



**CHAPEL HILL TRANSIT
TOWN COUNCIL INFORMATION PACKET**

March 5, 2008

Council Presentation
March 5, 2008

The following information has been compiled as supporting information for the Council Presentation of public transit.

Chapel Hill Transit appreciates the opportunity to provide the Town Council with a discussion of the status of public transit in our community and the challenges and opportunities we face in the future.



DEPARTMENT BUDGET REQUEST
FISCAL YEAR 2008-2009
Table of Contents

About Chapel Hill Transit 1

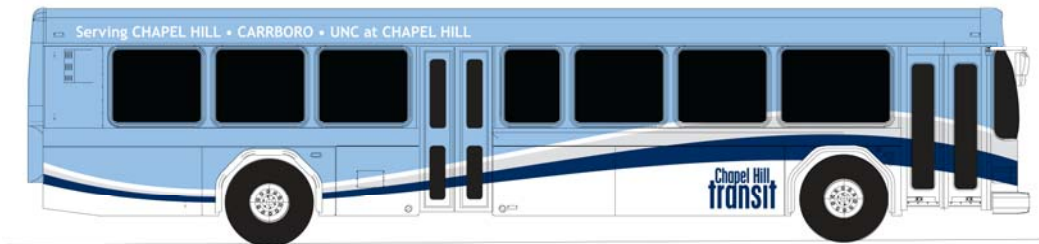
Performance Measures 7

Successes, Trends and Priorities..... 16

FY2008-09 Budget Information 23

Supplemental Information:

- Chapel Hill Transit Fleet Analysis
- Chapel Hill Transit Satisfaction Survey



About Chapel Hill Transit

Service		Average Daily Riders
- Regular Route		<u>28,000</u>
- Local and Park and Ride Express Service		
Demand Response		
- EZ Rider		<u>225</u>
- Shared Ride		<u>10</u>
- Feeder Service		<u>33</u>
Tar Heel Express	<u>150,000</u>	Annual Riders

Fast Facts

- FY 07/08 Operating Budget	\$14.8 million
- Annual Operating miles	2,081,000
- Daily Revenue Service miles	6,700
- Daily Service hours	560
- Total Employees	200
o - Operators	149
o - Mechanics	11

Fleet

-Revenue Vehicles	<u>7/1/07</u>
Buses	99
Demand Response	<u>18</u>
Total	117

Capital Investment in rolling stock \$27.5 million

Annual Ridership 6.1 million

Federal Funding

Operating and Capital funds come from the Federal Transit Administration. Federal legislation provides several different sources of funds. Chapel Hill Transit and planning staff work collaboratively to identify and apply for federal funds.

Sources of Federal Funding

Federal Transit Administration 5307 Funds

Federal 5307 funds are allocated to transit systems annually based on a distribution formula. This is the only source of federal transit funding that is guaranteed. Chapel Hill Transit receives approximately \$1,750,000 in FY 2006/07. Those funds are expected to increase by about 20% during the life of SAFETEA-LU. These funds are eligible for either operating or capital activities. Currently 100% of these funds are programmed for operating purposes.

Surface Transportation Program Funds

Surface Transportation Funds are made available to local areas and distributed through the area Metropolitan Planning Organization. The funds can be used to fund any activities eligible under Federal Highway or Federal Transit programs. To secure these funds, Chapel Hill would make application through the MPO.

Congestion Mitigation Air Quality Funds

Congestion Mitigation Air Quality funds are available to fund highway and transit projects that will have a direct impact on improving air quality or reducing congestion. The funds are allocated to states and required to be spent in non-attainment areas. The funds are allocated on a competition basis.

Planning Funds

FTA 5303 and PL funds are allocated to support transit planning activities. Funds are allocated to the urbanized area and then sub-allocated to towns by the Metropolitan Planning Organization. Chapel Hill receives about \$157,000 annually.

FTA 5307 Funds

- Annual mark \$1.6 million
- Possible uses
 - Capital 80% match
 - Operating (capped)
 - Planning
- Can be programmed over a 3 year period
- Most reliable source of capital funding

Funding

Source of Operating Funds for Chapel Hill Transit

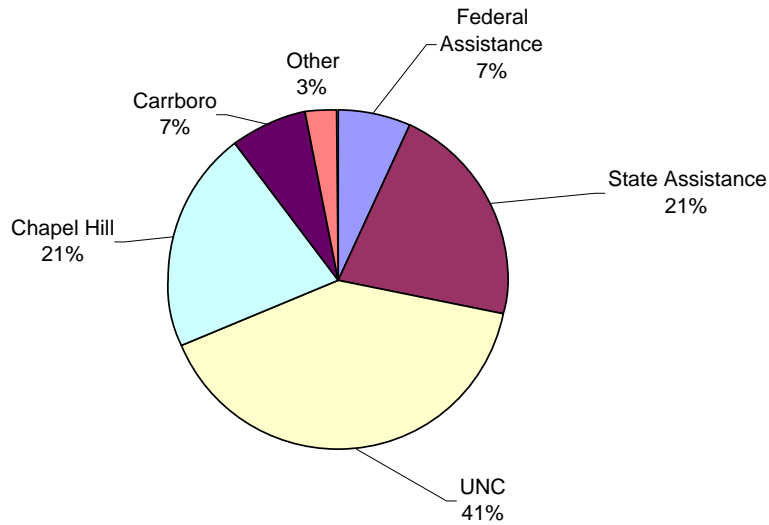
Chapel Hill Transit receives funding from State and Federal government and locally from the transit partners of Chapel Hill, Carrboro and the University of North Carolina.

Federal and state funds are allocated bases on distribution formulas.

Local funding is determined by a formula that allocates cost based on benefactor of the service and population. Services operated specifically for the University are paid for in full by the University. The cost of services that are used by the entire community are allocated to the partners by population.

The following charts show the funding distribution among various revenue sources and a break down of the key expense areas in the Chapel Hill Transit budget.

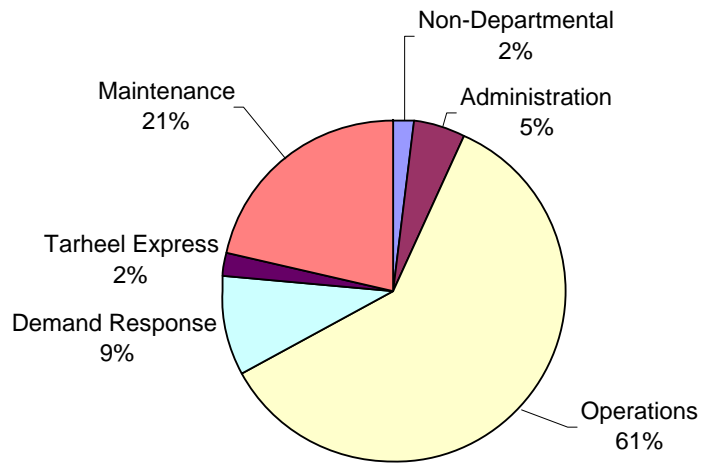
FY2008-09 Revenue Budget Request



FY2008-09 Revenue Budget Request

Federal Assistance	\$1,115,308	7%
State Assistance	\$3,432,644	21%
UNC	\$6,528,520	41%
Chapel Hill	\$3,362,697	21%
Carrboro	\$1,194,838	7%
Other	\$480,105	3%
Total	\$16,114,112	100%

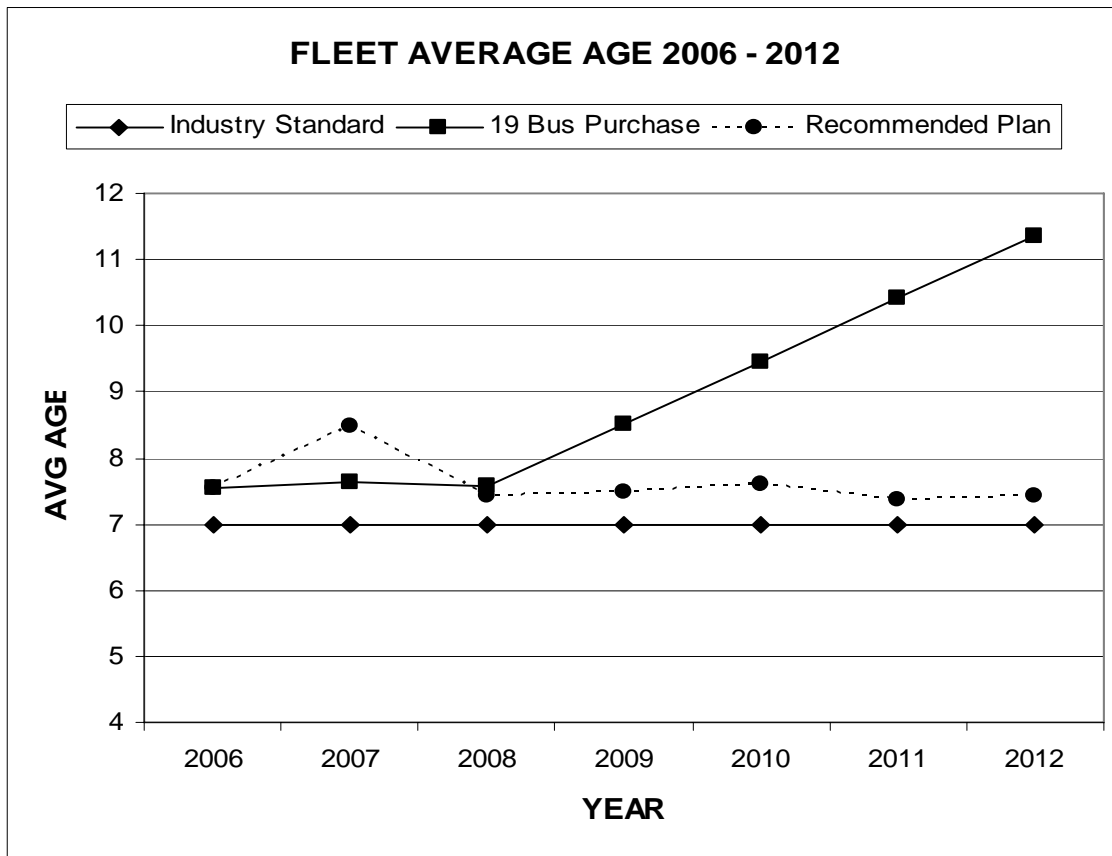
FY2008-09 Expenditure Budget Request



FY2008-09 Expenditure Budget Request

Division		
Non-Departmental	\$307,500	2%
Administration	\$813,079	5%
Operations	\$9,662,069	60%
Demand Response	\$1,516,012	9%
Tarheel Express	\$368,886	2%
Maintenance	\$3,446,566	21%
Total	\$16,114,112	100%

The chart below illustrates the effect of the recommended long term plan on fleet average age.



Peer Comparison

Peer comparison is an effective way to measure the performance of a transit operation. In order to examine the performance of Chapel Hill Transit (CHT), a group of peer systems was selected from within North Carolina and throughout the United States.

North Carolina peers were selected from a group of 19 systems throughout the state. Chapel Hill Transit is the second largest transit system in the state compared with the largest systems (excluding Charlotte) in the state by number of vehicles and passengers. Chapel Hill operates the largest number of buses and carries more riders than other larger urban systems (excluding Charlotte).

Comparing Chapel Hill Transit to systems on a national level allows for better with other systems.

On a national level a peer group was selected based on similar operating characteristics. Peer selection included the following characteristics:

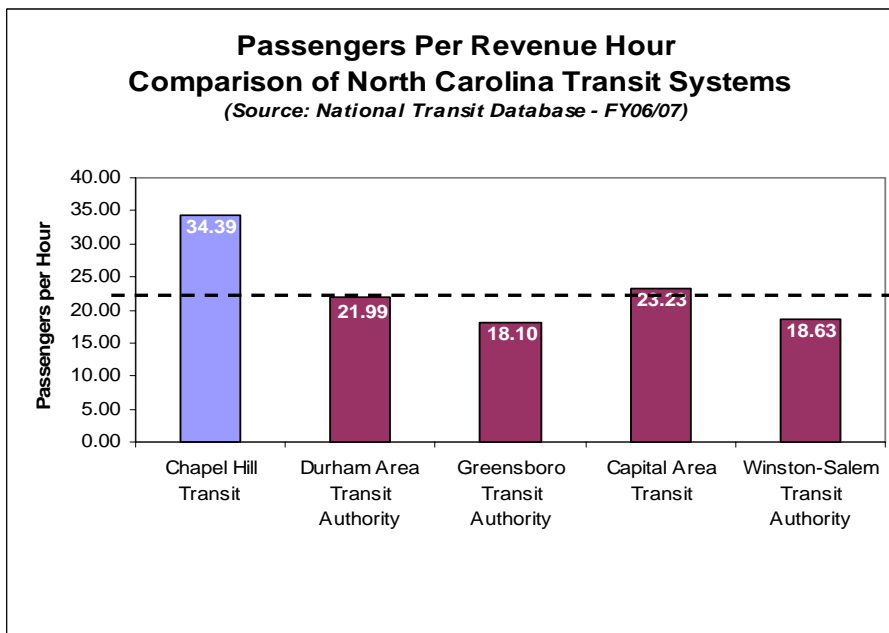
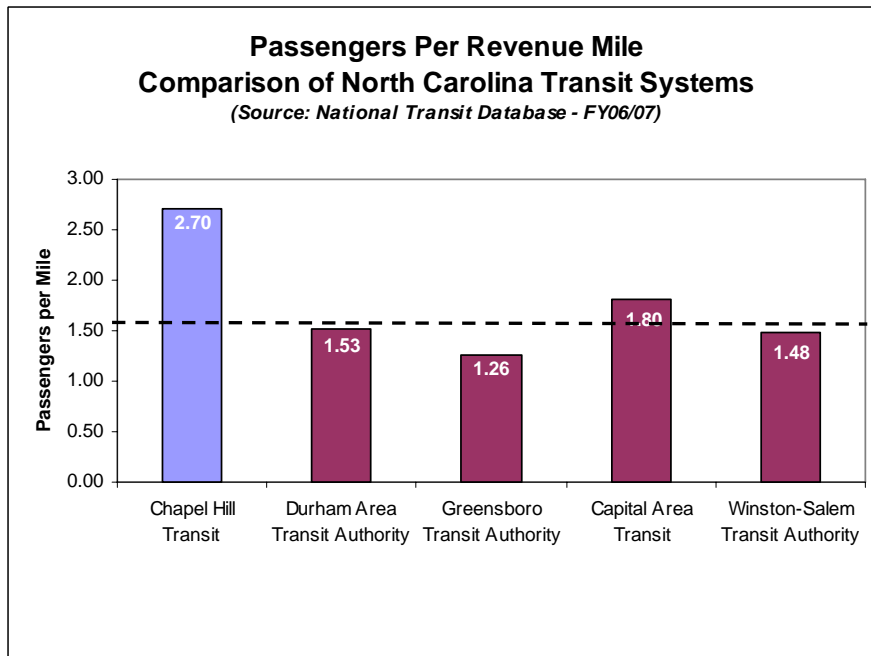
- town population
- presence of a large university
- peak hour buses
- operating expenses

Emphasizing similar operating, financial and physical characteristics provides the opportunity to compare key financial and performance indicators.

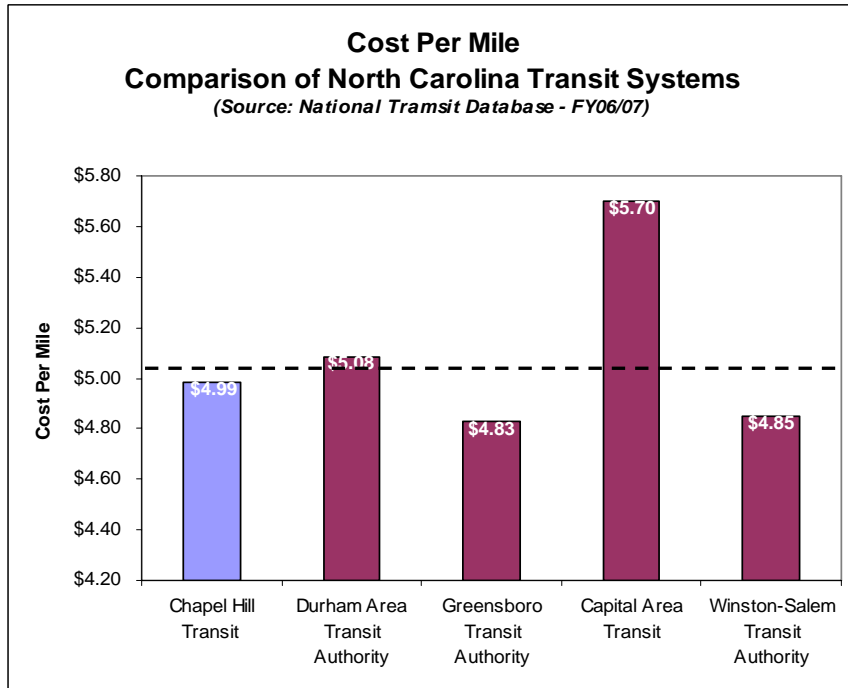
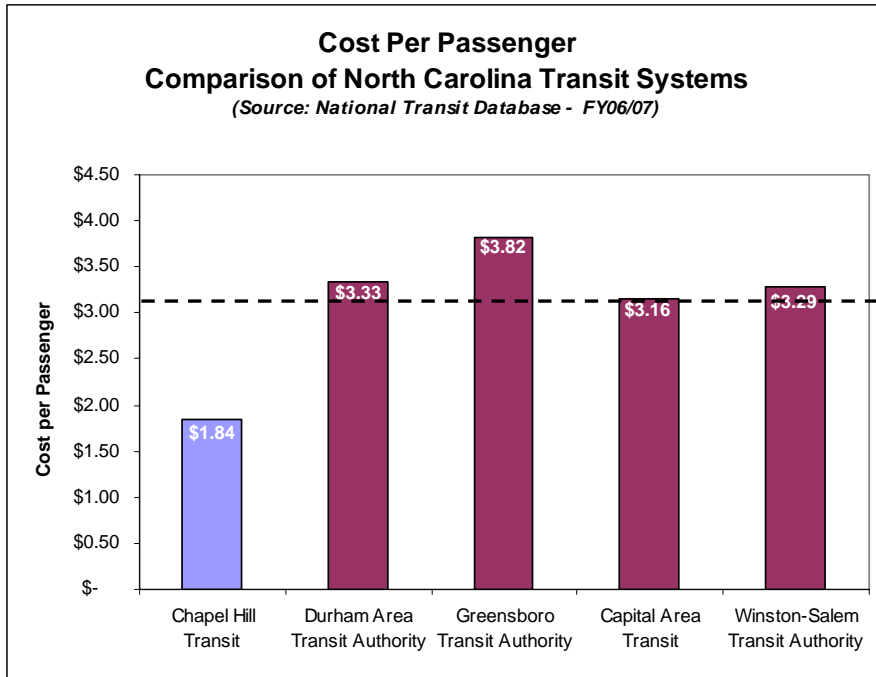
Transit system performance is evaluated in terms of efficiency and productivity. The following indicators have been measured:

- ridership
- ridership per capita
- passengers/mile
- passengers/hour
- cost/passenger
- cost/mile
- cost/hour

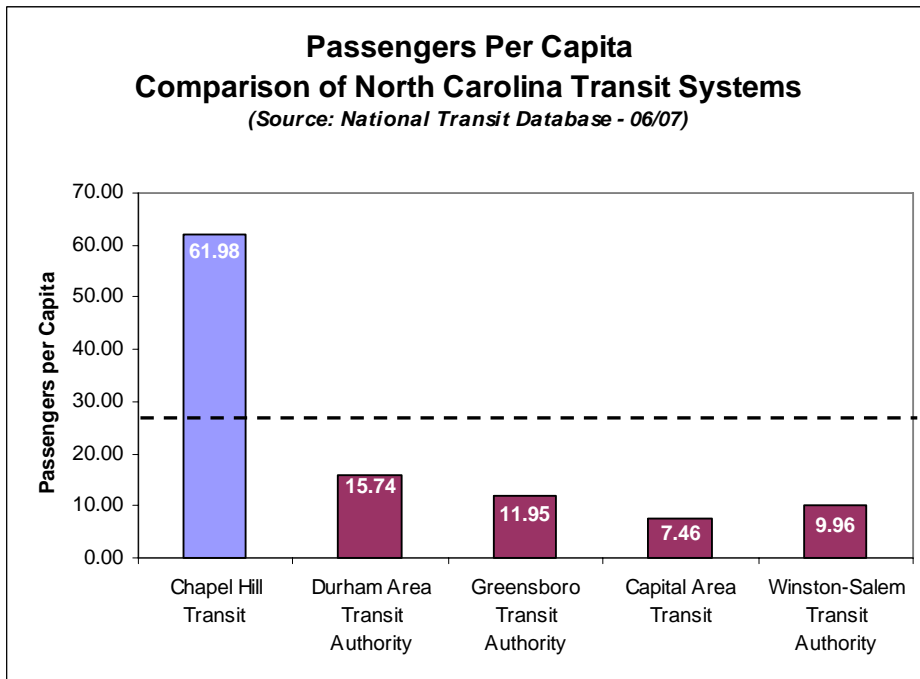
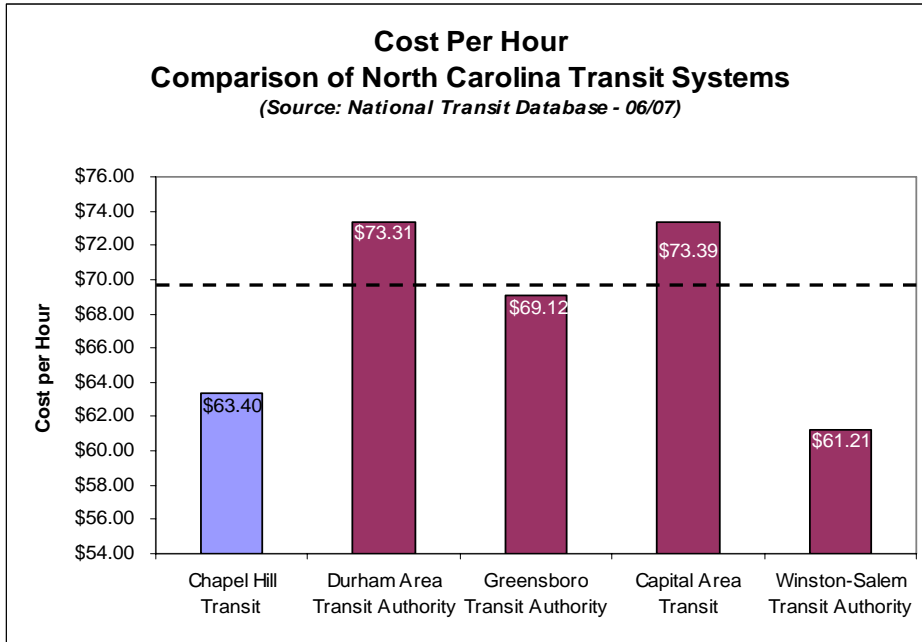
Peer Comparison Performance Measures – North Carolina



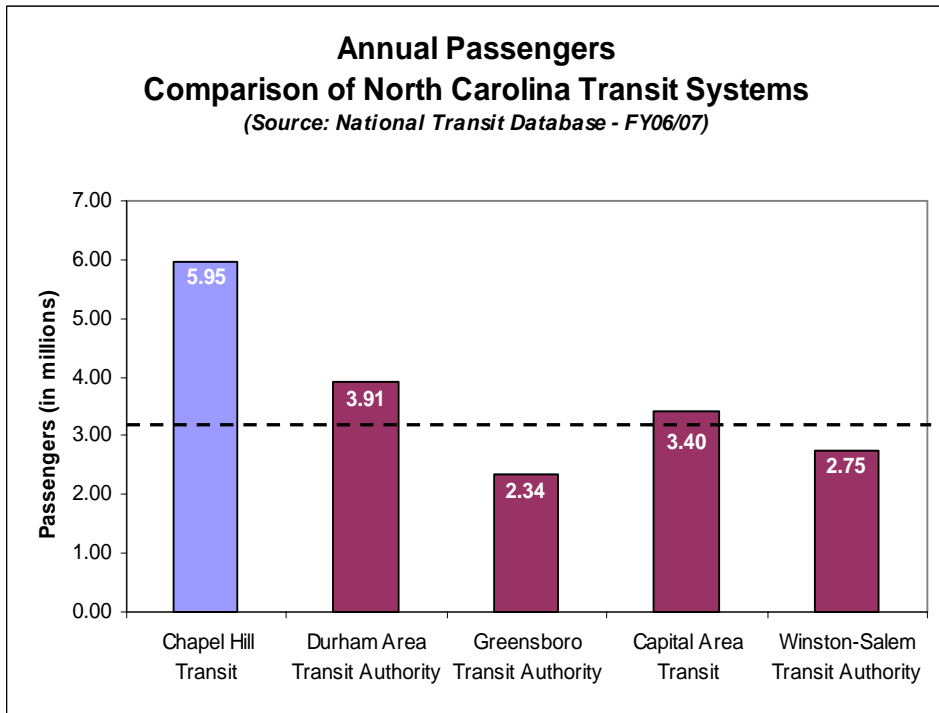
Peer Comparison Performance Measures – North Carolina



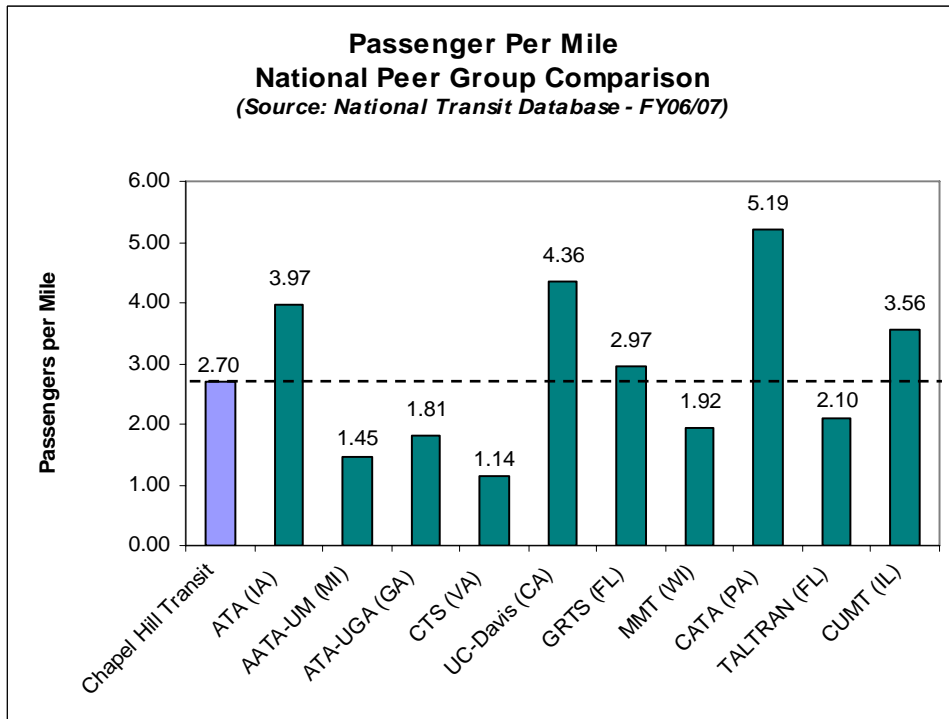
Peer Comparison Performance Measures – North Carolina



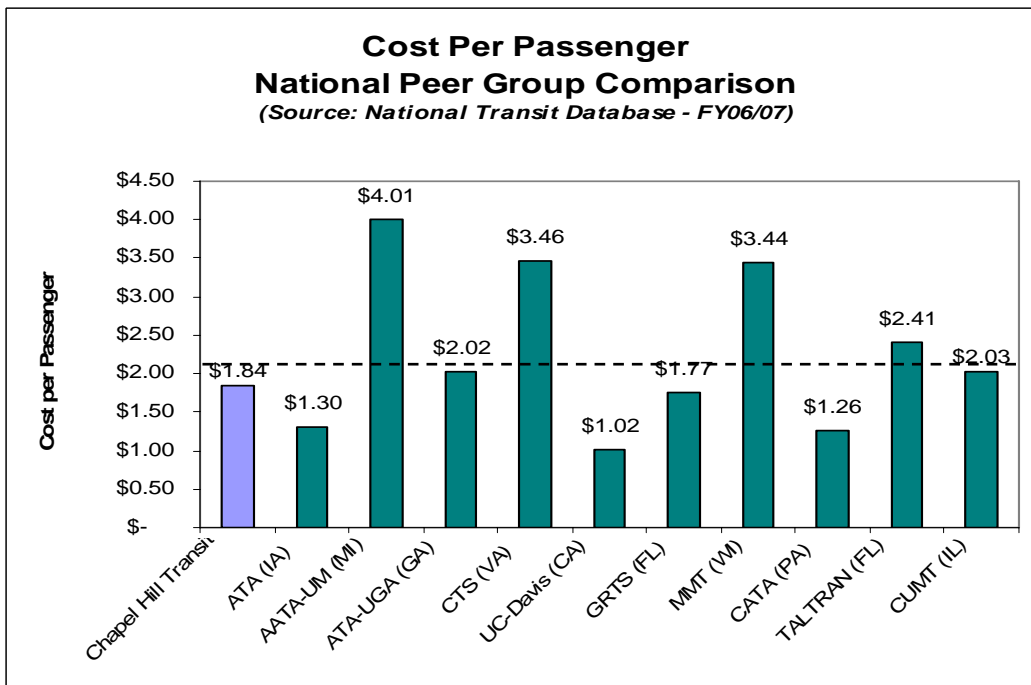
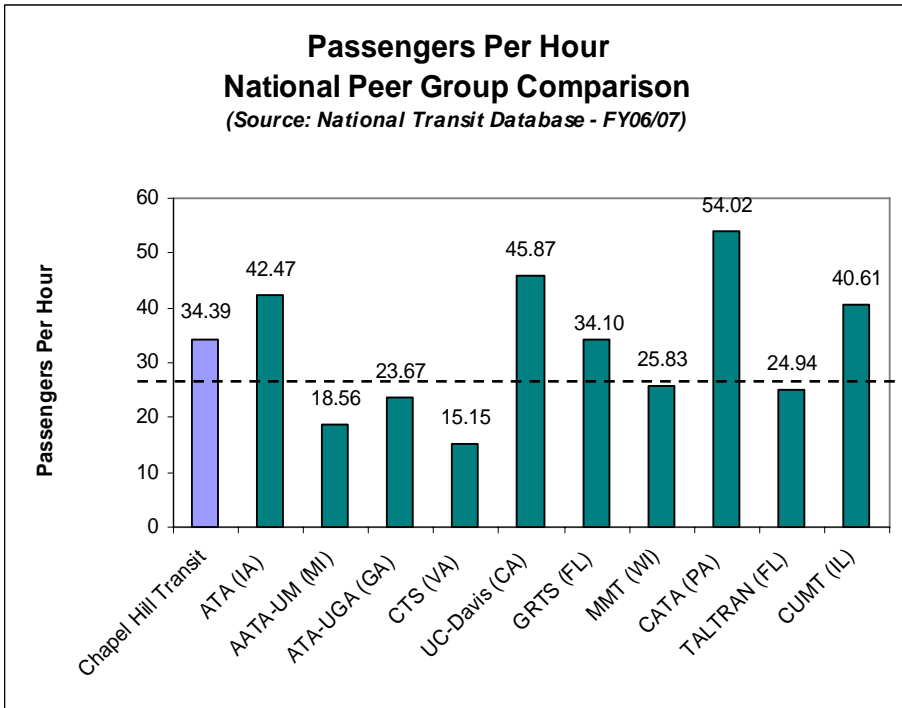
Peer Comparison Performance Measures – North Carolina



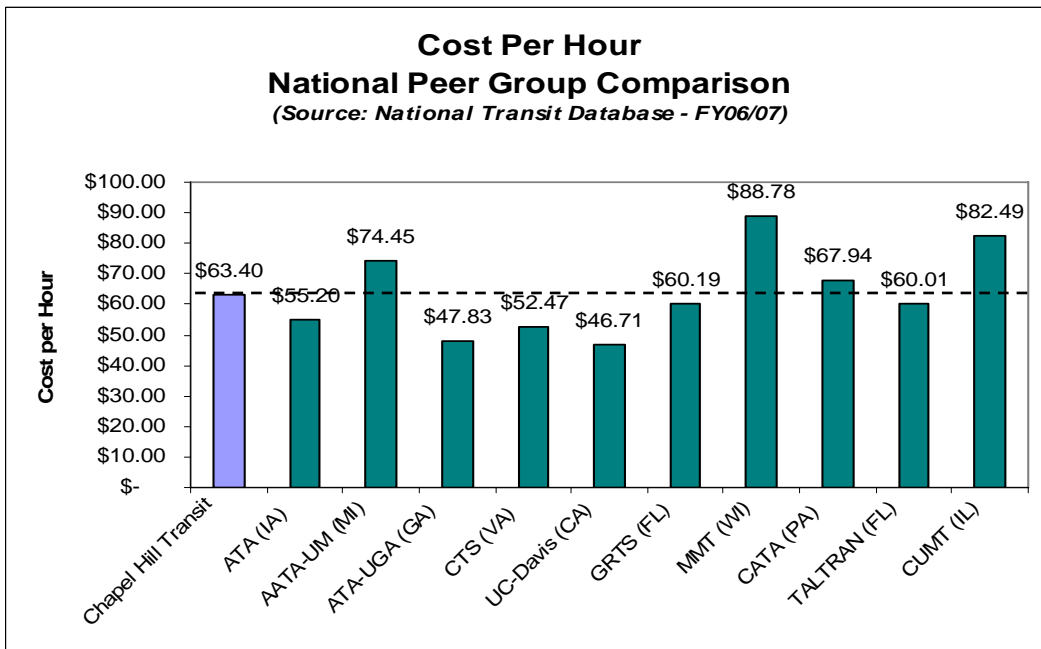
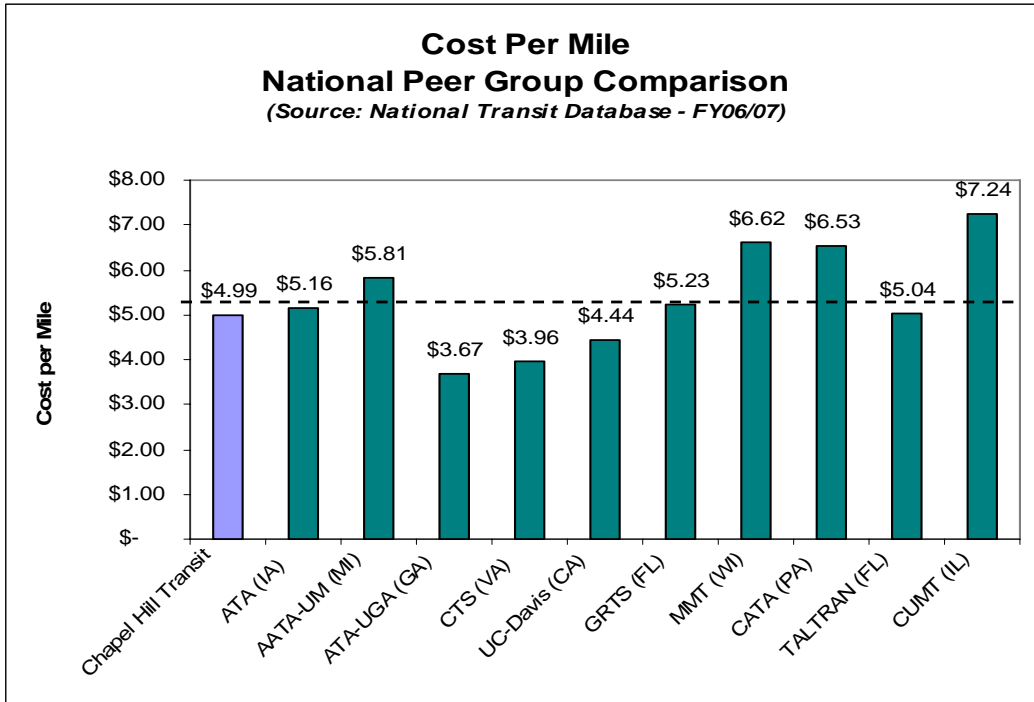
Peer Comparison Performance Measures – National



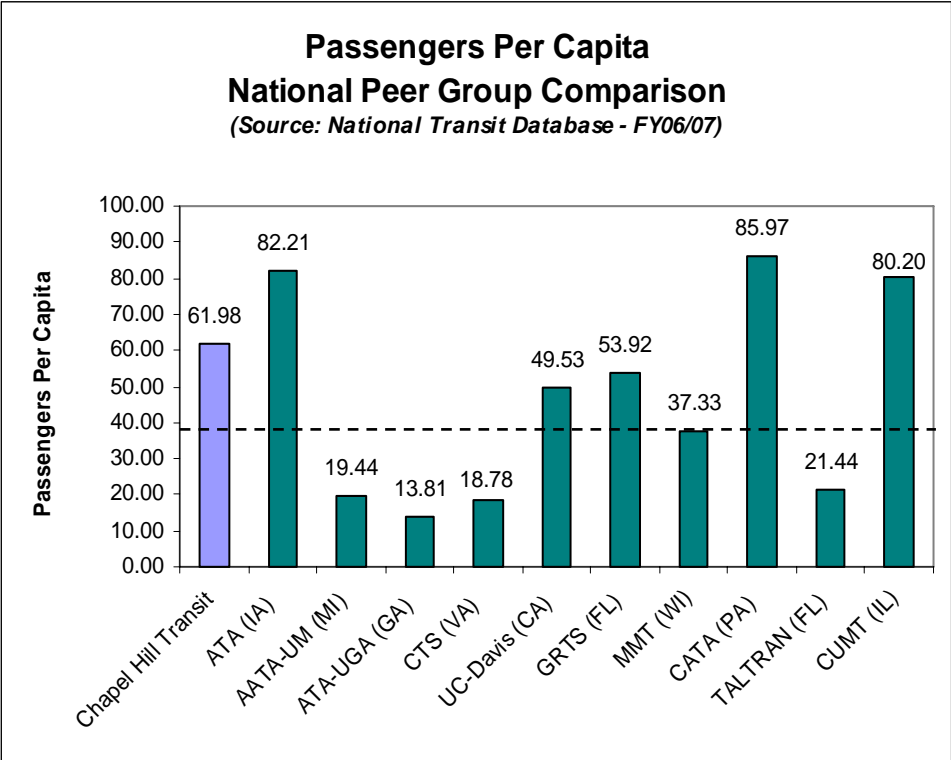
Peer Comparison Performance Measures – National



Peer Comparison Performance Measures – National



Peer Comparison Performance Measures – National



FY 2007-08 Strategic Planning
Transit Department

SUCSESSES

- 1. Receipt of 19 New Buses.** Chapel Hill Transit received 19 new buses as part of a 5 year fleet modernization program. The 19 vehicles will improve the Town's ability to provide high quality dependable service to the public. New vehicles also conserve energy, improve air quality and reduce the Town's carbon footprint. (Consistent with Goal 10.2 of the Comprehensive Plan to create a balanced transportation system.)
- 2. Passenger Amenities Program.** Chapel Hill Transit expanded and improved passenger amenities by adding new shelters, providing real time bus arrival information at 4 more locations and placing bus schedule information at every shelter (91). (Consistent with Goal 10.2 of the Comprehensive Plan to create a balanced transportation system.)
- 3. Improved Communication with Partner's.** Chapel Hill Transit improved communications and relationships with its funding partners, Carrboro and UNC. Activities such as a more inclusive/open budget development process, monthly operations meetings, and cooperative efforts like The 5th Quarter have contributed to supporting the Comprehensive Plan through cooperative planning with UNC.
- 4. Maintenance Efforts.** Chapel Hill Transit made several key improvements in Maintenance including:

 - hiring 3 new mechanics
 - converting transmission from petroleum based to synthetic lubricants
 - implementation of oil analysis program

These efforts resulted in Chapel Hill Transit maintaining service levels during the summer when other area systems could not make daily pull outs. (Consistent with Goal 10.2 of the Comprehensive Plan to create a balanced transportation system.)
- 5. Green Fleet Activities.** Chapel Hill Transit undertook several activities to make the transit system more environmentally conscious. Activities include:

 - purchase of 3 hybrid electric buses
 - conversion of fleet to ultra low sulfur diesel
 - conversion of transmission lubricants to synthetic

(Consistent with Comprehensive Plan theme "to conserve and protect the natural setting of Chapel Hill".)
- 6. New Facility.** In June 2007, Chapel Hill Transit moved to its new facility at the Town Operations Center. The construction of the new transit facility will enable Chapel Hill Transit to more effectively and efficiently maintain and operate transit vehicles and services.

7. Staff Development. People are our most valuable resource. Chapel Hill Transit placed an emphasis on staff development with a specific focus on improving skills of front line personnel. Activities included the following:

- Using bus operators as instructors for new operators
- Introduction of an operators training program that provided 12 operators with training to become supervisors.
- conducted monthly training classes for mechanics in numerous areas of vehicle repairs and familiarization with new vehicles.

(Consistent with Goal 10.2 of the Comprehensive Plan to create a balanced transportation system.)

TRENDS

1. Fuel Costs will continue to increase.

Higher diesel fuel costs will impact the Chapel Hill Transit Budget. High prices at the pump will create additional demand for transit service.

2. The age of the Chapel Hill Transit fleet will continue to grow toward the maximum recommended.

National standards recommend that transit fleet age not exceed 7 years. If no new buses are purchased in the next 2 years, the Chapel Hill fleet age will approach 10 years. Higher fleet age increases maintenance cost and reduces service dependability.

3. Service demand will continue to grow.

In recent public forums there have been requests for the following services:

- Rogers Road
- Weaver Dairy Extension
- Evening service
- Saturday and Sunday services

Growth of the weekday service and annexation of surrounding neighborhoods has created an expectation for improved services.

4. Auto use and road construction needs will increase in the Triangle.

At the same time funds available for highway and transit projects will become more difficult to secure.

PRIORITIES FOR THE FUTURE

1. Develop a consensus regarding transit growth among funding partners and establish a plan to sustain the growth.

The Town is completing work on a Long Range Transit Plan. This plan will establish a vision of the transit system in 2030 and how it will impact the community. Since Transit Oriented Development will be a cornerstone of future Chapel Hill growth, it is critical to

ensure a vibrant transit system. The funding partners (Chapel Hill, Carrboro and UNC) must come to agreement on key transit priorities.

The Town should position the transit system to meet future demands by undertaking the following:

1. Identify stages of transit development necessary to achieve 2030 goals
2. Develop a 3-5 year short range transit plan that will impact budget development with an emphasis on the early stages of Carolina North
3. Explore opportunities for regional cooperation and coordination
4. Conduct an assessment of EZ Rider services and develop a 3 year service improvement plan.
5. Develop a financial plan including sources of funding to sustain the necessary growth in the transit system.
6. Establish criteria to guide service performance evaluation
7. Clarify the roles and responsibilities of the Transportation Board and the Public Transit Committee

2. Improve the maintenance, dependability and condition of the Chapel Hill Transit fleet.

The Town of Chapel Hill and its partners have invested over \$27 million in its bus fleet. A modern, properly maintained bus fleet is essential to assure proper use of Town resources and quality service to the public. The recent purchase of 19 buses was a major improvement in the fleet. However, if the programmed replacement of 26 more buses does not occur in the next two years, service will deteriorate quickly. The following activities are critical to maintain the fleet.

- 1) Secure funding to purchase 26 replacement buses
- 2) Develop and support a long term fleet vehicle replacement plan
- 3) Secure funding to replace aging EZ Rider vehicles
- 4) Approve one additional maintenance employee to maintain electronic equipment on buses
- 5) Continue training to expand maintenance skills of maintenance staff.

3. Improve public information and marketing.

Demographic surveys indicate that 39% of the riders on Chapel Hill Transit each year are new. In order to sustain ridership growth, it is important to have adequate and accessible public information. An active and ongoing effort to educate and motivate the public to use transit is an important staff activity. The following activities should be undertaken in FY 2008 / 09:

1. Design a transit web page that takes advantage of recent technology and is user friendly.
2. Develop individual route schedules to replace the route guide making production of information more cost effective.
3. Work collaboratively with triangle transit systems to improve system coordination, connectivity and access to information.

4. Insure proper and efficient use of Town and partner resources.

In 2007 Chapel Hill Transit made significant advance in the introduction of technology to better manage the system. Automated passenger counters, scheduling and run cutting software, and mobile data terminals improve system management and performance measurement. Also, staff is now in place to conduct performance evaluation and short range planning.

In 2008 staff should focus on a comprehensive evaluation of the system with a goal to improve system performance. To be successful the following needs to take place:

1. The partners need to establish performance evaluation criteria
2. Staff should analyze the system in accordance with the evaluation criteria.
3. Periodic performance measurements should occur during the year.
4. The Town should examine the EZ Rider service performance and identify opportunities for regional cooperation.

5. Continue staff development efforts to improve employee skills and performance and establish opportunities to create a welcoming work environment.

Chapel Hill Transit has a responsibility to insure that employees have proper training to perform their jobs effectively. Staff development and training is a critical component to provide effective and responsive transit service. Chapel Hill Transit should continue and expand training efforts.

TRANSIT OBJECTIVES

December 7, 2007

Objective: Increase the focus on system performance with the ultimate goal of improvement in performance indicators.

Measure of success:

- Improvement in passengers per hour, passengers per mile and reduced cost per trip.
- Better peer group comparison.

Objective: Develop a marketing plan that will identify strategies to increase transit usage and support.

Measure of success:

- Ridership increases in areas of targeted marketing.
- Increase in positive press coverage of public transit
- Introduction of improved public information.

Objective:

- Maintain adequate staffing and improve performance of personnel through training, mentoring and other learning opportunities including:
 - Hire all budgeted mechanics
 - Maintain adequate operator levels to control cost
 - Hire at least 2 interns through the NC DOT to assist in service planning and promotion.
 - Establish a training committee that will identify and prioritize training needs and coordinate activities to provide training as needed throughout the department.

Measure of success:

- Staffing at full levels
- Improvement in performance indicators such as miles between road calls, on time inspections, and maintenance cost per mile.
- Development of a training plan and record of training activities scheduled and completed.

Objective: Develop a 5 year transit plan that will develop a consensus among partners regarding transit growth and identify a funding plan to sustain the growth

Measure of success:

- Partner adoption of a transit plan including commitments to service levels, capital planning and long term funding goals

Objective: Develop a two year operating budget to allow for better budget planning by all funding partners.

Measure of success:

- Completion of a 2 year budget for partner review by February 2008.

Objective: Provide a safe work place for all employees by expanding the use of departmental safety committees, holding monthly safety meetings in each department, and establishing safety performance criteria to measure safety activities and improvement in safety.

Measure of success:

- A functioning safety committee in operations and maintenance by September 1, 2007.

- Identification of key safety performance criteria and monthly statistics to monitor effort and performance.
- Reduced on the job injuries and vehicle accidents.

Objective: Purchase and install automated scheduling and run cutting software to improve the efficiency of operator run cuts.

Measure of success:

- Successful installation of software and training of the schedule run cut coordinator by February 1, 2008.
- Improved efficiency of runs as measured by payroll/platform productivity ratio, reduced overtime and dead time.

Objective: Create a work environment that reflects the values of the manager and town leadership by modeling the behavior expected of town employees and fostering an open, supportive and respectful workplace. Activities will include:

- Monthly meetings with employees to provide information on town activities and issues and seek feedback.
- Provide training and determined by the training committee that will improve the professional, and interpersonal skills of all employees.
- Establish an active wellness committee.

Measure of success:

- Record of monthly meetings and topics discussed that will result in more informed employees.
- At least 25% of Chapel Hill Transit employees will have participated in at least one wellness event during the year.

Objective: Have a vehicle replacement plan approved and supported by the funding partners.

Measure of Success:

- A vehicle replacement plan with regularly scheduled bus purchases
- Adoption of a funding plan or strategy
- Secure funding of commitment of funds to initiate purchase



FY2008-09 Budget In Brief

2/5/2008

Significant Trends:

Expenses

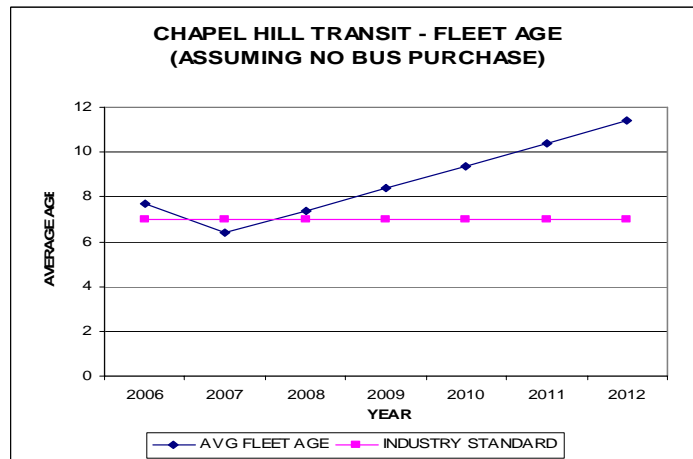
- Total Expenses have grown by over 29% since FY2004/05 (average 9% annually)
- Five year budget projections indicate that transit operating expenses will grow by 6% annually to maintain current service levels
- Diesel fuel costs have more than doubled in 4 years (\$814,000 in FY2004/05 to \$1.7 million in FY2007/08)
- Vehicle repair costs have increased 164% in 4 years (\$320,000 in FY2004/05 to \$843,000 in FY2006/07) and have increased 17% since last year

Ridership has more than doubled since going fare free in 2002

Year	2001	2002	2003	2004	2005	2006	2007
Riders	3,018,423	4,289,070	4,835,803	5,366,584	5,925,817	5,694,496	6,074,000

While ridership growth appeared to slow in 2006, recent months indicate that ridership is again growing – the last quarter of 2007 was 19% higher than the same quarter in 2006. Market surveys indicate that 25% of Chapel Hill Transit riders have ridden less than 1 year, suggesting a high customer turnover rate.

Fleet size has grown from 86 to 99 vehicles to meet growing demand for service and in response to critical maintenance issues. The chart below shows the effect of not maintaining a modern fleet. Transit industry standards recommend that the average fleet age be no more than 7 years. With no further efforts to modernize the fleet, the average age increases significantly in the next 3 years. As the fleet age increases, the dependability of transit service declines and the costs to maintain the fleet increases.



The cost to maintain the building and facilities is significantly higher due to the move to the Town Operations Center on Millhouse Rd.

Revenue Trends:

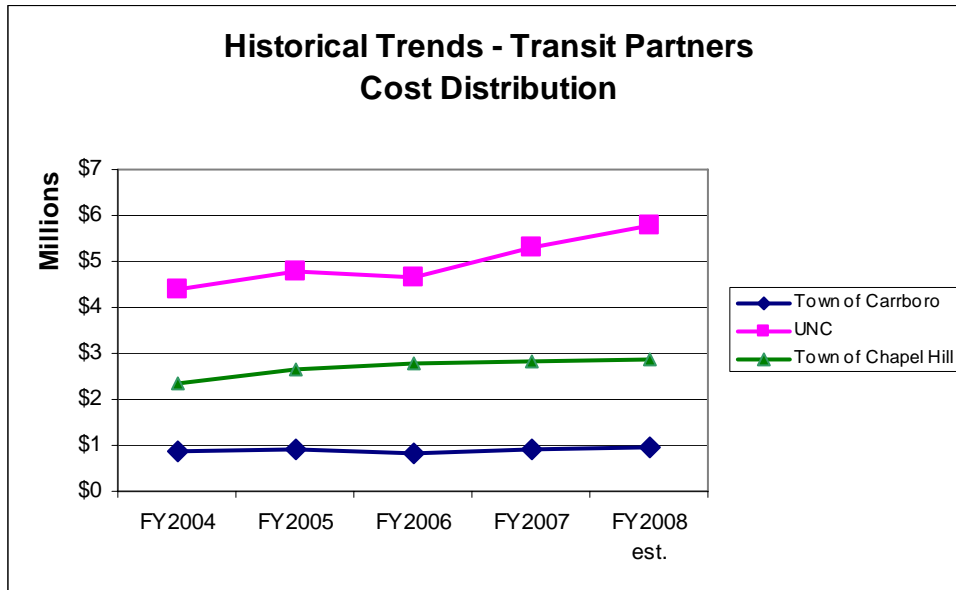
A significant portion of the revenues for the operation of Chapel Hill Transit come from 3 sources:

1. Local contributions from the funding partners, Chapel Hill, Carrboro and the University of North Carolina
2. Federal Funding
3. State Funding

Local Contributions

The allocation of local operating costs is based on a memorandum of understanding among the transit system partners. No changes have been made to the memorandum of understanding that will change the distribution. Currently, services that are provided solely for the benefit of the University of North Carolina are paid for in full by the University. The cost of services that benefit the entire community are then allocated based on population. Shown below is the distribution percentage used in the FY2007-08 budget. The FY2008-09 budget submitted for review assumes no significant change in that distribution percentage.

Chapel Hill	45.06%
UNC	39.10%
Carrboro	15.84%



State Funding

Chapel Hill Transit receives funding annually from the State Maintenance Assistance Program (SMAP). The FY2007/08 budget projects that Chapel Hill Transit will receive \$3.3 million. North Carolina DOT is not able to project any significant change in the funding and therefore the projections for SMAP funds for FY2008/09 have remained the same as FY2007/08.

Federal Funding

The Town of Chapel Hill receives Section 5307 funding from the Federal Transit Administration. This funding is eligible to pay for operating, planning and capital costs. It is the only federal funding that is predictable for the transit system. The funds are allocated to the MPO and then allocated between Chapel Hill, Durham and Triangle Transit Authority based upon an agreed upon formula. In FY2007/08, \$1.7 million was allocated to Chapel Hill Transit of which \$1.115 million was allocated to operating and the remainder used for capital activities. It is anticipated that there could be a 6% increase in Section 5307 funding coming to Chapel Hill showing a total funding mark of \$1.73 million. The FY2008/09 budget recommends no change in the funding allocated for operations and would anticipate that the additional 5307 funds be utilized to support capital activities. FTA 5303 funding is available for planning activities. It is recommended that some of these funds that are unspent by the Planning Department should be allocated to the Transit budget.

Appropriated Fund Balance

Preliminary figures for the base budget require an appropriation of \$478,506 to balance expenses and revenue.

Base Budget:

2007-08 Original Budget	\$14,663,000
2008-09 Requested Budget	\$16,114,111
% Change	9.9%

Significant Changes to Base Budget:

1. Process of identifying grant funds. Chapel Hill Transit offsets a portion of staff salaries with FTA planning grant funds. The current practice has been to allocate grant funds to offset specific staff salaries. This process is not consistent with the purpose of planning grants and limits flexibility in utilizing the funds. Chapel Hill Transit recommends that the budget contain a Grant Funding Revenue line and that grant funded positions be moved to the 640 account. This practice will allow grant funds to be allocated to grant eligible projects and activities which is more consistent with proper use of grant funds.
2. Chapel Hill Transit assumes role of data collection and short range transit planning. In the past Chapel Hill Transit has relied on planning interns to collect and maintain transit operating data and to develop the Short Range Transit Plan. Recently this practice has raised problems of not having timely data or activities. It has also been partially responsible for not having a completed Short Range Transit Plan. This budget reflects the fact that Chapel Hill Transit has assumed data collection duties and will take a more active role in short range transit planning. The Planning Department will continue to

have the primary responsibility for transportation planning and long range transit planning. Short range transit planning will be a collaborative effort.

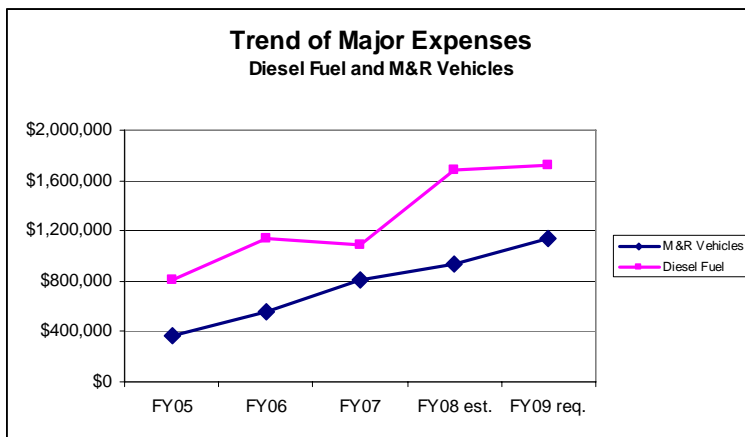
3. Hiring Flexibility. Last year it was recommended that a change in the Personnel Ordinance to set a dollar amount for drivers wages rather than budgeting FTE's would allow better management of overtime. In response to this recommendation, Transit was given the ability to hire additional personnel. The Personnel Ordinance, however, was not changed so there remained language that limited our ability to over hire. Chapel Hill Transit hopes to work with Human Resources Development to improve the ordinance to create the ability to manage personnel resources and overtime.

4. Facilities Costs: The cost to maintain the building and facilities since the move to Millhouse Rd has increased more than was anticipated in the development of the 2007 / 08 budget. This budget also recommends that Transit assume the responsibility for clean up and minor maintenance at park and ride lots. This function had been the responsibility of Public Works. In 2006, Transit added a part time employee to maintain shelters throughout the service area. The work can be done more efficiently if it is done by transit and provide transit with a building and grounds person to be more responsive to immediate needs of the facility.

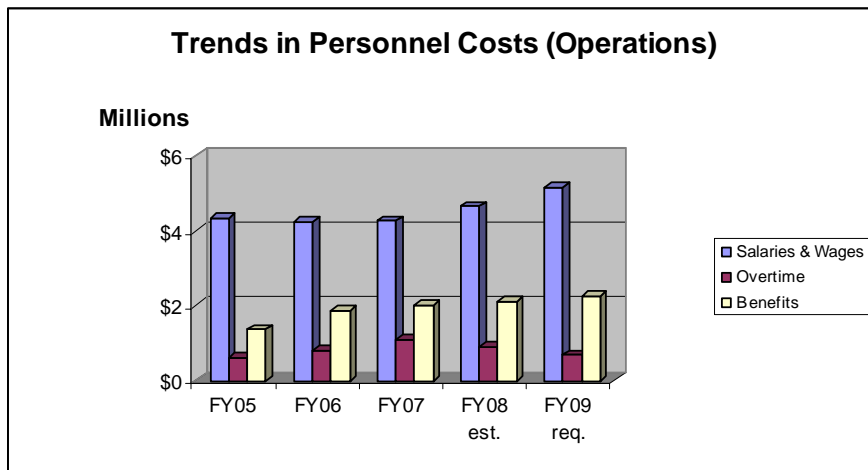
5. Fuel Reserve: In the FY2007/08 budget the fuel reserve was eliminated. Based on the current state of fuel prices it appears to be a decision that should be revisited.

Key Areas of Base Budget:

1. Maintenance:
 - M&R Vehicle costs of increased 158% between FY2004-05 and FY2006-07
 - For the current fiscal year, M&R vehicles costs represent 6% of the overall operating budget for Transit as compared to 3% of the operating budget in FY2004-05



2. Operations:



3. Administration:

- Building Security contract (\$25K)
- Emphasis on Marketing & Promotion (\$44K)

4. Non-Departmental/Capital Reserve:

- Charges by General Fund: Represents \$1.1 million of base budget; has increased 35% since FY2004-05.
-

Requested Additions:

1. Increase Existing Service to Serve the Weaver Dairy Rd. Extension to meet public requests for bus service. This service request was recommended by citizens and the Transportation Board in FY 2006. Estimated budget cost \$26,119.
2. Join Regional Call Center to improve schedule information services for Chapel Hill Transit users and expand phone coverage hours. Participation in the Regional Call Center enhances Chapel Hill as a regional partner and allows our service information to be more accessible to the wider region of the Triangle. Estimated budget cost \$76,000.
3. Establish Fuel Reserve due to the unpredictable nature of crude oil prices and diesel fuel prices in the current economy. For the current fiscal year a deficit is projected for diesel fuel budget line. Chapel Hill Transit requests a fuel reserve based on a one month supply of fuel at 30,000 gallons. Estimated budget cost \$86,100.
4. Modify and Extend Existing Weekend Route Service. Current weekend service has not changed significantly since going fare free in 2002. Since ridership has doubled, the

demand for weekend service to serve more parts of the Town and operate more frequently is common. Chapel Hill Transit requests improved frequency on certain Saturday and Sunday routes. Estimated budget cost \$127,124.

5. Modify and Extend Existing Evening Route Service. Current evening service is limited, and confusing. Chapel Hill receives numerous requests to improve evening bus service to serve the growing Town and University demand. Chapel Hill Transit requests night service schedule modifications to make night schedules consistent and to match work & class dismissal times. Estimated budget cost \$288,054.
6. Add New Bus Service to Rogers Road. The Rogers Road neighborhood is a low to moderate income neighborhood that has asked for bus service for residents for several years. Chapel Hill Transit proposes to serve the neighborhood by redesigning a current route. In addition to extending service to Rogers Road, mid-day service would be introduced to meet the demands of student teachers and volunteers. Since the route serves the Carrboro community, the initial year would be wholly allocated to the Carrboro portion of the Partner Split. Estimated budget cost \$106,586.

CHAPEL HILL TRANSIT

Historic Budget Growth (5 years)

Key Expenses	FY03-04 Actuals	FY04-05 Actuals	FY 05-06 Actuals	FY06-07 Actuals	FY07-08 Projected	Avg. Yrly % Inc
Salaries & Wages	\$5,447,342	\$6,004,133	\$6,030,839	\$6,642,553	\$6,863,664	6%
Benefits	\$1,978,652	\$2,129,205	\$2,209,232	\$2,441,595	\$2,696,976	8%
Diesel Fuel	\$563,697	\$814,043	\$1,139,680	\$1,092,134	\$1,679,546	34%
Maint. & Repair of Vehicles	\$508,146	\$464,306	\$773,282	\$946,436	\$975,936	21%
M&R Bldgs/Grounds/Equip	\$59,418	\$64,379	\$67,856	\$77,105	\$82,353	9%
Utilities	\$70,907	\$73,953	\$88,758	\$112,741	\$144,846	20%
Insurance	\$207,454	\$230,505	\$241,472	\$279,542	\$346,509	14%
Charges by General Fund	\$680,155	\$751,543	\$844,029	\$872,445	\$986,060	10%
TOTAL KEY EXPENSES	\$9,515,771	\$10,532,066	\$11,395,150	\$12,464,550	\$13,775,893	10%
TOTAL BUDGET	\$11,646,590	\$12,469,180	\$13,254,555	\$14,256,085	\$14,840,446	6.25%
<i>Key Expenses as % of Budget</i>	82%	85%	86%	88%	93%	3.26%

Chapel Hill Transit Fleet Analysis and Bus Purchase Recommendations

From: Steve Spade – Transportation Director

Date: June 30, 2006

Introduction

Chapel Hill Transit provides the following document as a recommendation for the transit short term bus purchase and long term fleet modernization program.

Background

Chapel Hill Transit operates a fleet of 86 buses. The transit system has a peak hour requirement of 72 buses, however demand increases beyond 72 during certain times of the year. The fleet is challenged due to extremely high demand and its increasing age. Chapel Hill Transit is facing rising maintenance costs due to an aging fleet and demands for expanded service.

Chapel Hill Transit has \$7.7 million to purchase new buses. This funding will enable Chapel Hill Transit to replace nearly 25% of its active fleet. This is a significant opportunity that has short term benefits and long term implications. It is important to make decisions regarding the transit fleet now in order to insure that the fleet is consistent over the next 15 years.

Discussion

Chapel Hill Transit has evaluated the transit fleet, its age and operating cost and considered other issues (demands for more service and operating costs) facing the system to develop a series of recommendations regarding the modernization of the transit fleet and its ability to respond to community issues.

Fleet Analysis

Chapel Hill Transit operates a fleet of 86 buses ranging in age from 4 – 19 years old. The following are facts about the fleet, its condition and usage.

Recommended national fleet standards:

- Maintain a fleet average age of 7.0 years
- Maintain a fleet spare ratio of 20%

The fleet:

- The Chapel Hill fleet currently has an average age of 7.55 years.
- In 2007 the average age will increase to 8.51 years.
- Chapel Hill Transit has a maximum peak hour pull out of 72 buses, leaving a 16% spare ratio
- Service improvements scheduled for the fall of 2006 will increase the peak requirement to 77 buses, leaving a 10% spare ratio.
- Based on a 77 bus peak the fleet should be a minimum size of 93 buses in order to maintain an adequate spare ratio.
- Future service needs of the funding partners suggest that the size of the fleet needs to increase over the next two years.
- Over the past 6 months the maintenance cost of the fleet has averaged \$.96 per mile.
- Vehicles ordered in 2006 will take 12 – 18 months to be delivered.

Bus Purchase recommendations:

- Purchase the maximum number of buses with the \$7.7 million – 19 diesel buses and 3 hybrid buses. This will increase Chapel Hill Transit's ability to respond to growing service needs, improve reliability and control maintenance costs.
- Expand the bus fleet from 86 to 99 buses by allocating a portion of the new buses to replacement and 13 buses to fleet expansion.
- Schedule ongoing procurement to maintain an average age of 7 years to best control cost and stay responsive to needs.

Staff has analyzed the fleet average age based on the recommended purchase of 16 diesel and 3 hybrid buses.

The receipt of 19 buses will only temporarily bring the fleet age within acceptable industry standards.

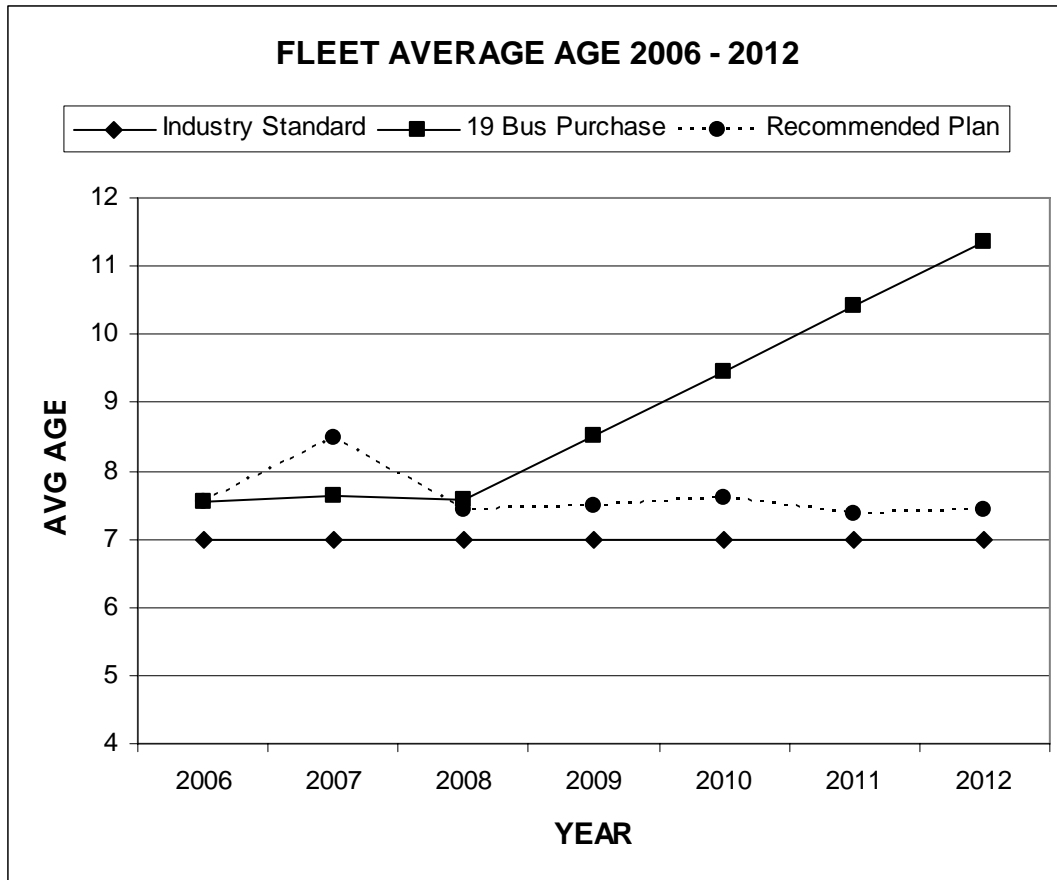
The purchase of 19 buses in 2008 and expansion of the fleet to 99 buses would reduce the fleet age to 7.14 years in 2008, 8.14 years in 2009, 9.14 years in 2010 and 10.14 in 2011.

In order to maintain a modern fleet and provide modest expansion, smaller bus purchases should be made annually in addition to the initial purchase of 19 buses. The suggested schedule for bus replacement will achieve and maintain an average fleet age at 7 years through 2012.

Recommended vehicle purchase schedule

2008	purchase 19 buses	9 replacement/ 10 expansion...expand fleet from 86 to 96
2009	purchase 6 buses	3 replacement / 3 expansion...expand fleet to 99 buses
2010	purchase 6 buses	replacement
2011	purchase 8 buses	replacement
2012	purchase <u>6</u> buses	replacement
	48 buses	

The chart below illustrates the effect of the recommended long term plan on fleet average age.



Alternative Fuels

Chapel Hill Transit has a Congestion Mitigation / Air Quality grant that includes the purchase of 3 hybrid buses to be used on the Chatham park and ride route. This grant suggests that the long term plan for the transit fleet must be considered. The purchase of 3 hybrid vehicles will allow the town to consider the advantages and implications of a long term commitment to hybrid vehicles.

Industry data suggests that hybrid technology has great promise but has not been utilized in a transit setting long enough to determine long term reliability of hybrid engines.

Purchasing 3 hybrid buses will allow Chapel Hill Transit to gain experience with hybrid engines. By 2010 the transit industry will have at least 10 years experience with hybrid buses in revenue service. This will be adequate time to prove long term reliability. The Town will be in a better position to make a long term decision regarding the future of hybrid buses in the Chapel Hill Transit fleet.

Chapel Hill Transit staff recommends the following regarding the acquisition of hybrid buses:

- Purchase 3 hybrid buses in 2006 as part of the Congestion Mitigation Air Quality grant.
- Ten per cent of the purchases from 2009 – 2012 should be hybrid buses as long as the vehicles meet performance expectations
- Additional large purchases should be made after the fleet has been brought to an acceptable level of size and condition.
- A determination should be made of what portion of the fleet will be hybrid.

Below are questions that must be answered as experience with hybrid vehicles is gained:

1. Is hybrid the best alternative fuel option?

Hybrid technology has gained much popularity in recent years. Numerous transit systems including Charlotte, Maryland DOT and New York City are experimenting with hybrid technology in buses. Many believe that it is one of two potential forms of alternative fuel vehicles that will be generally accepted in the future. (Bio-diesel being the other).

Hybrid technology still is in the early stages of development and there are still questions about the long term reliability of the technology in transit applications. Bio-diesel is currently the most often used alternative fuel.

2. Can the Chapel Hill Transit system support hybrid buses?

The high voltage of hybrid buses is dangerous if not properly controlled, but standards and training are in place to mitigate the dangers. The biggest challenge is to train mechanics in a new technology. Because it will take 18-24 months to receive new buses, existing staff can be trained and new staff acquired as necessary.

More significant is the concern that if Chapel Hill Transit purchases vehicles with new unproven technology, the overall fleet must be modern and well maintained enough to withstand the possibility of a portion of the fleet with major repair problems.

3. What is the level of commitment to rely on hybrid technology and are the funding partners able to support that commitment?

There is a high degree of interest among the transit partners in testing new technology and improving fleet performance to meet desirable environmental objectives. It is advisable to purchase a limited number of hybrid buses to gain experience with this

technology. This will allow the partners to make a more ambitious commitment to the technology once it is proven.

Vehicle Characteristics

Standard floor vs. Low floor.

Chapel Hill Transit recommends that all new buses be low floor. There are several advantages to low floor buses

1. The buses are less expensive because a lift is not required (wheelchairs gain access via a ramp)
2. A ramp is less costly to maintain than a lift
3. Boarding for ambulatory and non-ambulatory passengers is faster and more efficient.
4. Almost 90% of the buses purchased today are low floor. Purchasing low floor assures a quicker delivery and a longer availability of parts as standard floor fleets are phased out.

The only disadvantage to low floor buses is the loss of seating. A 35 ft low floor bus can have 6 fewer seats than the same size standard floor bus.

Vehicle Size

Chapel Hill Transit operates a fleet of 35-foot buses. The system is faced with 2 issues that give credibility to the idea that larger vehicles be considered as part of the long term fleet strategy. The issues of operating cost and over-crowding are inter-related. The funding partners are concerned with growing operating costs. Factors affecting cost are fuel prices, labor costs and overcrowding of buses. With the current fleet, overcrowding can only be resolved by adding additional buses. Utilizing larger buses can resolve over crowding by providing more capacity with no increase in labor.

Articulated buses have been used successfully in many university settings including the University of Illinois and East Carolina.

Chapel Hill Transit recommends that consideration be given to deployment of articulated buses on over-crowded peak hour routes. Most of the routes experiencing overcrowding are running from park and ride lots serving the University of North Carolina.

Other Technology

The following equipment is recommended to be included in all bus purchases of Chapel Hill Transit vehicles.

Automated passenger counters

Automated passenger counters will record passenger boardings without reliance on operators. In the current fare free system the only source of rider information comes from drivers manually recording each passenger boarding using farebox counters. This is not always an accurate method of determining ridership. Automated passenger counters provide accurate detailed rider counting.

Automated vehicle locators

Chapel Hill Transit is installing real time passenger information system and automated vehicle locators. All future purchases should include the installation of automated vehicle locating equipment as part of the specifications. This is critical to maintain the effectiveness of the real time passenger information system.

Security cameras

Chapel Hill Transit staff recommends that all buses purchased have security cameras and that funds be committed to retrofit existing buses. Throughout the transit industry security cameras have proven to be critical to effective management of the system. Security cameras installed on buses can record all activity that occurs on the bus during the time the engine is running. Four camera locations record activities in the back of the bus, boarding, outside the windshield and passenger boarding.

Security cameras offer protection for both passengers and riders from unlawful or dangerous activities on the bus. They are particularly useful in protecting transit operators from false claims. The cameras can also mitigate exposure to the Town of Chapel Hill in accidents by providing accurate documentation account of an actual incident.

Project Cost and Financing

The chart on the next page identifies the annual cost for recommended bus purchases over the 5 year period. Cost projections assume a 5% growth in FY 2007/08 and 3% growth each year thereafter.

The purchase recommendations include a mixture of 35 ft. and 40 ft. buses and the introduction of articulated buses. In addition, hybrid buses are purchased every other year.

The total cost to purchase 45 buses over the 5 year period is \$17,384,361. Assuming federal participation at 83%, federal cost will be \$14,429,068.

Chapel Hill Transit has funding available to purchase 19 buses programmed for FY 2006/07. After applying current federal funding of \$5,871,769, there is a 5 year federal funding deficit of \$8,557,300.

5 Year Bus Purchase Cost Summary

<u>Vehicle</u>	<u>#</u>	<u>Unit Cost</u>	<u>Total Cost</u>	<u>Federal Cost (83%)</u>	<u>State 8%</u>	<u>Local 9%</u>
<u>FY 2006/07</u>						
<u>Rec. 2008</u>						
35ft. bus	10	\$318,100	\$3,181,000	\$2,640,200	\$254,500	\$286,300
40ft. bus	2	\$341,200	\$682,400	\$566,400	\$54,600	\$61,400
60ft. bus	4	\$487,900	\$1,951,600	\$1,619,900	\$156,100	\$175,600
40ft. bus (Hybrid)	3	\$460,000	<u>\$1,380,000</u>	<u>\$1,145,400</u>	<u>\$110,400</u>	<u>\$124,200</u>
TOTAL			\$7,195,000	\$5,971,900	\$575,600	\$647,500
<u>FY 2007/08</u>						
<u>Rec. 2009</u>						
40ft. bus	6	\$360,000	<u>\$2,160,000</u>	<u>\$1,792,800</u>	<u>\$172,800</u>	<u>\$194,400</u>
TOTAL			\$2,160,000	\$1,792,800	\$172,800	\$194,400
<u>FY 2008/09</u>						
<u>Rec. 2010</u>						
35ft. bus	4	\$345,000	\$1,380,000	\$1,145,400	\$110,400	\$124,200
40ft. bus (Hybrid)	2	\$495,000	<u>\$990,000</u>	<u>\$821,700</u>	<u>\$79,200</u>	<u>\$89,100</u>
TOTAL			\$2,370,000	\$1,967,100	\$189,600	\$213,300
<u>FY 2009/10</u>						
<u>Rec. 2011</u>						
35ft. bus	6	\$355,000	\$2,130,000	\$1,767,900	\$170,400	\$191,700
60ft. bus (Articulated)	2	510,000	<u>\$1,020,000</u>	<u>\$846,600</u>	<u>\$81,600</u>	<u>\$91,800</u>
TOTAL			\$3,150,000	\$2,614,500	\$252,000	\$283,500
<u>FY 2010/11</u>						
<u>Rec. 2012</u>						
40ft. bus	4	395,000	\$1,580,000	\$1,311,400	\$126,400	\$142,200
40ft. bus (Hybrid)	2	525,000	<u>\$1,050,000</u>	<u>\$871,500</u>	<u>\$84,000</u>	<u>\$94,500</u>
TOTAL			\$2,630,000	\$2,182,900	\$210,400	\$236,700
Total 5 Year Cost			\$17,505,000	\$14,529,200	\$1,400,400	\$1,575,400
Less FY 06/07 Committed			<u>\$7,195,000</u>	<u>\$5,971,900</u>	<u>\$575,600</u>	<u>\$647,500</u>
Unfunded			\$10,310,000	\$8,557,300	\$824,800	\$927,900

By 2012 the fleet will consist of 99 buses in the following configuration:

Fleet configuration by size and fuel source

35 ft. Diesel Buses	72
40 ft. Diesel Buses	14
60 ft. Diesel Buses	6
40 ft. Hybrid Buses	7
Total	99

By 2012 45 buses will be less than 5 years old (45% of the fleet). More significantly about 30% of the fleet will be over 12 years old and eligible for replacement.

Possible Funding Sources

Federal Transit Administration 5307 Funds

Federal 5307 funds are allocated to transit systems annually based on a performance based distribution formula. This is the only source of federal transit funding that is guaranteed. Chapel Hill Transit will receive approximately \$2,750,000 in FY 2006/07. Those funds are expected to increase by about 20% during the life of the current transportation bill. These funds are eligible for either operating or capital activities. Currently 100% of these funds are programmed for operating purposes.

Surface Transportation Program Funds

Surface Transportation Program Funds are made available to local areas and distributed through the area Metropolitan Planning Organization. The funds can be used to fund any activities eligible under Federal Highway or Federal Transit programs. To secure these funds, Chapel Hill would make application through the metropolitan planning organization.

Congestion Mitigation / Air Quality Funds

Congestion Mitigation / Air Quality funds are available to fund highway and transit projects that will have a direct impact on improving air quality or reducing congestion. The funds are allocated to states and required to be spent in non-attainment areas. The funds are allocated on a competitive basis.

Congressional Earmarks

All of the sources of federal funding described above will not fully fund the Chapel Hill Transit fleet replacement needs. We believe it will be necessary to seek congressional earmarks to fund long term vehicle replacement.

Bus Leasing

If federal funds to purchase vehicles cannot be obtained it may be feasible to consider a bus lease option. To use the lease option the town would secure a financial institution and lease / purchase agreement through a bidding process. The cost of buses (plus interest) would be spread over a twelve year period.

There are benefits to leasing:

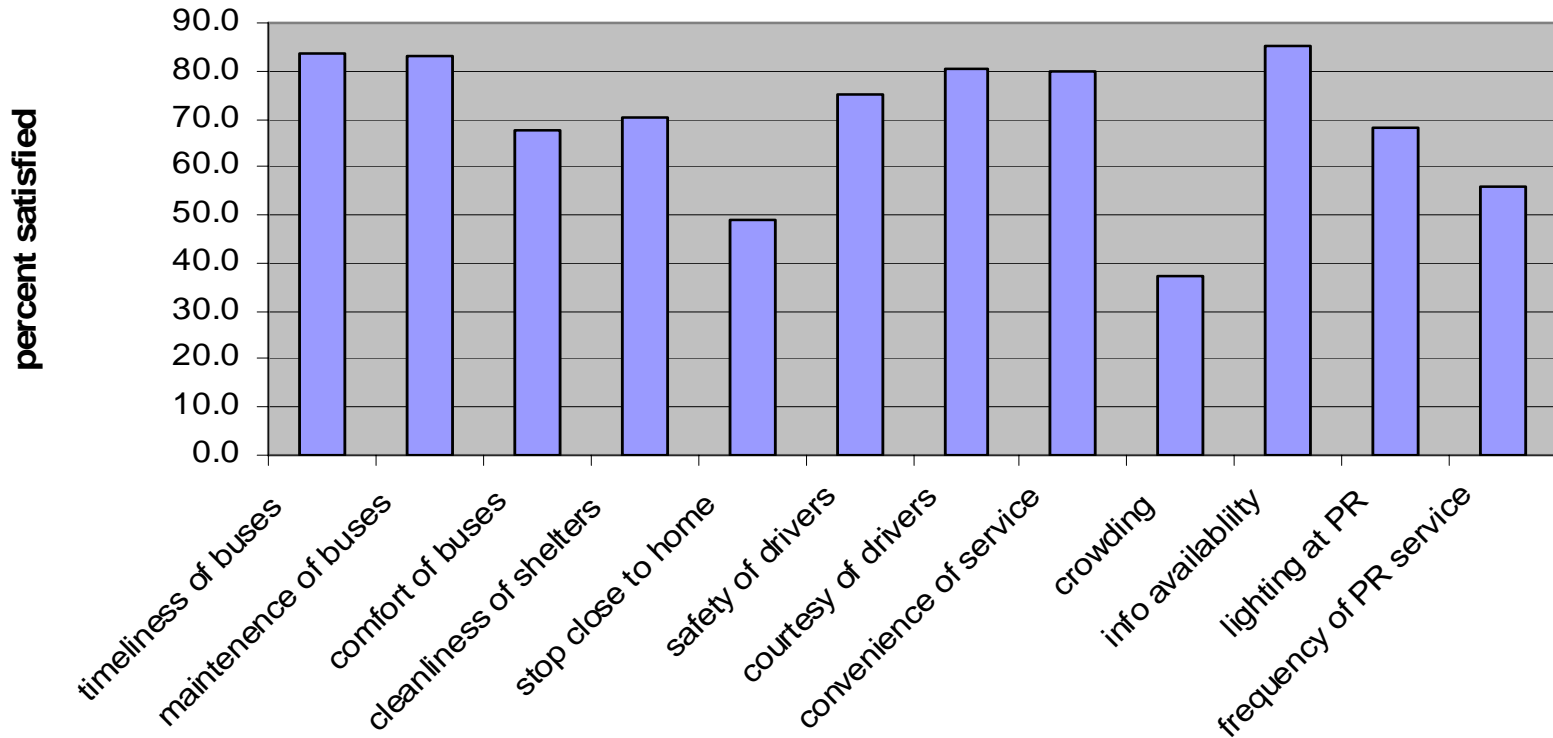
1. It is possible to purchase a large number of buses when federal funds are not available.
2. Modernizing the fleet more quickly will avoid higher maintenance cost of an older fleet.
3. Services will be more dependable and better able to respond to service demands.
4. Leases can be paid off with congressional earmark funds.

There are also disadvantages to leasing:

1. Costs are higher due to interest payments.
2. Lease payment commitments can affect the ability to make required purchase during the twelve year payoff period.

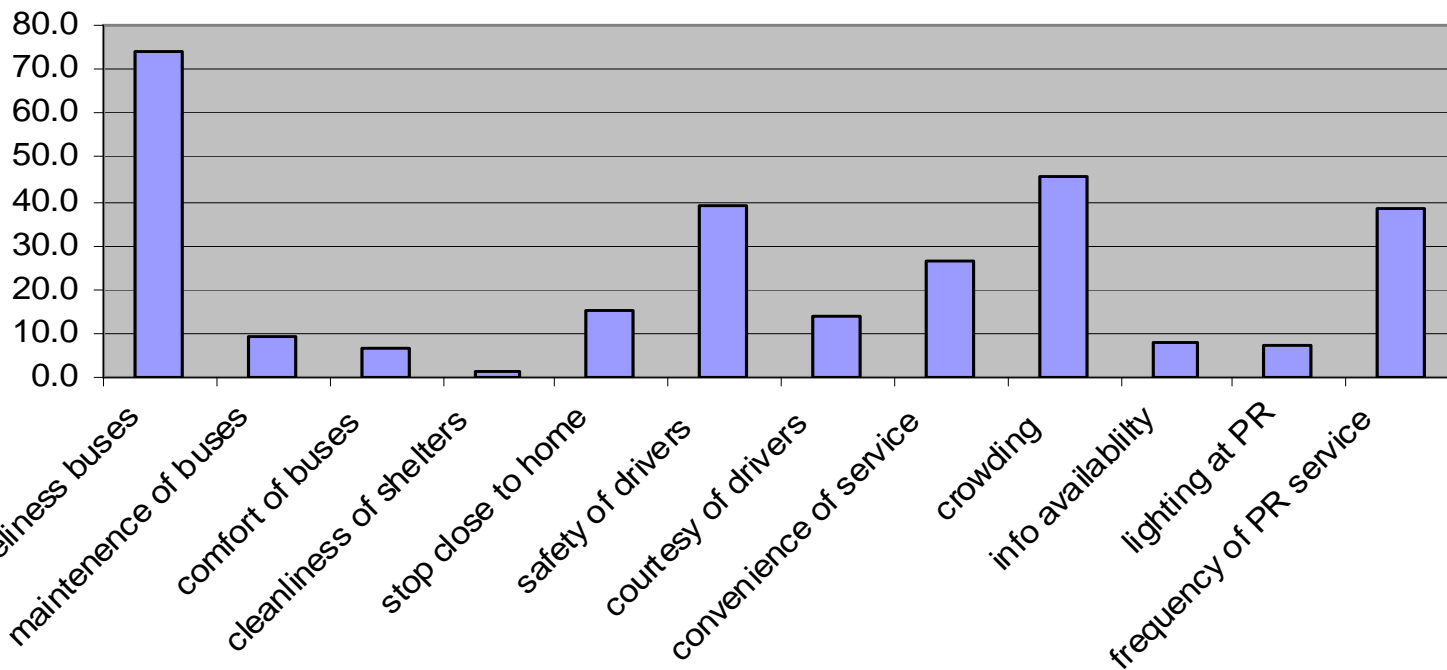
To support the development of an ongoing fleet modernization program long term funding must be secured. Since programmed federal funds will not adequately fund the recommended replacement program the partners should develop a strategy to secure congressional earmarks. Funding is in place for planned bus purchases in 2006/07. However there is no funding committed to purchases in 2007/08 or beyond. Communication with the congressional delegation should begin early this fall to secure an earmark in the 2007 transportation appropriations bill.

Please rate your level of Satisfaction with the following:

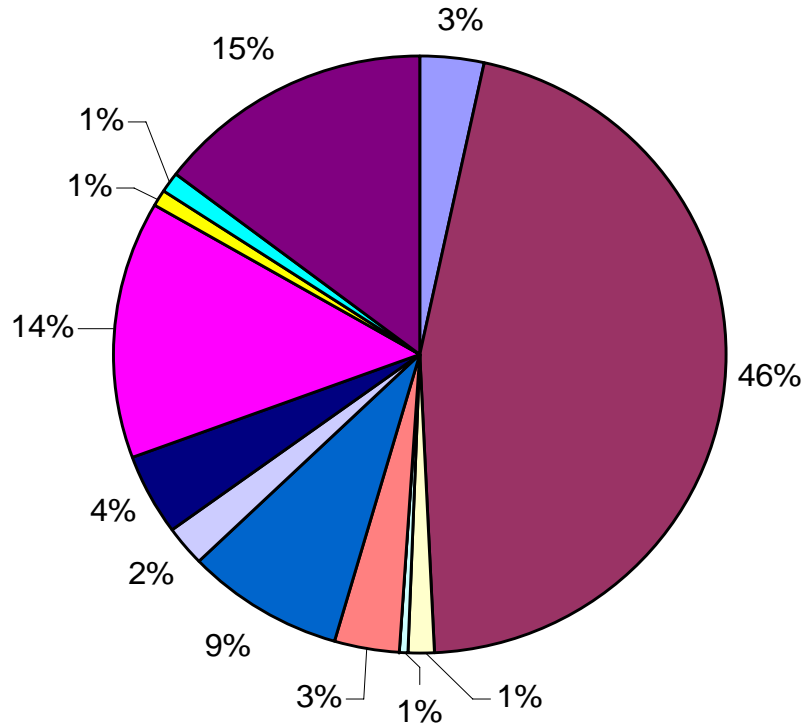


Which items from satisfaction level are the most important?

percent listing item in top 3

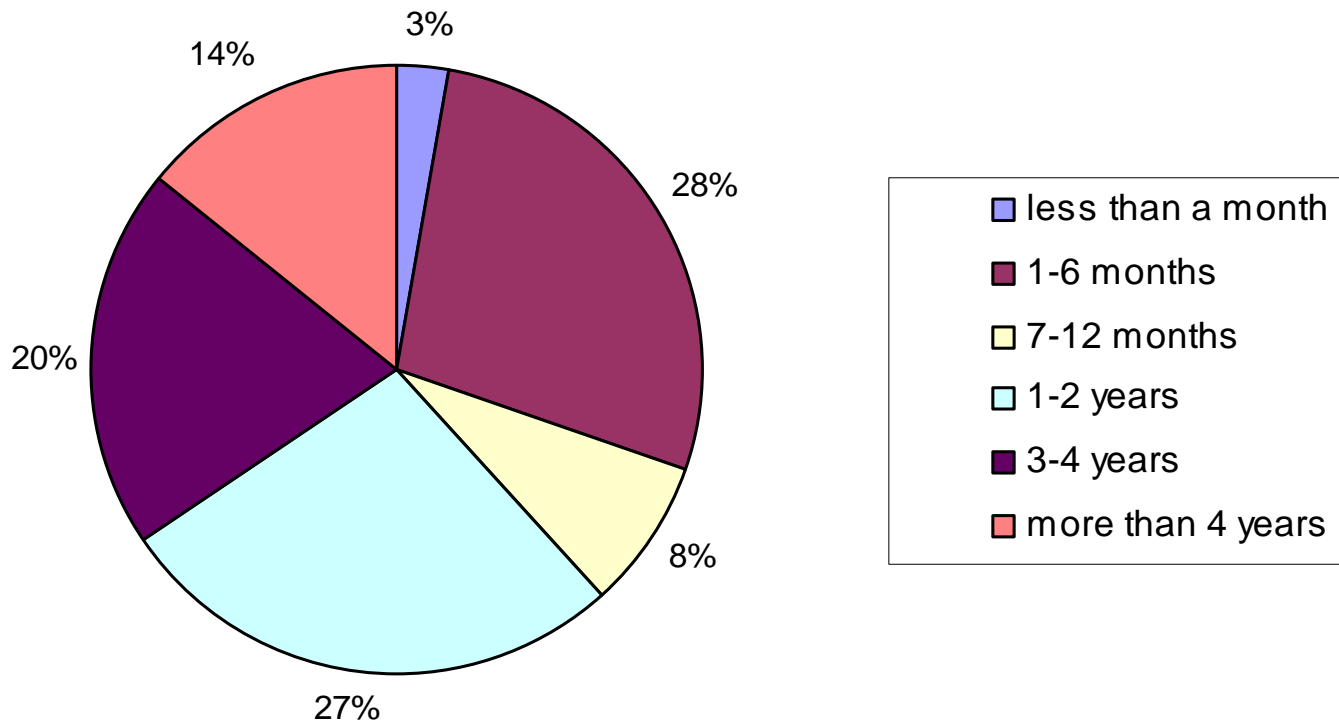


Which item from satisfaction level is the most important?



- none
- timeliness buses
- maintenance of buses
- comfort of buses
- cleanliness of shelters
- stop close to home
- safety of drivers
- courtesy of drivers
- convenience of service
- crowding
- info availabilty
- lighting at PR
- frequency of PR service

If you ride at least once a week, for how long have you been riding at least once a week?



How often do you ride Chapel Hill Transit?

