133	95.0%	1	0.7%	6	4.3%
11	90	88	97.8%	1	1.1%	1	1.1%
12W	120	60	50.0%	1	0.8%	59	49.2%
12E	84	42	50.0%	2	2.4%	40	47.6%
13	24	24	100.0%	0	0.0%	0	0.0%
14 Gold	12	0	0.0%	0	0.0%	12	100.0%
14 Green	12	0	0.0%	0	0.0%	12	100.0%
15	50	49	98.0%	1	2.0%	0	0.0%
16	91	56	61.5%	0	0.0%	35	38.5%
TOTAL	1588	1105	69.6%	49	3.1%	434	27.3%

On-time departures are very important in transit systems where so many routes have buses that operate on an hourly basis. Any passenger missing a bus because it arrived too early must wait a very long time for the next bus. If a bus arrives too late to get the passenger to their destination on time, they may have to cancel the trip or look for another alternative.

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Approximately 70 percent of all weekday bus departures occurred within the defined period. The standard used for this analysis allows buses that depart a time point up to two minutes early still to be considered on time. Only 3.1 percent were early, which is very good. For bus riders, early departures may have a more negative impact than late departures because they lead to serious concerns about schedule accuracy and reliability. With 27.3 percent of all buses departing more than five minutes late and some departing more than two minutes early, passengers are forced to increase their waiting time at the bus stop to avoid missing a bus. This results in a longer travel time for the customer and less confidence in the transit system.

PASSENGER PRODUCTIVITY

Based on the ridership data collected for the TDP update and operating statistics provided by MATS, the passenger productivity of each route was calculated to distinguish the stronger routes from the weaker ones. Passenger productivity is defined as the number of passengers carried for each hour of service provided. Individual route productivity rankings are detailed in Exhibits 4-9 and 4-10 for weekday and Saturday service. The productivity rankings are based on the average passenger productivity so each route is compared to all the other existing routes.

To help identify the routes that needed attention when potential service improvements were being developed, the routes are segregated into four categories. These categories are based on a percentage of the average productivity. Special attention can be required for routes that perform above and below the average. For example, a route that performs at a high level of productivity could require an adjustment to its headway to match the passenger demand. It may also need extra running time due to the added time needed for passenger boardings and de-boardings. Routes that perform below average might call for a decrease in frequency so any extra vehicles could be reallocated to another route or a new service. Well below average routes could perhaps be considered for elimination.

The two parking shuttle routes and the Lightning Route are included in the overall passenger productivity analysis. Their performance, however, should not be based only on these rankings since they provide a service that is different from the regular fixed routes.

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Exhibit 4-9
Weekday Passenger Productivity

ROUTE	PASSENGERS PER HOUR
2 Eastdale Mall	25.86
10 S. Court	25.85
4 Boylston	24.31
13 Crampton Bowl Shuttle	22.88
12 Smiley Court/Gibbs Village	21.43
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125 PERCENT OF AVERAGE	18.07
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11 Ridgcrest	16.10
3 Montgomery Commons	15.78
5 Montgomery Mall	15.25
<hr/>	
SYSTEM AVERAGE	14.45
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16 Twin Oaks	13.85
6 Southlawn/Twin Gates	11.28
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75 PERCENT OF AVERAGE	10.84
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7 Maxwell	8.90
Parking Shuttle	7.50
1 AUM Campus	6.35
9 Virginia Loop	6.33
14 Gold Loop	5.96
14 Green Loop	5.42
8 Gunter Annex	4.45
15 Allendale	2.70

On weekdays, MATS averages 14.5 passengers per hour of revenue service. Revenue hours do not include the time required to travel to and from the garage each day, but it does include any layover time built into the schedules between trips.

Route 2 Eastdale Mall has the highest level of passenger productivity, and four other routes carry enough passengers per hour of service to be well above the system average. Unfortunately, five local routes, the Lightning Route, and one of the parking shuttles operate well below the system average.

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On Saturday, the same group of routes performs well above the system average. Route 13 Crampton Bowl Shuttle does not operate on Saturday.

Exhibit 4-10
Saturday Passenger Productivity

ROUTE	PASSENGERS PER HOUR
2 Eastdale Mall	21.70
10 S. Court	19.70
4 Boylston	15.80
12 Smiley Court/Gibbs Village	12.82
125 PERCENT OF AVERAGE	12.69
5 Montgomery Mall	11.80
16 Twin Oaks	11.70
3 Montgomery Commons	10.56
SYSTEM AVERAGE	10.15
14 Green Loop	9.44
75 PERCENT OF AVERAGE	7.62
14 Gold Loop	6.99
6 Southlawn/Twin Gates	6.98
11 Ridgecrest	6.98
1 AUM Campus	5.43
7 Maxwell	3.80
8 Gunter Annex	2.80
9 Virginia Loop	2.80
15 Allendale	1.80

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FINANCIAL PERFORMANCE

There are a number of ways to evaluate transit service. One of the most useful, a route financial analysis, compares the relationship between the revenue generating capability of each route with the cost of providing the service. The purpose is to compare the amount of resources that are required to provide the service with an estimate of the benefit the community receives from the service. For the purposes of this analysis, the benefit is defined as passenger revenue. While there are many other significant benefits to regularly operated transit service, passenger revenue is an effective measure of how well the customer accepts the service and facilitates a valid comparison to the cost of providing the service. The analysis develops a cost per passenger for each of the fifteen routes and examines the farebox recovery ratio. The revenue recovery ratio is the percentage of the cost of service that is paid by the passenger fares. Transit subsidy levels are finite. Minimizing the subsidy per passenger allows MATS to provide more service and benefit more members of the community.

Determining the Route-Level Cost of Service

MATS provides transit service on fifteen different routes. Many of the costs of operating this service are not readily distinguishable or traceable to the individual routes. In order to do this, a cost allocation methodology that assigns appropriate increments of cost to each route is required.

There are two major components to route-level costs. First, the direct costs of transit service are those costs actually caused by operation of the service. Drivers' salaries, fuel, tires, vehicle maintenance expenses are all caused directly by the operation of the service. If the revenue hours and revenue miles of service were increased, we can rightly assume these direct costs will increase in a largely linear fashion.

Other transit system expenses tend not to change when service levels are altered. These expenses are mostly determined by management actions and are determined largely through the budget process. These indirect expenses, normally considered "overhead", must be allocated to the individual transit routes in a rational manner.

The transit industry has long relied on the three-variable cost model as a mechanism for estimating the cost of portions of the service. This methodology produces a realistic estimate of the fully allocated cost of service that includes both the direct cost of transit operation and a proportionate share of the indirect costs, or transit system overhead.

The three variable cost model for MATS was constructed using the FY 2005 National Transit Database Report. Each expense item (i.e., driver wages, maintenance wages, fuel, tires, repair parts, etc.) was assigned to the service variable, either miles or hours of service, which tends to have the greatest influence on the expense. For example, driver wages and benefits largely vary as a function of revenue hours. Conversely, the distance a bus travels determines the amount of

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fuel consumed. Tire expense and vehicle maintenance expenses are also considered a function of the miles operated.

Indirect or “overhead” costs are handled differently. Since these do not have a direct, causal relationship with service, all indirect costs must be allocated another way. Following the common practice of the transit industry, these costs are allocated to the routes based on peak buses. Peak buses are the number of buses assigned to a route during the period of heaviest service.

Transit systems sometimes vary the number of buses operating on a route throughout the day based on the expected demand for service. During the mid-day, when service is lightest, only one vehicle might be operated. In the morning and evening rush hours when riders are traveling to and from work, the vehicles assigned are increased to accommodate the larger number of riders. The maximum amount of buses operated anytime during the day is the number of “peak” buses for that route.

Multiplying the number of peak buses by the number of days that the service operates further refines this measure. For our example, a route that has one peak bus per weekday times five weekday service days per week yields total peak bus-days for weekday service of five peak bus-days per week. Peak bus-days for Saturdays are calculated in a similar fashion in order to allocate a proportionate share of the indirect costs to the weekend service.

Table 4-11 shows the assignment of the direct expenses taken from the MATS 2006 National Transit Database Report into the two kinds of direct cost, one allocated by revenue miles and one by revenue hours, and the grouping of the indirect expenses that is allocated by peak bus-days. Dividing the mileage-based cost pool, the hour-based cost pool and the peak bus-day cost pool by the revenue miles, hours and peak bus-days respectively yields the three cost coefficients that are used to calculate the route-level cost of service.

The annual service costs for each route operated on weekdays and Saturday are shown on Table 4-12 and Table 4-13.

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Exhibit 4-11
Fully Allocated Cost Model

Fixed-Route Cost Parameters	Costs
Annual Mileage Based Costs:	
Vehicle Maintenance Wages & Fringes	\$356,911
Contract Maintenance Services	\$1,115
Fuel Cost & Taxes	\$302,899
Tire Cost	\$15,684
Vehicle Repair Parts & Supplies	\$108,747
Subtotal	\$ 785,356
Annual Hourly Based Costs:	
Operator's Wages	\$ 1,156,340
Other Transportation Wages	437,924
Transportation Fringe Benefits	281,570
Transportation Services	785
Transportation Supplies	-
Subtotal	\$ 1,876,619
Peak Bus Day Based Indirect Costs:	
Administrative Salaries & Fringes	\$ 195,667
Insurance	123,439
Professional Services	52,663
Utilities	59,767
Building & Grounds Salaries & Fringes	15,387
Building & Grounds Maint. Materials	7,819
Building & Grounds Services	6,413
Administrative Supplies	15,693
Miscellaneous	70,647
Subtotal	\$ 547,495
Total Operating Expenses	\$ 3,209,470

Fixed-Route Operating Parameters:	Annual Total
Revenue Miles	1,264,696
Revenue Hours	81,627
Peak Bus Days	6,541
Fixed Route Cost Coefficients	
Cost Per Mile	\$0.621
Cost Per Hour	\$22.990
Cost Per Peak Bus-Day	\$83.702

Based on 2006 National Transit Database Report.

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Exhibit 4-12
Fully Allocated Cost of Weekday Service

Route Number	Annual Revenue Hours	Annual Revenue Miles	Peak Bus-Days	Annual Cost of Service
1	7,846	144,305	510	\$ 312,688
2	6,375	120,488	510	\$ 264,071
3	5,103	63,725	255	\$ 178,225
4	4,080	58,752	255	\$ 151,628
5	5,865	98,532	510	\$ 238,712
6	4,080	75,480	255	\$ 162,016
7	3,912	84,150	255	\$ 163,531
8	4,190	83,028	255	\$ 169,224
9	3,950	65,255	255	\$ 152,676
10	5,865	67,448	510	\$ 219,409
11	2,892	53,321	255	\$ 120,936
12	6,036	105,825	510	\$ 247,169
13	1,326	8,033	255	\$ 56,817
Parking	1,020	9,180	255	\$ 50,495
14 Gold	2,525	12,266	255	\$ 86,999
14 Green	2,117	8,288	255	\$ 75,149
15	2,550	32,130	255	\$ 99,921
16	4,080	73,032	255	\$ 160,496
System	73,810	1,163,234	5,865	\$ 2,910,163

Exhibit 4-13
Fully Allocated Cost of Saturday Service

Route Number	Annual Revenue Hours	Annual Revenue Miles	Peak Bus-Days	Annual Cost of Service
1	624	10,046	52	\$ 24,937
2	624	9,828	52	\$ 24,801
3	624	6,698	52	\$ 22,857
4	364	3,744	26	\$ 12,870
5	624	8,736	52	\$ 24,123
6	416	7,696	26	\$ 16,519
7	312	3,900	26	\$ 11,771
8	312	3,848	26	\$ 11,739
9	624	9,027	52	\$ 24,304
10	624	5,980	52	\$ 22,412
11	243	5,117	26	\$ 10,937
12	650	10,067	52	\$ 25,548
13	0	0	0	\$ -
Parking	0	0	0	\$ -
14 Gold	429	2,501	52	\$ 15,769
14 Green	463	1,690	52	\$ 16,054
15	260	3,276	26	\$ 10,188
16	624	9,308	52	\$ 24,479
Total	6,470	87,188	546	\$ 248,587

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Route Revenue Estimates

Route revenue is a product of the number of riders and the fare that each rider pays. Because most transit systems offer fare prepayment options and discounts for selected groups, the actual fare per trip for each rider can vary. The options for non-cash passengers include weekly and monthly passes. The amount paid by cash customers is set. The cost per trip for pass users is a function of the cost of the pass and the number of times they use the pass during the week or month the pass is issued.

To simplify this situation, route revenues are calculated as the product of the projected ridership for each route times the average fare paid by each passenger on the route. The average fare paid by an originating or transferring passenger based on data provided by MATS is \$0.474. Route revenues then are the product of the ridership for each route times the average fare.

Route-level ridership and revenue estimates are shown in the following exhibits.

Exhibit 4-14
Annual Weekday Ridership and Revenue

Route Number	Daily Boardings	Annual Riders	Annual Revenue	Percent of System Total
1	162	41,310	\$ 19,599	4.5%
2	569	145,095	\$ 68,840	15.7%
3	273	69,615	\$ 33,029	7.5%
4	316	80,580	\$ 38,231	8.7%
5	305	77,775	\$ 36,900	8.4%
6	150	38,250	\$ 18,148	4.1%
7	105	26,775	\$ 12,703	2.9%
8	57	14,535	\$ 6,896	1.6%
9	81	20,655	\$ 9,800	2.2%
10	517	131,835	\$ 62,549	14.3%
11	161	41,055	\$ 19,478	4.4%
12	465	118,575	\$ 56,257	12.8%
13	119	30,345	\$ 14,397	3.3%
Parking	30	7,650	\$ 3,630	0.8%
14 Gold	59	15,045	\$ 7,138	1.6%
14 Green	45	11,475	\$ 5,444	1.2%
15	27	6,885	\$ 3,267	0.7%
16	180	45,900	\$ 21,777	5.0%
System	3,621	923,355	\$ 438,082	100.0%
Average Fare for Fixed Route Service			\$0.474	

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Exhibit 4-15
Annual Saturday Ridership and Revenue

Route Number	Daily Boardings	Annual Riders	Annual Revenue	Percent of System Total
1	57	2,964	\$ 1,406	4.3%
2	217	11,284	\$ 5,354	16.4%
3	113	5,876	\$ 2,788	8.5%
4	79	4,108	\$ 1,949	6.0%
5	118	6,136	\$ 2,911	8.9%
6	37	1,924	\$ 913	2.8%
7	19	988	\$ 469	1.4%
8	14	728	\$ 345	1.1%
9	30	1,560	\$ 740	2.3%
10	197	10,244	\$ 4,860	14.8%
11	37	1,924	\$ 913	2.8%
12	141	7,332	\$ 3,479	10.6%
13	-	-	\$ -	-
Parking	-	-	\$ -	-
14 Gold	58	3,016	\$ 1,431	4.4%
14 Green	84	4,368	\$ 2,072	6.3%
15	9	468	\$ 222	0.7%
16	117	6,084	\$ 2,887	8.8%
System	1,327	69,004	\$ 32,739	100.0%
Average Fare for Fixed Route Service			\$0.474	

Route Efficiency Analysis

Route revenue and route cost estimates yield a number of different comparisons that illustrate different aspects of route-level financial performance. Exhibits 4-16 and 4-17 show the key financial performance indicators: cost and revenue per revenue hour and per revenue mile, subsidy per rider, and the revenue cost recovery ratio.

With an average weekday cost per operating hour of \$39.43 and \$2.50 per revenue mile, the system is operating at a unit cost that is a little better than similar systems throughout the country. MATS has a revenue per hour rate of \$5.94, which produces a revenue to cost ratio of 15.05 percent. This is related to the productivity of the system, which is 14.45 passengers per hour on weekdays.

The amount of the operating cost that is paid by passenger revenue is an indicator of a number of the factors affecting the productivity of a transit route. The transit industry employs an index known as the revenue to cost ratio, sometimes known as the revenue recovery ratio. The revenue recovery ratio measures the amount of route operating costs that are paid by the passenger fares collect for that route.

The most fundamental indication that riders accept and approve of the design and operation of a transit system is by their use of its services. Passenger revenue is a measure of this use. A

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Exhibit 4-17

Saturday Route Efficiency Analysis

Route Number	Cost/ Revenue Hour	Revenue/ Revenue Hour	Cost/ Revenue Mile	Revenue/ Revenue Mile	Net Cost per Unlinked Passenger	Revenue/ Cost Ratio
1	\$39.96	\$2.25	\$2.48	\$0.14	\$7.94	5.64%
2	\$39.75	\$8.58	\$2.52	\$0.54	\$1.72	21.59%
3	\$36.63	\$4.47	\$3.41	\$0.42	\$3.42	12.20%
4	\$35.36	\$5.35	\$3.44	\$0.52	\$2.66	15.14%
5	\$38.66	\$4.67	\$2.76	\$0.33	\$3.46	12.07%
6	\$39.71	\$2.19	\$2.15	\$0.12	\$8.11	5.53%
7	\$37.73	\$1.50	\$3.02	\$0.12	\$11.44	3.98%
8	\$37.62	\$1.11	\$3.05	\$0.09	\$15.65	2.94%
9	\$38.95	\$1.19	\$2.69	\$0.08	\$15.11	3.05%
10	\$35.92	\$7.79	\$3.75	\$0.81	\$1.71	21.69%
11	\$45.04	\$3.76	\$2.14	\$0.18	\$5.21	8.35%
12	\$39.30	\$5.35	\$2.54	\$0.35	\$3.01	13.62%
13	No Service					
Parking	No Service					
14 Gold	\$36.76	\$3.34	\$6.30	\$0.57	\$4.75	9.07%
14 Green	\$34.65	\$4.47	\$9.50	\$1.23	\$3.20	12.91%
15	\$39.18	\$0.85	\$3.11	\$0.07	\$21.29	2.18%
16	\$39.23	\$4.63	\$2.63	\$0.31	\$3.55	11.79%
System	\$38.42	\$5.06	\$2.85	\$0.38	\$3.13	13.17%

Average Fare for Fixed Route Service:

\$ 0.474

Exhibit 4-18 and 4-19 show the revenue recovery ratio for each route ranked from the highest to the lowest. The weekday service analysis shows that eight of the 18 routes rank above the average revenue to cost ratio of 15.05 percent. Five routes rank at least 125 percent above the mean. Several routes, excluding the special shuttles, are performing very poorly according to this measure. Serious consideration should be given to any route that performs this poorly.

On Saturdays, the average revenue to cost ratio is 11.0 percent. One-half of the routes perform above the average. Not surprisingly, the poor performers on weekdays continue this trend on Saturday.

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Exhibit 4-18
Weekday Route Efficiency Ranking

Route Number	Route Destination	Cost/ Revenue Hour	Revenue/ Revenue Hour	Cost/ Revenue Mile	Revenue/ Revenue Mile	Revenue/ Cost Ratio
10	S. Court	\$ 37.41	\$ 10.66	\$ 3.25	\$ 0.93	28.51%
2	Eastdale Mall	\$ 41.42	\$ 10.80	\$ 2.19	\$ 0.57	26.07%
13	Crampton Bowl Shuttle	\$ 42.85	\$ 10.86	\$ 7.07	\$ 1.79	25.34%
4	Boylston	\$ 37.16	\$ 9.37	\$ 2.58	\$ 0.65	25.21%
12	Smiley Court/Gibbs Village	\$ 40.95	\$ 9.32	\$ 2.34	\$ 0.53	22.76%
3	Montgomery Commons	\$ 34.93	\$ 6.47	\$ 2.80	\$ 0.52	18.53%
11	Ridgecrest	\$ 41.82	\$ 6.74	\$ 2.27	\$ 0.37	16.11%
5	Montgomery Mall	\$ 40.70	\$ 6.29	\$ 2.42	\$ 0.37	15.46%
16	Twin Oaks	\$ 39.34	\$ 5.34	\$ 2.20	\$ 0.30	13.57%
6	Southlawn/Twin Gates	\$ 39.71	\$ 4.45	\$ 2.15	\$ 0.24	11.20%
14	Gold Loop	\$ 34.46	\$ 2.83	\$ 7.09	\$ 0.58	8.20%
7	Maxwell	\$ 41.81	\$ 3.25	\$ 1.94	\$ 0.15	7.77%
4	Green Loop	\$ 35.51	\$ 2.57	\$ 9.07	\$ 0.66	7.24%
Parking	Parking Shuttle	\$ 49.50	\$ 3.56	\$ 5.50	\$ 0.40	7.19%
9	Virginia Loop	\$ 38.65	\$ 2.48	\$ 2.34	\$ 0.15	6.42%
1	AUM Campus	\$ 39.85	\$ 2.50	\$ 2.17	\$ 0.14	6.27%
8	Gunter Annex	\$ 40.39	\$ 1.65	\$ 2.04	\$ 0.08	4.08%
15	Allendale	\$ 39.18	\$ 1.28	\$ 3.11	\$ 0.10	3.27%
TOTAL		\$ 39.43	\$ 5.94	\$ 2.50	\$ 0.38	15.05%

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Exhibit 4-19
Saturday Route Efficiency Ranking

Route Number	Route Destination	Cost/ Revenue Hour	Revenue/ Revenue Hour	Cost/ Revenue Mile	Revenue/ Revenue Mile	Revenue/ Cost Ratio
10	S. Court	\$ 35.92	\$ 7.79	\$ 3.75	\$ 0.81	22%
2	Eastdale Mall	\$ 39.75	\$ 8.58	\$ 2.52	\$ 0.54	22%
4	Boylston	\$ 35.36	\$ 5.35	\$ 3.44	\$ 0.52	15%
12	Smiley Court/Gibbs Village	\$ 39.30	\$ 5.35	\$ 2.54	\$ 0.35	14%
4 Green	Green Loop	\$ 34.65	\$ 4.47	\$ 9.50	\$ 1.23	13%
3	Montgomery Commons	\$ 36.63	\$ 4.47	\$ 3.41	\$ 0.42	12%
5	Montgomery Mall	\$ 38.66	\$ 4.67	\$ 2.76	\$ 0.33	12%
16	Twin Oaks	\$ 39.23	\$ 4.63	\$ 2.63	\$ 0.31	12%
14 Gold	Gold Loop	\$ 36.76	\$ 3.34	\$ 6.30	\$ 0.57	9%
11	Ridgecrest	\$ 45.04	\$ 3.76	\$ 2.14	\$ 0.18	8%
1	AUM Campus	\$ 39.96	\$ 2.25	\$ 2.48	\$ 0.14	6%
6	Southlawn/Twin Gates	\$ 39.71	\$ 2.19	\$ 2.15	\$ 0.12	6%
7	Maxwell	\$ 37.73	\$ 1.50	\$ 3.02	\$ 0.12	4%
9	Virginia Loop	\$ 38.95	\$ 1.19	\$ 2.69	\$ 0.08	3%
8	Gunter Annex	\$ 37.62	\$ 1.11	\$ 3.05	\$ 0.09	3%
15	Allendale	\$ 39.18	\$ 0.85	\$ 3.11	\$ 0.07	2%
Parking	Parking Shuttle	n/a	n/a	n/a	n/a	n/a
13	Crampton Bowl Shuttle	n/a	n/a	n/a	n/a	n/a
TOTAL		\$ 38.29	\$ 4.19	\$ 2.95	\$ 0.32	11%

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During the last five years, MATS has introduced a progression of strategic public transportation improvements with the purpose of rebuilding the City's fixed-route transit system. This chapter describes a set of improvements for the next five years (2008-2012). The goals of these improvements are to preserve the progress that has been made and continue to improve public transportation service in the City of Montgomery. Each recommendation is the product of a close collaboration between the City of Montgomery, MATS, general public and advocacy groups, bus operators, stakeholders, current users, and the consultants that were retained to update the TDP.

The proposed improvements are designed to meet a number of planning objectives. By addressing these objectives, MATS will be able to sustain the service and ridership growth achieved during the last five years. The system should also be able to reach a higher level of performance in the future. The planning objectives include:

- Simpler route alignments and system design
- More direct travel
- Consistent frequency of service
- Greater route connectivity that eliminates double transfers and offers timed transfers to the majority of passengers
- Higher passenger productivity and on-time performance
- Consideration of new markets or non-traditional riders

Based on the data collected and the tasks completed for this project, several key observations can be made that affect the TDP update recommendations:

- Although Montgomery has a long history of providing public transportation, the existing system is relatively new.
- Reintroducing fixed-route service has brought about significant ridership growth.
- Refinements to the existing routes and schedules are needed to help meet the planning objectives. Not addressing these issues could result in a less effective system with major cost issues.
- Most of the demand for public transportation is still found in the older, established neighborhoods located south and west of downtown Montgomery.
- Although some redevelopment activity is taking place in midtown and downtown, most of the residential, business/commercial and employment growth is taking place in the east and southeast sectors of the city.
- Poor on-time performance is having a major impact on timed transfers and system reliability.
- The West Fairview Transit Center is not centrally located.
- The new Intermodal Center offers improved passenger amenities. However, pedestrian access near the center (e.g. sidewalks, pedestrian crossings, and signals), bus circulation and the amount of space set aside for buses limits its short-term and long-term usefulness.

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- A full pulse schedule, or one where all routes met at the center at the same time on all scheduled trips, would be extremely attractive to current and potential users, but limited, interior parking makes this infeasible. A partial pulse, similar to the current operation that schedules some routes in to the transfer center at a designated time and the remaining routes at another time is a practice that should be continued.
- Some route alignments require too much out of direction travel, which can significantly increase travel times.
- Some routes and route segments are carrying very few if any passengers.
- Although the current system is relatively new, it contains several cases of route duplication.

The short-term improvements described in this chapter were made possible by restructuring the existing routes and services. A limited number of route segments with extremely low productivity are affected by the proposed changes, but overall, very little service is eliminated. Most of the areas affected by the deleted segments are still covered because of modifications proposed to other routes.

The list below enumerates some of the key accomplishments of the 2008-2012 TDP:

- Provides a direct connection from downtown to East Montgomery along a well-developed corridor (Atlanta Highway).
- Eliminates some of the most unproductive route segments and improves service to most productive routes.
- Improves connections from west Montgomery to other parts of city.
- Maintains excellent transfer connections.
- Provides more one-seat rides (e.g. Route 6 Selma Highway/Southlawn to downtown).
- Eliminates some confusing loop alignments and out-of-direction travel.
- Addresses route duplication.
- Retains service coverage and positions MATS for future service improvements.
- Addresses some running time and on-time performance issues.
- Achieves short-range improvements without any expensive increases in operating costs.

IMMEDIATE IMPROVEMENTS

To help achieve the study objectives, MATS should initiate a comprehensive service re-design process during the next 12-18 months that is based on the following proposed improvements. Passenger productivity data used in the following sections is based on the revenue hours of service that were operated prior to the expansion of evening service and the 2007 systemwide passenger count.

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ROUTE 1 AUM

Analysis:

- The Route 1 alignment is relatively long (27.6 miles) but well designed. Recently, the alignment was extended from the AUM campus to the Super Wal-mart on Atlanta Highway to add a major activity center and provide a connection to Route 2.
- Approximately 90 minutes are needed to complete a round trip on Route 1. Consequently, two vehicles are required to operate the current 45-minute frequency of service on weekdays. Route 1 only operates every 90 minutes on Saturday, which requires one vehicle.
- Route 1 averages 162 passenger boardings on weekdays and 57 on Saturdays.
- On weekdays, Route 1 averages 6.35 passenger boardings per hour of service, or less than one-half the system average. On Saturday, Route 1 averages 5.43 passenger boardings per hour or just about one-half the average.
- Due to its low ridership and low passenger boardings per trip, Route 1 does not experience any capacity problems.
- Approximately 70 percent of scheduled trips use the scheduled run time or less than the scheduled run time to complete the trip.
- Almost 75 percent of Route 1 buses departed from the designated timepoints on time or a little early.

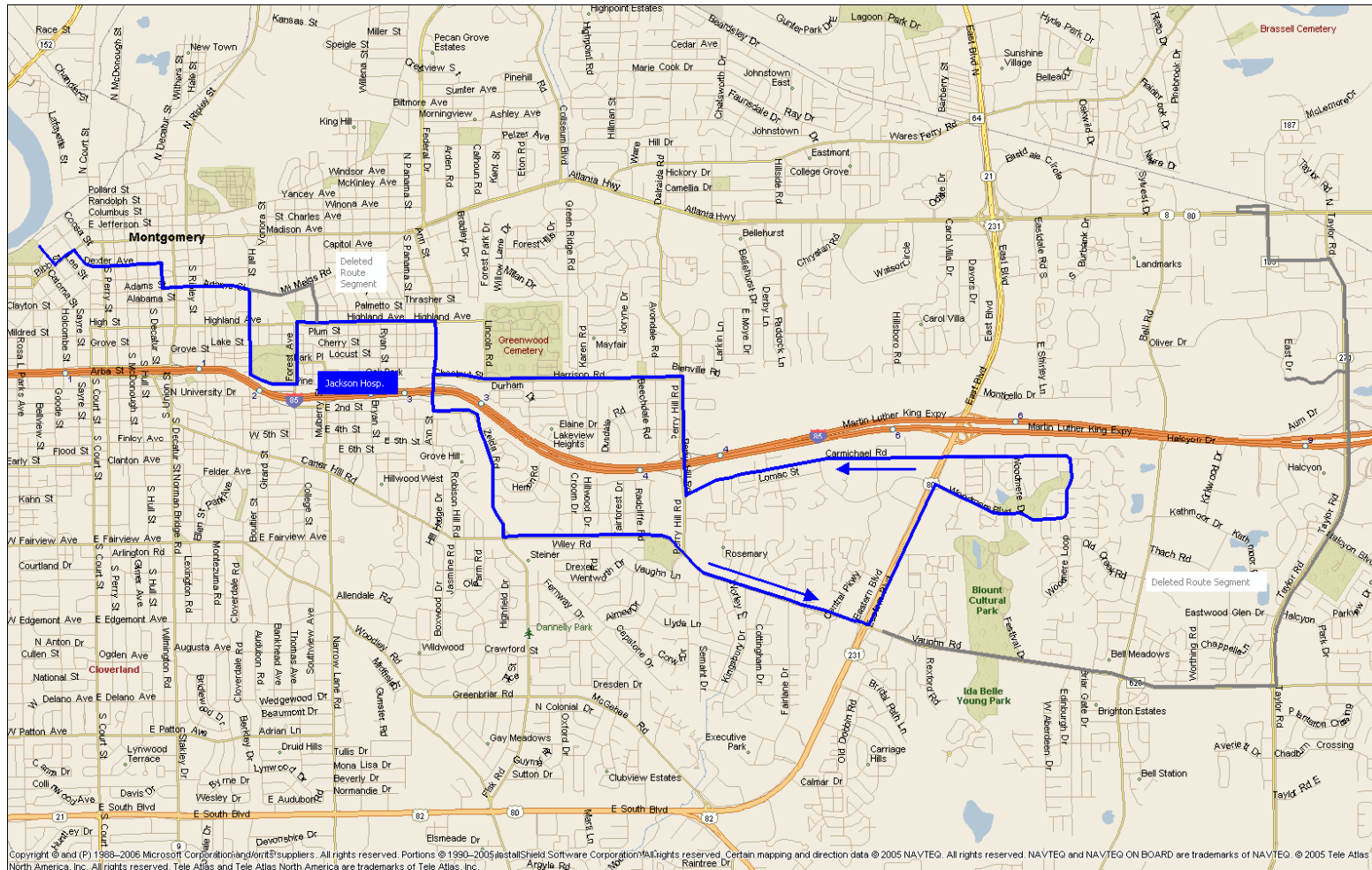
Proposed Improvements:

- To address the low passenger productivity on Route 1 and route segments with very little or no ridership potential (i.e. Vaughn Road between East Boulevard and Taylor Road), it is recommended that Route 1 be combined with Route 16. According to the systemwide passenger count, the deleted segment averages eight passenger boardings and 14 passenger alightings on weekdays.
- In addition, the current alignment should be modified to serve Jackson Hospital.
- The proposed route will require less run time so it can operate on a 60-minute frequency all day and on Saturday.
- The proposed schedule and frequency will require one bus, which saves one bus.
- The proposed route will operate out of the new Intermodal Transit Center.
- Change name to Route 1 Woodmere.

The proposed Route 1 alignment is shown on the following page.

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Route 1 Woodmere Proposed Alignment



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ROUTE 2 EASTDALE MALL

Analysis:

- Route 2 operates on an east-west alignment mostly along Madison Avenue and the Atlanta Highway. The existing alignment includes three deviations. The first one serves the VA Hospital on Perry Hill Road on selected outbound trips. The second deviation serves Eastland Mall only on inbound trips, which is a large inconvenience for passengers. The third deviation is to the Pinebrook area north of the Atlanta Highway. Once again, this area is only served on inbound trips.
- Route 2 starts at 5:35 AM and operates for approximately 15.5 hours on weekdays.
- A round trip on Route 2 takes approximately 60 minutes to complete. During peak periods, Route 2 operates on a 30-minute frequency of service and requires two vehicles. During other periods, one vehicle is assigned, which allows it to operate every 60 minutes. It also operates every 60 minutes on Saturday.
- On weekdays (569) and Saturdays (217), Route 2 has the highest number of passenger boardings in the system.
- On weekdays, Route 2 averages 25.86 passengers per hour of service operated and is the most productive route in the system. On Saturday, it is still the most productive with 21.7 passengers per hour of service.
- Passenger boardings appear to be steady throughout the day.
- Forty-two percent of the scheduled trips need more time to complete a round trip. This is probably due to traffic congestion, particularly along Atlanta Highway east of East Boulevard and needing more time for stops to pick up and drop off passengers.
- At the same time, about 49 percent of scheduled trips actually use less than the established running time to complete a trip.

Proposed Improvements:

- To provide a more direct routing to the growth areas in east Montgomery and improve the frequency of service to these areas, it is recommended that Route 2 be extended from the Super Wal-mart to the Sturbridge Shopping Center near the intersection of Taylor Road and Vaughn Road. This extension will cover a segment that was deleted from Route 1 and maintain service to AUM and the new Shoppes at Eastchase.
- The extended alignment will increase the scheduled run time from 60 minutes to 90 minutes.
- Using three buses, the peak frequency of service will remain at 30 minutes. The off-peak frequency will improve from 60 minutes to 30 minutes. This change will also improve the frequency of service to AUM and Eastchase from every 45 minutes to every 30 minutes.
- Route 2 buses should service Eastdale Mall in both directions to improve access to this important location.
- The deviation to Pinebrook on inbound trips should be deleted due to the low level of passenger activity and the need to make the alignment more efficient.

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- Change name to Route 2 Eastdale Mall-Taylor Road.

The proposed Route 2 alignment is illustrated on the following page.

ROUTE 3 MONTGOMERY COMMONS

Analysis:

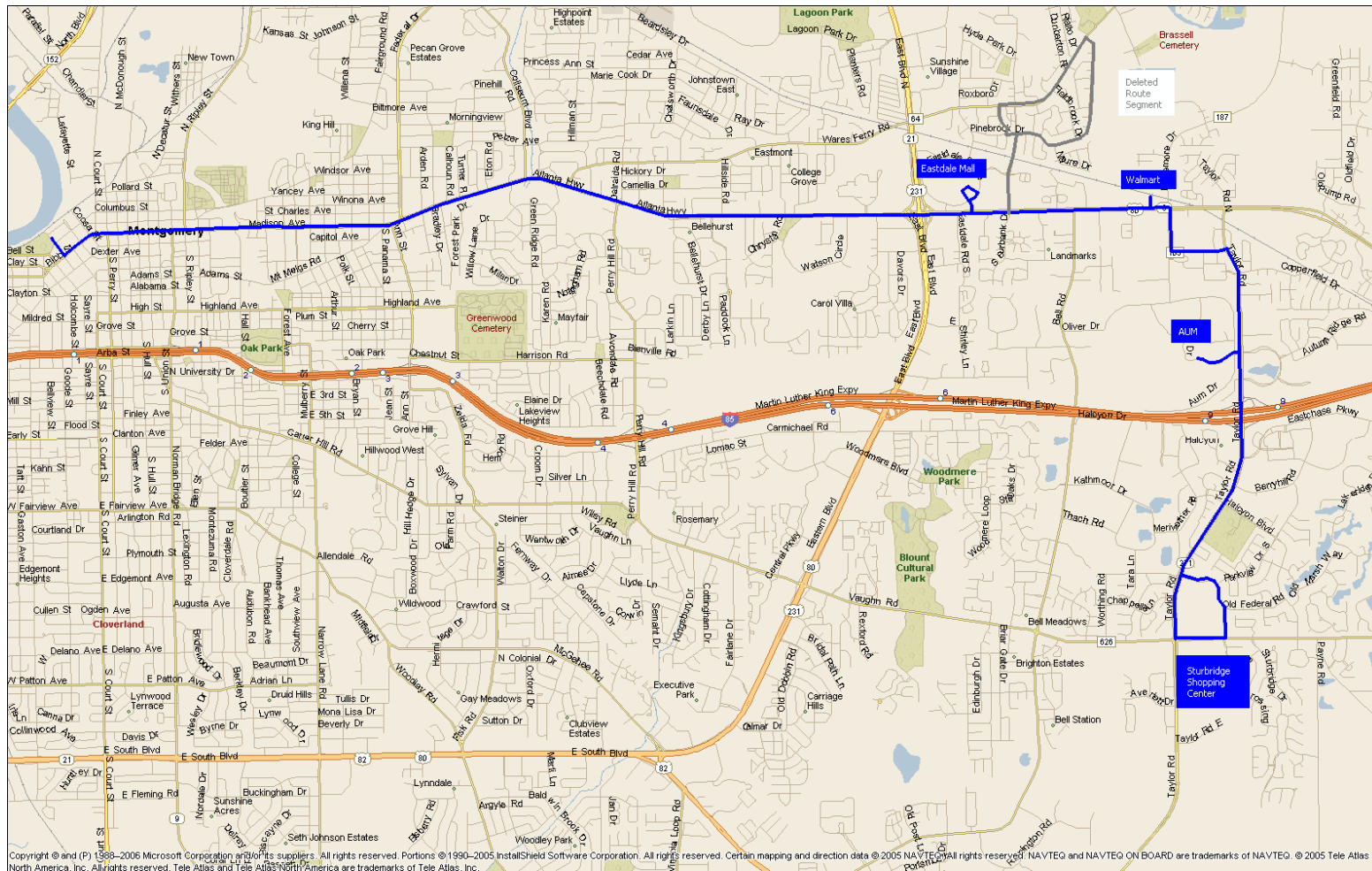
- Route 3 is a bi-directional alignment that operates between the West Fairview Transit Center and the Montgomery Commons shopping area near East Boulevard and Troy Highway. It also deviates off South Boulevard to serve the Montgomery Mall, which is mostly vacant.
- Other activity centers served by the existing alignment include Baptist Medical Center South and the Patterson Vocational and Technical School.
- Currently, the segment of this route that runs along Rosa Parks Avenue between E. Fairview and W. Patton parallels a segment of Route 11, which is only one block away on Gaston Avenue.
- South Boulevard is a very congested major arterial street with no safe locations for bus stops and poor access to adjacent activity centers.
- A round trip on this route takes approximately 80 minutes. By interlining Route 3 with Route 11, MATS can operate Route 3 every 60 minutes all day on weekdays. On Saturday, it runs every 80 minutes.
- Only one bus is assigned to this route on weekdays and Saturday.
- Route 3 averages 273 passenger boardings on weekdays and 113 on Saturday. This equates to 15.78 passengers per hour of service on weekdays and 10.56 passengers on Saturday.
- Excluding the shuttle routes, Route 3 is the sixth most productive route in the system on weekdays. On Saturday, it is the seventh most productive route.
- About 46 percent of trips use more than the scheduled time to complete a round trip, and another 46 percent use less than the scheduled run time.
- Route 3 does not appear to have any on-time performance issues since 86.5 percent of departures were on time.

Proposed Improvements:

- Along with some modifications to other routes that are described in subsequent sections, a modification to the Route 3 alignment is proposed.
- The proposed route will move from Rosa Parks Avenue to S. Court Street to provide a more even distribution of service in this area.
- The frequency of service and vehicle requirement for this route will remain the same.

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Route 2 Eastdale Mall/Taylor Road Proposed Alignment



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The proposed alignment is illustrated on the following page.

ROUTE 4 BOYLSTON

Analysis:

- Route 4 operates between the Intermodal Transit Center, Boylston, and surrounding residential areas.
- This route runs every 60 minutes on weekdays. On Saturday, it is interlined with Route 15, which leads to a 120-minute frequency of service for the first five trips. Starting with the 4:35 PM departure, Route 3 runs every 60 minutes for the remainder of the day.
- The first section of this route runs through North Montgomery, which appears to have suffered over the years a significant loss in housing stock, employment and population. Due to the changes that have occurred in this area, Route 4 probably does not produce as much ridership as in the past and probably never will. Nevertheless, the population that resides in this corridor seems to have a strong need for public transportation based on its current productivity.
- The northern segment, however, does produce higher and more consistent ridership activity.
- Longer travel times and less direct travel are caused by the loop at the northern end of Route 4.
- Route 4 averages 316 passenger boardings on weekdays and 113 on Saturday.
- Route 4 is the third most productive regular route on weekdays and Saturday.
- Sixty-four percent of trips use the scheduled time or less than the scheduled time.
- Almost 74 percent of all departures from all designated timepoints are on time.

Proposed Improvements:

- Due to its strong passenger productivity and lack of alternative routings, no changes are recommended to the Route 4 at this time.

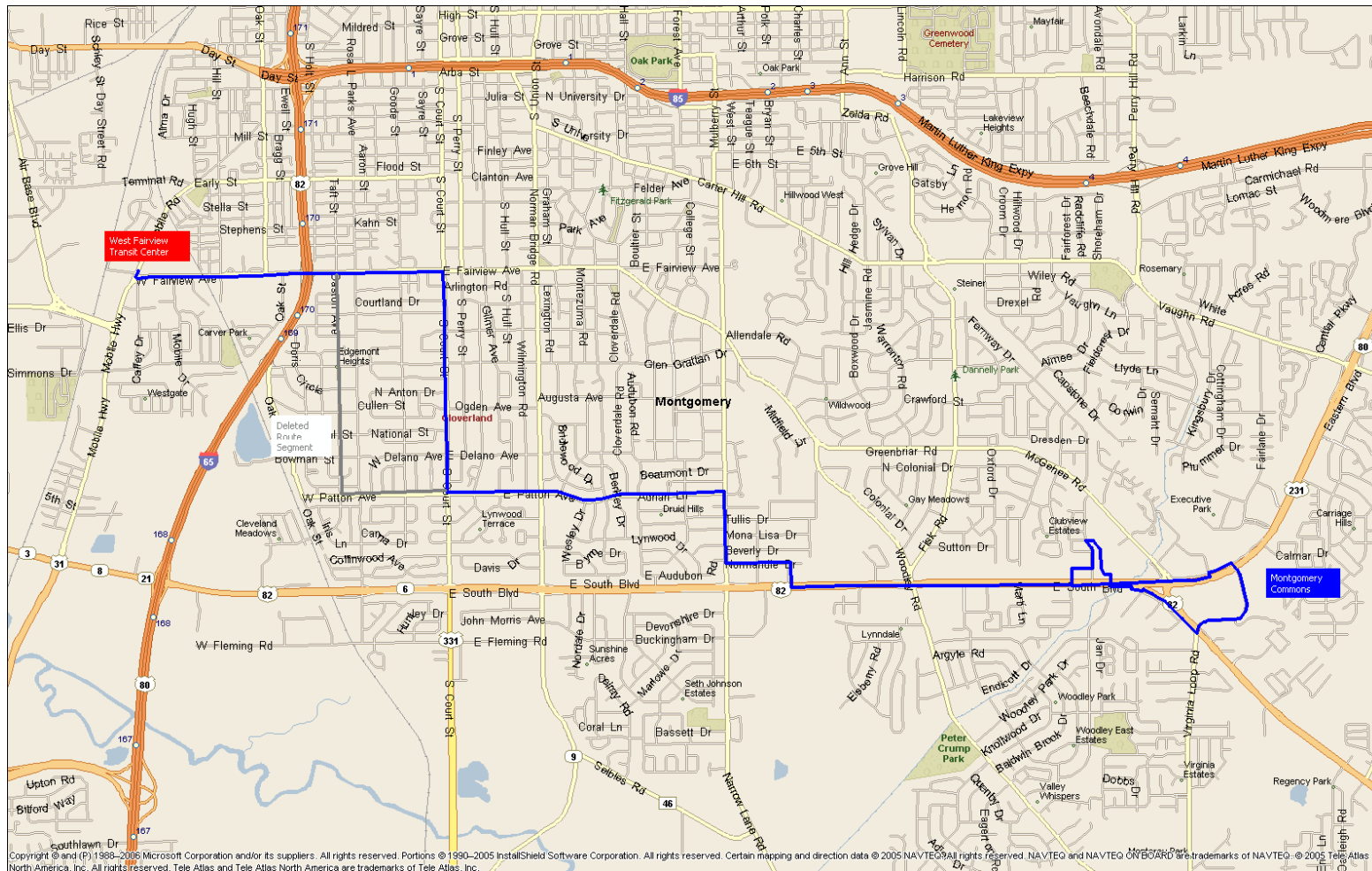
ROUTE 5 MONTGOMERY MALL

Analysis:

- Route 5 operates between the Intermodal Center and Montgomery Mall. Currently, just a few small stores at the mall are open.
- The bus stop located at Montgomery Mall appears to be used as a secondary transfer point between Route 3, Route 5, and Route 9.
- The current alignment meanders through older, residential areas to reach Jackson Hospital and Alabama State University. This alignment creates some operational

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Route 3 Montgomery Commons Proposed Alignment



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- concerns, especially the outbound turn from Hall Street to Hutchinson. Hutchinson is a narrow street with parking allowed on both sides, which can create safety and operating problems.
- The outer portion of the route consists of a large counter-clockwise loop. Operating in this direction, Route 5 serves the Montgomery Mall bus stop, a portion of E. South Boulevard, and a densely developed office park near the intersection of Executive Park Drive and Fairlane. Although a left turn signal is available, the turn from Eastern Boulevard can take up a relatively significant amount of scheduled run time because the cycle time at the signal is longer than most.
- It takes approximately 60 minutes to complete a round trip on route 5. During weekday peak periods, Route 5 runs every 30 minutes. During the weekday off-peak, weekday evening, and Saturday operations, this route runs every 60 minutes.
- Route 5 averages 305 passenger boardings on weekdays and 118 on Saturday.
- Passenger productivity is slightly above average at 15.25 per revenue hour on weekdays and 11.8 per hour on Saturday.
- Route 5 has a lower level of productivity during peak periods (16.9 passengers per hour) than off-peak service operating every 60 minutes (22.7 passengers per hour).
- Seventy-seven percent of trips used the scheduled run time or less time.
- On-time performance might be a problem as 61.4 percent of departures at all the checked timepoints were late.

Proposed Improvements:

- To address operational and safety concerns, delete route segments on High, Forest, Glen Palmer, Hall, and Hutchinson and operate, instead, outbound and inbound along S. Jackson in the vicinity of Alabama State University.
- Reverse the direction of travel on the eastern loop to avoid delays at Executive Park.
- Maintain current frequency of service (30-minute peak and 60 minute off-peak).

The proposed alignment is shown on the following page.

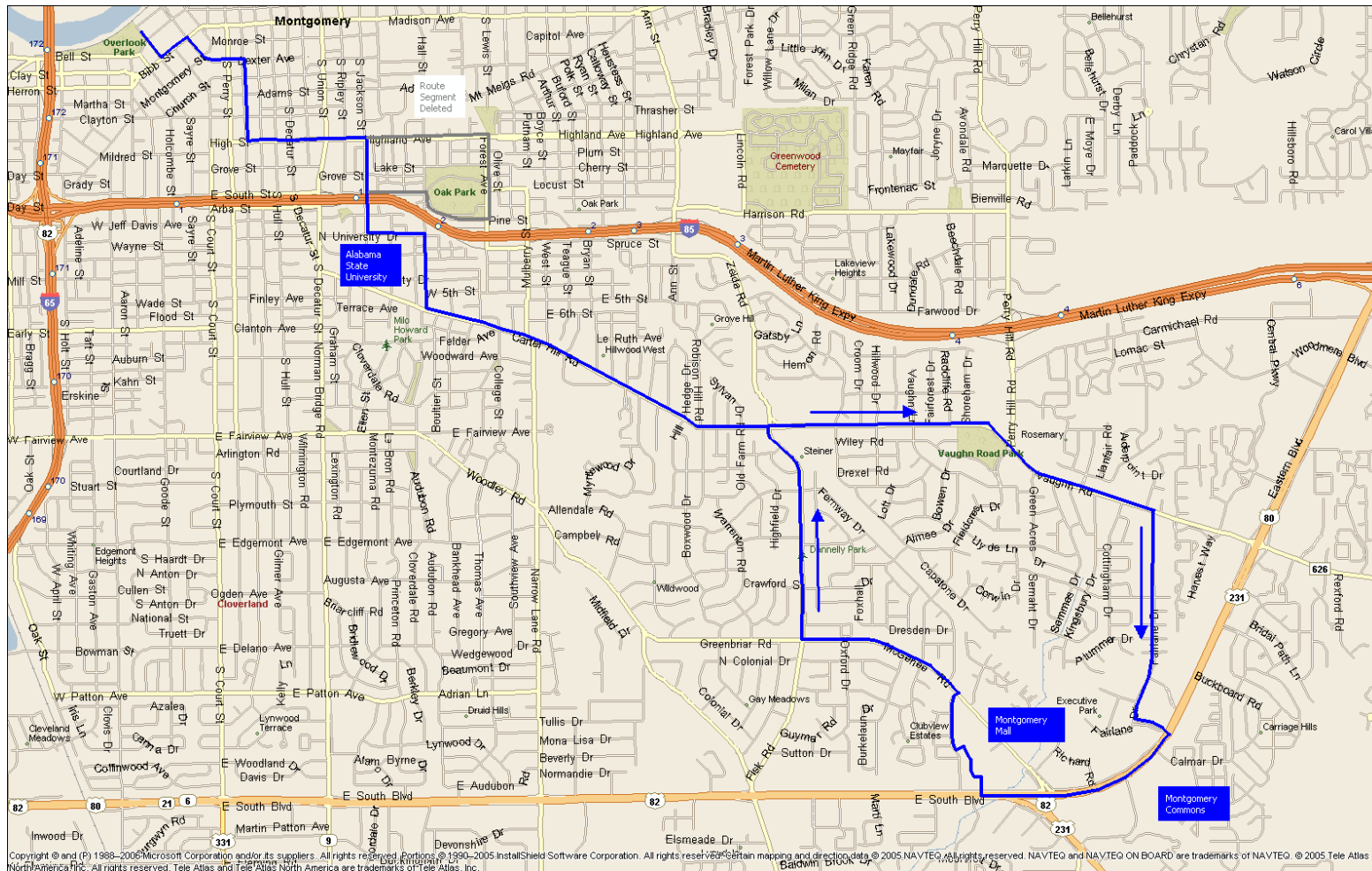
ROUTE 6 SOUTHLAWN TWIN GATES

Analysis:

- Route 6 originates at the W. Fairview Transit Center and serves the southwest sector of Montgomery.
- The street network and development pattern in this area do not offer any low-cost alternative routings or service alternatives.
- The existing alignment serves five distinct residential areas including Woodcrest Estates, Twin Gates, Dannelly Pines, Southlawn Estates and English Village.

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Route 5 Montgomery Mall Proposed Alignment



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- Other activity centers served by this route include Montgomery Regional Airport, Department of Human Resources & Medicaid Complex, and various employers located along Selma Highway (US 80) and Mobile Highway (US 31).
- Passengers traveling to downtown must transfer to Route 10 or Route 12 to complete the trip.
- Currently, Route 6 buses travel south on Mobile Highway, west on Selma Highway to Woodcrest, Twin Gates, Dannelly Pines and then the airport, east on Selma Highway, and then south on Mobile Highway to Southlawn and English Village before returning to the W. Fairview Transit Center.
- This routing increases travel times for some passengers, provides poor service to the airport, and limits the use of this route for local trips to area shopping centers and other destinations. A trip from Southlawn to the W. Fairview Transit Center takes approximately 20 minutes, but a return trip takes about 40 minutes. Residents along the western leg of Route 6 can ride a bus to Westport Shopping Center and other retail businesses in the area, but the routing does not provide a return trip unless the passenger rides through Southlawn, English Village, W. Fairview Transit Center and all the way back to their point of origin.
- Route 6 takes approximately 60 minutes to complete a round trip. The weekday frequency of service is 60 minutes, which requires one vehicle. On Saturday, Route 6 is interlined with Route 11, which results in buses running every 100 minutes.
- Route 6 averages 150 passenger boardings on weekdays and 37 on Saturday.
- Weekday productivity is 11.28 passengers per hour of service, which is below the system average of 14.45 per hour. On Saturday, Route 6 is well below the system average with 6.98 passengers per hour.
- Scheduled running time appears to be adequate, and on-time performance is very high.

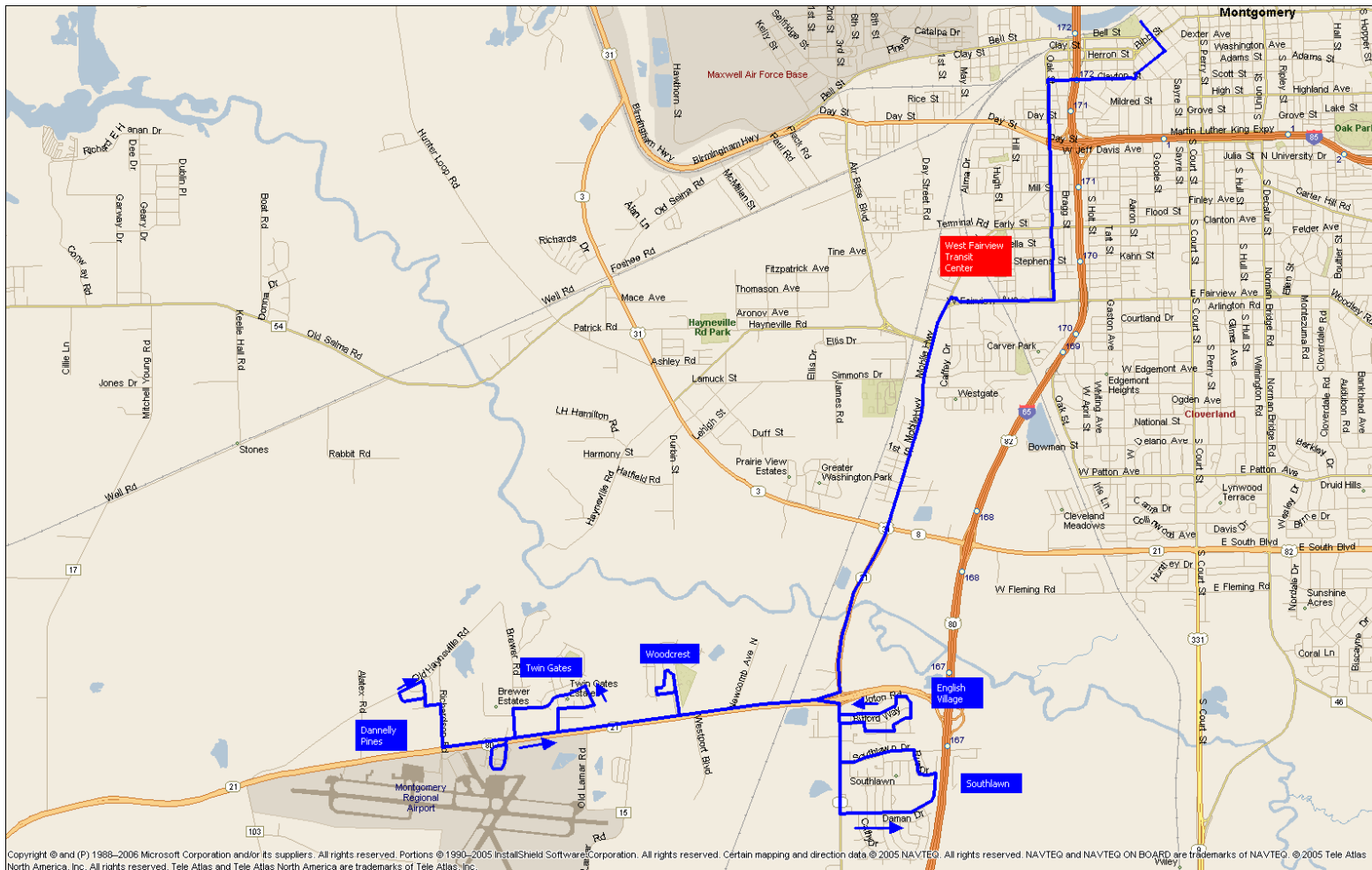
Proposed Improvements:

- Extend Route 6 from the W. Fairview Transit Center to downtown Montgomery along the Oak Street segment of Route 12 to provide more one-seat rides from southwest Montgomery. This would lessen the inconvenience of transfers, which is one of the problems associated with this route and allow improvements to be made to other routes that serve this portion of the city.
- The proposed alignment modification increases the round trip running time from 60 to 90 minutes. Assign two vehicles to the route and improve the frequency of service from 60 minutes to 45 minutes.
- Change name to Route 6 Selma Highway-Southlawn.

The proposed alignment is shown on the following page.

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Route 6 Selma Highway/Southlawn Proposed Alignment



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ROUTE 7 MAXWELL AFB

Analysis:

- Route 7 serves an older area of Montgomery and continues out Birmingham Highway to the Hunter Station area.
- The current alignment is well designed, but it runs through neighborhoods and employment sites that have undergone significant change over the years. It also runs through areas with little or no transit potential due to very low population densities or no development at all. An example of these changes is the high-density housing developments along Bell Street that have been demolished.
- The Hunter Station community, which is the terminal point for Route 7, is a very low-density single-family residential area that generates very little ridership.
- On weekdays, 22 trips are made to Hunter Station. According to the systemwide passenger count, an average of two passengers board the route and three get off all day.
- Approximately 5.5 hours of service are required to operate the trips that run west of Maxwell AFB. This segment averages five ons and six offs for the entire day including the activity in Hunter Station.
- Route 7 is interlined with Route 8 on weekdays and Saturday. The most common scheduled run time on Route 7 is 40 minutes, but it ranges from 20-50 minutes. The combined running time results in a weekday frequency of service on Route 7 that ranges from 30-55 minutes.
- On Saturday, Route 7 runs every two hours and makes only six round trips.
- Route 7 averages 105 passenger boardings on weekdays and 19 on Saturday.
- On weekdays, passenger productivity (8.90 per hour) is 62 percent of the system average. On Saturday, productivity remains extremely low at 3.8 passengers per hour.
- About 61 percent of trips were not completed in the allotted running time. About one-third of bus departures from designated timepoints were late.

Proposed Improvements:

- Delete the segment west of Maxwell AFB due to extremely low demand. The very small number of transit users in this area can be served by Montgomery Area Paratransit (MAP).
- Combine Route 7 with Gibbs Village portion of Route 12 to strengthen service and operating characteristics of the most productive segments of both routes.
- Allot 60 minutes of running time including layover/recovery time to address scheduling and on-time performance issues.
- Assign one vehicle to Route 7 and provide 60-minute frequency of service all day on weekdays and Saturday.
- Change name to Route 7 Maxwell AFB-Gibbs Village.

The proposed alignment is illustrated below.

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ROUTE 8 GUNTER ANNEX

Analysis:

- Route 8 operates between downtown Montgomery and the Gunter Industrial Park. Other locations served by this route are Garrett Coliseum, the Farmer's Market, Alabama Driver License Division, and the Gunter Air Force Station.
- More often than not, the weekday running time per trip is 45 minutes. On Saturday, 60 minutes is allotted.
- Route 8 is interlined with Route 7 on weekdays and Saturday. The frequency of service ranges from 35-50 minutes on weekdays and 120 minutes on Saturday.
- Route 8 averages 57 passenger boardings on weekdays and 14 on Saturday.
- Route 8 is the second least productive route in the system on weekdays and Saturday.
- On weekdays, only six passenger boardings were counted after 3:00 PM.
- About 82 percent of all trips required less than the scheduled running time.
- At the time the systemwide passenger count was conducted, 17 trips were made to Gunter Industrial Park on weekdays. Excluding the bus stop located at Congressman William Dickinson and Gunter Park Drive, the industrial park generated an average of five ons and 6 offs. On Saturday, five trips to the industrial park generated one boarding and zero offs.

Proposed Improvements:

- Because running time and on-time performance are not issues, Route 8 should be modified to serve a small portion of the Chisholm neighborhood, immediately south of the Montgomery Zoo, which is also served by Route 4 Boylston. The purpose is to give the riders that live in the area an alternative route to return home and shorten their travel time.
- Set the weekday running time and frequency of service at 60 minutes. Saturday trips will continue to run every 120 minutes.
- An alternative recommendation that should be further discussed is to shorten this route during off-peak periods by deleting service to Gunter Industrial Park or extending the route beyond Northern Boulevard.

The proposed alignment is illustrated below.

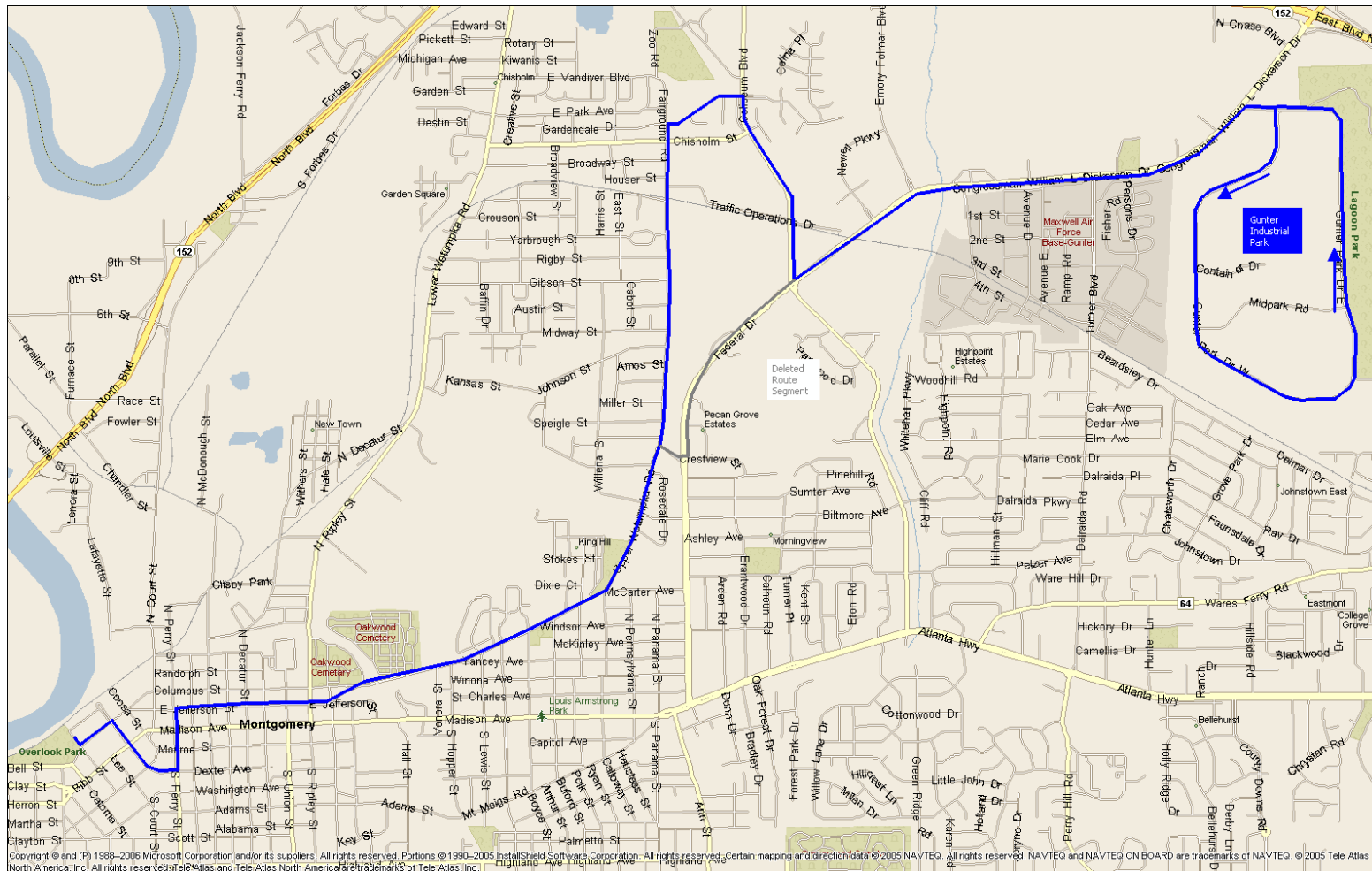
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Route 7 Maxwell AFB/Gibbs Village Proposed Alignment



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Route 8 Gunter Annex Proposed Alignment



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ROUTE 9 VIRGINIA LOOP

Analysis:

- Route 9 is a loop alignment designed to serve the residential areas generally bounded by South Boulevard, Troy Highway, Woodley Road.
- The current route is based at Montgomery Mall, and it runs in a clockwise direction. It serves a residential development off Troy Highway, returns to Troy Highway and turns south on Virginia Loop Road, north on Woodley, runs through the Spring Valley area, and then continues back to Montgomery Mall.
- A 45-minute round trip running time and one vehicle allows Route 9 to run every 45 minutes.
- Route 9 averages 81 weekday and 30 Saturday passenger boardings.
- The passenger boardings per hour of service are well below the system average on weekdays (6.33) and Saturday (2.80). The number of ons and offs per trip are very small but steady throughout the day.
- About 56 percent of the trips required less than the scheduled running time while 35 percent needed more.
- On-time performance is relatively high at 82.4 percent.
- The current alignment forces some passengers to contend with out of direction travel and longer travel times.

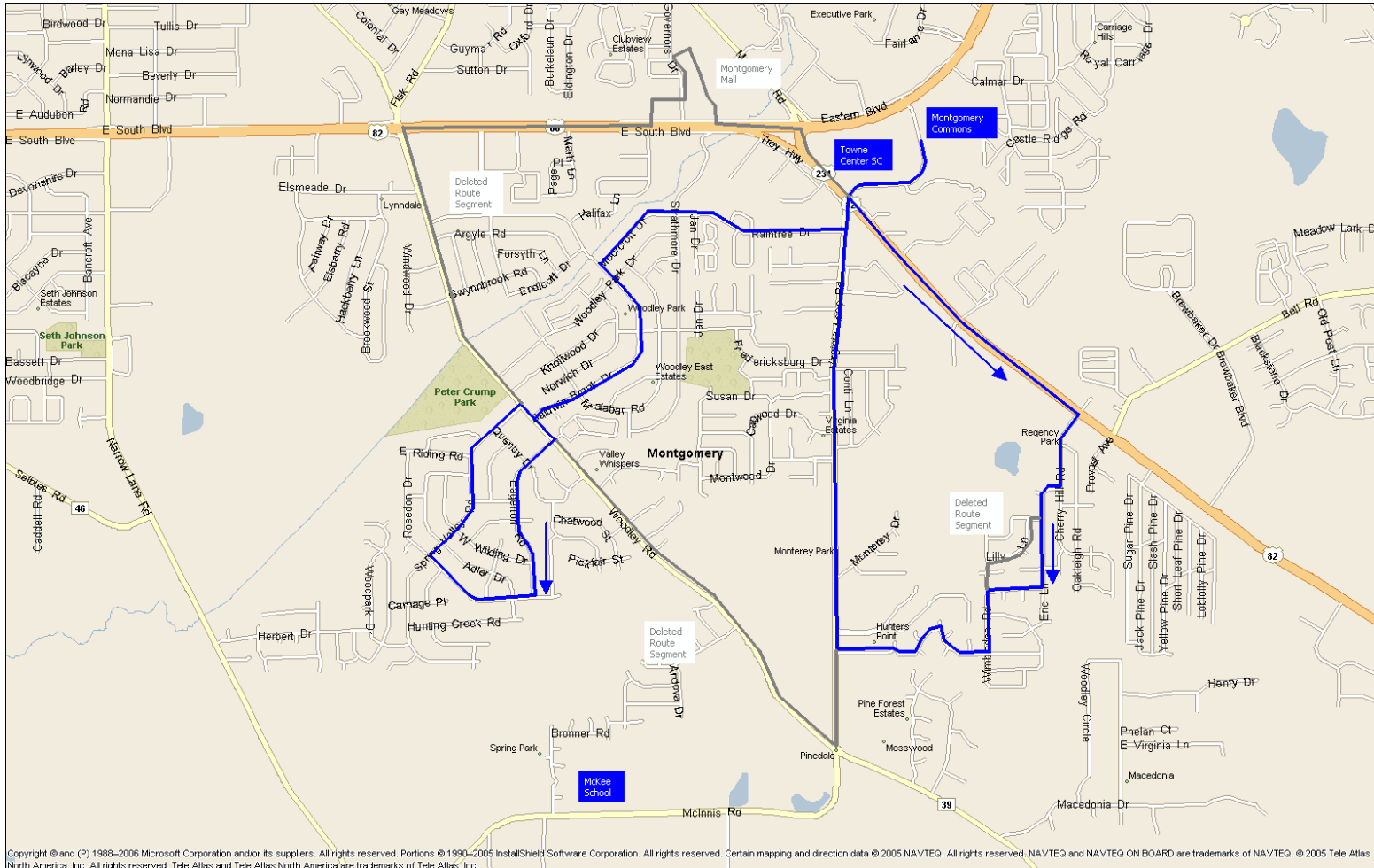
Proposed Improvements:

- This route should be divided into two routes - 9A and 9B to address the longer travel times endured by the majority of passengers on one leg of their trip. Route 9A will serve the eastern area, and Route 9B will serve the western area.
- Due to the status of Montgomery Mall, Montgomery Commons should be made the focal point of these routes to offer enhanced shopping and employment opportunities.
- Each route will require about 30 minutes running time. Assigning one vehicle to these closely related routes will result in a 60-minute frequency of service. Although the proposed frequency is not as high, more consistent inbound and outbound travel times will be provided.
- Change route names to Route 9A Virginia Loop and Route 9B Woodley.

The proposed alignments are shown on the following page.

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Route 9A Virginia Loop and Route 9B Woodley Proposed Alignments



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ROUTE 10 SOUTH COURT STREET

Analysis:

- Route 10 serves both the W. Fairview Transit Center and downtown Montgomery.
- The routing is probably very confusing to all but the most experienced user and is not effectively described in the material distributed to the public. Upon leaving W. Fairview Transit Center, Route 10 runs along Fairview and Rosa Parks Avenue to downtown. After completing this portion of the route, it retraces the segment on Rosa Parks before turning east on Fairview. Following that, it does a counterclockwise loop around Court, Delano, and Norman Bridge before returning to the W. Fairview Transit Center.
- Transit riders that live along the loop get direct service to W. Fairview Transit Center, but much less direct service if their final destination is downtown. Passengers transferring to Route 10 at W. Fairview Transit Center or boarding the bus along Rosa Parks have direct service to downtown, but the service is not very attractive if they are traveling back to the Court Street, Delano, and Norman Bridge area.
- Route 10 runs every 30 minutes during weekday periods, which requires two vehicles. One vehicle provides 60-minute service during the weekday off-peak and on Saturday.
- Because Route 10 serves an area with high transit dependency, weekday ridership is the second highest (517) in the system. On Saturday, Route 10 averages 197 passenger boardings, which is also the second highest of all routes.
- On weekdays and Saturday, Route 10 is the most productive route in the system carrying 25.86 and 21.70 passengers per hour of service, respectively.
- There are no apparent running time issues as 95 percent of all trips used the scheduled time or less time.
- On-time performance is very good at 95 percent.

Proposed Improvements:

- To provide the best possible service to an area that generates a large number of transit trips, Route 10 should be rerouted. The proposed alignment will operate through areas where the percentages of occupied housing units that do not have a car range as high as 53 percent.
- The new route will operate between Smiley Court and the Intermodal Center. The bulk of the alignment will run along E. South Boulevard and Rosa Parks Avenue.
- Two vehicles should be assigned to this route to maintain the 30-minute peak service and 60-minute off-peak frequency.
- Change name to Route 10 Smiley Court.

The proposed alignment is shown on the following page.

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ROUTE 11 RIDGECREST

Analysis:

- Route 11 has a circuitous routing that contains several loops and one-way segments.
- Attempts to serve activity centers on both sides of E. South Boulevard contribute to basic design and operational issues. Local street and land use patterns also have a strong bearing on route design and efficiency.
- The current alignment represents a strong disincentive to transit ridership.
- The Gaston Avenue segment operates only one block from Rosa Parks Avenue, which is currently served by Route 3 Montgomery Commons.
- This type of route alignment and schedule is very difficult to describe accurately in material prepared for the public so it can be very confusing for occasional or new users.
- Route 11 is interlined with Route 3 on weekdays and Route 6 on Saturday.
- Route 11 runs every 60 minutes on weekdays and every 100 minutes on Saturday.
- On weekdays, this route averages 161 passenger boardings. The Saturday average is 37 passengers.
- Weekday passenger productivity (16.10 passengers per hour) is above the system average. On Saturday, Route 11 performs well below the system average with 6.98 passengers per hour.
- Total passenger boardings on the afternoon trips are very low.
- About 37 percent of all trips used more than the allotted running time.
- On-time performance is very high at 97.8 percent.

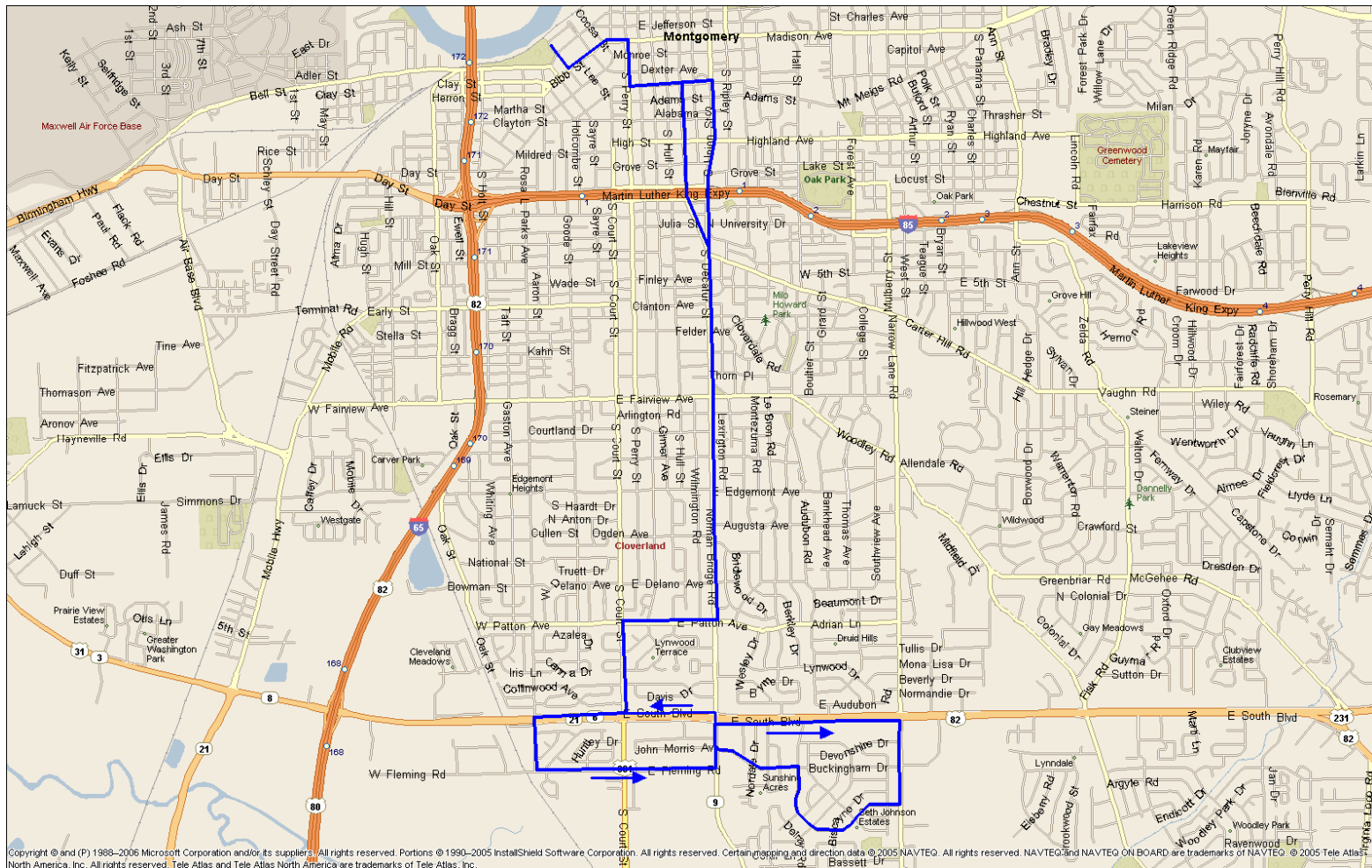
Proposed Improvements:

- Delete the segments that run along Gaston Avenue and Mobile Highway. The Gaston Avenue corridor will be served by the proposed Route 10, and the proposed Route 6 will service Mobile Highway.
- Redesign the route to run from downtown along Norman Bridge Road and then along the current alignment south of E. South Boulevard.
- The frequency of service will remain at 60 minutes on weekdays and 100 minutes on Saturday.
- Change name to Route 11 Norman Bridge.

The proposed alignment is shown on the following page.

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Route 11 Norman Bridge Proposed Alignment



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ROUTE 12 SMILEY COURT GIBBS VILLAGE

Analysis:

- Route 12 runs along a circuitous alignment that is difficult to understand. In fact, Route 12 actually functions as two separate routes.
- The western portion of Route 12 runs from the W. Fairview Transit Center along Mobile Highway to the Smiley Court apartments located off West Boulevard. Returning buses turn north on Air Base Boulevard and skip the W. Fairview Transit Center. The route continues north on Air Base and deviates to a housing development off Terminal. After completing a small loop in the housing development, Route 12 proceeds along a clockwise loop that extends to Day Street, serves Gibbs Village, and then returns to the W. Fairview Transit Center.
- After Route 12 completes the western part of the alignment, the eastern segment travels along W. Fairview and Oak Street to downtown Montgomery.
- Each segment of Route 12 receives 30 minutes of running time and layover. Using two vehicles during peak periods, buses run every 30 minutes. During weekday off-peak periods and on Saturday, the frequency of service is 60 minutes, which only requires one vehicle.
- The western leg of Route 12 averages 161 weekday and 59 Saturday passenger boardings.
- The eastern leg of Route 12 averages 304 weekday and 82 Saturday passenger boardings.
- On weekdays, Route 12 carries 21.43 passengers per hour, which is well above the system average.
- On Saturday, it carries 12.82 passengers per hour, which is also well above the Saturday system average.
- Route 12 experiences running time problems on about one-half its trips. At the same time, buses are on time at 50 percent of all stops.

Proposed Improvements:

- Route 12 should be modified in conjunction with the improvements proposed for Route 6 and Route 7.
- The proposed alignment combines a segment of Route 7 with the piece of Route 12 that currently serves Gibbs Village. The new route will offer transfer opportunities at both the Intermodal Center and the W. Fairview Transit Center. Gibbs Village residents will no longer be forced to ride around the entire route to return home.
- Maintain 30-minute frequency of service during peak periods and 60-minutes during the off-peak and on Saturday.

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ROUTE 15 ALLENDALE ROAD

Analysis:

- Route 15 originates at the Intermodal Center, and it is designed to serve S. Hull Street, the Old Cloverdale community, Huntingdon College, and the single-family residential area southeast of Montgomery Country Club.
- One of the major purposes of this route is provide work transportation. The majority of passengers boarding Route 15 get off the bus in the Wildwood neighborhood.
- Route 15 is interlined with Route 4 on Saturday.
- Route 15 runs every 60 minutes on weekdays and 120 minutes (five round trips) on Saturday.
- Route 15 averages 27 weekday and 9 Saturday passengers.
- Not surprisingly, this route is the least productive route in the system. It carries less than three passengers per hour on weekdays and less than two passengers on Saturday.
- Although total passenger boardings are low all day, the afternoon trips that start at 3:00 PM carried only three passengers.
- About 74 percent of trips used the allotted running time or less time.
- On-time performance is very high at 98 percent.

Proposed Improvements:

- Because Route 15 helps provide very important work-related transportation, no changes are recommended.

ROUTE 16 TWIN OAKS

Analysis:

- Route 16 operates between downtown Montgomery and the “big box” retail district located along Eastern Boulevard between I-85 and Vaughn Road.
- It also serves the new shopping center/Wal-mart on Ann Street and the apartment complexes and medial offices located along Woodmere Boulevard and Carmichael Road.
- Operating along Eastern Boulevard frontage roads, Route 12 must cope with dangerous turning movements and heavy traffic congestion.
- Route 16 runs every 60 minutes on weekdays and Saturday, which requires one vehicle.
- This route averages 180 boardings on weekdays and 117 on Saturday.
- On weekdays, its passenger productivity is about the same as the system average. On Saturday, it performs a little better than the system average.
- About 44 percent of trips require more than the scheduled running time probably due to congestion along Eastern Boulevard.

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- Probably due to the same reason, Route 12 is on time at the designated timepoints about 62 percent of the time.

Proposed Improvements:

- A recommendation to combine Route 16 and Route 1 was described earlier in this chapter.

OTHER ROUTES

MATS operates two parking shuttles and the Lightning Route, which is a downtown-based circulator that consists of two interrelated loop alignments. Four vehicles are required to operate these specialized services. No changes to the alignments or schedules are recommended at this time.

FUTURE IMPROVEMENTS

The short-term service improvements described on the previous pages should be initiated during the first year of the plan. They are designed to address specific route design and scheduling issues identified in the analysis of the existing transit system.

The following outlines a series of future improvements that are correlated to the system that will exist after the short-term improvements are completed. These improvements entail increasing service frequencies, adding vehicles to address likely scheduling issues, and implementing new services. The future service improvements will require additional resources. These recommendations are not as fully developed as the short-term improvements because operating and capital funding, community support, and other external conditions are likely to change. Assuming the full plan is implemented; MATS and the City of Montgomery can easily complete the minor scheduling and operational work that is required to carry out these future improvements.

Based on input received during the study and area growth projections, the proposed services should support future demand. Finally, we believe the service coverage provided by the existing and planned services will be sufficient and no new routes or route extensions will be required during this five-year period.

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Year Two - 2009

- Route 4 Boylston: Assign one extra bus on weekdays and increase frequency of service from 60 minutes to 30 minutes.
- Route 3 Montgomery Commons: Extend alignment along Eastern Boulevard to Eastdale Mall. The objective is to augment service to the Eastern Boulevard retail corridor and provide a more direct connection between the west side and Eastern Montgomery. Add one vehicle and operate on 45-minute frequency on weekdays and Saturday.

Year Three - 2010

- Increase frequency on one of the routes that serve Southwest Montgomery. At this time, a likely candidate is Route 6, which serves the area along Selma Highway and Southlawn. MATS should monitor the productivity and performance of all the new routes to determine if another route should be improved.
- Assign one extra vehicle to Route 2 to help maintain schedule reliability due to higher level of passenger activity and travel time delays caused by traffic congestion.

Year Four - 2011

- Route 3 Montgomery Commons: Increase running time to 120 minutes. Increase vehicles to four and operate on 30-minute frequency.

Year Five - 2012

- Reevaluate conditions and consider one suburban express route.

PROJECTED PEAK VEHICLE REQUIREMENTS

One objective of the short-range (Year 1) improvement plan was to address current issues through a reallocation of existing resources. These resources include buses and revenue hours of service. Including the four vehicles needed for the two parking shuttles and the Lightning Route, the weekday, peak vehicle requirement is 23 buses. The peak vehicle requirement is the number of buses needed when the greatest amount of service is being provided. Typically, this occurs during the morning or afternoon peak period when all routes are in service and some of the routes are running more often. The following table compares the current and projected vehicle requirements by route for weekdays and Saturday.

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Exhibit 5-1
Current and Projected Peak Vehicle Requirements

ROUTE	WEEKDAY		SATURDAY	
	Current	Projected	Current	Projected
1 AUM Campus	2	1	1	1
2 Eastdale Mall	2	3	1	3
3 Montgomery Commons	1	1	1	1
4 Boylston	1	1	0.5	0.5
5 Montgomery Mall	2	2	1	1
6 Southlawn/Twin Gates	1	2	0.5	0.5
7 Maxwell	1	1	0.5	0.5
8 Gunter Annex	1	1	0.5	0.5
9 Virginia Loop	1	1	1	1
10 S. Court	2	2	1	1
11 Ridgecrest	1	1	0.5	0.5
12 Smiley Court/Gibbs Village	2	0	1	0
13 Crampton Bowl Shuttle	1	1	0	0
Parking Shuttle	1	1	0	0
14 Gold Loop	1	1	1	1
14 Green Loop	1	1	1	1
15 Allendale	1	1	0.5	0.5
16 Twin Oaks	1	0	1	0
TOTAL	23.0	21.0	13.0	13.0

As the table shows, the proposed improvements result in a slight decrease in the number of weekday peak vehicles. On Saturday, the vehicle requirement stays the same.

The next table summarizes the peak vehicle requirement for each year of the plan.

Exhibit 5-2
Projected Annual Vehicle Requirements

Period	Peak Vehicle Requirement	Active Fleet	Spare Vehicles	New Vehicles Required	Spare Ratio
Current	23	31	8	-	25.8%
Year 1	21	31	10	0	32.3%
Year 2	23	31	8	0	25.8%
Year 3	26	34	8	3	23.5%
Year 4	28	37	9	3	24.3%
Year 5	30	39	9	2	23.1%

Note: Active fleet does not include 1956 GMC historic vehicle and 1985 Chance trolley vehicle.

Exhibit 5-2 also shows the new vehicles that must be added to the total fleet to maintain a spare vehicle ratio similar to the current ratio.

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PROJECTED REVENUE HOURS AND MILES

The revenue hours and miles of service that will be provided after the Year 1 improvements are fully implemented are shown in Exhibit 5-3. The overall plan objective was to accomplish these improvements without any major increases in resources. This information is an estimate based on proposed headways and approximate hours of operations. They could vary a little when the final, detailed route schedule is prepared by MATS.

Exhibit 5-3
Projected Revenue Hours and Miles of Service

Route	Name	Weekday Interline	Saturday Interline	Revenue Hours		Revenue Miles	
				Weekday	Saturday	Weekday	Saturday
1	Woodmere	Rt. 10		16.00	12.00	305.6	229.2
2	Eastdale Mall/Taylor Rd.			48.00	24.00	838.4	419.2
3	Montgomery Commons	Rt. 11		21.00	16.00	256.7	195.6
4	Boylston		Rt. 15	16.00	5.50	230.4	79.2
5	Montgomery Mall			22.00	12.00	341.0	186.0
6	Airport/Southlawn			32.00	12.67	558.9	221.3
7	Maxwell/Gibbs Village	Rt. 8	Rt. 8	15.50	5.50	173.6	61.6
8	Gunter Annex	Rt. 7	Rt. 7	15.50	5.50	289.9	102.9
9A	Virginia Loop			7.75	6.00	80.6	62.4
9B	Woodley			7.75	6.00	97.7	75.6
10	Rosa Parks/Smiley Court	Rt. 1		22.00	12.00	299.2	163.2
11	Norman Bridge	Rt. 3		11.11	7.11	260.1	166.5
12	West Smiley Court/Gibbs Village						
12	East Smiley Court/Gibbs Village						
13	Cramton Bowl Shuttle			4.00	0.00	31.2	0
	Parking Shuttle			4.00	0.00	36.0	0
14	Lightning Route-Gold			9.00	9.00	75.6	75.6
14	Lightning Route-Green			8.34	8.34	75.1	75.1
15	Allendale		Rt. 4	10.00	4.50	126.0	56.7
16	Twin Oaks						
				269.95	146.12	4076.0	2170.1

PROJECTED RIDERSHIP

The revenue hours of service provided under the proposed Year 1 plan are about the same as the current level of service. In addition, most of the segments that are deleted will be merged with other routes. It is recommended the areas that no longer receive fixed-route service due to segments deleted altogether should be offered paratransit service already operated by MATS.

Based on these conditions, MATS should not experience any decrease in ridership even with the slight decrease in weekday revenue hours. An increase in systemwide ridership is possible due to the improvements in route directness and higher frequency of service on selected routes.

MATS Transit Development Plan

CHAPTER 6 FINANCIAL PLAN

The five-year financial plan provides a general outline for the operation and funding of the fixed-route transit services described in the 2008-2012 TDP update. This plan enumerates the projected operating costs and capital outlays for new transit coaches that will be needed to implement the planned service improvements.

It is important to understand that a financial plan is preliminary and speculative. It is preliminary because the final service parameters will not be available until MATS prepares the final, detailed schedules. It is speculative because funding sources and amounts are not guaranteed, especially over a five-year period.

Operations

The operations element of the financial plan is based on the recommended improvements and phasing of the improvements. Chapter 5 described the level of fixed-route service for each year of the five-year planning period. As a part of the route-specific recommendations, route mileages, peak, base and evening headways, revenue bus hours, revenue bus miles, and the number of buses needed to operate at those levels of service were also estimated. This information is a critical element in the estimate of annual operating costs. The other important element is the cost coefficients that were established in the cost allocation model.

Table 6-1 shows the estimated operating costs for the next five years. Weekday revenue hours of service increase from 68,837 in the first year of the plan (2008) to 87,452 in the fifth year. Year 1 of the plan is based on a full year of operation for all the short-range improvements. The fixed-route operating expenses are the product of the estimated revenue hours, revenue miles and peak buses and the cost coefficients produced by the cost allocation model.

The paratransit operating costs were taken from the National Transit Database report and inflated annually at a rate of three percent. Because future fare increases, percentage of pass sales and other financial factors are unknown, the average fare remains constant throughout the period.

Like the average fare, federal and state operating assistance is based on current amounts and held constant throughout the five-year period. The result shows the increase in local operating assistance that is required if no increases in federal and state assistance or new sources of funds are identified. The local subsidy ranges from the current year estimate of \$1.4 million to about \$2.8 million in the last year of the five-year plan.

One of the greatest concerns facing most transit systems is the possibility of a reduction in operating or capital support from existing sources. Reduced funding would significantly affect MATS' ability to provide an important service to the citizens of Montgomery. The proposed transit service provides much needed transportation to members of the community who do not have many other transportation options. Without adequate funding, it would be a challenge to preserve the current level of service and expand the system to accommodate Montgomery's future travel needs.

MATS Transit Development Plan

CHAPTER 6 FINANCIAL PLAN

Exhibit 6-1
Five Year Financial Plan

OPERATING STATISTICS:	Current Year	Year 1	Year 2	Year 3	Year 4	Year 5
	Estimate*	Projected	Projected	Projected	Projected	Projected
Revenue Hours	81,627	76,435	82,555	87,145	94,030	95,050
Revenue Miles	1,264,696	1,152,225	1,266,797	1,280,159	1,347,504	1,370,454
Weekday Peak Buses	6,541	6,031	7,051	8,836	9,856	10,366
Annual Passengers	946,459	960,185	1,037,064	1,094,724	1,181,214	1,194,027
Passengers per Mile	11.59	12.56	12.56	12.56	12.56	12.56
Average Fare	\$0.474	\$0.474	\$0.474	\$0.474	\$0.474	\$0.474
Farebox Recovery Rate	9.7%	10.1%	9.9%	9.6%	9.5%	9.2%
FINANCIAL STATISTICS:						
Fixed Route Operating Expense	\$3,209,470	\$3,066,915	\$3,474,247	\$3,866,114	\$4,303,412	\$4,525,708
Paratransit Operating Expense	1,412,477	1,454,851	1,498,497	1,543,452	1,589,755	1,637,448
Annual Operating Cost	\$4,621,947	\$4,521,767	\$4,972,744	\$5,409,565	\$5,893,167	\$6,163,156
Annual Operating Revenues:						
Fixed Route Farebox Revenue	\$449,043	\$455,556	\$492,031	\$519,387	\$560,422	\$566,501
Demand Response Farebox Revenue	75,917	75,917	75,917	75,917	75,917	75,917
Non-Operating Revenue	312,595	312,595	312,595	312,595	312,595	312,595
Annual Revenues	\$837,555	\$844,068	\$880,543	\$907,899	\$948,934	\$955,013
Subsidy Required:	\$3,784,392	\$3,677,699	\$4,092,201	\$4,501,666	\$4,944,233	\$5,208,143
Operating Assistance						
Federal Operating (5307 & 5311 Funds)	\$2,300,676	\$2,300,676	\$2,300,676	\$2,300,676	\$2,300,676	\$2,300,676
State Operating	\$38,496	\$39,651	\$40,840	\$42,066	\$43,328	\$44,627
Local Operating Assistance	\$1,445,220	\$1,337,372	\$1,750,684	\$2,158,925	\$2,600,230	\$2,862,839
Subsidy Available	\$3,784,392	\$3,677,699	\$4,092,201	\$4,501,666	\$4,944,233	\$5,208,143
Surplus/(Deficit)	\$0	\$0	\$0	\$0	\$0	\$0
Cumulative Surplus/(Deficit)	\$0	\$0	\$0	\$0	\$0	\$0

* Based upon operating data and cost coefficients.

Vehicles

The capital element of the five-year financial plan is based on the fleet requirements associated with the proposed service improvements and on-going fleet replacements needed to maintain a vehicle spare ratio similar to the current ratio. Table 6-2 shows the current and future vehicle needs and the number of new buses needed annually to maintain the spare ratio.

It is projected that MATS will need to purchase three buses in Year 3 and Year 4 and two buses in Year 5. For the purposes of this plan, the cost per vehicle is based on the 2007 price (\$260,000) for a Thomas transit vehicle similar to those already in service. This results in a capital outlay in Year 3 and Year 4 of approximately \$780,000 and \$520,000 in Year 5.

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Exhibit 6-2
Projected Annual Bus Requirements

Period	Peak Vehicle Requirement	Active Fleet	Spare Vehicles	New Vehicles Required	Spare Ratio
Current	23	31	8	-	25.8%
Year 1	21	31	10	0	32.3%
Year 2	23	31	8	0	25.8%
Year 3	26	34	8	3	23.5%
Year 4	28	37	9	3	24.3%
Year 5	30	39	9	2	23.1%

Note: Active fleet does not include 1956 GMC historic vehicle and 1985 Chance trolley vehicle.